LOS ANGELES COUNTY
DEPARTMENT OF
REGIONAL PLANNING

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March 24, 2026

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, CA 90012

Dear Supervisors:

PROJECT R2015-00408-(5)
VESTING TENTATIVE TRACT MAP NO. 073336
VESTING TENTATIVE PARCEL MAP NO. 073335
CONDITIONAL USE PERMIT NO. RPPL2023004316
ENVIRONMENTAL ASSESSMENT NO. RPPL2023004887
APPLICANT: NORTHLAKE ASSOCIATES LLC
PROJECT LOCATION: NORTH OF LAKE HUGHES ROAD, EAST OF RIDGE ROUTE ROAD AND INTERSTATE 5, AND WEST OF CASTAIC LAKE AND LAGOON CASTAIC CANYON ZONED DISTRICT
(FIFTH SUPERVISORIAL DISTRICT) (3-VOTES)

SUBJECT

The project is an appeal of a decision by the Los Angeles County (County) Regional Planning Commission (Commission) to certify the Recirculated Partial Final Supplemental Environmental Impact Report (RPFSEIR), Findings of Fact (FF), Statement of Overriding Considerations (SOC), and Mitigation Monitoring and Reporting Program (MMRP), and approve Project Number R2015-00408-(5), including Vesting Tentative Tract Map (VTTM) No. 073336 to create 2,295 residential units including single-family, multi-family (attached condominium), and apartment-style residential; senior and senior affordable housing; mixed use, live-work, and highway commercial including 38,700 square feet of commercial space; open space and recreation lots; and related infrastructure including a fire station lot; on 720 acres; Vesting Tentative Parcel Map (VTPM) No. 073335 to create 21 large-lot parcels for lease and financing purposes only on approximately 1,307 acres; and Conditional Use Permit (CUP) No. RPPL2023004316 for Specific Plan review, affordable and senior affordable set-aside housing, mixed use and live-work development, walls and fences exceeding six feet in height, construction of two water tanks with associated grading and infrastructure, and onsite and offsite grading in excess of 100,000 cubic yards (cy) totaling 37.54 million cy. This Commission's decision was made at a duly-noticed hearing held on January 28, 2026, with a

unanimous 5-0 vote. Collectively the project is referred to as the “Project” or “Northlake Phase 1”.

IT IS RECOMMENDED THAT THE BOARD AFTER THE PUBLIC HEARING,

1. Affirm the actions of the Commission;
2. Certify the NorthLake Specific Plan Supplemental Environmental Impact Report (SEIR), as revised by the RPFSEIR, Recirculated Partial Draft Supplemental Environmental Impact Report (RPDSEIR) and associated errata, was completed in compliance with the California Environmental Quality Act (CEQA) and the State and County CEQA Guidelines related thereto;
3. Certify that it independently reviewed and considered the information contained in the SEIR, as revised by the RPFSEIR, RPDSEIR and associated errata, and the SEIR reflects the independent judgment and analysis of the Board as to the environmental consequences of the Project;
4. Adopt the FF, SOC, and MMRP; and
5. Adopt the Commission's findings and conditions for the Project.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

The Project includes a VTTM to create 2,295 residential units on a total of 720 acres within 288 single-family residential lots and 27 multi-family lots with 1,341 attached units, 345 senior attached units, 95 senior affordable attached units, and 180 detached and live-work units as well as 38,700 square feet of commercial space, one 2.5-acre highway commercial lot, open space lots, park lots, debris basin lots, water tank lots, water quality basin lot, pump station lot, and one fire station lot containing a 1.4-acre building pad.

The Project also includes a VTPM to create 21 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only. The CUP would authorize a Specific Plan site plan review for the development of 2,295 residential dwelling units; affordable and senior affordable set-aside housing; mixed-use and live-work development; walls exceeding six feet in height; construction of two water tanks with associated grading and infrastructure, and onsite and offsite grading in excess of 100,000 cy. The Project grading includes a total of 34.32 million cy (17.16 million cy of cut and 15.84 million cy of fill with 1.32 million cy of shrinkage) to be balanced onsite; and offsite grading requiring an additional 2.15 million cy of cut and 1.07 million cy of fill for an offsite total of 3.22 million cy of combined cut and fill. The overall onsite and offsite grading includes 37.54 million cy of combined cut and fill.

On April 2,2019, Northlake Phase 1 was adopted. Subsequently, in the following month, the development was challenged in court. The court ruled that the SEIR for the Northlake Specific Plan Project, which includes development of Northlake Phase 1 and a future Phase 2, failed to comply with the CEQA on three specific grounds: (1) inadequate alternatives analysis (for failing to fully analyze a creek avoidance alternative); (2) inadequate Western Spadefoot Toad (WST) baseline assessment and, therefore, inadequate mitigation (to recreate baseline conditions;

mitigation inadequate in detail and commitment); and (3) improper deferred mitigation as to rare plants (measure lacked sufficient detail).

The court denied the Petition for Writ of Mandate regarding: (1) impacts to mountain lions/wildlife crossings, (2) aesthetics, (3) air quality/public health, (4) wildfire impacts, and (5) recirculation.

In 2021, a Partial Creek Avoidance Alternative (PCAA) was prepared to help remedy the above impacts. The PCAA is considered the environmentally superior alternative among the project alternatives summarized in the RPFSEIR. As identified in the Recirculated Partial Draft SEIR, after implementation of the MMRP, Northlake Phase 1 would not result in any new or substantially more severe significant impacts.

The Project will implement the following Goals and Strategies of the 2024-2030 County Strategic Plan:

North Star 1, Make Investments That Transform Lives, Focus Area Goal B - Employment and Sustainable Wages: Support social mobility, economic and workforce development, job training, meaningful connections, and access to employment opportunities with sustainable wages for County residents, with emphasis on those who are experiencing barriers to employment or the ability to earn a sustainable wage. Support small and large business growth to maintain job supply.

Northlake Phase 1 proposes 38,700 square feet of mixed-use and live-work commercial uses as well as 2.5 acres of highway commercial uses, parks and trails maintenance, and a Homeowner's Association (HOA) funded shuttle system that will provide a variety of economic and employment opportunities within the Project.

North Star 1, Make Investments that Transform Lives, Focus Area Goal C - Housing and Homelessness: Support efforts that prevent displacement, increase access to housing stability, develop more affordable housing, sustain homeownership opportunities, and enhance the effectiveness of the County's homeless rehousing system.

Northlake Phase 1 proposes 2,295 dwelling units, consisting of 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units of median income and 31,200 square feet of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); and one senior affordable median income multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership). This will provide a substantial amount of new housing and assist in alleviating homelessness in the County.

North Star 2, Foster Vibrant and Resilient Communities, Focus Area Goal F - Community Connections: Invest in our communities and create public spaces and programs that are welcoming, accessible, where all residents can easily build relationships, create social networks, feel connected and can access opportunities.

Northlake Phase 1 provides 11 parks consisting of a combined 103 acres of community and public spaces, including five public-accessible park spaces as well as playgrounds, trails and bike paths, family picnic pavilions, sports courts, ball fields, outdoor lounges, garden seating, tot lots, and barbeque areas which will be available to residents and guests and that facilitate social connections and networks that build relationships.

FISCAL IMPACT/FINANCING

Northlake Phase 1 is a new 2,295-unit mixed-use and residential development with a variety of amenities and open space areas. The construction and operating costs of the development will be solely borne by the Applicant and overall Project, except for the maintenance of the public trails as discussed below. Northlake Phase 1 is connecting to existing public sewer, water, and electric facilities already located at the property site as well as upgrading sewer and water infrastructure for the site and will fully cover the associated costs of making such connections and upgrades. The Project will also fully cover the costs associated with physical improvements and inspections required by the County Departments of Public Works, Fire, and Public Health. Northlake Phase 1 will be required to pay a Quimby Parks Fee to County Department of Parks and Recreation (DPR) which will be utilized for future parks and recreation facilities in the area. It employs an HOA that will operate and maintain all the common areas and open spaces once developed.

COUNTY PUBLIC TRAILS OPERATING BUDGET IMPACT

Based on the Project description, DPR anticipates one-time and ongoing costs for staffing, operations, utilities, and/or grounds maintenance associated with the public multi-use trails included in the Project. DPR will submit to the Chief Executive Office (CEO) a funding request through the budget process. DPR will work on the funding request with the CEO in order to allow DPR to operate and maintain the new trails.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

Commission Hearing Proceedings

A duly noticed public hearing was held before the Commission on January 28, 2026. Staff presented the Project and Damon Mamalakis, on behalf of the applicant, also provided a presentation. The Commission then reiterated the “limited scope” of the three CEQA defects that the court ruled needed to be corrected: “alternatives analysis”, “WST”, and “rare plant species”. County Counsel reminded the Commission that, in addition to these three issues, the Northlake entitlements were required to be re-approved. The Commission also clarified that while the PCAA reduces the scope of the future Northlake Phase 2, the PCAA leaves Northlake

Phase 1 (before the Commission) as designed. The Commission asked for more information regarding affordable housing and the percentage of affordable units required in 2018, which the applicant confirmed is the same as what was required by the Commission at that time. The Commission also asked for clarification about the fire station pad, water tanks in Phase 1, and confirmed that the HOA funded shuttle system will include routes both internal to the Project and external to offsite locations in the Santa Clarita area.

There were a total of 12 public speakers during the January 28 public hearing. Nine spoke in opposition to the Project or asked for a postponement. These speakers cited issues including suburban sprawl/leapfrog development, damage to coastal sage scrub, expansion of the wildland-urban interface, fire and landslide dangers, potential gas pipeline rupture, negative effects on mountain lions, conflict with the 2022 Greenhouse Gas (GHG) carbon reduction plan, traffic congestion, lack of discussion about new job generation, interference with wildlife linkages, and lack of mitigation/analysis for the gas pipeline. Three public speakers were in favor of the Project, citing reasons such as supporting economic growth, revitalizing local commercial centers (such as re-opening a neighborhood-serving supermarket that closed down several years ago due to poor economic conditions), more housing to help lower housing costs, developing a thoughtful plan that was adopted in 1992, increasing high school enrollment and job creation, enhancing the overall quality of life, providing needed transportation investments, and constructing housing for working families that is closer to jobs.

After the public speakers, the Commission made remarks related to using photos of wildlife movement in the culvert crossing through the Northlake property, natural gas line located offsite from the Project, and that the applicant provided support for repair work related to the pipeline rupture. The Commission also asked about landslides and the pipeline as well as grading totals, to which the applicant stated that the pipeline rupture is not located on Northlake property, and that the pipeline is proposed to be relocated to Ridge Route Road which is a less dangerous location farther away from homes. Other comments during the applicant's rebuttal included that the PCAA will improve wildlife movements through the project site, the VMT appropriate baseline was used, coastal sage scrub mitigation location is identified, GHG comments were upheld by the court and did not require recirculation, and that the third wildlife crossing is in Phase 2 and is not being considered at this time but that a road adjustment for a crossing could be possible, if needed.

After hearing public testimony and Commission discussion, the Commission closed the public hearing and unanimously approved the Project by vote of 5-0.

Appeals of Commission's Decision

On February 6, 2026, the Project was appealed by Supporters' Alliance for Environmental Responsibility regarding the RPFSEIR for Northlake Phase 1 (SCH No. 2015031080, Project No. R2015-00408-(5). On February 9, 2026, the Project was also appealed by the Center for Biological Diversity (CBD) regarding the RPFSEIR for Northlake Phase 1. The appeals argued the following:

1. The RPDSEIR failed to adequately analyze or mitigate GHG impacts.

   Response: The limited purpose of the RPDSEIR is to correct the three specific defects in the SEIR that the court ruled violated CEQA. Under the law, the County is not required to revise and recirculate other portions of the SEIR, which were upheld by the court and remain compliant with CEQA. Accordingly, the County was not required to revise and recirculate any analysis of the Project's GHG impacts.

2. The RPDSEIR failed to adequately analyze Vehicle Miles Traveled (VMT) impacts.

   Response: Staff responds that the RPDSEIR adequately analyzed VMT impacts and demonstrated there will be no VMT impact. Northlake Phase 1 is a revision to the adopted 1992 Project. As such it is proper and legal to use the original Project as the baseline for comparison. Public Works, the County's expert agency, approved the VMT report including the methodology and impact determination.

3. The Project will have significant unmitigated impacts and, therefore, the County must analyze whether the Project's economic benefits exceed its environmental impacts before adopting an SOC.

   Response: The County prepared a Findings of Fact and SOC for the Project that analyzed the Project's benefits, including its economic benefits, and concluded that those benefits outweigh the Project's significant and unavoidable impacts. The Commission appropriately reviewed, considered, and adopted the SOC and, therefore, determined that the Project's significant and unavoidable impacts are outweighed by specific social, economic, legal, technological, or other benefits. Among other benefits, and as summarized in the SOC, the Project will generate employment opportunities for the local community and surrounding area by providing for new commercial uses that will generate jobs, and will provide needed housing, including affordable units and senior housing.

4. Overall, the County's environmental review failed to adequately analyze and mitigate the Project's biological resources, VMT, GHG, and wildfire risk impacts, including impacts to mountain lions, burrowing owls, and wildlife movement; its analysis of impacts to special-status species, including WST, is inadequate; it failed to consider new scientific knowledge and state policy on climate change and California's water supply; and its revised alternatives analysis is inadequate.

   Response A: (Mountain Lions) Issues regarding potential habitat fragmentation and wildlife crossing were addressed in the underlying litigation. The court denied the wildlife crossing challenge and did not require the wildlife crossing impact analysis to be recirculated. Specifically, the court denied all of the commenter's claims regarding mountain lions and wildlife crossings, finding that "The use of the undercrossings by large animals was thoroughly discussed in the SEIR … The County had the best

available information on the topic when it approved the Project in April 2019. The County's implied determination that the Project will not interfere with mountain lion crossings of the I-5 is supported by substantial evidence."

Response B: As stated above, the RPDSEIR adequately analyzed VMT impacts and demonstrated there will be no VMT impact.

Response C: As stated above, the County was not required to revise and recirculate any analysis of the Project's GHG impacts.

Response D: Regarding wildfire risk, the RPDSEIR wildfire analysis and the Wildfire Technical reports fully comply with the requirements of CEQA and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act*." The Wildland Fire Risk Report considered years of meteorological data, including wind data. It determined that under all ten modeled wildfire scenarios, evacuation would take place within the allowable limit.

Response E: (Burrowing Owl) Multiple mitigation measures address the burrowing owl (MM 5.2-7 through MM 5.2-9). Regarding critical habitat, the Habitat Management and Monitoring Plan (HMMP) shall provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for burrowing owls. Habitat restoration/enhancement shall consist of seeding of suitable California annual grassland/wildflower fields plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria.

Response F: Regarding new scientific knowledge, as set forth in the Notice of Completion and Availability, the County only circulated for review and comment the RPDSEIR, which revises the SEIR as directed by the Court. Given that the revision is limited to certain chapters and portions of the SEIR, CEQA Guidelines section 15088.5(c) only requires the County to recirculate the RPDSEIR. The limited purpose of the RPDSEIR is to correct the three specific defects in the SEIR that the court ruled violated CEQA. Under the law, the County is not required to revise and recirculate other portions of the SEIR, which were upheld by the court and remain compliant with CEQA.

Response G: The RPDSEIR complies with CEQA, specifically CEQA Guidelines Section 15088.5 (c). The RPDSEIR recirculated those sections of the SEIR that the court ruled violated CEQA and needed to be revised. New information has not been added to sections or chapters of the SEIR that were not recirculated including climate change impacts and water supply. Moreover, CEQA Guidelines Section 15088.5 does not trump the legal principles of res judicata and collateral estoppel. Further, as set forth above, wildfire impacts were adequately analyzed in RPDSEIR.

Response H: Regarding revised alternatives, the RPDSEIR purports, based on applicant-prepared studies, that full creek avoidance is infeasible for geotechnical reasons. The RPDSEIR deems the PCAA as the Environmentally Superior Alternative. Prepared as a result of the court ruling, it reduces impacts to Grasshopper Creek by 20% and improves wildlife connectivity in the northern part of the site, while retaining all housing. The RPDSEIR notes that the PCAA does not meet the Open Space/ Recreational Area Goal to the same extent as the proposed Project because there would be 37 acres less Recreation/Park. However, there would still be 130 acres of Recreation/Park. This is a very substantial amount. There is no showing that 130 acres is inadequate, that land uses could not otherwise be rearranged, or that the increased natural open space of unfilled Grasshopper Creek does not provide a compensatory benefit. An alternative can be adopted even though it does not satisfy every goal as much as the proposed Project. The PCAA is fully feasible.

5. Violation of CEQA and State Planning and Zoning Law.

Response: As set forth in the Notice of Completion and Availability, the County only circulated for review and comment the RPDSEIR, which revises the SEIR as directed by the Court. Given that the revision is limited to certain chapters and portions of the SEIR, CEQA Guidelines section 15088.5(c) only requires the County to recirculate the RPDSEIR. The limited purpose of the RPDSEIR is to correct the three specific defects in the SEIR that the court ruled violated CEQA. Under the law, the County is not required to revise and recirculate other portions of the SEIR, which were upheld by the court and remain compliant with CEQA.

6. Inconsistency with the General Plan.

Response: Regarding the General Plan Safety Element, CBD did not provide any new information regarding wildfire requiring additional review or analysis. Their comment letter was fully responded to in the RPFSEIR. RPDSEIR wildfire analysis and the Wildfire Technical reports (RPDSEIR Appendices D-1, D-2 and K) comply fully with the requirements of CEQA and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act*." The built environment generally consists of the 5 Freeway to the west which runs the length of the Project site; residential neighborhoods to the South, the Castaic Lake Recreational Area to the East and the Templin Highway to the North. The Wildland Fire Risk Report determined that under all ten modeled wildfire scenarios, evacuation would take place within the allowable limit.

HOUSING ACCOUNTABILITY ACT (HAA) APPLICABILITY

The HAA applies to Northlake Phase 1. The HAA limits a local government's ability to deny, down-size, or render infeasible housing development projects containing either affordable or market-rate housing units. According to the California Department of Housing and Community

Development's Housing Accountability Act Technical Assistance Advisory published on September 15, 2020, a local agency shall not deny, down-size, or render a housing development infeasible if it complies with applicable, objective general plan, zoning, and subdivision standards and criteria, including design review standards, in effect at the time the application was deemed complete (insert date in here and/or document), unless written findings supported by a preponderance of evidence (evidence for denying Northlake Phase 1 outweighs the evidence for supporting it) on the record that both of the following conditions have been met:

1. Northlake Phase 1 will have a specific, adverse impact upon public health or safety unless Northlake Phase 1 is denied or approval conditioned to be developed at a lower density (i.e., a significant, quantifiable, direct and unavoidable impact based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete).

2. There is no feasible method to satisfactorily mitigate or avoid the adverse impact. Feasible means capable of being accomplished in a successful manner within a reasonable time period, taking into account economic, environmental, social, and technological factors.

For a Project to qualify for the protections included in the HAA, it must meet the definition of a housing development project. Northlake Phase 1 qualifies as a housing development Project because it consists of more than one residential unit and is consistent with the General Plan, Zoning, and development standards.

Violation of the HAA will subject the County to paying attorneys' fees and could result in substantial fines against the County in a successful court action. A court must award attorneys' fees to a party successfully challenging the County for violating the HAA. In addition, the court also must issue an order requiring compliance with the HAA. The County then must comply with that order within 60 days or be subject to, at a minimum, a penalty of $10,000 per housing unit proposed by the Project. Therefore, it is imperative that the County comply with State law, specifically the HAA, when approving or disapproving housing development Projects.

ENVIRONMENTAL DOCUMENTATION

The Northlake Phase 1 DSEIR was released on May 2, 2017, and circulated for a 45-day public review and comment period ending on June 15, 2017. Following the close of the public comment period on the DSEIR on June 15, 2017, detailed responses to all public agency comments and comments received from members of the general public received regarding Northlake Phase 1 and the analyses of the DSEIR were prepared and were contained in the FSEIR.

An Errata was released in February 15, 2018, prior to the Commission hearing to make minor technical corrections to the SEIR and to provide further information in response to public

comments received prior to the Commission meeting. The Errata included only minor technical changes to the SEIR and additional information to support the SEIR's conclusions, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. At the February 21, 2018, public hearing, the Commission requested that the Subdivider include an affordable housing component in the Project. Based on this request, the Subdivider made minor revisions to the Project analyzed in the SEIR to include an affordable component. An Errata dated April 4, 2018, was prepared which concluded that the revisions involve only minor changes to the distribution of land uses and an overall reduction in density and intensity or use, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. On April 18, 2018, the Commission adopted the required findings, certified the SEIR, and granted the requested Project approvals.

On April 23, 2018, appeals were filed by CBD, the Santa Monica Mountains Conservancy, and the Golden State Environmental Justice Alliance. A Second Errata dated August 2018, was prepared to make minor technical corrections in the SEIR and to provide further information in response to public comments at the Commission meeting.

On September 25, 2018, the Board of Supervisors (Board) held a public hearing on Northlake Phase 1 and the appeals and voted to reject the appeals, uphold the Commission approvals, and certify the SEIR. On April 2, 2019, the Board adopted the Northlake Phase 1 entitlements, CEQA findings, SOC, and MMRP, and Northlake Phase 1 conditions.

A Petition for Writ of Mandate was filed in May 2019, challenging Northlake Phase 1. The Los Angeles Superior Court's ruling in Center For Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al, Case No. 19STCP01610, dated January 11, 2021 (Court Ruling), granted in part and denied in part the Petition for Writ of Mandate. Specifically, the Court Ruling held that the SEIR for Northlake Phase 1 failed to comply with CEQA because it contained: (1) inadequate alternatives analysis (for failing to fully analyze a creek avoidance alternative); (2) inadequate WST baseline assessment and, therefore, inadequate mitigation (to recreate baseline conditions; mitigation inadequate in detail and commitment); and (3) improper deferred mitigation as to rare plants (measure lacked sufficient detail).

The Court denied the Petition for Writ of Mandate regarding: (1) impacts to mountain lions/wildlife crossings, (2) aesthetics, (3) air quality/public health, (4) wildfire impacts, and (5) recirculation.

These findings incorporate by reference, as if fully set forth herein, the CEQA Supplemental Findings of Fact and SOC regarding the RPFSEIR for Northlake Phase 1, which are attached hereto as Exhibit F. As stated in the Findings of Fact, the PCAA is the environmentally superior alternative among the project alternatives summarized in the RPDSEIR. As identified in the RPDSEIR, after implementation of the MMRP, Northlake Phase 1 would not result in any new or substantially more severe significant impacts.

The County Department of Regional Planning prepared an RPDSEIR. The document did not revise the original SEIR in any respect other than as directed by the Court and was limited to a few portions of the SEIR. Pursuant to CEQA Guidelines Section 15088.5(c), the County only needed to recirculate the portions of the SEIR that were modified by the RPDSEIR. The County did not recirculate the other portions of the SEIR for public review and comment because those portions were not modified.

The RPDSEIR was made available for public review and comment pursuant to State CEQA Guidelines Section 15087. Copies of the RPDSEIR and appendices were available for a review period of 45 calendar days from April 14, 2025, to May 29, 2025. As CEQA Guidelines Section 15088.5, subdivision (f)(2) permits, the County requested that the scope of public comment be limited to the material that was addressed within the text of the revised portions and the appendices included in the RPDSEIR. The RPFSEIR was completed in June 2025.

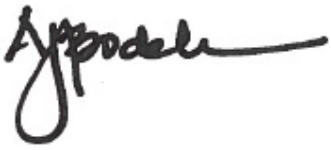
IMPACT ON CURRENT SERVICES (OR PROJECTS)

Once Northlake Phase 1 is approved, there will be a need for County services. Approval of the Project is not anticipated to have negative impacts on projects and services, inclusive of all conditions of approval, mitigation measures, and payment of all required development fees

CONCLUSION

In conclusion, staff recommends that the Board deny the appeal and affirm the actions of the Commission. For further information, please contact Mr. Jodie Sackett of the Subdivisions Section at (213) 893-7409 or jsackett@planning.lacounty.gov.

Respectfully submitted,



Amy J. Bodek, AICP
Director of Regional Planning

AJB:DD:SMT:JSH:JDS:lm

Attachments

1. Correspondence Received After Cutoff for RPC Hearing
2. RPC Approval Package
3. RPC Hearing Package
4. RPC Supplemental Hearing Package
5. RPC Second Supplemental Hearing Package
6. RPFSEIR (December 2025)
7. Notice of Availability (NOA) (Narrative Summary)
8. RPDSEIR (Part I)
9. RPDSEIR (Part II)
10. RPDSEIR (Part III)
11. Photo Location Exhibit

c: Executive Office, Board of Supervisors
Assessor
Chief Executive Office
County Counsel
Public Works
Fire
Parks and Recreation
Public Health

S_CP_03242026_PROJECT_NO_ R2015_00408_5_NORTHLAKE_BL_REVISED_21826_AJB

January 26, 2026.

I printed out only the first page to save on paper. The full 58 page letter is included with the references on the USB drive

Theresa Relfe

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2026 JAN 27 PM 2:31

January 26, 2026

Sent via email, with references via FTP and FedEx

Chair Michael R. Hastings and Members of the
Regional Planning Commission
Los Angeles County Department of Regional Planning
320 West Temple St.
Los Angeles, CA 90012
commission@planning.lacounty.gov
comment@planning.lacounty.gov

Re: January 28, 2026 Regional Planning Commission Meeting Agenda Item No. 7 – Northlake Development (Project No. R2015-00408-(5))

Dear Chair Hastings and Members of the Regional Planning Commission:

These comments are submitted on behalf of the Center for Biological Diversity (the "Center") regarding the proposed Northlake Development ("Project"). The Center has reviewed the Recirculated Partial Final Supplemental EIR ("EIR") closely and remains concerned that the EIR's analysis of, *inter alia*, biological resources, wildfire, and transportation impacts is inadequate. The Center urges the Regional Planning Commission ("Commission") not to approve the Project without first remedying these deficiencies.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has members and online activists throughout California and the United States. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County.

I. The RPFSEIR Fails to Adequately Assess and Mitigate the Project's Impacts to Mountain Lions and Wildlife Connectivity.

The RPFSEIR fails to appropriately respond to the Center's comments regarding mountain lions and wildlife connectivity, stating "[w]ith respect to the portions of the SEIR that were not recirculated, the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of those issues states" (RPFSEIR at 2-22) and that "[c]ollateral estoppel bars relitigation of the mountain/wildlife movement *[sic]* and connectivity issues" (RPFSEIR at 2-24). However, as discussed in the Center's May 29, 2025 comment letter, new and significant information regarding the conservation status of local mountain lions and the increasing threats they face, the movement of at least one mountain lion adjacent to the Project area, and the

Jodie Sackett

From: Chris Dittes <dittes.catc@gmail.com>
Sent: Tuesday, January 27, 2026 10:27 PM
To: Jodie Sackett
Subject: Late-Breaking Safety Information – Agenda Item 7 (Northlake Phase 1) – Request for Continuance

CAUTION: External Email. Proceed Responsibly.

Subject: URGENT – Late-Breaking Safety Information for Agenda Item 7 (Northlake Phase 1) – Omission of 34-inch SoCalGas Transmission Line from RPFSEIR

To: jsackett@planning.lacounty.gov; (cc) Commission Secretary; (please forward to Commission Secretary for distribution)
Date: 01-27-26

Re: Agenda Item 7 – Northlake Phase 1 (Project No. R2015-00408; VTTM 073336; VTPM 073335; CUP RPPL2023004316)

Dear Commissioners:

As a resident of the existing Northlake Neighborhood, representing region 5 on the Castaic Area Town Council, and directly affected by the gas pipeline accident, I respectfully ask that this statement requesting a continuance, be reviewed with the January 28, 2026 hearing for this project. Due to the critical nature of the incident, I ask that it also be included in the official project package. Recent developments regarding this gas pipeline have raised an environmental safety issue that has not been sufficiently evaluated in past or current revisions of the EIR.

Summary. The **Recirculated Partial Final Supplemental EIR (RPFSEIR)** and hearing package for Northlake **omit** a known **34-inch SoCalGas high-pressure gas transmission line**—including its **hazard footprint, potential impact radius, and mitigation.** The package seeks **final certification of the RPFSEIR** and adoption of the **MMRP** at the January 28, 2026 hearing. Because the gas transmission line is **not analyzed** anywhere in the environmental record provided to the Commission, the County **cannot lawfully certify** the RPFSEIR or approve the entitlements at this time. I respectfully request a **continuance** and direction to staff to prepare a focused, site-specific pipeline hazard and consequence analysis with enforceable mitigation/avoidance before any approvals. [Northlake...ined final | PDF]

What the County's package shows.

- The staff report requests that the RPC **certify the RPFSEIR**, **adopt the MMRP**, and **approve** the maps/CUP on **Jan 28, 2026 (Agenda Item 7).** [Northlake...ined final | PDF]
- Project drawings and legal exhibits list **Southern California Gas Company** as the gas utility and label **"EXIST 34" GAS," "GAS LINE CROSSING,"** and related gas easements across the site. **No PHMSA/49 CFR 192** analysis appears; there are **no hazard radii, no setback standards, no leak-detection/isolation commitments,** and **no pipeline-safety mitigation** in the hearing package. [Northlake...final.pdf | PDF]

Why this is a CEQA defect. CEQA requires disclosure/analysis of **significant hazards** and adoption of **enforceable mitigation before approval**. Gas transmission lines in **High Consequence Areas (HCAs)** require risk-based integrity management under **PHMSA's 49 CFR Part 192, Subpart O**, which uses **potential impact radius** concepts linked to occupied structures. It is **not sufficient** to rely on general regulatory compliance without analyzing **how the project's land uses interact with the hazard** and without **objective performance standards** (e.g., setbacks, isolation valves, leak detection, emergency access). Approving the project and certifying the RPFSEIR **without any analysis** of the 34-inch line would be an **impermissible failure to disclose** and an **improper deferral of mitigation**. [case.plann...county.gov], [regulation...justia.com]

Requested Commission action.

1. **Continue** Agenda Item 7 and direct staff to prepare a **site-specific gas transmission hazard and consequence analysis** that: (a) identifies the **HAIA** (hazard analysis influence area) using PHMSA methods; (b) models credible rupture/thermal/overpressure scenarios; and (c) establishes **setbacks/controls** for land uses, schools, senior housing, and high-occupancy spaces. [case.plann...county.gov]
2. Direct staff to bring back **enforceable mitigation/avoidance** (MMRP) and **"permit gate" conditions** that **prohibit grading/building/occupancy** within the HAIA until objective pipeline-safety **performance standards** (integrity verification, automatic/remote isolation, leak detection, emergency coordination) are **independently verified**. (Suggested language attached below.) [regulation...justia.com]

Conclusion. Given the complete omission of a known **34-inch SoCalGas transmission line** from the environmental analysis, the Commission should **not certify** the RPFSEIR or grant approvals at this time. A short continuance will allow staff to correct the record and present enforceable, site-specific pipeline safety measures commensurate with the risk.

Respectfully submitted,
Chris Dittes

[phone/email]

Evidence references for the administrative record (for staff/Commission use):
– **Staff Report** (Jan 15, 2026) showing requested **RPFSEIR certification** and MMRP adoption for **Jan 28, 2026, Item 7**.
– **Map/plan sheets** noting **"EXIST 34" GAS," "GAS LINE CROSSING,"** and gas-utility/easement callouts without safety analysis.
– **PHMSA Subpart O** (49 CFR Part 192) establishing HCA/potential impact radius-based integrity management for **gas transmission pipelines**.
– **CEQA "deferral of mitigation" guidance/case law**: mitigation must be **committed** with

objective standards before approval; agencies cannot "approve now, study later." [Northlake...ined final | PDF] [Northlake...final.pdf | PDF] [case.plann...county.gov] [regulation...justia.com]

-–

Regards,

Chris Dittes
Northlake Resident, and CATC Director, Region-5
dittes.catc@gmail.com
661-645-5378

MOUNTAINS RECREATION & CONSERVATION AUTHORITY
King Gillette Ranch
26800 Mulholland Highway
Calabasas, California 91302
PHONE (818) 878-0886

January 26, 2026

Planning Commission
Los Angeles County Department of Regional Planning
320 West Temple Street
Los Angeles, California 90012

Recirculated Partial Final Supplemental Environmental Impact Report for the Northlake Phase 1 Project No. R2015-00408, etc., Not in Compliance with CEQA

Dear Planning Commissioners:

The Mountains Recreation and Conservation Authority (MRCA) recommends the Los Angeles County Planning Commission (Commission) find that the Recirculated Partial Final Supplemental Environmental Impact Report (RPFS-EIR) for Northlake Phase 1 Project No. R2015-00408, Vesting Tentative Tract Map No. 073336, Vesting Tentative Parcel Map No. 073335, and Conditional Use Permit No. RPPL2023004316 (Project) is not in compliance with the California Environmental Quality Act (CEQA) and deny the Project as presented to the Commission.

The supplemental findings of fact in the RPFS-EIR are unequivocally incorrect and inconsistent with Public Resources Code Sections 21081 and State CEQA Guidelines Section 15091 as the proposed Project requires compensatory mitigation to be performed on MRCA lands without consultation of, agreement with, or approval by the MRCA. Specifically, the RPFS-EIR identified southwestern spiny rush (*Juncus acutus*) occurrences on MRCA-owned lands to satisfactorily mitigate adverse impacts to documented southwestern spiny rush within the Project (see RPFS-EIR Mitigation Measure [MM] 5.2-5c). On October 5, 2022, the MRCA Governing Board approved MRCA Resolution No. 22-138 entering into a Mitigation Agreement pursuant to California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement 1600-2015-0271-R5 (and other regulatory permits) with Lennar Homes of California, LLC, to perform habitat mitigation on MRCA property in Marple Canyon associated with the Habitat Mitigation and Monitoring Plan for the Aidlin Hills Residential Project. MRCA has initiated this habitat restoration work in Marple Canyon and cannot provide the requisite off-site southwestern spiny rush compensatory mitigation as outlined in RPFS-EIR MM 5.2-5c.

Further, the proposed Partial Creek Avoidance Alternative (PCAA) would irreparably impact wildlife usage of an oversized box culvert below southbound Interstate 5 (I-5) on MRCA-owned land that provides protected wildlife crossing of I-5 between Marple and Grasshopper Canyons. Deterrence of wildlife use of this protected I-5 crossing in the regionally significant, multi-agency designed *Sierra Madre-Castaic Connection* linking the Southern California Ecoregion with the Tehachapi and Sierra Nevada ranges would result in additional wildlife-vehicle collisions on I-5 and Ridge Route Road and further reduce

the genetic viability of Central Coast and Southern California mountain lion (*Puma concolor*)—a candidate species for protection by California Endangered Species Act (CESA). Given the public trust doctrine codified by Fish and Game Code Section 1600 that wildlife (and their habitat) are held in trust for the people and the protection and conservation of fish and wildlife is of utmost public interest, the Commission has an opportunity to appropriately deny the Project while satisfying the requisite conditions of the Housing Accountability Act (HAA) whereby the Project has (1) specific, adverse impacts upon public health or safety and (2) no feasible method to satisfactorily mitigate or avoid these impacts as related to southwestern spiny rush and mountain lion.

Recent wildfires in the immediate vicinity of the Project include: Holser Fire (2020), Castaic Fire (2020), Route Fire (2021), Route Fire (2022), Hughes Fire (2025), and Canyon Fire (2025). See attached MRCA – Northlake 20-Year Fire Recurrence Map for reference. Repeat fires in the same area over a short interval often result in habitat type change where former oak woodlands are converted to chaparral shrublands and chaparral shrublands are converted to grasslands—each successive type change results in more fire prone, faster burning fuel types. Because the proposed Project's development is sited over one mile from the nearest planned residential developments along Pine Crest Place, the Project unnecessarily fragments habitat and creates a fire-vulnerable island of development surrounded by flashy fuels.

The Project's "planned" expansion of the wildland-urban interface in a California Department of Forestry and Fire Protection (CalFire) designated Very High Fire Hazard Severity Zone (VHFHSZ) endangers the public health and safety of future residents and overburdens local and mutual-aid fire departments tasked to defend ever expanding suburban sprawl. Additionally, the Project Area regularly receives high wind warnings issued by the National Weather Service to alert the public about dangerous weather conditions. As evidenced by the Palisades and Eaton Fires (2025), high wind events and wildfires can overwhelm home-hardening defenses and on-the-ground fire suppression, prevent aerial fire containment, and result in extensive destruction to life and property.

Given the extensive liabilities the County is experiencing from the Palisades and Eaton Fires (2025), the Commission should not further imperil the public, first responders, or the County's fiscal solvency by approving 2,295 new residential units in a VHFHSZ with at least one decaying 34-inch, 600-psi petroleum pipeline running through failure-prone hillsides. The Commission should also recognize the unmitigated threat the Project poses to habitat (including southwestern spiny rush) and habitat connectivity that supports the persistence of State-protected mountain lions in Southern California.

The County must also ensure the Project applicants, developers, financiers, future residents, and insurance providers sufficiently understand the multitude risks of living next to a 34-inch, 600-pounds-per-square-inch pressured petroleum pipeline that ruptured on December 27, 2025, and forced thousands of area residents and visitors to shelter in place. Preliminary investigation indicates the gas pipeline exploded after a minor landslide below Ridge Route Road, on or near LA County APN 3244-014-050 owned by Northlake

Associates LLC, and approximately 250 feet from the primary ingress/egress for the Project. See attached MRCA – Northlake Gas Line Rupture Map for reference. Since there are other aging pipelines that run through the PCAA footprint, the Project's evaluation of hazards must include assessments of each petroleum pipeline, the adequacy of performed pipeline maintenance, and the planned future pipeline maintenance and/or replacement schedule(s) in the Project Area. The Project applicant must also prepare public outreach materials for all future residents (fee owners and renters) outlining emergency preparedness information about how to minimize sensitive-receptor exposure to any future gas line ruptures. Similar sensitive-receptor information should be prepared for future residents for information regarding the nearby Chiquita Canyon Landfill that is unable to abate toxic air pollution derived from uncontrolled decomposition of landfill waste. Commercial businesses within the Project must be required to publicly and prominently display emergency evacuation routes and effective methods to shelter in place.

In 2025, MRCA completed a Wildlife Conservation Board (WCB) funded implementation project to improve 2.5 acres of cover and forage for wildlife at the above-mentioned box culvert I-5 crossing on MRCA land. Throughout the course of this state-funded project that initiated in April 2020, MRCA's wildlife cameras documented several species using the I-5 culvert including: lion, deer, bobcat, coyote, roadrunner, quail, and weasel. Attached are select photos (see MRCA Marple Canyon Photo Exhibit) that document wildlife that will be directly impacted by Project construction and prevented from using this critical connectivity point across the 26-mile-plus I-5 wildlife barrier from State Route 138 (SR 138) to State Route 126 (SR 126) as identified on the Project's PCAA Exhibit 2 map. The same PCAA Exhibit 2 map also delineates presumed wildlife dispersal routes through the Project where wildlife will have to cross a new, at-grade, 64-foot-wide "Modified Industrial Collector" and several crossings of new, at-grade, 40-foot-wide "Local Collector" streets to travel between Grasshopper Canyon and Marple Canyon.

Grasshopper Canyon is currently undeveloped except for overhead and underground utilities and unpaved roads to service these utilities—virtually no barriers to wildlife movement. By developing Grasshopper Canyon, even with the reduced grading footprint for the PCAA, wildlife will be irreparably harmed by the Project's impacts to existing wildlife dispersal routes and forced to cross new Project roads that do not incorporate any avoidance or mitigation measures (such as oversized culverts or bridge spans, habitat cover to reduce vehicle noise and light impacts, etc.) that can facilitate east-west wildlife movement through the Project. The proposed "emergency vehicle access" road to the new school site will connect to Ridge Route Road within 450 feet of the I-5 crossing structure on MRCA property. At minimum, this school service road must be realigned to the south, as shown on MRCA – Northlake Road Alignment Alternative Map, to avoid and/or mitigate additional impacts to this existing I-5 wildlife crossing route of regional significance.

The proposed PCAA school service road's connection with Ridge Route Road is dangerously close (within 200 feet and on a slight curve) to the Marple Canyon access

road used by MRCA, Southern California Edison, SoCalGas Company, and contractors to enter and exit Marple Canyon. The gate at this location is a double-arm swinging gate and there is minimal room for parking along Ridge Route Road to unlock or close the gate. As designed, the school's service road will endanger authorized work crews and the public traveling Ridge Route Road. At minimum, the school service road should be moved to approximate the orientation shown in MRCA – Northlake Road Alignment Alternative Map; however, MRCA recommends a formal traffic study to align with appropriate site distances and intersection design criteria set forth in the California Highway Design Manual as Ridge Route Road is often used as a bypass for I-5 during extreme traffic conditions.

In furtherance of the multi-agency designed *Sierra Madre-Castaic Connection* to identify the least-cost corridor for movement of priority indicator species between the Tehachapi Range and the Transverse Ranges of Southern California, MRCA is conducting a project in coordination with California Department of Transportation (Caltrans), CDFW, U.S. Geological Survey (USGS), and other partner organizations, to study the 26-mile stretch of Interstate 5 (I-5) between SR 138 and SR 126 for wildlife permeability and opportunities to improve wildlife connectivity across I-5. CDFW and Caltrans have each designated this section of I-5 as a barrier to wildlife movement and genetic contact between increasingly homogenous Southern California species with their more heterogenous populations of the Tehachapi and Sierra Nevada mountain ranges.

Preliminary MRCA I-5 study data indicates the oversized box culvert on MRCA property below the southbound I-5 regularly transmits priority megafauna between Marple and Grasshopper Canyons. Complementary mountain lion field work is being collected by U.C. Davis's California Carnivores Program in coordination with U.S. Forest Service to determine how regional lions are, or are not, able to cross I-5. The U.C. Davis project has only recently collared a mountain lion west of I-5 near the Project Area; however, the extent of tracked mountain lion movement data, compared to mountain lion roadkill data, indicates that lions confined east of I-5 and south of SR 138 have limited points of access westerly across I-5 and any further reductions in wildlife connectivity across I-5 associated with the proposed Project will represent cumulative, avoidable impacts to a CESA-protected species. See MRCA – Northlake Puma Observation Map for reference.

Adding additional vehicle traffic to Ridge Route Road to serve the Project's 2,295 new residential units will reduce wildlife approaches to the CDFW and Caltrans recognized I-5 barrier and force wildlife to attempt dangerous at-grade crossings or attempt to use the northern Marple Canyon box culvert identified on PCAA Exhibit 2 that leads directly to an existing paintball/airsoft park that severely dissuades wildlife connectivity. Extensive roadkill data compiled for MRCA's I-5 wildlife connectivity study indicates Project development of Grasshopper Canyon will result in addition roadkill of priority megafauna species including mountain lion, mule deer, black bear, bobcat, coyote, and fox. Increased wildlife-vehicle collisions resultant from the Project will similarly endanger vehicle occupants, increase insurance costs, and increase commerce delays on an already congested I-5.

Through a series of acquisitions facilitated by the Trust for Public Land, in 2022 MRCA completed the 6,000-acre-plus Temescal-Hathaway Ranch acquisition that comprises the bulk of the County-designated Santa Felicia Significant Ecological Area (SEA). Project development would impact wildlife connectivity between Castaic Lake and the Santa Felicia SEA that abuts Ventura County and Lake Piru. Development of 2,295 residential units and associated roadway improvements would irreparably harm wildlife connectivity in this biologically unique and sensitive area between perennial water sources of Lake Piru and Castaic Lake. While Southern California is not currently experiencing drought conditions, climate change science anticipates future droughts punctuated by extreme rainfall events which requires conservation of existing surface water resources and preservation of access to surface water in support of rare, threatened, endangered, or at-risk wildlife.

Considering the threat to public health and safety posed by this Project and the inability of Project applicant to propose mitigation that satisfactorily avoids or mitigates impacts to wildlife and habitat, the Commission is fully justified to deny Project No. R2015-00408, Vesting Tentative Tract Map No. 073336, Vesting Tentative Parcel Map No. 073335, and Conditional Use Permit No. RPPL2023004316.

Please address any correspondence to me by email at chad.christensen@mrca.ca.gov, by phone at (310) 589-3230, ext. 121, or at the above letterhead address.

Sincerely,

Chad Christensen
Deputy Chief
Natural Resources and Planning

Attachments:
MRCA – Northlake Road Alignment Alternative Map
MRCA – Northlake Gas Line Rupture Map
MRCA – Northlake 20-Year Fire Recurrence Map
MRCA – Northlake Puma Observation Map
MRCA – Marple Canyon Photo Exhibit

The following Photo Exhibit accompanies the Mountains Recreation and Conservation Authority (MRCA) January 26, 2026, comments to the Los Angeles County Planning Commission and Department of Regional Planning regarding the Recirculated Partial Final Supplemental Environmental Impact Report (RPFS-EIR) for Northlake Phase 1 Project No. R2015-00408, Vesting Tentative Tract Map No. 073336, Vesting Tentative Parcel Map No. 0733356, and Conditional Use Permit No. RPPL2023004316 (Project) and Project's associated Partial Creek Avoidance Alternative (PCAA) that would irreparable harm regional habitat connectivity and MRCA's completed Marple Canyon I-5 Wildlife Crossing Enhancement Project (WCB Project ID 2019155).

The below Photos 1 though 6 provide sample wildlife camera images of various species documented to live-in and move-through Marple Canyon and Grasshopper Canyon. These representative wildlife camera captures were collected during the term of MRCA's habitat improvement project between April 3, 2020, and November 30, 2025.

Photos 7 and 8 provide overview pictures of MRCA's habitat improvement project to show the ecological lift through removal of non-native, invasive mustards, thistles, and ruderal grasses, establishing container plants of coast live oak, elderberry, coyote brush, mulefat, sagebrush, ceanothus, and toyon while recruiting expansion of native plants such as thickleaf yerba santa, narrowleaf milkweed, and deerweed. Combined, these efforts will provide shade, cover, and forage for wildlife attempting to cross I-5 between Marple and Grasshopper Canyons.

Photos continue on the following pages.



Photo 1. Date: 2020-08-09. California quail (*Callipepla californica*) entering Marple Canyon box culvert below I-5 traveling west to east towards Grasshopper Canyon.



Photo 2. Date: 2020-11-05. Uncollared Mountain lion (*Puma concolor*) exiting Marple Canyon box culvert below I-5 traveling east to west from Grasshopper Canyon into Marple Canyon.



Photo 3. Date: 2021-07-24. Mule deer (*Odocoileus hemionus*) exiting Marple Canyon box culvert below I-5 traveling east to west from Grasshopper Canyon into Marple Canyon.



Photo 4. Date: 2022-04-19. Bobcat (*Lynx rufus*) entering Marple Canyon box culvert below I-5 traveling west to east towards Grasshopper Canyon.



Photo 5. Date: 2022-04-25. Coyote (*Canis latrans*) exiting Marple Canyon box culvert below I-5 and carrying prey capture (apparent ground squirrel).



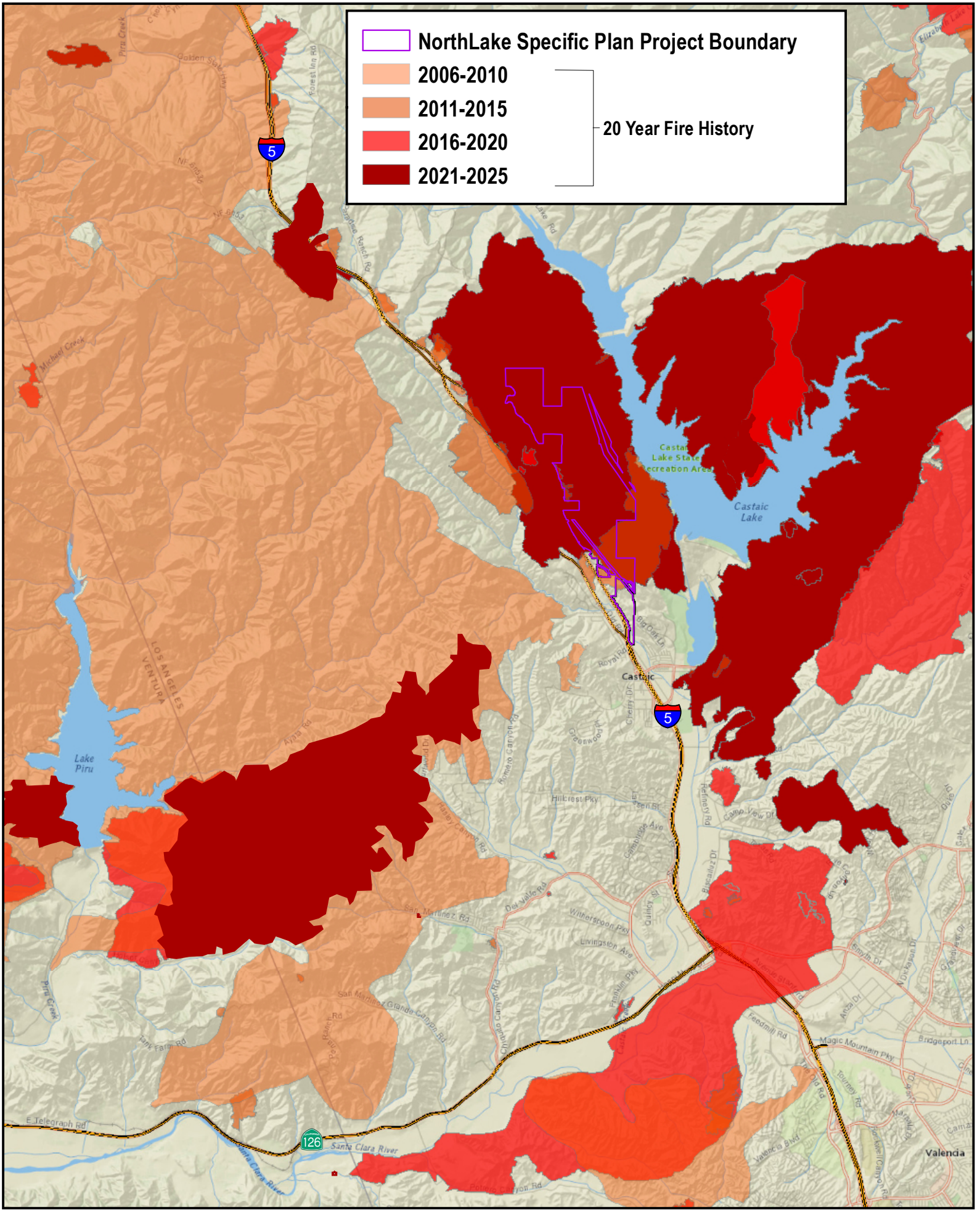
Photo 6. Date: 2022-05-15. Long-tailed weasel (*Neogale frenata*) captured on MRCA wildlife camera at Marple Canyon box culvert below I-5 connecting Grasshopper Canyon to Marple Canyon.



Photo 7. Date: 2020-05-11. Overview of MRCA I-5 Habitat Project area from Photo Monitoring site with box culvert below I-5 visible on right of frame. Note the prevalence of non-native, invasive mustard (yellow flowers) throughout.



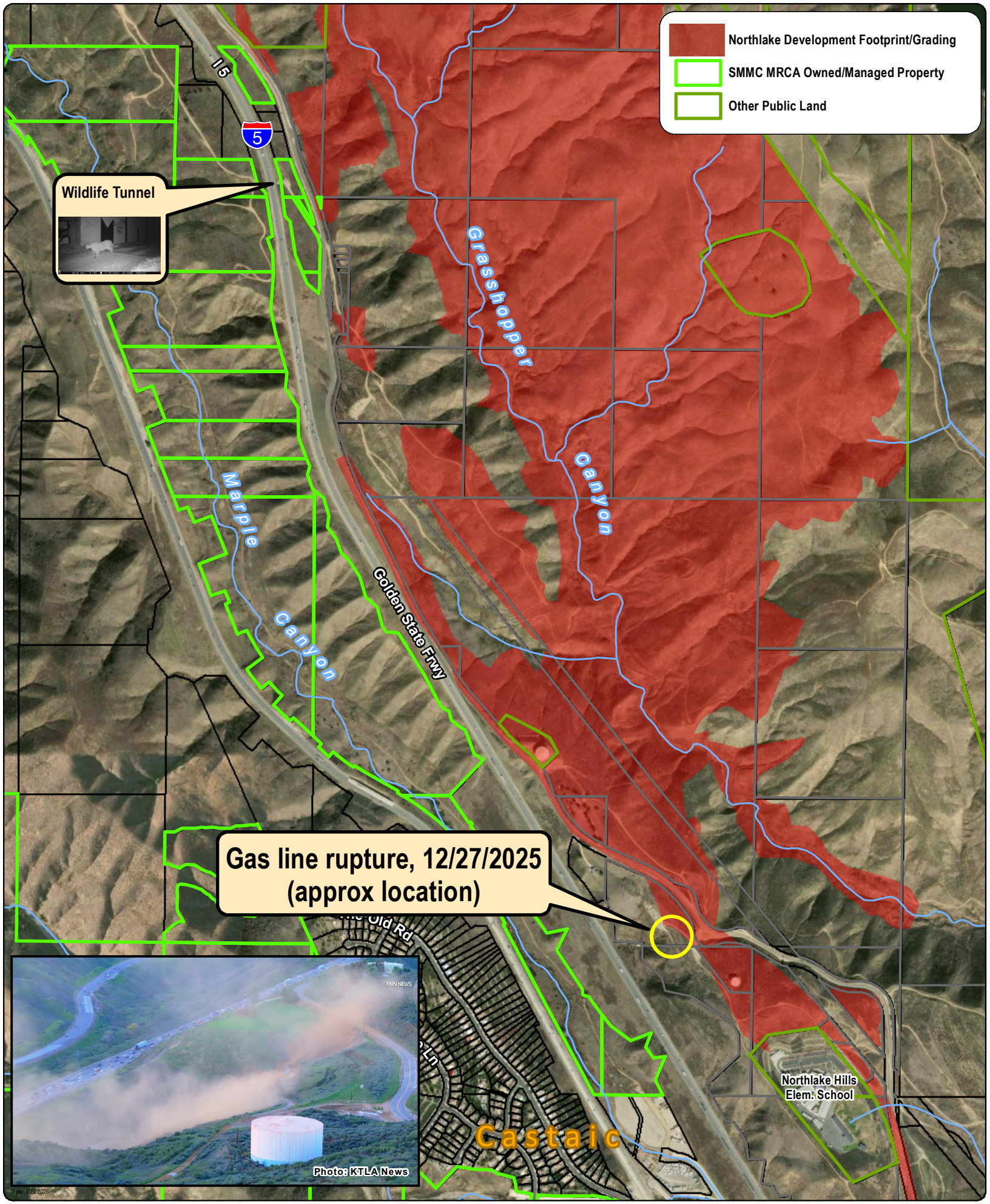
Photo 8. Date: 2025-10-01. Similar view as Photo 7 showing MRCA I-5 Habitat Project area mostly free of non-native vegetation with native “volunteer” and installed container plants established and thriving.



Northlake Project No. R2015-00408 Phase 1

Northlake 20-Year Fire Recurrence Map

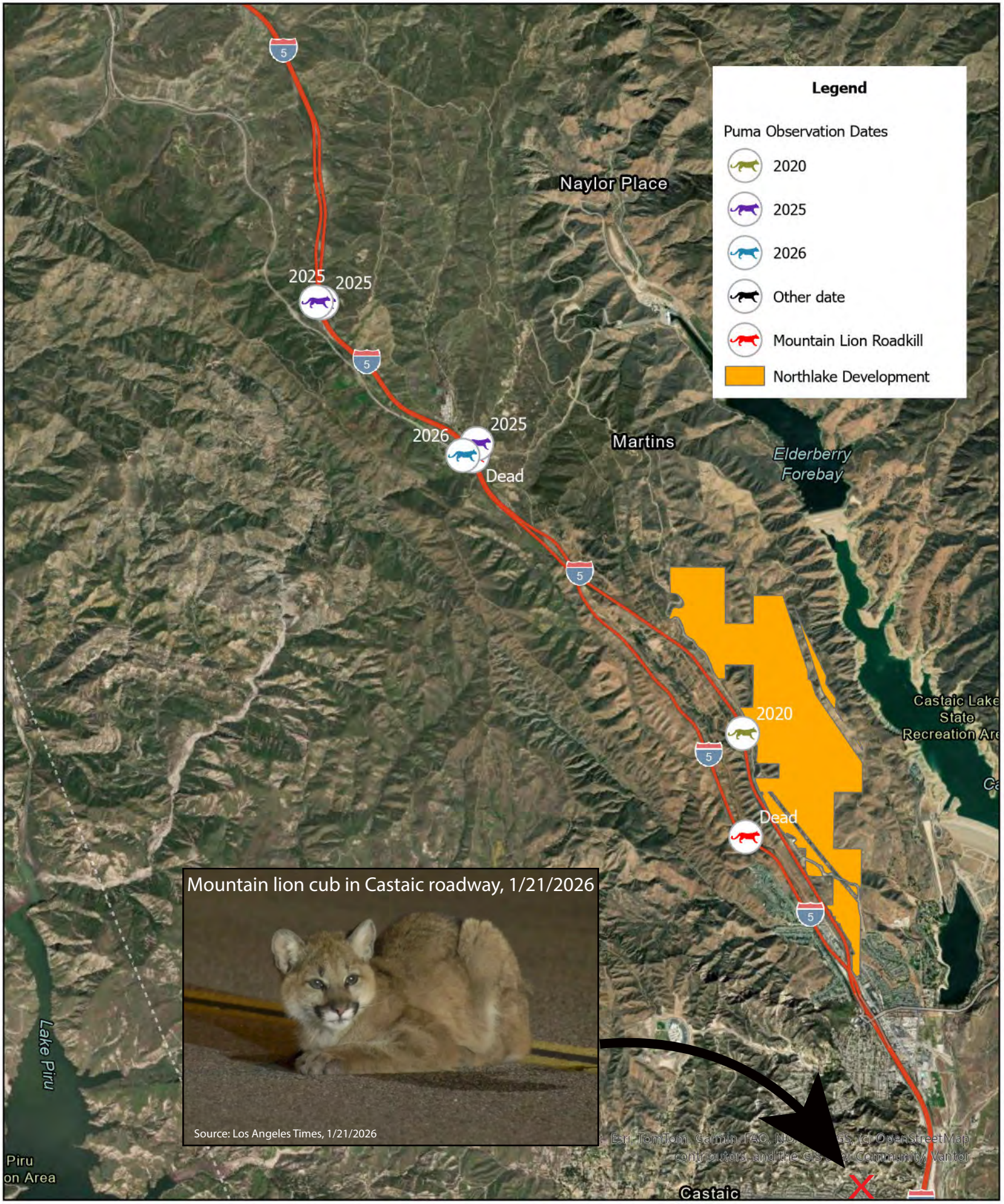
0 0.5 1 Miles



Northlake Project No. R2015-00408 Phase 1

Northlake Gas Line Rupture Map

0 250 500 Feet

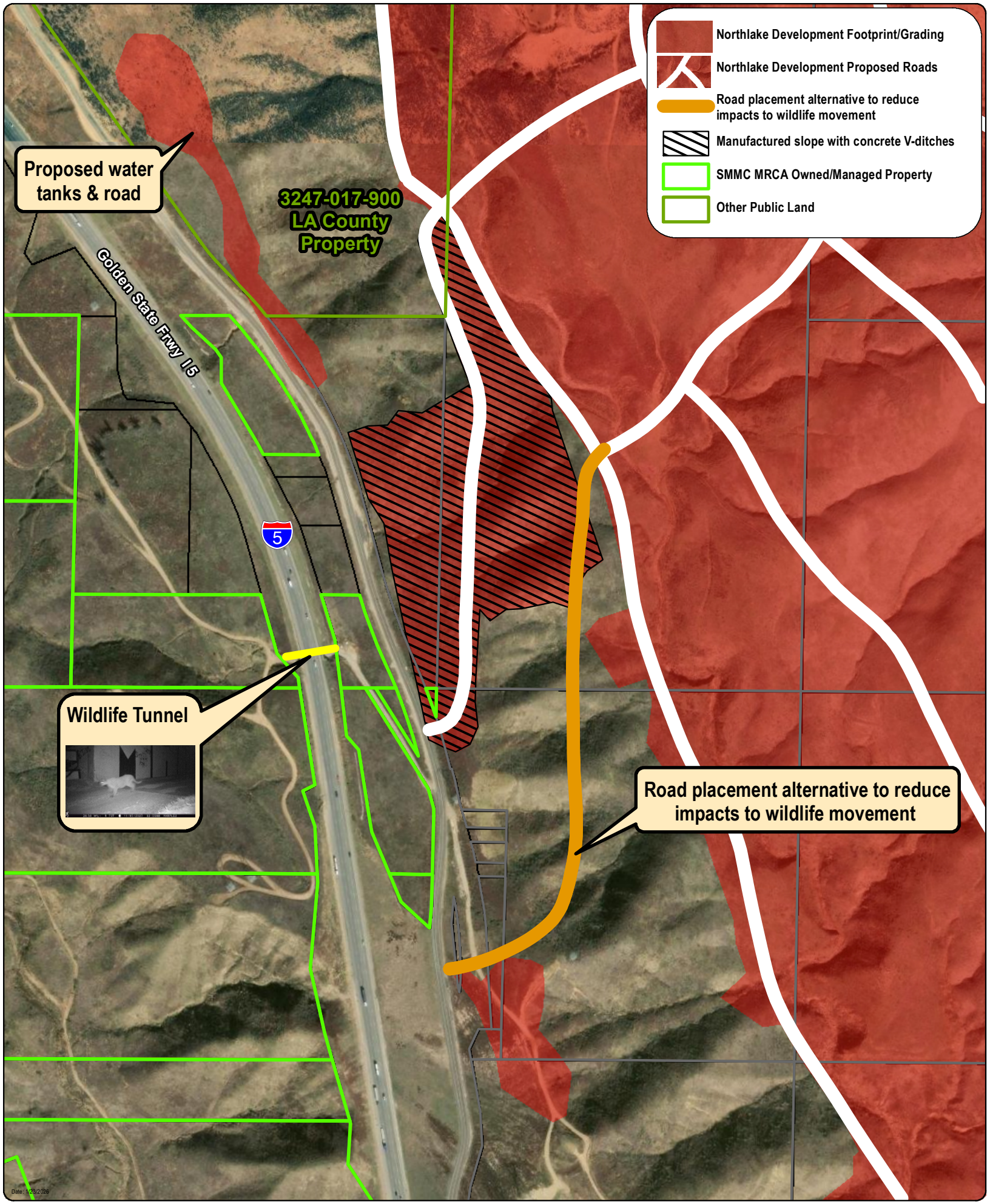


Northlake Project No. R2015-00408 Phase 1

Northlake Puma Observation Map

Source:
UC Davis CA Roadkill Observation System &
wildlife camera data collected 2020,2025-2026

0 0.25 0.5 1 Miles



Northlake Project No. R2015-00408 Phase 1

Northlake Road Alignment Alternative Map

N W E S

0 150 300 Feet

RANCHO SIMI RECREATION AND PARK DISTRICT

SC Wildlands
Science & Collaboration for Connected Wildlands
P.O. Box 1052, Fair Oaks, CA 95628
www.scwildlands.org

January 27, 2026

Members of the Regional Planning Commission
Los Angeles County Department of Regional Planning
320 West Temple St.
Los Angeles, CA 90012
commission@planning.lacounty.gov
comment@planning.lacounty.gov

SUBJECT: Comments Northlake Recirculated Partial Final Supplemental EIR (RPFSEIR)

Many thanks for the opportunity to comment on the proposed Northlake project. SC Wildlands' mission is to protect and restore systems of connected wildlands that support native species and the ecosystems upon which they rely. As such, our comments largely focus on the potential impacts of the proposed project on habitat connectivity and the need to ensure that wildlife movement is maintained.

The monumental importance of maintaining and restoring landscape connectivity between the Sierra Madre and Castaic Ranges across Interstate 5 (I-5) to sustain biodiversity, ecological and evolutionary processes, has sharpened greatly since the Northlake Specific Plan was originally adopted in 1992. Yet, throughout the various environmental review processes that this 33-year-old project has gone through – the significant and irreparable impacts that this project would most certainly cause to habitat connectivity and wildlife movement have never been properly analyzed and disclosed, as is required under CEQA. The landscape-level linkage between the Sierra Madre and Castaic Ranges is arguably one of the most important habitat linkages within the jurisdiction of Los Angeles County. All potential adverse impacts of the proposed project on habitat connectivity and wildlife movement for native resident or migratory wildlife species, including federally and state listed and candidate species, and established wildlife corridors must be evaluated, disclosed and mitigated as required by CEQA.

While SC Wildlands appreciates the modification to the proposed project footprint that eliminated the northernmost approximately 2,200 feet of development, as described in the April 23, 2023 Memo entitled, *NorthLake Partial Creek Avoidance Alternative and Associated Wildlife Movement Enhancements*, the 2-page analysis + maps is utterly insufficient to determine the adverse impacts of the project on habitat connectivity and wildlife movement. As stated in the memo, "The purpose of the biological analysis was to determine the effects on Wildlife Movement of the PCAA," yet the analysis relied entirely on regional least-cost corridor analyses designed to link Roadless Areas within Los Padres and Angeles National Forests (Penrod et al. 2005), with no field component or local analysis. The intent of least-cost corridor analyses is to identify the best potential movement routes between habitat areas targeted by the analysis, it does not identify all potential movement routes of importance at the local scale, as required by CEQA.

SC Wildlands urges the County not to certify this RPFSEIR because significant new information has become available, which is further described below. We implore Members of the Regional Planning Commission to deny Project No. R2015-00408, Vesting Tentative Tract Map No. 073336, Vesting Tentative Parcel Map No. 073335, and Conditional Use Permit No. RPPL2023004316. The County should require a new EIR so that potential impacts to habitat connectivity and wildlife movement can be thoroughly analyzed and disclosed, and appropriate mitigation measures developed, as required by CEQA.

The Sierra Madre-Castaic Linkage (Penrod et al. 2005), first identified at the landmark California Missing Linkages: Restoring Connectivity to the California Landscape (Penrod et al. 2001) is one of several regionally important connections in the South Coast Missing Linkages Network (Figure 1; Beier et al. 2006, SC Wildlands 2008), which is widely considered the backbone of a regional conservation strategy for southern California, stitching together over 18 million acres of existing conservation lands, and maintaining connected wildlife populations from Baja California Norte to the southern Sierra Nevada, and from the beaches of Camp Pendleton eastward to the deserts of Anza-Borrego Desert State Park. The Sierra Madre-Castaic Linkage is an essential landscape connection for east-west connectivity through the South Coast Ecoregion, providing connectivity between mountain ranges within the Transverse Ranges and between the Transverse and Coast Ranges.



Figure 1. South Coast Missing Linkages Network

While it's been over two decades since the Sierra Madre-Castaic Linkage design was completed in 2005, more recent connectivity and climate assessments, such as the California Essential Habitat Connectivity Project (Spencer et al. 2010), Omniscape Present-Day Connectivity (TNC and Conservation Science Partners 2017), Climate Resilient Connectivity for the South Coast Ecoregion of California (Jennings et al. 2019), Resilient and Connected Landscapes (TNC 2020), and Connectivity for Climate Adaptation (TNC 2020, Schloss et al. 2021) have all reinforced the landscape level importance and continued permeability of

the South Coast Missing Linkages Network. Most importantly, several of these subsequent analyses evaluated the connectivity importance of every pixel across California, and highlight the importance of the Northlake project area both under existing conditions and for climate adaptation, as described below.

Numerous wildlife-vehicle collisions resulting in roadkill have been documented between the I-5/SR-138 interchange and the Castaic Creek crossing of I-5, including 66 deer, 16 black bears, 16 foxes or coyotes, 6 mountain lions, and other species (California Roadkill Observation System, Figure 2). A great deal of these roadkill observations is adjacent to the proposed Northlake Project, including two mountain lions with the most recent killed on June 15, 2024. Projected increases in traffic from the proposed Northlake Project, on I-5, Ridge Route Road, and other access routes would likely increase wildlife-vehicle collisions and the potential adverse impacts to wildlife and human safety should be evaluated as part of a new EIR.

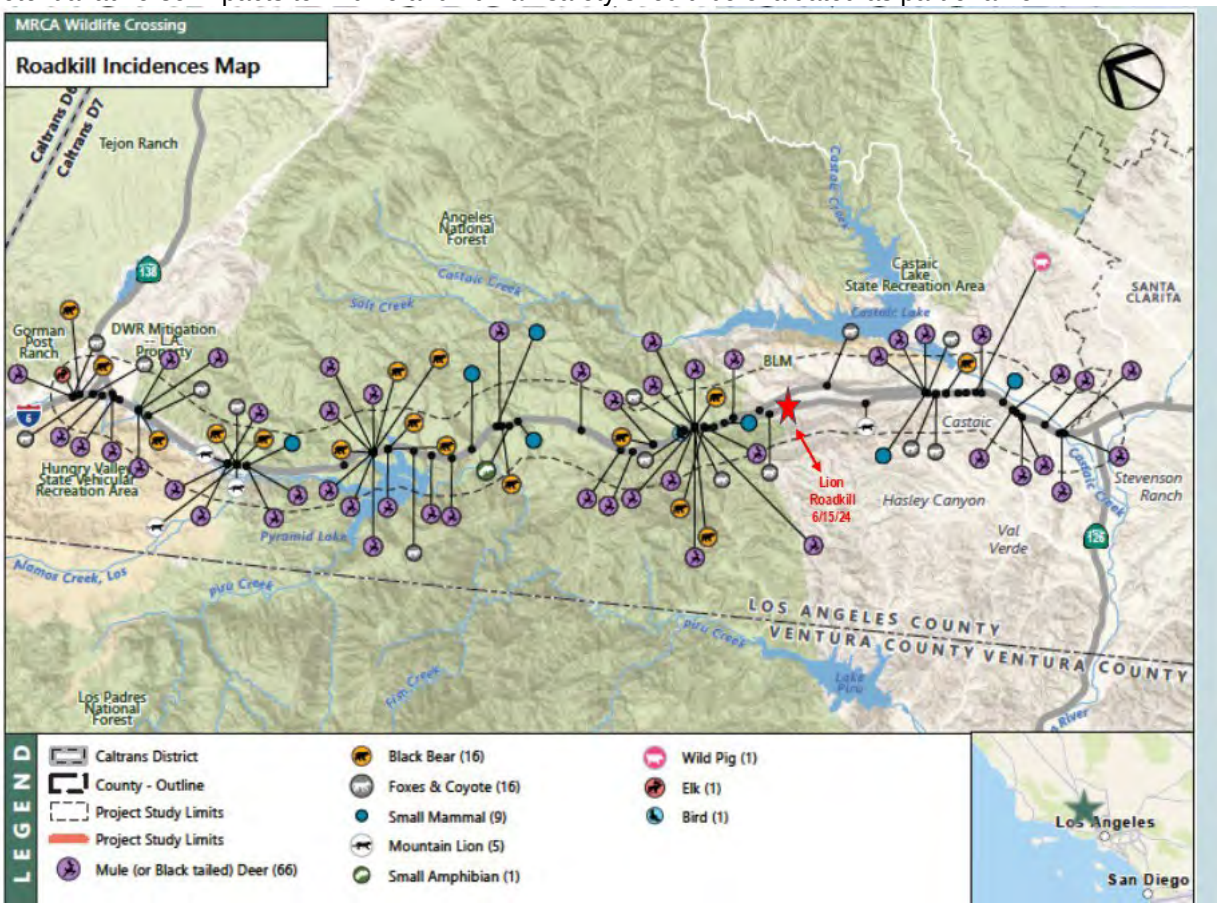


Figure 2. Documented roadkill on I-5 between the Sierra Madre and Castaic Ranges

National Park Service's Santa Monica Mountain Lion Project has been documenting habitat use, movement, and mortality of GPS-collared mountain lions in the Santa Monica Mountains and surrounding region for decades. GPS data shows collared lions have made their way northward into the Sierra Madre Mountains, some crossing several highways along the way, though NPS has not documented successful crossings of I-5. Both P-16 and P-32's dispersal paths (Figure 3) have led them to the eastern Sierra Madre Range directly across from the Proposed Northlake Development, where P-32 was hit on I-5.

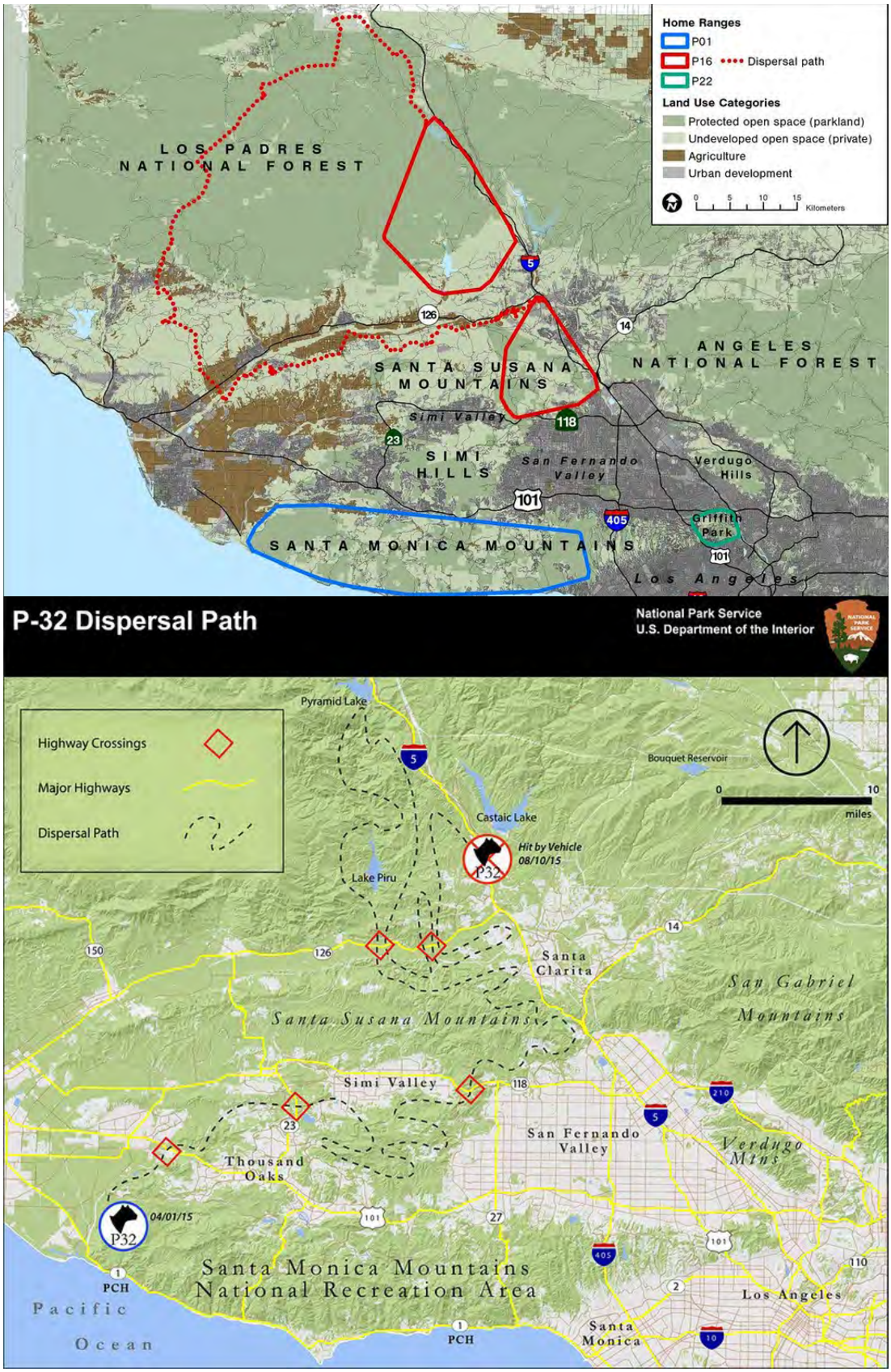


Figure 3. Mountain lion dispersal pathways (National Park Service Santa Monica Mountain Lion Project)

While the barrier effects of I-5 have been well documented, there is also extensive new data documenting wildlife passage across I-5. Mountains Recreation and Conservation Authority (MRCA) conducted camera trap surveys at a box culvert under I-5 on their Marple Canyon property that lies within the median of the north and southbound lanes, directly adjacent to the Proposed Northlake Development. Mountain lion, bobcat, coyote, and mule deer have been detected using this structure (C. Christensen, MRCA, pers. comm.). Wildlife Conservation Board (WCB) recently granted MRCA funding to restore habitat in and around this crossing structure to provide cover and screen nighttime lighting due to its strategic importance



Camera data documenting wildlife use of I-5 box culvert at Marple Canyon directly across from proposed Northlake Development (Mountains Recreation & Conservation Authority).

for wildlife movement and maintaining the genetic viability of mountain lion populations in this part of the Transverse Ranges. MRCA also recently purchased the 6,065-acre Temescal Ranch in the designated Santa Felicia Significant Ecological Area (SEA; LA County 2019) directly west of their Marple Canyon property and the proposed Northlake Development in order to conserve landscape connectivity and core habitat in the foothills of the Sierra Madre and Castaic Ranges.

California Department of Fish and Wildlife (CDFW) has identified a Wildlife Barrier (I-5 Sierra Madre to Castaic Ranges W231) for remediation on I-5 for mountain lion, mule deer, black bear, and mesocarnivores, which is adjacent to, and extends the entire length of the proposed Northlake Specific Plan (see web map Terrestrial Wildlife Connectivity Barriers). The I-5 Sierra Madre to Castaic Ranges Wildlife Barrier meets 7 of the 10 criteria that CDFW uses to evaluate each potential barrier segment (Penrod 2020, CDFW 2022):

- Important habitat or landscape linkage identified in a species movement or regional connectivity study, or necessary for connectivity between or within important habitat blocks.
- Movement corridors for sensitive, keystone, or other high priority species according to species-specific studies, genetic studies, or published recovery plans.
- Areas suggested by available data to be important or functionally significant crossing locations where barrier improvement would benefit wildlife populations, as identified by cameras or GPS data, or by the presence of landscape features where animals are known to cross more frequently than other areas (e.g., riparian corridors, canyon bottoms, ridges, and open space corridors).
- Areas where animals actively approach but are unable or refuse to cross.
- Quality of adjacent habitat surrounding the barrier within a landscape context.
- Durability of conservation status of adjacent lands (public lands, conservation easements, or lands with committed partners/landowners) and patch size.
- Linkages that could facilitate range shifts due to climate change (e.g., connects lower to higher elevations or habitats latitudinally).

In January 2024, an I-5 Connectivity Working Group was established, whose members include US Fish and Wildlife Service, US Forest Service, National Park Service, Tejon Tribe, California State Parks, California Department of Fish and Wildlife, California Department of Transportation, Los Angeles County, MRCA, Santa Monica Mountains Resource Conservation District, UC Davis Wildlife Health Center, The Nature Conservancy, Trust for Public Land, Wildlife Conservation Network, The Wildlands Conservancy, and SC Wildlands. The I-5 Connectivity Working Group was formed to advance research, land protection and wildlife crossing infrastructure in two habitat linkages of regional and statewide importance (i.e., Sierra Madre-Castaic Linkage, Tehachapi Connection), with the ultimate goal of restoring functional connectivity across I-5 to support day-to-day movements of wildlife seeking food, shelter, or mates; juvenile dispersal; seasonal migration, gene flow, recolonizing unoccupied habitat after a local population goes extinct, and for species to shift their geographic range in response to global climate change.

In February 2024, MRCA, in partnership with Wildlife Conservation Network, The Nature Conservancy, and SC Wildlands, and in collaboration with the I-5 Connectivity Working Group, submitted a preproposal to the California Wildlife Conservation Board (WCB) for an *Interstate 5 (Sierra Madre-Castaic) Wildlife Crossing Infrastructure Assessment and Implementation Plan* (Figure 3). WCB requested a full proposal,

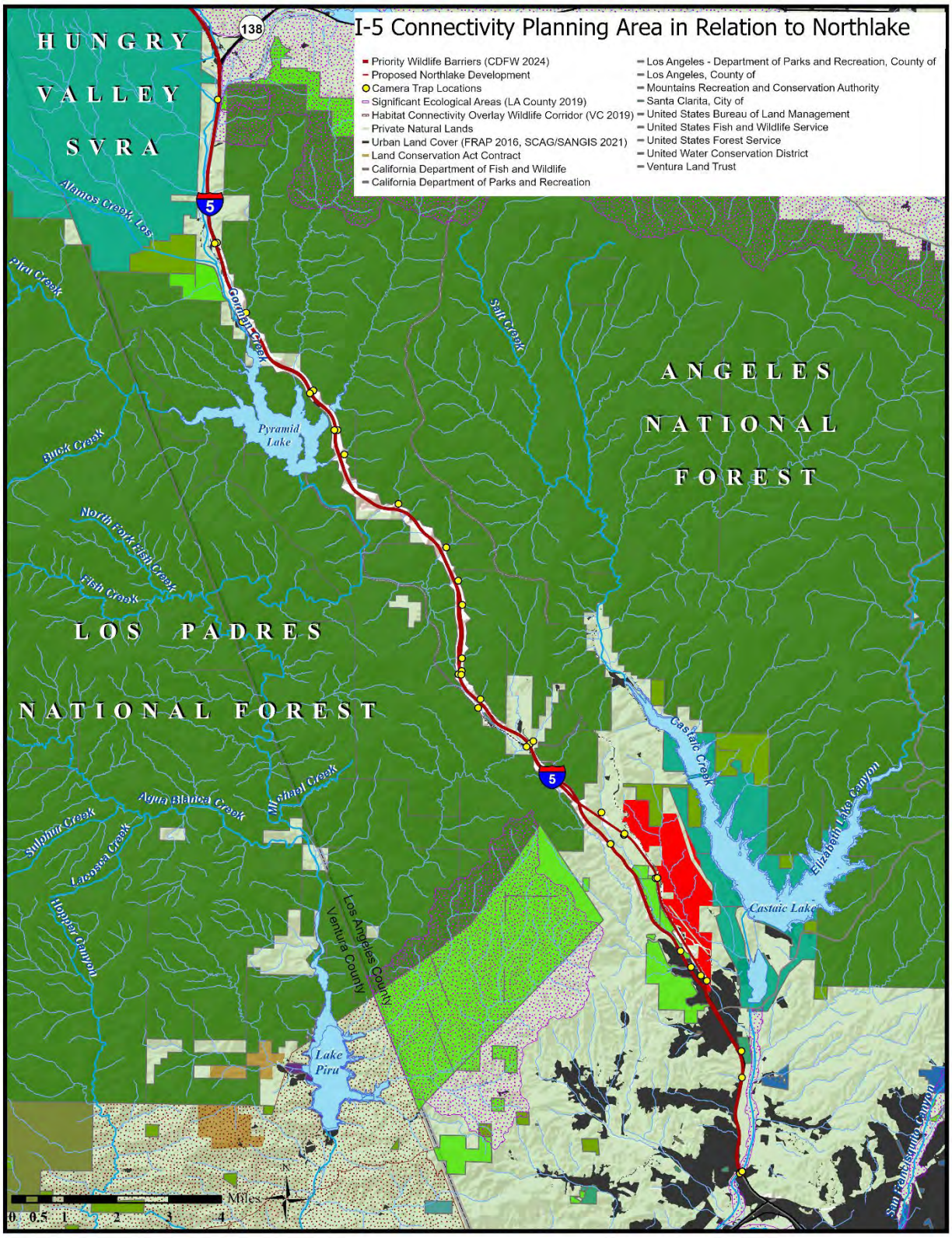
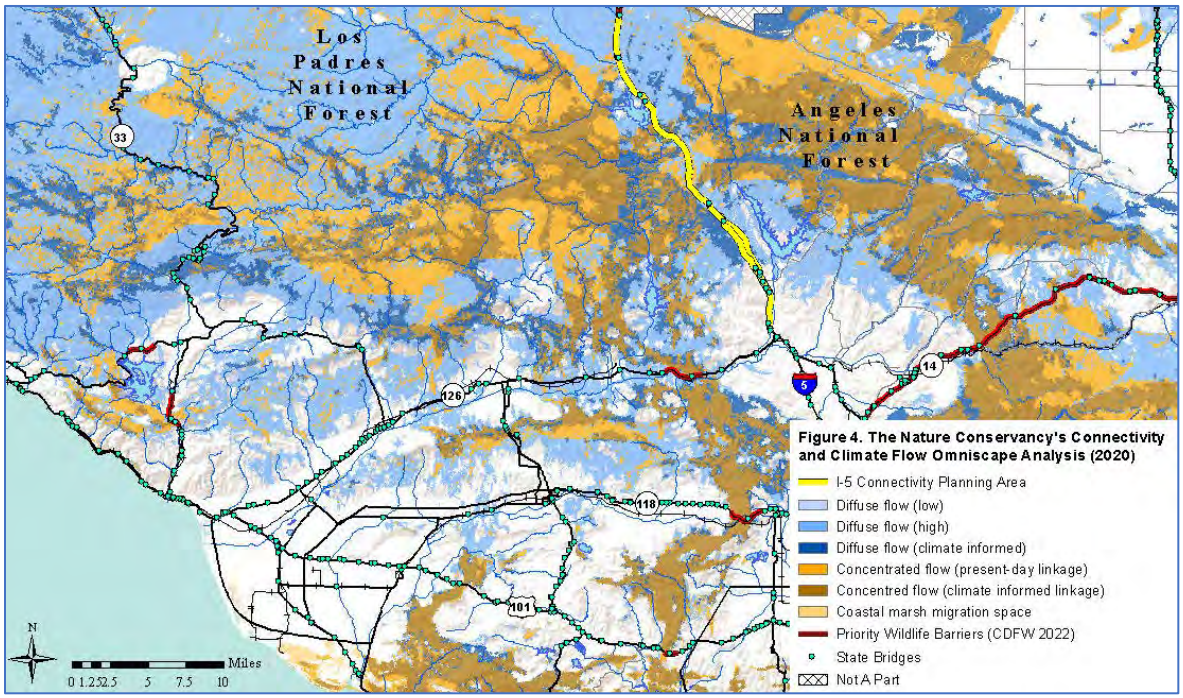


Figure 3. I-5 Wildlife Crossing Infrastructure Improvement Plan study area and existing camera trap locations

which was submitted in June 2024. The project was approved for 4.9-million dollars in state funding at the February 2025 WCB meeting and MRCA received a Notice to Proceed with the project in March of 2025.

The *Interstate 5 (Sierra Madre-Castaic) Wildlife Crossing Infrastructure Assessment and Implementation Plan* project is currently developing a wildlife crossing assessment and infrastructure improvement "master plan" for a 26-mile stretch of I-5 to restore functional habitat connectivity (e.g., wildlife movement and gene flow) between the Sierra Madre and Castaic Ranges. The entire planning area for this project is within Los Angeles County. The wildlife crossing infrastructure improvement plan is using existing data, such as connectivity analyses, roadkill and camera trap efforts described above, as well as collecting new data through field studies, including camera trap surveys, wildlife transects, and opportunistic roadkill, to identify locations and recommendations for a system of wildlife crossings including enhancement of existing and creation of new crossings and associated features such as wildlife exclusion fencing and jump-outs, along I-5 between the SR138 interchange and where Castaic Creek crosses I-5, which includes the Northlake Project area. Once the master plan is complete, feasibility and constraints analyses will be conducted for at least 4 priority wildlife crossing locations, and at least one priority wildlife crossing will be advanced through the Caltrans planning, design, and environmental review process (PID, PA/ED, PS&E) of appropriate level CEQA/NEPA documents to deliver 35% and 65% design plans/specifications and cost estimates for at least one priority structure. The primary outcome will be a wildlife crossing infrastructure improvement "master plan" to improve habitat connectivity across I-5 to maintain viable wildlife populations, reduce dangerous wildlife-vehicle collisions, allow species to shift their ranges in response to climate change, and ensure the ecological integrity of California's existing conservation investments.

The Nature Conservancy's (2020) Connectivity and Climate Flow analysis (Figure 4) underscores the critical importance of maintaining and restoring connectivity three regionally significant linkages associated with Los Angeles County, the Sierra Madre-Castaic Ranges, San Gabriel Mountains-Castaic Ranges, and



Santa Monica Mountains-Sierra Madre Ranges, both today and for species to shift their ranges in response to climate change. This analysis identifies the entire Sierra Madre-Castaic Linkage as extremely intact with continuous, diffuse flow in much of the linkage with several wide east-west present-day and climate informed linkages. Importantly, this analysis indicates that the Proposed Northlake Project area and the Santa Felicia SEA recently conserved by MRCA support intact, diffuse connectivity flow to the south of the Sierra Madre-Castaic Linkage. Maintaining intact habitat and connectivity and addressing the barrier effects of I-5 to restore functional connectivity across the highway is essential to allow species to shift their ranges in response to changing habitat conditions related to climate change, and to recolonize areas after environmental perturbations exacerbated by climate change (e.g., wildfire, floods). Nearly 90-million dollars have been spent on the Wallis Annenberg wildlife overpass currently under construction, largely to restore connectivity for mountain lion populations between the Santa Monica Mountains and Sierra Madre Mountains, so individuals can access other regionally important connections, like Sierra Madre-Castaic.

While the *Interstate 5 (Sierra Madre-Castaic) Wildlife Crossing Infrastructure Assessment and Implementation Plan* will address connectivity improvements for a taxonomically diverse group of species, emphasis is being placed on benefits to at-risk wide-ranging species such as mountain lion. In April 2020, the CDFW Commission found that listing the mountain lion as threatened under the California Endangered Species Act (CESA) may be warranted and designated mountain lion in southern California as a candidate species. Under CESA, species classified as a candidate species are afforded the same protection as listed species. I-5 bisects almost continuous lion habitat (Dellinger et al. 2020; Figure 5), including nearly the

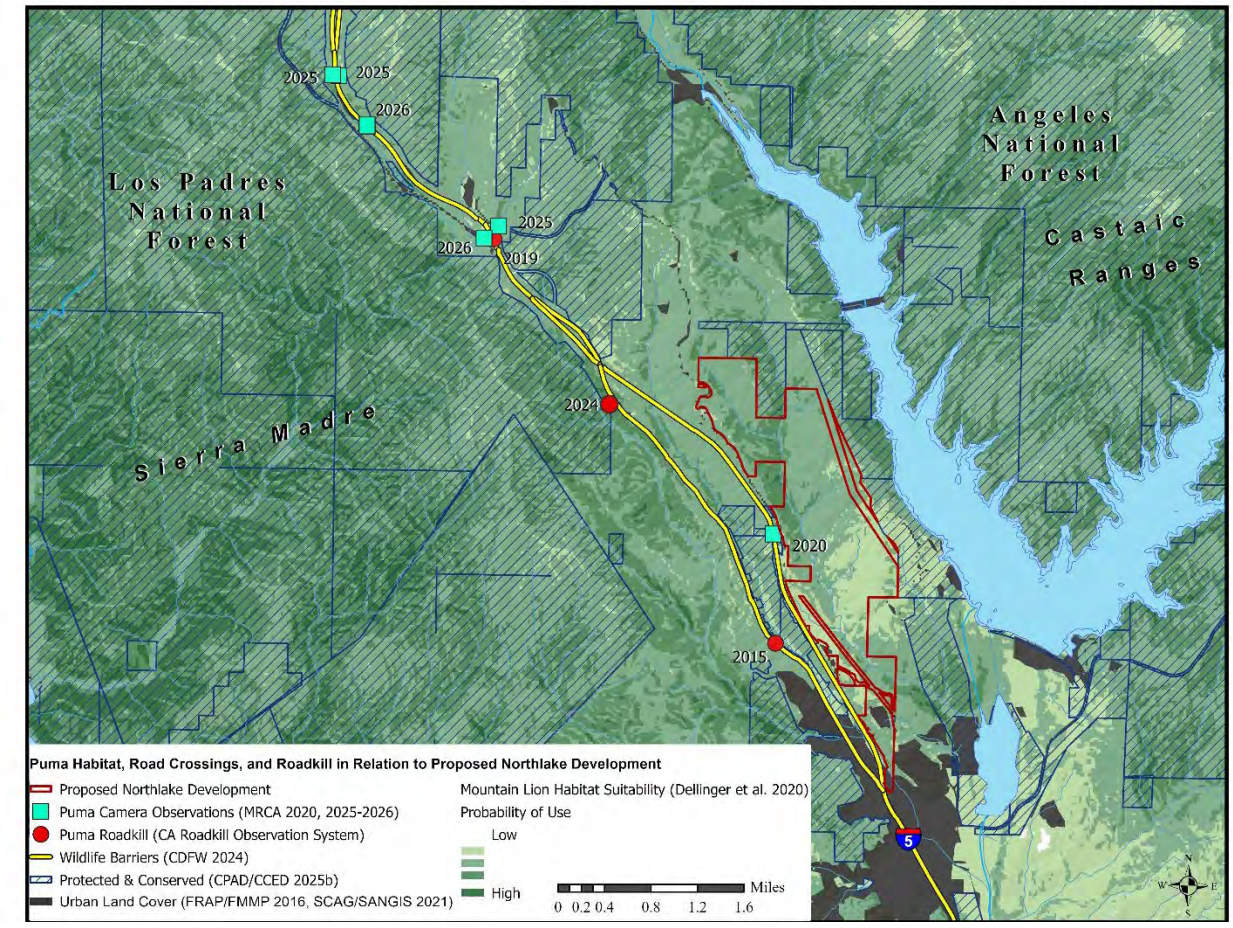


Figure 5. Puma Habitat, Road Crossings and Roadkill in Relations to Proposed Northlake Development.

entirety of the proposed Northlake Project area. The above data shows high quality mountain lion habitat all along Grasshopper Creek that the RPFSEIR proposes to fill, and upland habitat throughout the Northlake Project area that connects to conserved lands to the north and south and to the culvert leading to MRCA's Marple Canyon property that was used by a lion in 2020. Yet, the mountain lion was not reviewed as a protected species within the RPFSEIR. In December of 2025, CDFW released A Status Review of the Petitioned Southern California/Central Coast ESU of Mountain Lion in California, which recommends listing all six petitioned populations as threatened. To ensure compliance with CESA, potential impacts to this species must be evaluated, disclosed and mitigated.

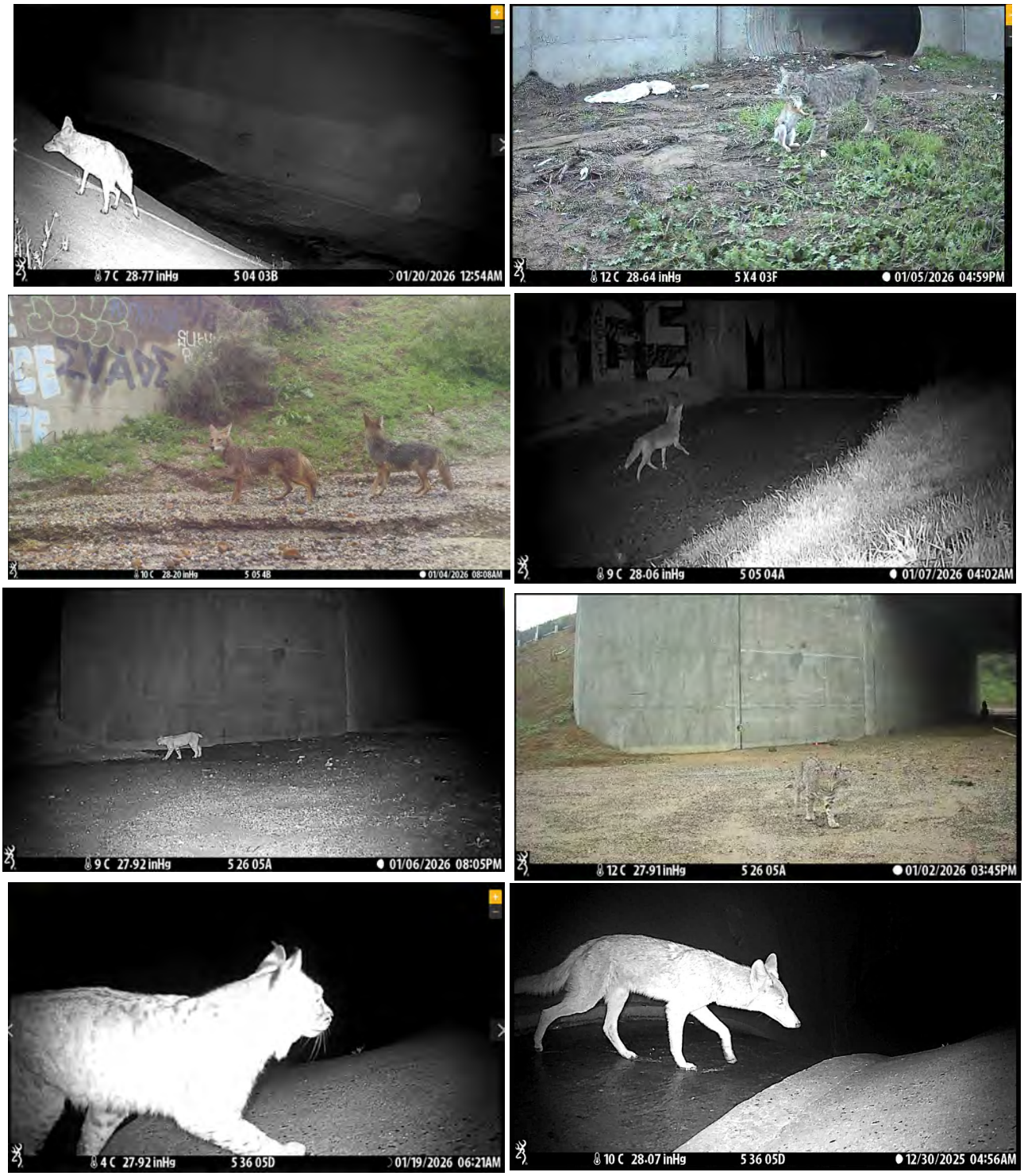
Territorial carnivores like mountain lions that occur at low densities and have large individual area requirements are particularly sensitive to habitat loss and fragmentation (Fahrig 2002, Henle et al. 2004, Gálvez et al. 2018) and at higher risk of extirpation (Soulé and Terborgh 1999). Dispersal is crucial for healthy cougar population dynamics but freeways and major roadways in southern California significantly limit demographic connectivity, juvenile dispersal, and cause direct mortality (Riley et al. 2014, Vickers et al. 2015, Gustafson et al. 2022). Mountain lion populations in the highly fragmented landscape of southern California lack adequate connectivity to one another (Riley et al. 2006, Beier et al. 2006, Riley et al. 2014, Zeller et al. 2017, Dellinger et al. 2020a) and have become genetically isolated (Vickers et al. 2015, Benson et al. 2016, Dellinger et al. 2020b). The recent state-wide mountain lion genetic study (Gustafson et al. 2022) indicates the Sierra Madre-Castaic Linkage is a vitally important connectivity area between the Sierra Nevada, Coast and Transverse Ranges and identifies the Sierra Madre population as a valuable source population for restoring genetic diversity to lion populations in the Transverse Ranges to the south and west (and beyond). The ecological consequences of losing mountain lions in southern California could have cascading effects through the entire ecosystem (Soulé and Terborgh 1999, Thorne et al. 2006, Ripple et al. 2014, Dellinger et al. 2020 a,b). Connectivity between the Sierra Madre and Castaic Ranges is vitally important for restoring gene flow to southern California mountain lion populations.

The Project Team for the Wildlife Crossing Infrastructure Improvement Master Plan are currently assessing the functionality of existing bridge and culvert structures to support wildlife movement and identifying locations for the construction of new or improved crossing structures and associated wildlife fencing as part of the master plan for ameliorating the barrier effects of I-5 over the long term. The Project Team began deploying camera trap stations at existing bridge and culvert structures on I-5 on 11/18/25 (see Figure 3 above for camera trap locations). Within hours of camera deployment, two lion photos were captured at a box culvert associated with a Caltrans sand shed roughly 3 miles north of the proposed Northlake project, well within the distance an individual could cover in less than an hour. In fact, 8 lion photos have been captured by the project at this structure, at the bridge for Templin Highway, and at a structure south of here, closer to the proposed Northlake Project in less than 2 months of camera deployment. In fact, all structures currently being monitored on I-5 directly west of the Northlake Project boundary are being regularly used by wildlife, not "Limited East-to-West and West-to-East Movement" as suggested in the *Northlake Partial Creek Avoidance Alternative and Associated Wildlife Movement Enhancements* Technical Memorandum dated April 23, 2023.

The Project Team is also coordinating with the UC Davis California Carnivores Program, which has been investigating mountain lion habitat use, movement and mortality in the region since 2022. From 2022-2025, their focus was on collaring individuals further north in the Tehachapi Connection (Penrod et al. 2003), where they captured several individuals west of I-5 and east of SR58. Figure 6 below depicts GPS data of



Recent documented mountain lion crossings and detections on I-5 within daily movement range of Northlake (MRCA).



Recent photo documentation of regular use of I-5 structures used by wildlife to move between the Sierra Madre and Castaic Ranges directly adjacent to the Proposed Northlake Development (MRCA).

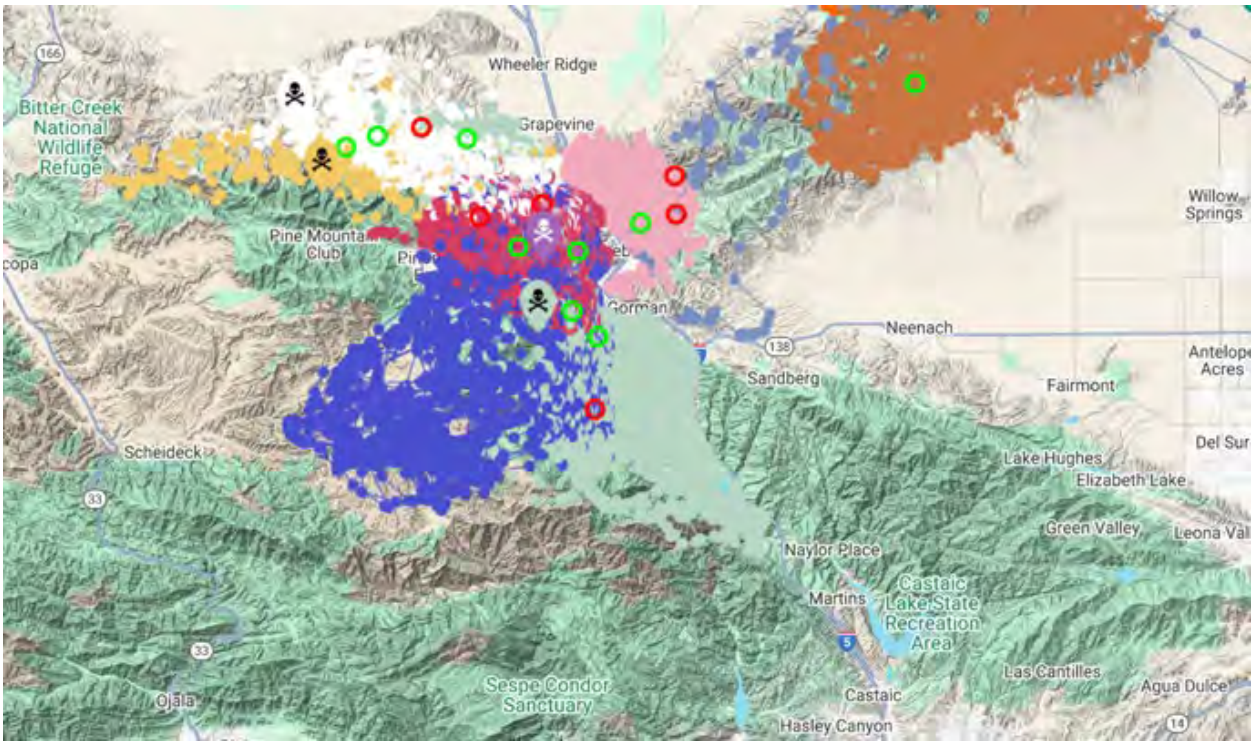


Figure 6. GPS collar data for several mountain lions (UC Davis California Carnivores Program).

several individual collared lions, showing the barrier effects of I-5 but also successful crossings of I-5 and SR58 by a few individuals that established home ranges in the Tehachapi Mountains, with a few individuals making their way southward into the Sierra Madre-Castaic Linkage. The current phase of the study, *"Understanding ecological and human-related factors affecting felid movement in a critical wildlife linkage"* is focused on the Sierra Madre and Castaic Ranges. UC Davis scientists began efforts to collar lions east of I-5 and south of SR138 on Forest Service lands in January 2026. We expect that the forthcoming data from collared mountain lions in the Castaic Ranges will show similar patterns to those in the Tehachapi Connection -- that lions are utilizing suitable habitat throughout the range and that at least some individuals are successfully navigating across or under I-5. This UC Davis effort is expected to extend through 2028.

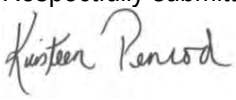
The County is currently in the process of updating the Open Space Element of its General Plan to address SB 1425 and AB 1889, as required by law, providing an opportunity to address landscape connectivity based on existing conditions. The Sierra Madre-Castaic Linkage (Penrod et al. 2005) is one of the most important landscape linkages within the jurisdiction of Los Angeles County, with the others being the San Gabriel-Castaic Linkage (Penrod et al. 2004) and the Santa Monica-Sierra Madre Linkage (Penrod et al. 2006), all of which should be fully captured in the forthcoming update to the County's Open Space Element. As described in the fact sheet, *the County's role in the protection, conservation, and preservation of natural resources and open space areas is vital for the region. The Open Space Element was last updated in 2015 and is required to be updated by January 1, 2026, by recent State laws SB 1425 and AB 1889. SB 1425 requires local governments to revise their open-space plans by January 1, 2026, to enhance equitable access to open spaces, promote climate resilience, and explore rewilding opportunities, ensuring these elements are integrated with environmental justice policies. AB 1889, also known as the Room to Roam Act, focuses on enhancing wildlife connectivity, supporting biodiversity, and mitigating the impact of human activities on natural habitats, must be completed by January 2028* CNR-Element-Update_FAQ.pdf. SC Wildlands applauds the County for being proactive in their efforts to comply with SB 1425 and AB 1889 to

address the impacts of development on wildlife movement and habitat connectivity and ensure climate resilience and equitable access to open space.

SC Wildlands implores Members of the Regional Planning Commission not to certify this RPFSEIR. We urge the Commission to deny Project No. R2015-00408, Vesting Tentative Tract Map No. 073336, Vesting Tentative Parcel Map No. 073335, and Conditional Use Permit No. RPPL2023004316, due to noncompliance with CEQA. The County should require a new EIR so that potential impacts to habitat connectivity and wildlife movement can be thoroughly analyzed and appropriate mitigation measures developed. The data currently being collected for the *Interstate 5 (Sierra Madre-Castaic) Wildlife Crossing Infrastructure Assessment and Implementation Plan* and the UC Davis Study *Understanding ecological and human-related factors affecting felid movement in a critical wildlife linkage,* can be provided to the County to inform the impact analyses of a new EIR for the Proposed Northlake development, which should have been completed as part of the environmental review processes to date, as required by CEQA.

Thank you again for the opportunity to comment. Please add SC Wildlands to your notice list for all future updates on this proposed project and do not hesitate to contact us with any questions.

Respectfully submitted,



Kristeen Penrod, Director
SC Wildlands
www.scwildlands.org

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LA COUNTY PLANNING

AMY J. BODEK, AICP
Director,
Regional Planning

DENNIS SLAVIN
Chief Deputy Director,
Regional Planning

VIA ELECTRONIC MAIL ONLY

January 29, 2026

Northlake Associates LLC
Thomas DiPrima, Applicant
thomas@woodridgecapital.com

"THE NORTHLAKE PHASE 1 PROJECT"
PROJECT NO. R2015-00408-(5)

ENVIRONMENTAL ASSESSMENT NO. RPPL2023004887
STATE CLEARINGHOUSE NO. 2015031080

VESTING TENTATIVE TRACT MAP NO. 073336
VESTING TENTATIVE PARCEL MAP NO. 073335
CONDITIONAL USE PERMIT NO. RPPL2023004316
NORTH OF LAKE HUGHES ROAD, EAST OF RIDGE ROUTE ROAD AND INTERSTATE 5 FREEWAY ("I-5"), AND WEST OF CASTAIC LAKE AND LAGOON, UNINCORPORATED COMMUNITY OF CASTAIC
(APNs 3244-012-046, 3244-014-053, 3244-004-024)

Dear Mr. DiPrima:

The Los Angeles County Regional Planning Commission (Commission), by its action of **January 28, 2026** has approved the above-referenced project. Enclosed are the Commission's Findings and Conditions of Approval. Please carefully review each condition. This approval is not effective until the appeal period, February 9, 2026, has ended and the required documents and applicable fees are submitted to LA County Planning (see enclosed Affidavit of Acceptance Instructions).

A notarized Affidavit of Acceptance and any applicable fees must be submitted to the planner assigned to your case. Please make an appointment to ensure that processing will be completed in a timely manner. Failure to submit these documents and applicable fees within 60 days will result in a referral to Zoning Enforcement for further action.

In addition, any applicable California Environmental Quality Act fees for the Department of Fish and Wildlife shall be paid, and a Notice of Determination, if applicable must be filed with the County Clerk according to the instructions with the enclosed Affidavit of Acceptance. A Notice of Exemption, if applicable, may also be filed according to the instructions in the enclosed Affidavit of Acceptance.

For questions or for additional information, please contact Jodie Sackett of the Subdivisions Section at (213) 893-7409 or jsackett@planning.lacounty.gov.

Sincerely,

AMY J. BODEK, AICP
Director of Regional Planning



Joshua Huntington, AICP, Supervising Regional Planner
Subdivisions Section

JSH:JDS

Enclosures: Findings and Conditions of Approval, Affidavit of Acceptance (Permittee's Completion), Notice of Determination

c: Regional Planning Commission
Damon Mamalakis, Armbruster Goldsmith & Delvac LLP
Raman Gaur, Sikand Engineering
Jennifer Marks, Psomas

CP_01282026_RPCAPPROVALPACKAGE2026

Affidavit of Acceptance Instructions

STEP 1: **NOTARIZE AFFIDAVIT:** In the presence of a Notary Public, sign the Affidavit of Acceptance form. Complete and sign both applicant and owner sections, even if the applicant is the same as the owner.

STEP 2: **COUNTY REGISTRAR-RECORDER:** Visit the Registrar-Recorder's office at 12400 East Imperial Highway, Norwalk, CA 90650 (the following branch offices can also assist you: LAX Courthouse, Lancaster District Office, Van Nuys District Office. For more information call (562) 462-2125 or visit http://www.lavote.net/Recorder/Document_Recording.cfm) to complete the following tasks:

a) **Record Affidavit of Acceptance Form and Conditions of Approval:** Submit the original Affidavit of Acceptance form (wet signature) and Conditions of Approval to the County Registrar-Recorder for recording. If your project has an associated Mitigation Monitoring Reporting Program (MMRP), this document should be recorded as well. Request one certified copy of the recorded Affidavit, Conditions of Approval, and MMRP (if applicable) to submit to LA County Planning.

b) ☒ **Pay CEQA Fees and Post Notice of Determination (NOD):** Environmental filing fees and posting of an NOD are required pursuant to the California Environmental Quality Act (CEQA). This should be completed within five (5) working days from the day after your appeal period ends on February 9, 2026. Bring two copies of the enclosed NOD along with one check for fees, payable to the "County of Los Angeles", as applicable below:

☐ **$75.00 for Notice of Determination (NOD),** with original "No Effect" form from the California Department of Fish & Wildlife (for posting only)

☐ **$2,548.00 for Notice of Determination (NOD) for the issued Negative Declaration or Mitigated Negative Declaration** (Includes $75.00 Registrar-Recorder processing fee).

☒ **$4,227.50 for the Environmental Impact Report** (Includes $75.00 Registrar-Recorder processing fee).

c) ☐ **Post Notice of Exemption (NOE):** The filing of an NOE is **OPTIONAL**. Pursuant to CEQA, the filing of an NOE will limit the time period for legal challenges to an agency's exemption determination to 35 days. If a NOE is not filed, a 180 day statute of limitation applies. If you wish to file an NOE, please request for a completed NOE form from your case planner and post the document at the Registrar-Recorder's office listed above, along with your Final Letter of Approval.

STEP 3: **LA COUNTY PLANNING:** Please submit the following items:

a) One certified copy of the recorded Affidavit of Acceptance, Conditions of Approval, and MMRP if applicable. The certified copy will have an official document number and a purple recordation stamp from the Registrar-Recorder. Also provide a NOD or NOE posting receipt, and CEQA filing fee receipt if applicable. NOD posting receipt, and F & W fee receipt. Mail to:

Department of Regional Planning
320 W Temple Street, Room 1360
Los Angeles, CA 90012

b) Zoning inspection fees*, and MMRP fees if applicable (see Conditions of Approval). Payment can be made by mail or online. Mail payment to address above. Write project number on checks and make payable to "County of Los Angeles." To pay online, please contact your case planner for an invoice number and make payment through https://epicla.lacounty.gov/.

STEP 4: **OBTAIN BUILDING PERMITS**: Provide a copy of your stamped plans to the Department of Public Works, Building and Safety office.*

For questions or for additional information, please contact the planner assigned to your case. Our office hours are Monday through Thursday, 7:30 a.m. to 5:30 p.m. We are closed on Fridays.

** Does not apply to subdivision cases.*

LA COUNTY PLANNING

Please complete and return to:
LA County Planning
320 West Temple Street, 13th Floor
Los Angeles, California 90012

AFFIDAVIT OF ACCEPTANCE

STATE OF CALIFORNIA
COUNTY OF LOS ANGELES }ss

REGARDING: PROJECT NO. R2015-00408
VESTING TENTATIVE TRACT MAP ("VTTM") NO. 073336 (RPPL2023004336), VESTING TENTATIVE PARCEL MAP ("VTPM") NO. 073335 (RPPL2023004448), CONDITIONAL USE PERMIT ("CUP") NO. RPPL2023004316, ENV. ASSESSMENT NO. RPPL2023004887. NORTH OF LAKE HUGHES RD, EAST OF RIDGE ROUTE RD AND INTERSTATE 5 FWY, AND WEST OF CASTAIC LAKE AND LAGOON IN THE UNINCORPORATED COMMUNITY OF CASTAIC
APN(S): [2865-003-013 (PARCEL 25), 2865-003-035 (PARCEL 26), 2865-036-001 (PARCEL 25), 2865-036-002 (PARCEL 24), 2865-036-003 (PARCEL 23), 3244-012-013 (PARCEL 17), 3244-012-045 (POR.) (PARCEL 36), 3244-012-046 (POR.) (PARCEL 31), 3244-012-048 (PARCEL 30) 3244-012-049 (POR.) (PARCEL 29), 3244-012-050 (POR.) (PARCEL 38), 3244-012-054 (PARCEL 15), 3244-012-057 (PARCEL 16), 3244-012-058 (POR.) (PARCEL 32), 3244-012-059 (POR.) (PARCEL 15), 3244-013-001 (PARCEL 35), 3244-014-015 (PARCEL 39), 3244-014-050 (PARCEL 52), 3244-014-053 (PARCEL 43), 3244-014-062 (PARCEL 56), 3244-014-067 (PARCEL 40), 3244-014-068 (PARCEL 40), 3247-017-019 (POR.) (PARCEL 37), 3244-012-904 (TO BE ACQUIRED) (PARCEL 70), 3244-014-902 (NAP – OFFSITE WATER TANK) (PARCEL 72)

I/We the undersigned state:

I am/We are the permittee of the above-mentioned permits and/or owner of the real property described above .I am/We are aware of, and accept, all the stated Conditions of Approval for the above-mentioned permit(s).

I/We have enclosed a check in the amount of **$2,280.00** payable to the County of Los Angeles as required by the Conditions of Approval for regular inspections for compliance, and **$6,000.00** for compliance with the Mitigation Monitoring Reporting Program fee. I/We also acknowledge that I/We and my/our successors in interest may be required to reimburse the Department of Regional Planning for any additional enforcement efforts necessary to bring the subject property into compliance.

Executed this _____ day of _____ ,20 _____

I/We declare under the penalty of perjury that the foregoing is true and correct.

Complete both Applicant and Owner sections, even if the same.

Signatures must be acknowledged by a Notary Public. Affix seal or appropriate acknowledgements.

Applicant's Name: _____
Address: _____
City, State, Zip: _____
Signature: _____

Owner's Name: _____
Address: _____
City, State, Zip: _____
Signature: _____

LOS ANGELES COUNTY
DEPARTMENT OF REGIONAL PLANNING
FINDINGS OF THE REGIONAL PLANNING COMMISSION
AND ORDER
PROJECT NO. R2015-00408

VESTING TENTATIVE TRACT MAP ("VTTM") NO. 073336 (RPPL2023004336)

RECITALS

1. **HEARING DATE.** The Los Angeles County ("County") Regional Planning Commission ("Commission") conducted a duly-noticed public hearing on January 28, 2026, in the matter of Project No. R2015-00408 ("Northlake"), consisting of VTTM No. 073336. VTTM No. 73336 were considered together with Vesting Tentative Parcel Map ("VTPM") No. 073335 (RPPL2023004448), Conditional Use Permit ("CUP") No. RPPL2023004316, and Environmental Assessment No. 201500030 [(RPPL2023004887) (State Clearinghouse No. 2015031080)]. These are referred to collectively as "Northlake Phase 1".

2. **HEARING PROCEEDINGS.** The public hearing proceeded on Wednesday, January 28, 2026. Staff made a presentation and subsequently the applicant, Damon Mamalakis, made a presentation. The Commission then reiterated the "limited scope" of three remedies resulting from the prior court decision and order: "alternatives analysis", "spadefoot toad", and "rare plant species". County Counsel also reminded the Commission that, in addition to the three remedies, the Northlake entitlements were also required to be re-filed and re-approved. The Commission then reiterated that the PCAA only affects Phase 2, while Phase 1 (before the Commission) is unchanged by the PCAA. Commissioners asked for more information regarding affordable housing and the percentage amount of affordable units directed by the Commission back in 2018. The Commission asked questions about the fire station pad, water tanks in Phase 1, and confirmed that the HOA-funded shuttle system will include routes both internal to the project and external to offsite locations in the Santa Clarita area. There were a total of 12 public speakers, nine of them speaking virtually. A total of nine public speakers spoke-out against the project or asked for a postponement, including issues such as: suburban sprawl/leapfrog development, damage to Coastal Sage Shrub, expansion of the wildland-urban interface (WUI), fire and landslide dangers, potential gas pipeline rupture, negative effects on mountain lions, conflict with the 2022 GHG carbon reduction plan, traffic congestion, lack of discussion about new job generation, interference with wildlife linkages, lack of mitigation for the gas pipeline, and pipeline "hazard" not analyzed. Three public speakers were in favor of the project, citing reasons such as: supporting economic growth, revitalizing local commercial centers (such as re-opening a neighborhood-serving market that closed down several years ago due to poor economic conditions), more housing to help lower housing costs, developing a "thoughtful" plan that was adopted in 1992, incentivizing high school enrollment and job creation, enhancing the overall quality of life, needed transportation investments, and housing for working families that are closer to jobs. After the public speakers had concluded, the Commission made final remarks related to camera shots

of wildlife movement in the culvert, gas line located offsite from the project, and that the applicant provided support for repair work related to the pipeline rupture. Then the Commission asked about landslides and the pipeline, and grading totals. The applicant made a rebuttal of some of the remarks of those opposed to the project, stating the pipeline rupture is not located on Northlake property, the pipeline will be proposed to be located to Ridge Route Road, which is a less dangerous location further away from residences. Other applicant rebuttals included the PCAA will improve wildlife movements through the project site, the VMT appropriate baseline was used, Coastal Sage Scrub mitigation location is identified, GHG comments were upheld by the court and did not require recirculation, the third wildlife crossing is in Phase 2 and not considered at this time but could be possible to adjust the road, if needed. At the end of the hearing, during the motion, Lastly, after hearing no further testimony, comments, or rebuttal, the Commission then closed the public hearing and unanimously approved the project (5-0).

3. **ENTITLEMENTS REQUESTED.** Northlake Associates LLC ("Subdivider") requests VTTM No. 073336 to create a total of 386 lots and 2,295 dwelling units on 720 gross acres. This includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet (“sf”) of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); one highway commercial lot (2.5 acres), 39 open space lots, 11 park lots, 13 debris basin lots, two water tank lots, one water quality basin lot, one pump station lot, and one fire station lot (1.4 acre building pad). Of the total 2,295 dwelling units in Northlake Phase 1, 1,777 units are proposed to be for-sale and 518 units expected for rental. This is pursuant to County Code Chapters 21.38 (Vesting Tentative Map) and 21.40 (Tentative Maps).

4. **RELATED ENTITLEMENT.** VTPM No. 073335 is a related request to create 17 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only.

5. **RELATED ENTITLEMENT.** CUP No. RPPL2023004316 is a related request to authorize the Northlake Specific Plan (“SP”) Site Plan Review procedure for development of 2,295 residential dwelling units; affordable set-aside housing and affordable senior set-aside housing; mixed-use and live-work development; onsite and offsite grading in excess of 100,000 cubic yards (“cy”): 17.16 million cy of cut,15.84 million cy of fill, and 1.32 million cy of shrinkage balanced onsite, as well as 3.22 million cy of grading offsite, for an overall total of 37.54 million cy, pursuant to County Code Section 22.140.240 (Grading Projects); walls exceeding six feet in height; and construction of two water tanks with associated grading and infrastructure. As part of the proposed Northlake Phase 1, offsite improvements would include connection to

existing utilities, relocation of existing utility lines, new drainage facilities, and other related infrastructure outside the boundaries of Northlake Phase 1.

6. **PREVIOUS ENTITLEMENTS.** Northlake Specific Plan No. 87172-(5), Sub-Plan Amendment No. 87172-(5), Zone Change No. 87172-(5), CUP No. 87172-(5), and Development Agreement ("DA") No. 87172-(5) authorized the SP and was approved in 1992. It authorized a maximum of 3,150 dwelling units on 1,330 acres of land, to include single-family and multi-family residences, schools, parks, and a fire station. The DA was not used and expired in 2003. Specific Plan Amendment No. 98047, DA No. 98047, CUP No. 98047, VTTM No. 51582, and CUP No. 2004-00015 were filed in 1998 and were withdrawn in 2007. The CUP included grading and the SP site plan review procedure. Also included in prior entitlements are the 2015 requests for the VTTM, VTPM, and CUP, which were approved in 2019 and subsequently litigated.

7. **ENTITLEMENTS REQUESTOR**. Unless otherwise apparent from the context, "Subdivider" shall include the Subdivider, successor in interest, owner of the property, and any other person, corporation, or other entity making use of this grant.

8. **COMMISSION APPROVAL.** The approval of VTTM No. 073336 and related entitlements VTPM and CUP will not become effective unless and until the Commission certifies the Recirculated Partial Final Supplemental Environmental Impact Report ("RPFSEIR") and approves Northlake Phase 1, and both have become effective.

9. **VESTING DATE.** Pursuant to Government Code Section 65866, the County and Subdivider agreed to a vesting date of March 17, 2015 pursuant to LA County Code Section 21.38 (Vesting Maps). Accordingly, Northlake Phase 1 is generally subject to the applicable rules, regulations, and official policies that were in effect as of March 17, 2015.

10. **LOCATION.** Northlake Phase 1 is located north of Lake Hughes Road and Ridge Route Road, east of Interstate 5 ("I-5") Freeway and west of Castaic Lake and Lagoon in the unincorporated community of Castaic. The site is also located within a designated Very High Fire Hazard Severity Zone ("VHFHSZ") and State Responsibility Area ("SRA").

11. **LAND USE DESIGNATION.** Northlake Phase 1 is located within various designations within the SP, a component of the General Plan. It includes Single-Family, Multi-Family, General Commercial, Public Facilities, Recreation, and Open Space uses.

12. **ZONING.** Northlake Phase 1 is located in the Castaic Canyon Zoned District within the Santa Clarita Valley Planning Area and is currently zoned SP.

LOCATION	SANTA CLARITA VALLEY AREA PLAN LAND USE POLICY	ZONING	EXISTING USES
SUBJECT PROPERTY	SP	SP	Vacant Land

NORTH	RL5 (Rural Land 5 – One Dwelling Per 5 Acres), BLM (Bureau of Land Management)	A-2-2 (Light Agricultural – Two-Acre Minimum Lot Size)	Vacant Land
EAST	BLM, RL10 (Rural Land 10 – One Dwelling Per 10 Acres), OS-PR (Open Space – Parks and Recreation), RL5, IL (Light Industrial)	A-2-2, M-1-DP (Light Manufacturing – Development Program), M-2-DP (Heavy Manufacturing – Development Program), RPD-5000-2.9DU (Residential Planned Development – 5000 Square Foot Lot Size – 2.9 Dwellings Per Acre), OS (Open Space)	Vacant Land, Elementary School, Single-Family Residences, Shopping Center
SOUTH	H2 (Large Lot Residential – 0-2 Dwellings Per Acre), IL, H18 (Medium Density Residential – 9-18 Dwellings Per Acre), CM (Major Commercial)	R-1 (Single-Family Residence), C-3 (Major Commercial), M-1 (Light Manufacturing)	Vacant Land, Shopping Center, Single-Family Residences, Senior Residences
WEST	RL5, RL1 (Rural Land 1 – One Dwelling Per Acre), IL, OS-C (Open Space Conservation)	A-2-2, A-2-1 (Light Agricultural – One-Acre Minimum Lot Size), M-1, M-1-DP, OS	Vacant Land, Single-Family Residences, Water Tank, Warehousing

13. **PROJECT AND SITE PLAN DESCRIPTION.**

A. Existing Site Conditions
The SP site consists of approximately 1,330 acres located north of Lake Hughes Road and Ridge Route Road, east of I-5 Freeway and west of Castaic Lake and Lagoon in the unincorporated community of Castaic. The site is comprised of vacant land, with adjacent infrastructure such as transmission towers (via utility easement through the property) and a water tank to the west, just outside of the Northlake boundary. Northlake Phase 1 consists of 720 acres.

The property exhibits a wide range of topographic relief, with gently-rolling hills, extremely steep slopes, and a major drainage course (Grasshopper Creek) running north-south down the middle of Northlake Phase 1. The property is not located within and does not contain any portion of a Significant Ecological Area ("SEA").

B. Site Access
Northlake Phase 1 is accessible via Ridge Route Road, a Limited Secondary Highway on the County Master Plan of Highways with 64 to 80 feet of width that

transitions into an 80 to 90 foot-wide Secondary Highway on the County Master Plan of Highways. Primary access to the site will be via an entrance/exit on Ridge Route Road. Secondary access to the property will be via Northlake Boulevard, a Local Collector with 64 to 80 feet of width that transitions into an 80 to 86-foot-wide Modified Industrial Collector. Northlake Phase 1 provides a five-foot wide or greater walkway along private and future streets throughout the property, with publicly-accessible walkways of similar widths along private drives/fire lanes providing direct access to all units.

C. Tentative Map and Exhibit Map

The VTTM No. 073336 tentative map and Exhibit Map dated August 20, 2025, consists of Northlake Phase 1. It depicts a total of 386 lots and 2,295 dwelling units on 720 gross acres. This includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); one highway commercial lot (2.5 acres), 39 open space lots, 11 park lots, 13 debris basin lots, two water tank lots, one water quality basin lot, one pump station lot, and one fire station lot (1.4 acre building pad). Of the total 2,295 dwelling units in Northlake Phase 1, 1,777 units are proposed to be for-sale and 518 units expected for rental. This is pursuant to County Code Chapters 21.38 (Vesting Tentative Map) and 21.40 (Tentative Maps).

D. Affordable and Senior Housing

Northlake Phase 1 proposes a total of 315 affordable attached rental units for Very Low, Lower, and Moderate Income households, of which 95 shall be senior affordable (all ownership) units. Though not subject to the IHO due to the adopted SP, the Subdivider has offered the affordable units through the CUP. The affordable units shall be dispersed throughout Northlake Phase 1. In addition, Northlake Phase 1 proposes 345 market-rate attached senior units (209 ownership, 136 rental) within the site.

E. Parking

Northlake Phase 1 requires an overall total of 5,284 parking spaces. It will provide a total of 5,670 parking spaces, to include 4,167 residential parking spaces required and provided; 639 guest parking spaces required and 1,021 provided; 65 accessible spaces required and 69 provided; and 413 commercial spaces required and provided. Lastly, there are four Type A loading spaces distributed throughout the office, commercial, and mixed-use development areas.

F. Internal Circulation

Northlake Phase 1 would incorporate various internal roadway improvements, including arterials, residential collectors, and private drives. A series of public collector streets and private drives within Northlake Phase 1 and would provide access to the various areas and land uses on-site, to include the Community Sports Park, Grasshopper Creek Park, fire station, mixed-use development, senior housing development, and potential school site. All of these internal destinations would be accessible via a shuttle system managed by the Northlake Homeowner's Association ("HOA") as detailed in the original 2019 LA County Board of Supervisors ("Board") approval and included in the Northlake Phase 1 conditions. Within Northlake Phase 1, the proposed trail system would include community trails, bike lanes, and recreational trails linked to the above-mentioned destinations. In addition to the various trail types that would serve as bicycle routes, Northlake Phase 1 would expand bicycle facilities in the area.

G. Condominium Project
Pursuant to the Subdivision Map Act, condominium units may be leased or sold. Renters of condominium units may not receive sufficient notification when an owner decides to sell the units. In order to provide renters with proper notification, notification is required 180 days prior to termination of tenancy in the event the condominium units are first leased and then later sold.

H. Grading
The grading amounts include 17.16 million cy of cut and 15.84 million cy of fill with 1.32 million cy of shrinkage to be balanced onsite, as well as 3.22 million cy of offsite grading, for a combined grading amount of 37.54 million cy.

I. Oak Trees
There are no Oak trees on the subject property.

14. **CEQA DETERMINATION.**

Supplemental Environmental Impact Report ("SEIR")
The Northlake Phase 1 Draft Supplemental EIR ("DSEIR") was released on May 2, 2017, and circulated for a 45-day public review and comment period ending on June 15, 2017. Following the close of the public comment period on the DSEIR on June 15, 2017, detailed responses to all public agency comments and comments received from members of the general public received regarding Northlake Phase 1 and the analyses of the DSEIR were prepared and were contained in the Final SEIR ("FSEIR").

An Errata was released in February 2018, prior to the Commission hearing to make minor technical corrections to the SEIR and to provide further information in response to public comments received prior to the Planning Commission meeting. The Errata included only minor technical changes to the SEIR and additional information to support the SEIR's conclusions, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. At the February 21, 2018, public hearing, the Planning Commission requested that the Subdivider include an affordable housing component in the Project. Based on this request, the Subdivider made minor revisions to the Project analyzed in the SEIR to include an affordable component. An

Errata dated April 4, 2018 was prepared which concluded that the revisions involve only minor changes to the distribution of land uses and an overall reduction in density and intensity or use, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. On April 18, 2018, the Planning Commission adopted the required findings, certified the SEIR, and granted the requested Project approvals. On April 23, 2018, appeals were filed by the Center for Biological Diversity, the Santa Monica Mountains Conservancy, and the Golden State Environmental Justice Alliance. A Second Errata dated August 2018 was prepared to make minor technical corrections in the SEIR and to provide further information in response to public comments at the Planning Commission meeting.

On September 25, 2018, the Board held a public hearing on Northlake Phase 1 and the appeals and voted to reject the appeals, uphold the Planning Commission approvals, and certify the SEIR. On April 2, 2019, the Board adopted the Northlake Phase 1 entitlements, CEQA findings and Mitigation Monitoring and Reporting Program ("MMRP"), and Northlake Phase 1 conditions.

A Petition for Writ of Mandate was filed in May 2019, challenging Northlake Phase 1. The Los Angeles Superior Court's ruling in the Center For Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al, Case No. 19STCP01610, dated January 11, 2021 (Court Ruling) granted in part and denied in part the petitioner's Petition for Writ of Mandate. Specifically, the Court Ruling held that the SEIR for Northlake Phase 1 failed to comply with CEQA because it contained: (1) inadequate alternatives analysis (for failing to fully analyze a creek avoidance alternative); (2) inadequate Western Spadefoot Toad (WST) baseline assessment and, therefore, inadequate mitigation (to recreate baseline conditions; mitigation inadequate in detail and commitment); as well as (3) improper deferred mitigation as to rare plants (measure lacked sufficient detail).

The Court denied the Petition for Writ of Mandate regarding: (1) impacts to mountain lions/wildlife crossings, (2) aesthetics, (3) air quality/public health, (4) wildfire impacts, and (5) recirculation.

These findings incorporate by reference, as if fully set forth herein, the CEQA Supplemental Findings of Fact ("FOF") and Statement of Overriding Considerations ("SOC") regarding the RPFSEIR for Northlake Phase 1, which are attached hereto as Exhibit F. As stated in the FOF, the Partial Creek Avoidance Alternative ("PCAA") is the environmental superior alternative among the project alternatives summarized in the RPDSEIR. As identified in the RPDSEIR, after implementation of the MMRP, Northlake Phase 1 would not result in any new or substantially more severe significant impacts.

<u>Recirculated Partial Draft SEIR ("RPDSEIR")</u>
The LA County Department of Regional Planning ("LA County Planning") prepared a RPDSEIR. The document did not revise the original SEIR in any respect other than as directed by the Court (above) and was limited to a few portions of the SEIR. Pursuant to CEQA Guidelines Section 15088.5(c), the County only needed to recirculate the portions of the SEIR that were modified by the RPDSEIR. The County did not

recirculate the other portions of the SEIR for public review and comment because those portions were not modified.

The RPDSEIR was made available for public review and comment pursuant to State CEQA Guidelines Section 15087. Copies of the RPDSEIR and appendices were available for a review period of 45 calendar days from April 14, 2025, to May 29, 2025. As CEQA Guidelines Section 15088.5, subdivision (f)(2) permits, the County requested that the scope of public comment be limited to the material that was addressed within the text of the revised portions and the appendices included in the RPDSEIR. The RPFSEIR was completed in June 2025.

15. **AGENCY RECOMMENDATIONS.**

The Los Angeles County Subdivision Committee, consisting of LA County Planning and County Departments of Public Works ("Public Works"), Fire ("Fire"), Parks and Recreation ("Parks and Recreation"), and Public Health ("Public Health"): Recommended clearance to public hearing with conditions of the VTTM No. 073336 map dated August 20, 2025.

A. In a letter dated September 18, 2025, Public Works recommended that the Project proceed to public hearing with required conditions of approval.

B. In a letter dated September 23, 2025, Fire recommended that the Project proceed to public hearing with required conditions of approval.

C. In a letter dated September 24, 2025, Parks and Recreation recommended that the Project proceed to public hearing with required conditions of approval.

D. In a letter dated October 1, 2025, Public Health recommended that the Project proceed to public hearing with required conditions of approval.

16. **LEGAL NOTIFICATION.** Pursuant to Sections 21.16.060 (Public Hearings), 21.16.070 (Notice of Public Hearing) and 21.16.075 (Posting) of the County Code, Staff properly notified the community of the public hearing. This included mailings, The Signal newspaper publication, and property posting. On December 11, 2025, Staff mailed a total of 362 Notices of Public Hearing out to all property owners as identified on the County Assessor's record within a 1,000-foot radius from the Project Site. This mailing also included 46 notices to those on the courtesy mailing list for the Castaic Canyon Zoned District and to any additional interested parties. Additionally, Staff posted the Northlake case materials and hearing notice on LA County Planning's website.

GENERAL PLAN CONSISTENCY FINDINGS

17. **LAND USE POLICY.** The Commission finds that the Northlake Phase 1 is consistent with the goals and policies of the SP because the Single-Family, Multi-Family, General Commercial, Public Facilities, Recreation, and Open Space land use designations of

the SP are being appropriately implemented as part of Northlake Phase 1. It complies with the maximum density of 2,295 dwelling units established by the SP. In addition, Northlake Phase 1 realizes a substantial amount of new housing units which are needed to address the State's housing crisis. Furthermore, Northlake Phase 1 will implement substantial open space in the forms of recreation (public parks) and preserves (undisturbed and disturbed open space).

18. **GOALS AND POLICIES. The Commission finds that the Project is consistent with the following policies of the General Plan:**

- ***General Plan – Housing Element, Policy 3.1:*** *"Promote mixed-income neighborhoods and a diversity of housing types throughout unincorporated Los Angeles County to increase housing choices for all economic segments of the population."*

  Northlake Phase 1 will include 2,295 new residential units with multiple housing types that will increase housing choices for varying economic segments of the population within the unincorporated County. There will be a total of 315 affordable units with a mix of rental and for-sale units.

- ***General Plan – Parks & Recreation, Policy P/R 4.3:*** *"Develop a network of feeder trails into regional trails."*

  A community trail system would connect Northlake Phase 1 to existing and planned trails in the vicinity and into regional trails. Within Northlake Phase 1, the proposed trail system would include community trails and recreational trails that would be linked to the overall SP trail system and the existing communities to the south. Bicycle facilities and bicycle route improvements in and around Northlake Phase 1 would connect to an extensive system of continuous bike paths within Northlake Phase 1 and to other communities outside Northlake Phase 1, consistent with the County's Bicycle Master Plan.

- ***General Plan – Economic Development, Policy ED 2.5:*** *"Encourage employment opportunities to be located in proximity to housing."*

  Northlake Phase 1 includes 70,875 sf of non-residential (commercial/office/retail) space in the southerly portion of the site, in close proximity to the proposed 2,295 new residential units as well as existing destinations further south, such as the aforementioned elementary school and senior retirement community. This supports and encourages employment opportunities and more accessible proximity to these destinations.

- ***General Plan – Land Use, Policy LU 5.2:*** *"Encourage a diversity of commercial and retail services, and public facilities at various scales to meet regional and local needs."*

Northlake Phase 1 will result in 70,875 sf of onsite commercial, retail, and office development that will provide local residents with increased access to commercial and retail services, as well as public facilities such as parks, schools, and a fire station within and proximate to Northlake Phase 1. Therefore, it supports a diversity of commercial and retail services, and public facilities, that help meet regional and local needs.

- ***General Plan – Land Use, Policy LU 5.3:*** *"Support a mix of land uses that promote bicycling and walking, and reduce VMT."*

  Northlake Phase 1 provides ample and convenient opportunities for bicycling and walking, due to an extensive trail and sidewalk/walkway system that connects to many destinations within and outside of Northlake Phase 1. This encourages more bicycling and walking, not only reducing VMT but also improving health.

The Commission also finds that the Project is consistent with the following policies of the Area Plan:

- ***Area Plan - Land Use, Policy LU-1.1.3:*** *Discourage urban sprawl into rural areas by limiting non-contiguous, "leap-frog" development outside of areas designated for urban use.*

The Northlake SP, adopted in 1992, has long been planned for residential and commercial development under the SP and is designated for residential and commercial uses. Northlake Phase 1 will be developed adjacent to existing communities, avoiding leapfrog development and unnecessary extension of infrastructure. The development proposed is consistent with the Area Plan, which accounts for the long-term planned development of the area in an orderly manner.

- ***Area Plan – Land Use, Policy LU-1.1.4:*** *Preserve community character by maintaining natural features that act as natural boundaries between developed areas, including significant ridgelines, canyons, rivers and drainage courses, riparian areas, topographical features, habitat preserves, or other similar features, where appropriate.*

The area of natural open space within the SP has been significantly increased from 476 acres to 783 acres compared to the original SP natural open space allotment. Much of the open space is natural and covers extensive steep slope areas that would be impractical to develop. This benefits wildlife and encourages enhancement of ecological, scenic, and cultural open space resources. Of the open space, the amount of undisturbed open space would be increased from 328 to 572 acres. Furthermore, the PCAA reduces the development footprint in the northerly portion of the site, increasing the amount of natural open space.

- ***Area Plan – Conservation and Open Space Element, Policy CO-10.1.5:*** *"Maintain open space corridors along canyons and ridgelines as a way of delineating and defining communities and neighborhoods, providing residents with access to natural areas, and preserving scenic beauty."*

The SP and part of Northlake Phase 1 utilizes the existing Grasshopper Creek area to define communities and neighborhoods by providing a linear park and multi-use trail along the creek. The park and trail link the northerly and southerly portions of the Northlake Phase 1, connecting northerly residences to the mixed-use areas in the south of the site. An equestrian staging area would also be provided in the south of the development for convenient access to the trails.

SUBDIVISION AND ZONING CODE CONSISTENCY FINDINGS

19. **PERMITTED USE IN ZONE.** The Commission finds that the Northlake Phase 1 is consistent with the adopted SP land use designations, as attached and detached single-family units, apartment-style units, live-work units, commercial, recreation, and mixed residential-commercial uses are permitted in the SP in County Code Section 22.404.020 (Northlake Specific Plan). In particular, the mixed-use and senior affordable and senior market-rate units integrate a wide range of housing densities with community-serving commercial uses to serve local residents, employees, guests, and visitors. A total of 315 affordable housing units (269 affordable rental, 46 senior affordable rental) would be provided as well as 345 market-rate senior-restricted units (209 ownership, 136 rental) for a combined total of 660 affordable and senior units (209 ownership, 451 rental). The Commission finds that the development of Northlake Phase 1 is consistent with the SP that provides the appropriate land use designations mentioned above that are consistent with the adopted SP and the revised Guidebook implementing changes to Northlake Phase 1 pursuant to County Code Section 22.404.020 (Northlake Specific Plan).

20. **LOT AREA AND WIDTH.** The Commission finds that Northlake Phase 1 is consistent with the lot area and width standards identified in the Northlake SP and as modified in the revised Guidebook pursuant to County Code Section 22.404.020 (Northlake Specific Plan). Northlake Phase 1 consists only of multi-family, mixed-use, commercial, and live-work development. These uses do not have any required lot widths or sizes per the 2025 updated Land Use Plan of the revised Guidebook.

21. **MINIMUM FRONTAGE.** The Commission finds that the Northlake Phase 1 is consistent with the standards identified in County Code Section 21.24.300 (Minimum Frontage), except where locations require a waiver of frontage and have provided a

justification for the waiver pursuant to Section 21.24.040 (Modifications to Access and Frontage Requirements). A waiver of public street frontage is necessary to access to some lots by private drives instead of public streets, due to topographic conditions, drainage and biological constraints, and title limitations. Lots that require a waiver of frontage are Lots 131 through 140 (10 total).

22. **REQUIRED YARDS.** The Commission finds that Northlake Phase 1 is consistent with the required yard standards identified in the SP and as modified in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan).

23. **HEIGHT.** The Commission finds that Northlake Phase 1 is consistent with the building height standards identified in the SP and as modified in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan). Northlake Phase 1 consists only of multi-family, mixed-use, commercial, and live-work development. These uses have a maximum height of four stories (three when adjacent to streets) per the 2025 updated Land Use Plan in the revised Guidebook.

24. **DISTANCE BETWEEN BUILDINGS**. The Commission finds that Northlake Phase 1 is consistent with the required distance between buildings identified in the SP and as modified in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan).

25. **FENCES AND WALLS.** The Commission finds that Northlake Phase 1 is consistent with the fence and wall standards identified in the SP and as modified, if applicable, in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan).

26. **PARKING.** The Commission finds that Northlake Phase 1 is consistent with the standard identified in County Code Section 22.112.070 (Required Parking Spaces). It requires an overall total of 5,284 parking spaces. Northlake Phase 1 will provide a total of 5,670 parking spaces, including 4,167 residential parking spaces required and provided; 639 guest parking spaces required and 1,021 provided; 65 accessible spaces required and 69 provided; and 413 commercial spaces required and provided. Lastly, there are four Type A loading spaces distributed throughout the office, commercial, and mixed-use development areas.

27. **SIGNS.** No signs are currently proposed or included as part of Northlake Phase 1. Any signage on the property will require separate approvals from LA County Planning in accordance with the SP or modified standards, if applicable, of the revised Guidebook.

28. **GRADING.** The Commission finds that Northlake Phase 1 is consistent with the standard identified in County Code Section 22.140.240 (Grading Projects). The Subdivider shall follow all applicable standards for On-Site grading to include a grading permit required for any grading project and a haul route for offsite grading, as provided in Title 26 (Building Code) of the County Code.

29. **CONDOMINIUM DEVELOPMENTS.** The Commission finds that Northlake Phase 1 is consistent with the standard identified in County Code Sections 21.16.015 (Building Location and Access Restrictions—Exhibit Map), Sections 22.20.040 (Development Standards for Commercial Zones), and 22.22.060 (Development Standards for Industrial Zones). The Project meets the Exhibit Map requirements for the location and dimensions of all structures, buildings, yards, walls, fences, vehicle and bicycle parking and loading facilities; the vehicular, bicycle, and pedestrian access to the proposed structures, buildings, and parking and loading facilities; and the location and design of pedestrian roadway crossings (i.e., crosswalks).

30. **PLANNING AREA STANDARDS DISTRICT**. The Commission finds that Northlake Phase 1 is not subject to or located within any existing planning area standards district.

31. **COMMUNITY STANDARDS DISTRICT.** The Commission finds that Northlake Phase 1 is not subject to or located within any existing community standards district.

32. **RURAL OUTDOOR LIGHTING DISTRICT.** The Commission finds that Northlake Phase 1 is not located within a rural outdoor lighting district nor subject to the standards identified in County Code Chapter 22.80 (Rural Outdoor Lighting District).

33. **RESIDENTIAL DESIGN.** The Commission finds that Northlake Phase 1 is not subject to the standards identified in County Code Section 22.140.520 (Residential Design Standards, "RDSO"). The SP was adopted in 1992, prior to the effective date of the RDSO. The revised Guidebook provides the current residential design standards.

34. **TREE PLANTING.** The Commission finds that the Northlake Phase 1 is not subject to the tree planting standards identified in County Code Section 21.32.195 (On-Site Trees) and Chapter 22.126 (Tree Planting Requirements). The SP was adopted in 1992, prior to the effective date of the above requirements. However, Northlake Phase 1 is proposing a substantial amount of trees, a total of 6,876, to include 2,333 street trees, 2,593 residential (single and multi-family) development lot trees, and 1,950 trees to be provided in dedicated parks and recreation spaces.

35. **IMPROVEMENTS.** The Commission finds that Northlake Phase 1 is consistent with the standards identified in County Code Section 21.32.010 (Requirements Generally). The Subdivider shall improve, or agree to improve, all land dedicated or to be dedicated on a final map, or by separate instrument, for roads and easements, and all private roads and private easements laid out on a final map, with those improvements, including sanitary sewers, needed for the general use of the lot owners in the division of land and for neighborhood traffic and drainage.

36. **INCLUSIONARY HOUSING.** The Commission finds that Northlake Phase 1 is not subject to the IHO. The Northlake SP was adopted in 1992, prior to the effective date of the IHO. The related CUP filed provides a total of 315 rental affordable housing units

(269 affordable and 46 senior-affordable) at the Very Low, Lower, and Moderate household income levels and which are required per the original 2019 Board approval.

37. **AFFORDABLE HOUSING REPLACEMENT.** The Commission finds that Northlake Phase 1 is not subject to rental replacement units because there are no existing rental units on the subject property (nor are there any units proposed for demolition) and furthermore the Project is exempt due to the existing VHFHSZ located on the Project Site pursuant to County Code Section 22.119.040.F (Exemptions).

TENTATIVE TRACT MAP FINDINGS

38. VTTM No. 073336 has been submitted as a Vesting Tentative Tract Map. As such, it is subject to the provisions of Chapter 21.38 (Vesting Tentative Map) of the County Code.

39. **The Commission finds that the map is consistent with the goals and policies of the General Plan and has balanced the needs for housing against the public service needs of the residents and available fiscal and environmental resources.** Northlake Phase 1 would result in the development of 2,295 new housing units to help alleviate the State's housing crisis and includes onsite public parks and natural open space. It locates development adjacent to existing residential and commercial areas to the south, and utilizes existing roadway infrastructure (Ridge Route Road) to maintain continuity among development areas.

40. **The Commission finds that the design or improvement of the proposed subdivision is consistent with the goals and policies of the General Plan.** The design of the proposed subdivision facilitates sufficient access to and through the Northlake Project Site; locates more intensive development near existing commercial areas; and takes advantage of existing roadway improvements which provide continuity among existing development and the proposed Northlake Project.

41. **The Commission finds that the site is physically suitable for this type of development.** The subdivision site is physically suitable for the development because of its size and location near existing development and major roadway improvements. The SP adopted and considered the physical topography and residential densities suitable for the site.

42. **The Commission finds that the site is physically suitable for the proposed density of development.** The subdivision site is physically suitable for the proposed density due to the size of the site and designing sufficient ingress and egress (including emergency access) to accommodate 2,295 dwellings, 130 acres of public-accessible park space, and 70,875 sf of commercial uses. Northlake Phase 1 features and measures (such as affordable housing set-asides for very low, low, and moderate income households, senior-affordable housing, mixed-use and live-work development, enhanced wildlife linkages, enhanced community transit systems, and noise impact reduction) provided by the Subdivider as a result of the public hearing process show Northlake Phase 1 to be physically suitable for the proposed density of development and are consistent with the Specific Plan, as well as consistent with the

goals, objectives, and policies of the General Plan and Area Plan, and adopts these features and measures as conditions of approval for Northlake Phase 1.

43. **The Commission finds the design of the subdivision, or the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.** The design of the Project and/or its improvements are not likely to cause substantial environmental damage because it protects, preserves, and enhances onsite biological resources through large open space areas and does not include an SEA.

44. **The Commission finds that the design of the subdivision or type of improvements is not likely to cause serious public health problems.** The design of the subdivision or type of improvements are not likely to cause serious health problems as the Project provides sufficient space to accommodate 2,295 dwelling units and 70,850 sf of commercial area while maintaining ample open spaces that include a 130 acres of publicly accessible park space.

45. **The Commission finds that the design or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of the property within the proposed subdivision.** The design of the subdivision or type of improvements will not conflict with any easements, as all applicable easements (existing or future) have been reviewed through the subdivision process and were not found to conflict.

46. **The Commission finds that the design of the subdivision provides, to the extent feasible, for future passive or natural heating or cooling opportunities in that the subdivision complies with California Code of Regulations, County Code Title 24 (Building Standards Code), County Code Title 26 (Building Code), and guarantees compliance with the Net Zero Greenhouse Gas ("GHG") Program including solar water heating for swimming pools and "cool roofs" specified under the Building Retrofit Program included in the MMRP.** Northlake Phase 1 will be consistent with Title 24 and Title 26 standards and will be implemented with GHG best practices and measures throughout the development area.

47. **The Commission finds that the design or the type of improvements comply with County Code Chapter 16.44 (Electrical Transmission and Distribution Systems) by undergrounding utilities (conduits, cables, and other facilities) providing adequate service including telephone and internet services to each parcel.** Northlake Phase 1 will construct adequate utilities to serve the additional residents, visitors, employees, and guests within the development area.

SUPPLEMENTAL FINDINGS (VHFHSZ)

48. **The Commission finds that the design, location of, and access to each lot of the subdivision, and the subdivision as a whole, subject to the Project Permit conditions, are consistent with applicable regulations adopted by the State Board of Forestry and Fire Protection, pursuant to sections 4290 and 4291 of the Public Resources Code.** The Commission further finds that Northlake Phase 1 is

located within a VHFHSZ and SRA. As such, the Subdivider is required to comply with applicable fire and building codes meant to create a wildfire-resistant development, including the implementation of defensible space, fire-ignition construction and building materials, and home/structure hardening. Furthermore, the Commission finds that a conceptual fuel modification plan was reviewed and approved by Fire's Fuel Modification Division prior to approval of the VTTM. Final fuel modification plans will require approval from Fire prior to the issuance of building permits. The Commission further finds that upon occupancy, the Fire Forestry Division will conduct random annual inspections for compliance with brush clearance regulations per the County's Fire Code. In addition, the Commission finds that the Project would provide emergency vehicle access (such as by Ridge Route Road) in addition to the private driveway and fire lanes within the development. As such, the Project would ensure that land uses have adequate setbacks, fuel modification areas, and emergency access routes. Finally, the Commission finds that this is supported by the SEIR, including evacuation plans and a fuel modification plan, in the Administrative Record for the Project. In addition, new fire hydrants and sprinklers will be required to be placed throughout the development, as determined by Fire.

49. **The Commission finds that structural fire protection and suppression services will be available for the subdivision through Fire.** The Commission finds that VTTM No. 073336 and Exhibit Map dated August 20, 2025, and RPFSEIR were reviewed and cleared by Fire. The Commission further finds that the Subdivider is providing a Fire station lot onsite.

ENVIRONMENTAL FINDINGS

50. As stated above, these findings incorporate by reference, as if fully set forth herein, the FOF and SOC regarding the RPFSEIR for Northlake Phase 1, which are attached hereto as Exhibit F. As stated in the FOF, the PCAA is the environmental superior alternative among the project alternatives summarized in the RPDSEIR. As identified in the RPDSEIR, after implementation of the MMRP, Northlake Phase 1 would not result in any new or substantially more severe significant impacts compared to the original 2019 Northlake Phase 1.

51. The Commission finds that the Subdivider is subject to payment of the California Department of Fish and Wildlife fees related to the Project's effect on wildlife resources pursuant to section 711.4 of the California Fish and Game Code.

ADMINISTRATIVE FINDINGS

52. **HOUSING ACCOUNTABILITY ACT**. The Commission finds that Northlake Phase 1 is considered a housing development that is consistent with the General Plan and would not have a specific adverse impact upon public health or safety as described in the tentative map, and environmental findings.

53. **LOCATION OF DOCUMENTS.** The location of the documents and other materials constituting the record of proceedings upon which the Commission's decision is based in this matter is at LA County Planning, 13th Floor, Hall of Records, 320 West Temple

Street, Los Angeles, California 90012. The custodian of such documents and materials shall be the Section Head of the Subdivisions Section, LA County Planning.

BASED ON THE FOREGOING, THE REGIONAL PLANNING COMMISSION FINDS AND CONCLUDES THAT:

A. The map is consistent with the goals and policies of the General Plan.

B. The design or improvement of the proposed subdivision is consistent with the goals and policies of the General Plan.

C. Northlake Phase 1 is physically suitable for this type of development since it complies with all development standards of the SP which provides the appropriate land use designations for Northlake Phase 1.

D. Northlake Phase 1 is physically suitable for the proposed density of development since it is consistent with all development standards of the SP which provides the appropriate land use densities for Northlake Phase 1.

E. The design of the subdivision or the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

F. The design of the subdivision or type of improvements is not likely to cause serious public health problems since sewage disposal, storm drainage, fire protection, and geologic and soils factors have been considered in the County's review of Northlake Phase 1.

G. The design or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of property within the proposed subdivision.

H. The design, location of, and access to each lot of the subdivision, and the subdivision as a whole, subject to the Northlake Project Permit conditions, are consistent with applicable regulations adopted by the State Board of Forestry and Fire Protection, pursuant to sections 4290 and 4291 of the Public Resources Code, and are supported by the 2019 SEIR and the current RPFSEIR, and the Administrative Record for this Project.

I. The structural fire protection and fire suppression services will be available for the subdivision through Fire.

J. It is necessary to provide tenant protections where the Subdivider opts to lease all of the units rather than sell the units as is allowed under the Subdivision Map Act.

K. A covenant and agreement are needed to ensure potential tenants are provided with 180 days' written notice of intention to sell units prior to termination of tenancy due to the sale of the condominium unit.

L. A waiver of public street frontage is necessary to access some lots by private drives instead of public streets.

THEREFORE, THE REGIONAL PLANNING COMMISSION:

1. Certifies the RPFSEIR for Northlake Phase 1 by finding, pursuant to State and County CEQA Guidelines, that it was completed in compliance with CEQA, presented, reviewed and considered by the Commission prior to approving Northlake Phase 1, and reflects the independent judgment and analysis of the Commission.

2. Adopts the Supplemental Findings of Fact prepared pursuant to Public Resources Code Sections 21081 and 21081.5 and State CEQA Guidelines Section 15091.

3. Adopts the MMRP for Northlake Phase 1 by finding that it is adequately designed to ensure compliance with the mitigation measures during the implementation of Northlake Phase 1.

4. Determines that Northlake Phase 1's significant and unavoidable impacts are outweighed by specifical social, economic, legal, technological, or other considerations by adopting the Statement of Overriding Considerations prepared pursuant to Public Resources Code Section 21081(b) and State CEQA Guidelines Section 15093.

5. Approves **VESTING TENTATIVE TRACT MAP NO. 073336**, subject to the attached conditions.

ACTION DATE: January 28, 2026

DD:SMT:JSH:EGA:JDS
01/14/2026

c: Each Commissioner

6274854.1

LOS ANGELES COUNTY
DEPARTMENT OF LA COUNTY PLANNING

CONDITIONS OF APPROVAL
PROJECT NO. R2015-00408 ("NORTHLAKE")
VESTING TENTATIVE TRACT MAP ("VTTM") NO. 073336 (RPPL2023004336)

PROJECT DESCRIPTION

Northlake Phase 1 includes a total of 2,295 dwelling units and 386 lots on 720 gross acres. There are 288 single-family residential lots; this includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); Other uses include highway commercial, open space, and public facilities, to include parks, fire station, potential school site, debris basins, water tanks, water quality basin, and a pump station. A shuttle service is also included to transport residents and guests within the site as well as offsite destinations (such as shopping and employment centers) in and around Santa Clarita Valley. Offsite improvements include connection to existing utilities, relocation of existing utility lines, new drainage facilities, and other related infrastructure outside the boundaries of the site.

This grant, the VTTM, is subject to the following conditions and requirements of approval:

GENERAL CONDITIONS

1. **Subdivider**. Unless otherwise apparent from the context, the term "Subdivider" shall include the applicant, owner of the property, and any other person, corporation, or other entity making use of this grant.

2. **Affidavit of Acceptance**. This grant shall not be effective for any purpose until the Subdivider, and the owner of the subject property if other than the Subdivider, have filed at the office of the Los Angeles County ("County") Department of LA County Planning ("LA County Planning") their affidavit stating that they are aware of and agree to accept all of the conditions of this grant, and until all required monies have been paid pursuant to Condition Nos. 13 and 16. Notwithstanding the foregoing, this Condition No. 2 and Condition Nos. 4, 6, and 7 shall be effective immediately upon the date of final approval of this grant by the County.

3. **Date of Final Approval**. Unless otherwise apparent from the context, the term "date of final approval" shall mean the date the County's action becomes effective pursuant to Section 21.56.010 of the County Code as provided in the Subdivision Map Act Section 66452.5 for Tentative Maps.

4. **Indemnification**. The Subdivider shall defend, indemnify, and hold harmless the County, its agents, officers, and employees from any claim, action, or proceeding against the County or its agents, officers, or employees to attack, set aside, void, or

annul this subdivision approval, which action is brought within the applicable time period of Government Code Section 66499.37 or any other applicable limitations period. The County shall promptly notify the Subdivider of any claim, action, or proceeding and the County shall reasonably cooperate in the defense. If the County fails to promptly notify the Subdivider of any claim, action, or proceeding, or if the County fails to cooperate reasonably in the defense, the Subdivider shall not thereafter be responsible to defend, indemnify, or hold harmless the County.

5. **Invalidation.** If any material provision of this grant is held or declared to be invalid by a court of competent jurisdiction, the subdivision shall be void and the privileges granted hereunder shall lapse.

6. **Litigation Deposit**. In the event that any claim, action, or proceeding as described above is filed against the County, the Subdivider shall within 10 days of the filing make an initial deposit with LA County Planning in the minimum amount of $5,000.00, from which actual costs and expenses shall be billed and deducted for the purpose of defraying the costs or expenses involved in LA County Planning's cooperation in the defense, including but not limited to, depositions, testimony, and other assistance provided to the Subdivider or the Subdivider's counsel.

    A. If during the litigation process, actual costs or expenses incurred reach 80 percent of the amount on deposit, the Subdivider shall deposit additional funds sufficient to bring the balance to the minimum required amount of $5,000.00. There is no limit to the number of supplemental deposits that may be required prior to completion of the litigation.

    B. At the sole discretion of the Subdivider, the amount of an initial or any supplemental deposit may exceed the minimum amounts defined herein. Additionally, the cost for collection and duplication of records and other related documents shall be paid by the Subdivider according to County Code Section 2.170.010 (Fees for Providing County Records).

7. **Expiration**. VTTM No. 073336 shall expire on January 28, 2028. The Hearing Officer may grant one (or more) time extensions to the terms of approval of the tentative map. If requested, time extension(s) shall be requested in writing and with the payment of the applicable fee prior to such expiration date. The total number of extensions shall not exceed the maximum number of extensions authorized by the Subdivision Map Act.

8. **Exhibit Map**. The subject property shall be developed and maintained in substantial conformance with the plans marked Exhibit Map. If changes to any of the plans marked Exhibit Map are required as a result of instruction given at the public hearing, a modified Exhibit Map shall be submitted to LA County Planning by **March 29, 2026 (60 calendar days from the date of approval)**.

9. **Revisions to Exhibit Map**. In the event that subsequent revisions to the approved Exhibit Map are submitted the Subdivider shall submit the proposed plans to the Director of LA County Planning ("Director") for review and approval. All revised plans

must substantially conform to the originally approved Exhibit Map. All revised plans must be accompanied by the written authorization of the property owner(s) and applicable fee for such revision.

10. **Conditions Compliance**. The subject property shall be maintained and operated in full compliance with the conditions of this grant and any law, statute, ordinance, or other regulation applicable to any development or activity on the subject property. Failure of the Subdivider to cease any development or activity not in full compliance shall be a violation of these conditions. No provision of any easement of any other encumbrance on the property shall exempt the Subdivider from compliance with these conditions and applicable regulations.

11. **Inspection**. If inspections are required to ensure compliance with the conditions of this grant, or if any inspection discloses that the subject property is being used in violation of any one of the conditions of this grant, the Subdivider shall be financially responsible and shall reimburse LA County Planning for all enforcement efforts necessary to bring the subject property into compliance. The amount charged for each inspection shall be $456.00 per inspection, or the current recovery cost established by LA County Planning at the time any inspection(s) is/are required, whichever is greater.

    Inspections may be unannounced. Inspections may be conducted utilizing available technologies, including, but not limited to, unmanned aircraft systems (UAS). Use of an UAS requires the consent of the Subdivider pursuant to LA County Planning's UAS policy, which may be updated from time to time, and which shall be provided to the Subdivider upon request.

12. **Library Facilities Mitigation Fees**. Prior to the issuance of any building permit(s), the Subdivider shall remit all applicable library facilities mitigation fees to the County Librarian and pay the fees in effect at the time of payment, pursuant to Chapter 22.264 of the County Code. Questions regarding fee payment can be directed to the County Librarian at (562) 940-8430. The Subdivider shall provide proof of payment upon request from LA County Planning.

13. **Environmental Document Filing Fees**. Within five (5) working days from the day after the appeal period ends on **February 9 , 2026,** (by **February 16, 2026**), the Subdivider shall remit processing fees at the County Registrar-Recorder/County Clerk Office (i.e. County Clerk's Office), payable to the County of Los Angeles, in connection with the filing and posting of a Notice of Determination ("NOD") for this project and its entitlements in compliance with section 21152 of the Public Resources Code. Unless a Certificate of Exemption is issued by the California Department of Fish and Wildlife ("CDFW") pursuant to section 711.4 of the California Fish and Game Code, the Subdivider shall pay the fees in effect at the time of filing the NOD, as provided for in section 711.4 of the Fish and Game Code, currently **$4,227.50** for an Environmental Impact Report ("EIR") plus $75.00 processing fee). No land use project subject to this requirement is final, vested or operative until the fee is paid. Fees are required unless waived by CDFW.

14. **Mitigation Monitoring and Reporting Program ("MMRP")**. The Subdivider shall comply with all mitigation measures as identified and revised in the MMRP, attached as Exhibit D-2, which are incorporated by this reference as if set forth fully herein.

15. **Covenant and Agreement**. Within thirty (30) days of the date of final approval of the grant by the County, the Subdivider shall record a covenant and agreement, which attaches the MMRP and agrees to comply with the mitigation measures imposed by the Supplemental EIR (including the Final Recirculated Portions of the Supplemental Environmental Impact Report) ("RPFSEIR") for this project, in the County Recorder's Office. Prior to recordation of the covenant, the Subdivider shall submit a draft copy of the covenant and agreement to LA County Planning for review and approval. As a means of ensuring the effectiveness of the mitigation measures, the Subdivider shall submit annual mitigation monitoring reports to LA County Planning for approval or as required. The reports shall describe the status of the Subdivider's compliance with the required mitigation measures.

16. **MMRP Deposit**. The Subdivider shall deposit an initial sum of **$6,000.00** with LA County Planning within thirty (30) days of the date of final approval of this grant in order to defray the cost of reviewing and verifying the information contained in the reports required by the MMRP. The Subdivider shall replenish the mitigation monitoring account, if necessary, until all mitigation measures have been implemented and completed.

17. **Revocation**. Notice is hereby given that any person violating a provision of this grant is guilty of a misdemeanor. Notice is further given that the LA County Planning Commission ("Commission") or a Hearing Officer may, after conducting a public hearing, revoke or modify this grant, if the Commission or Hearing Officer finds that these conditions have been violated or that this grant has been exercised so as to be detrimental to the public's health or safety or so as to be a nuisance, or as otherwise authorized pursuant to County Code Chapter 22.238 (Modifications and Revocations) of the County Code.

18. **County Fire Code**. All development pursuant to this grant must be kept in full compliance with the County Fire Code to the satisfaction of the County Fire Department ("Fire").

19. **County Public Works Requirements**. All development pursuant to this grant shall conform with the requirements of County Public Works ("Public Works") to the satisfaction of said department.

20. **Compliance to County Code Title 21 and Title 22**. All development pursuant to this grant shall comply with the requirements of Title 21 (Subdivisions) and Title 22 (Planning and Zoning) of the County Code and of the specific zoning of the subject property, unless specifically modified by this grant, as set forth in these conditions, including the approved Vesting Tentative Map and Exhibit Map, or an approved Amendment Map/Amended Exhibit Map.

21. **Maintenance**. The Subdivider shall maintain the subject property in a neat and orderly fashion. The Subdivider shall maintain free of litter all areas of the premises over which The Subdivider has control. All structures, walls and fences open to public view shall remain free of graffiti or other extraneous markings, drawings, or signage that was not approved by LA County Planning. In the event of graffiti or other extraneous markings occurring, the Subdivider shall remove or cover said markings, drawings, or signage within 48 hours of such notification, weather permitting. Paint utilized in covering such markings shall be of a color that matches, as closely as possible, the color of the adjacent surfaces.

TENTATIVE TRACT MAP SPECIFIC CONDITIONS

22. **Grant**. This grant shall authorize Northlake Phase 1— total of 2,295 dwelling units and 386 lots on 720 gross acres This includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); other uses include highway commercial, open space, and public facilities, to include parks, fire station, potential school site, debris basins, water tanks, water quality basin, and a pump station. A shuttle service is also proposed to transport residents and guests within the site as well as offsite destinations (such as shopping and employment centers) in and around Santa Clarita Valley. Offsite improvements would include connection to existing utilities, relocation of existing utility lines, new drainage facilities, and other related infrastructure outside the boundaries of the Project site.

23. **Lot Line Adjustments**. Permission is granted to adjust lot lines to the satisfaction of LA County Planning and Public Works.

24. **Subdivision Committee Conditions**. Except as expressly modified herein, this approval is subject to all recommended conditions listed in the attached Subdivision Committee Reports (VTTM dated August 20, 2025), consisting of letters and reports from Public Works, Fire, and County Departments of Parks and Recreation ("Parks and Recreation"), and Public Health.

25. **Grading**. This grant shall authorize early grading prior to final map approval at the discretion of the Planning Director. If authorized by the Planning Director, an REA shall be required for submittal to show the early grading.

26. **Bulk Grading in Phases**. Permission is granted to bulk grade, in one or more phases, to the satisfaction of LA County Planning and Public Works.

27. **Street Frontage**. The Subdivider shall provide at least 50 feet of street frontage for each lot, except for those lots granted a street frontage waiver; and at least 40 feet of

street frontage at the property line and approximately radial lot lines for each lot fronting on cul-de-sacs and knuckles, except for flag lots.

28. **Street Frontage Waiver**. Permission is granted to waiver from public street frontage requirements for lots fronting private drives and fire lanes for the following: Lot Nos. 131 through 140 (10 total).

PRIOR TO RECORDATION OF A FINAL MAP

29. **Water Supply.** A "Written Verification" and supporting documents from the water supplier to indicate the availability of a "Sufficient Water Supply" as required per Section 66473.7 of the Subdivision Map Act (SB 221) shall be provided to the satisfaction of LA County Planning and Public Works prior to filing any map for recordation.

30. **Final Map Phasing**. Permission is granted to record multiple final maps, provided that a phasing exhibit (or updated phasing exhibit) is submitted to LA County Planning for review and approval, prior to final map recordation. The phasing exhibit shall depict the timing of offsite improvements and open space dedication, number of phases, all lots to be phased, dwelling units per phase, gross and net lot area(s), and required homeowner's association ("HOA") and natural open space calculations.

Easements

31. **Easements Depicted on Final Map**. All existing and proposed easements shall be depicted on the final map, as shown on the Existing and Proposed Easements Table on the approved Tentative/Exhibit Map for ingress/egress, reciprocal access, trails, and utilities, etc. to the satisfaction of LA County Planning, Parks and Recreation, and Public Works.

32. **Easements**. Prior to final map recordation, the Subdivider shall submit a draft copy of the reciprocal ingress and egress easements for the private driveways to the Director for review and approval. Once the property changes hands, the Subdivider shall then record the easements immediately following the recordation of the final map.

33. **Draft Covenant Regarding Proposed Easements**. Prior to final map recordation, the Subdivider shall submit a draft covenant to LA County Planning for review and approval, agreeing to record all proposed easements as designated on the approved Tentative/Exhibit Maps. The approved covenant shall be recorded immediately after the recordation of the final map.

Condominiums

34. The Subdivider shall place a note or notes on the final map, to the satisfaction of LA County Planning, that this subdivision is approved as a condominium project whereby the owners of the units of air space will hold an undivided interest in the common areas, which common areas will in turn provide the necessary access and utility easements for all of the units.

35. Prior to final map recordation, the Subdivider shall submit a draft covenant and agreement to provide tenants 180 days written notification of the intention to sell units prior to termination of tenancy due to sale of the condominium units. The Subdivider shall record said covenant and agreement concurrently with the recordation of the final map.

Covenants, Conditions, and Restrictions ("CC&Rs")

36. The Subdivider shall submit a copy of the project's Covenants, Conditions and Restrictions ("CC&Rs") to the Director for review and approval. A copy of these conditions of approval shall be attached to the CC&Rs and made a part thereof. Those provisions in the CC&Rs required by these conditions shall be identified in the CC&Rs as such and shall not be modified in any way without prior authorization from the Director.

37. The Subdivider shall provide in the CC&Rs a method for the continuous maintenance of the common areas, including but not limited to, private driveways and fire lanes, walkways, lighting system along all walkways, landscaping (including all front yard trees and street trees), trash collection points and containers, irrigation systems, wall, fence and recreation areas, to the satisfaction of the Director.

38. The Subdivider shall reserve in the CC&Rs the right for all residents and their guests within the condominium project to use the guest parking, and private driveways and fire lanes for access into and out of the subdivision.

Driveway Conditions

39. The private condo, multi-family, commercial, and mixed-use driveways shall be labeled as "Private Driveway and Fire Lane" on the final map.

40. The Subdivider shall construct or bond with Public Works for the private driveways and fire lanes, complying with paving design and widths, as depicted on the approved Exhibit Map dated August 20, 2025, or an Amended Exhibit Map approved by the Director.

41. The external access points and internal private driveways/fire lanes of the development shall not be gated. Except for fire emergency access gates required by Fire and utilities and/or infrastructure that require private access gating, gated vehicular access shall be listed as a prohibition within the CC&Rs and physically delineated in an exhibit or map.

42. Once the final map is recorded, the Subdivider shall post on private driveways: "No Parking-Fire Lane", unless designated parking otherwise permitted. The Subdivider shall provide for continued enforcement in the CC&Rs or maintenance agreement. The Subdivider shall submit a draft copy of the CC&Rs and/or maintenance agreement to LA County Planning for review and approval. This shall include bonding for improvements, and such bonds shall not be released until the signs are posted.

Tree Planting

43. **On-site Tree Planting**. Prior to final map recordation, the Subdivider shall submit a tree planting plan to the Director for review and approval, depicting the planting location, size and species of the tree plantings required by this grant (currently a sum total of 6,876 trees, of which 2,333 comprise street trees; 2,593 trees for single and multi-family areas, and 1,950 for dedicated lot trees within recreation areas). The Subdivider shall post a bond guaranteeing performance of work with Public Works or provide other proof of plantings to the satisfaction of the Director. The number and placement of ornamental trees may be reviewed and modified by the Fire Forestry Division with respect to fuel modification and other requirements. Additionally, also prior to final map recordation, the Subdivider shall post a bond guaranteeing performance of work with Public Works or provide other proof of plantings to the satisfaction of the Director.

Open Space

44. Permission is granted to create additional open space lots to the satisfaction of the Director.

45. The Subdivider shall provide for the ownership and maintenance of the open space and/or lots for parks to the satisfaction of the Director. The ownership and maintenance of the lot(s) shall be provided by a HOA or dedicated to a public agency or land conservancy.

OTHER CONDITIONS

46. As agreed to by the Subdivider, Northlake Phase 1 shall substantially conform to the adopted Northlake Specific Plan ("SP") and all revisions and updates to the SP associated and approved with this grant. Northlake Phase 1 and all subsequent development approvals (such as, but not limited to, Amended Exhibit Maps) shall also substantially conform to the document marked "Northlake Design Guidebook" ("Guidebook") dated April 2025, or the latest version of said document as approved by LA County Planning.

47. As agreed to by the Subdivider, the Subdivider is required to comply with the current standards in the CalGreen Code by implementing energy-efficient building designs, pre-wiring residences with electric vehicle charging ports, implementing solar-ready rooftops, reducing indoor and outdoor water demand, and installing energy-efficient appliances and equipment.

48. As agreed to by the Subdivider, the Subdivider shall fund and provide a total of 135 or more electric vehicle ("EV") charging stations within the Project site and in locations within the surrounding Castaic community to the satisfaction of LA County Planning. The specific type, and location of the charging stations shall be approved by LA County Planning in an "EV charging station infrastructure siting concept plan" submitted to LA County Planning by the Subdivider prior to the first phased map approval; and in the same manner, for all subsequent final/phased map approvals, to the satisfaction of LA County Planning. In addition, the location and type of stations shall be noted in an "EV

charging station infrastructure siting detail plan" and depicted on all applicable Exhibit Maps/Revised Exhibit "A"s to the satisfaction of LA County Planning.

49. As agreed to by the Subdivider, the Subdivider shall fund and provide a community shuttle and service for the Northlake development residents and guests. The shuttle shall serve destinations within the Project site (such as the school, parks, highway commercial and mixed-use, live-work commercial areas) as well as outside the Project site (such as the Northlake Hills Elementary School, downtown Castaic shopping center, Sports Complex, and Valencia Commerce Center). The shuttle service shall substantially comply with the transit plans/exhibits depicted on the tentative map/Exhibit Map and in the Guidebook. Prior to final map approval, the Subdivider shall submit to LA County Planning a "community shuttle service plan" that describes the precise shuttle routes, stops, stop designs/amenities, destinations, vehicles, and other details to the satisfaction of LA County Planning.

50. As agreed to by the Subdivider, the Subdivider shall finalize, construct, and initiate the community shuttle service no later than the issuance of the 500th residential Certificate of Occupancy ("CofO") for the Project site. The Subdivider shall be responsible for tracking the progress of the CofO's and provide quarterly reports to LA County Planning for status. The community shuttle service plan is to be updated or amended every six months, or as needed, to the satisfaction of LA County Planning.

51. As agreed to by the Subdivider, the Subdivider shall construct a new school within the Northlake Phase 1, identified in Figure 5A of the Guidebook as "Alternative School Site", if requested by the local school district. The Subdivider shall notify LA County Planning in this event and shall submit an Amendment Map and Amended Exhibit Map/Revised Exhibit "A" for approval prior to final map approval and shall designate the school site/parcel on the applicable final map, to the satisfaction of LA County Planning.

52. As agreed to by the Subdivider, the Subdivider shall provide no less than 440 senior (age-restricted) housing units. Of the 440 senior units, the Subdivider shall provide no less than 345 senior age-restricted (136 rental, 209 for-sale) market-rate housing units and no less than 95 senior age-restricted for-sale affordable housing units within the Project site, and shall identify the lots containing such units on the applicable final map, to the satisfaction of LA County Planning.

53. As agreed to by the Subdivider, the Subdivider shall provide no less than 220 market rate (98 rental, 122 for-sale) housing units, no less than six live-work for-sale market rate units, and no less than 38,700 square feet of associated mixed-use commercial space within the Northlake Phase 1 General Commercial area, as presently depicted in the Guidebook, and shall identify the lots containing such units and space on the applicable final map, to the satisfaction of LA County Planning.

54. As agreed to by the Subdivider, prior to final map recordation, the Subdivider shall submit an Amendment Map and Amended Exhibit Map/Revised Exhibit "A" to LA County Planning for review and approval, depicting the General Commercial area and wildlife crossing/connection areas, as presently shown and described in the

Guidebook (or in the case of wildlife movement, as presently shown on the relevant Exhibit described herein or in a separate document), as well as any other minor changes related to the two areas described in this condition, if needed and would not go beyond the scope of the Amendment Map.

55. As agreed to by the Subdivider, the Subdivider shall provide no less than 315 affordable set-aside and deed-restricted housing units within the Project site, which equates to no less than 10 percent of the overall SP unit count of 3,150 dwellings. No less than 50 percent (or 158) of the 315 units shall be set-aside for lower and very low Income households, per State and County affordable housing guidelines, with the remaining balance of 157 affordable units set-aside for moderate income households, per State and County guidelines. If the overall SP unit count shall be less than 3,150, then the Subdivider shall provide 10 percent of the reduced final overall unit count.

56. As agreed to by the Subdivider, prior to final map recordation, the Subdivider shall coordinate with the Los Angeles County Development Authority ("LACDA") to enter into an agreement for the purpose of monitoring all affordable set-aside units and ensuring that they are deed-restricted in perpetuity, to the satisfaction of the LACDA.

57. As agreed to by the Subdivider, of the 315 affordable set-aside housing units, the Subdivider shall provide no less than 95 senior affordable set-aside and deed-restricted housing units within the General Commercial area, which equates to no less than three percent of the overall Northlake housing unit count of 3,150 dwellings. The three percent senior affordable set-aside shall be included within the overall 315-unit count of affordable set-aside units within the Northlake development. The 220 non-senior affordable units shall be provided throughout the Project site residential land use planning areas.

58. As agreed to by the Subdivider, the Subdivider shall ensure that all affordable set-aside units are developed on a 10 percent pro-rata basis with the non-affordable housing units built within the Northlake development, as per the following schedule:
    a. Affordable Units 1 through 50 to be constructed before the issuance of the 500th Northlake building permit;
    b. Units 51 through 100 before the 1,000th building permit;
    c. Units 101 through 150 before the 1,500th building permit;
    d. Units 151 through 200 before the 2,000th building permit;
    e. Units 201 through 230 before the 2,295th building permit;
    f. and Units 231 through 315 before the 3,150th building permit.

59. As agreed to by the Subdivider, together with the final map recordation, the Subdivider shall record a covenant (or covenants) for all income-restricted (affordable set-aside) and income-age restricted (senior-affordable set-aside) housing units within the Northlake development, which shall describe the income and age level restrictions of the units per State and County guidelines, and shall indicate that such restrictions are to be established in perpetuity, to the satisfaction of the LACDA.

60. As agreed to by the Subdivider, the Subdivider shall ensure that additional and/or enhanced wildlife crossings and connections are provided within/through the Project

and Northlake development, as depicted on the Exhibit marked "wildlife connectivity plan." This connectivity plan shall ensure that all Project and development landscaping and lighting located in applicable areas are compatible with the intended movement of wildlife as per the connectivity plan, to the satisfaction of the County Biologist; and shall ensure that sufficient schematic descriptions and depictions of roadway undercrossings, overcrossings, and culverts that are anticipated to facilitate wildlife movement are provided to LA County Planning prior to the approval of any final maps or grading permits for the Project, to the satisfaction of the County Biologist.

61. As agreed to by the Subdivider, prior to final map recordation, to help address noise impacts of the Project, the Subdivider shall confer with the Castaic Union School District to seek authorization to construct an approximately three-foot-high "noise wall" along the perimeter of the existing Northlake Hills Elementary School playground area. If the school district should authorize the construction of the wall, the Subdivider shall submit a site plan review for the wall to LA County Planning for review and approval and shall construct the wall prior to the issuance of the first residential unit building permit for the Project.

Attachments:

Exhibit D-1 Subdivision Committee Reports (Pages 1 to 74)

Exhibit D-2 MMRP (Pages 1 to 35)

LOS ANGELES COUNTY
DEPARTMENT OF REGIONAL PLANNING
FINDINGS OF THE REGIONAL PLANNING COMMISSION
AND ORDER
PROJECT NO. R2015-00408 ("Northlake")

VESTING TENTATIVE PARCEL MAP ("VTPM") NO. 073335 (RPPL2023004448)

RECITALS

1. **HEARING DATE.** The Los Angeles County ("County") Regional Planning Commission ("Commission") conducted a duly-noticed public hearing on January 28, 2026, in the matter of Project No. R2015-00408, consisting of VTPM No. 073335 and related entitlements Vesting Tentative Tract Map ("VTTM") No. PM073335 (RPPL2023004448), Conditional Use Permit ("CUP") No. 201500019 (RPPL2023004316), and Environmental Assessment No. 201500030 [(RPPL2023004887) (State Clearinghouse No. 2015031080)], referred to collectively as the "Northlake Parcel Map".

2. **HEARING PROCEEDINGS.** The public hearing proceeded on Wednesday, January 28, 2026. Staff made a presentation and subsequently the applicant, Damon Mamalakis, made a presentation. The Commission then reiterated the "limited scope" of three remedies resulting from the prior court decision and order: "alternatives analysis", "spadefoot toad", and "rare plant species". County Counsel also reminded the Commission that, in addition to the three remedies, the Northlake entitlements were also required to be re-filed and re-approved. The Commission then reiterated that the PCAA only affects Phase 2, while Phase 1 (before the Commission) is unchanged by the PCAA. Commissioners asked for more information regarding affordable housing and the percentage amount of affordable units directed by the Commission back in 2018. The Commission asked questions about the fire station pad, water tanks in Phase 1, and confirmed that the HOA-funded shuttle system will include routes both internal to the project and external to offsite locations in the Santa Clarita area. There were a total of 12 public speakers, nine of them speaking virtually. A total of nine public speakers spoke-out against the project or asked for a postponement, including issues such as: suburban sprawl/leapfrog development, damage to Coastal Sage Shrub, expansion of the wildland-urban interface (WUI), fire and landslide dangers, potential gas pipeline rupture, negative effects on mountain lions, conflict with the 2022 GHG carbon reduction plan, traffic congestion, lack of discussion about new job generation, interference with wildlife linkages, lack of mitigation for the gas pipeline, and pipeline "hazard" not analyzed. Three public speakers were in favor of the project, citing reasons such as: supporting economic growth, revitalizing local commercial centers (such as re-opening a neighborhood-serving market that closed down several years ago due to poor economic conditions), more housing to help lower housing costs, developing a "thoughtful" plan that was adopted in 1992, incentivizing high school enrollment and job creation, enhancing the overall quality of life, needed transportation investments, and housing for working families that are closer to jobs. After the public speakers had concluded, the Commission made final remarks related to camera shots of wildlife movement in the culvert, gas line located offsite from the project, and that the

applicant provided support for repair work related to the pipeline rupture. Then the Commission asked about landslides and the pipeline, and grading totals. The applicant made a rebuttal of some of the remarks of those opposed to the project, stating the pipeline rupture is not located on Northlake property, the pipeline will be proposed to be located to Ridge Route Road, which is a less dangerous location further away from residences. Other applicant rebuttals included the PCAA will improve wildlife movements through the project site, the VMT appropriate baseline was used, Coastal Sage Scrub mitigation location is identified, GHG comments were upheld by the court and did not require recirculation, the third wildlife crossing is in Phase 2 and not considered at this time but could be possible to adjust the road, if needed. At the end of the hearing, during the motion, Lastly, after hearing no further testimony, comments, or rebuttal, the Commission then closed the public hearing and unanimously approved the project (5-0).

3. **ENTITLEMENT REQUESTED.** The subdivider, Northlake Associates LLC ("Subdivider") requests VTPM No. 073335 to create 17 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only.

4. **RELATED ENTITLEMENT.** VTTM No. 073336 is a related request to create a total of 386 lots and 2,295 dwelling units on 720 gross acres. This includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet (“sf”) of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); one highway commercial lot (2.5 acres), 39 open space lots, 11 park lots, 13 debris basin lots, two water tank lots, one water quality basin lot, one pump station lot, and one fire station lot (1.4 acre building pad). Of the total 2,295 dwelling units in Northlake Phase 1, 1,777 units are proposed to be for-sale and 518 units expected for rental. This is pursuant to County Code Chapters 21.38 (Vesting Tentative Map) and 21.40 (Tentative Maps).

5. **RELATED ENTITLEMENT.** CUP No. RPPL2023004316 is a related request to authorize the Northlake Specific Plan (“SP”) Site Plan Review procedure for development of 2,295 residential dwelling units; affordable set-aside housing and affordable senior set-aside housing; mixed-use and live-work development; onsite and offsite grading in excess of 100,000 cubic yards (“cy”): 17.16 million cy of cut, 15.84 million cy of fill, and 1.32 million cy of shrinkage balanced onsite, as well as 3.22 million cy of grading offsite, for an overall total of 37.54 million cy, pursuant to County Code Section 22.140.240 (Grading Projects); walls exceeding six feet in height; and construction of two water tanks with associated grading and infrastructure. As part of the proposed Northlake Phase 1, offsite improvements would include connection to existing utilities, relocation of existing utility lines, new drainage facilities, and other related infrastructure outside the boundaries of Northlake Phase 1.

6. **PREVIOUS ENTITLEMENTS.** Northlake Specific Plan No. 87172-(5), Sub-Plan Amendment No. 87172-(5), Zone Change No. 87172-(5), CUP No. 87172-(5), and Development Agreement ("DA") No. 87172-(5) authorized the SP and was approved in 1992. It authorized a maximum of 3,150 dwelling units on 1,330 acres of land, to include single-family and multi-family residences, schools, parks, and a fire station. The DA was not used and expired in 2003. Specific Plan Amendment No. 98047, DA No. 98047, CUP No. 98047, VTTM No. 51582, and CUP No. 2004-00015 were filed in 1998 and were withdrawn in 2007. The CUP included grading and the SP site plan review procedure. Also included in prior entitlements are the 2015 requests for the VTTM, VTPM, and CUP, which were approved in 2019 and subsequently litigated.

7. **ENTITLEMENTS REQUESTOR**. Unless otherwise apparent from the context, "Subdivider" shall include the Subdivider, successor in interest, owner of the property, and any other person, corporation, or other entity making use of this grant.

8. **COMMISSION APPROVAL.** The approval of VTPM No. 073335 and related entitlements VTTM and CUP will not become effective unless and until the Commission certifies the Recirculated Partial Final Supplemental Environmental Impact Report ("RPFSEIR") and approves the Northlake Parcel Map, and both have become effective.

9. **VESTING DATE.** Pursuant to Government Code Section 65866, the County and Subdivider agreed to a vesting date of March 17, 2015 pursuant to LA County Code Section 21.38 (Vesting Maps). Accordingly, Northlake Phase 1 is generally subject to the applicable rules, regulations, and official policies that were in effect as of March 17, 2015.

10. **LOCATION.** The Northlake Parcel Map site is located north of Lake Hughes Road and Ridge Route Road, east of Interstate 5 Freeway and west of Castaic Lake and Lagoon in the unincorporated community of Castaic. The Project Site is also located within a designated Very High Fire Hazard Severity Zone ("VHFHSZ") and State Responsibility Area ("SRA").

11. **LAND USE DESIGNATION.** The Northlake Parcel Map is located within the adopted SP, a component of the General Plan.

12. **ZONING.** The Northlake Parcel Map is located in the Castaic Canyon Zoned District within the Santa Clarita Valley Planning Area and is currently zoned SP.

LOCATION	SANTA CLARITA VALLEY AREA PLAN LAND USE POLICY	ZONING	EXISTING USES
SUBJECT PROPERTY	SP (Specific Plan)	SP	Vacant Land
NORTH	RL5 (Rural Land 5 – One Dwelling Per 5 Acres), BLM (Bureau	A-2-2 (Light Agricultural – Two-Acre Minimum Lot Size)	Vacant Land

	of Land Management)		
EAST	BLM, RL10 (Rural Land 10 – One Dwelling Per 10 Acres), OS-PR (Open Space – Parks and Recreation), RL5, IL (Light Industrial)	A-2-2, M-1-DP (Light Manufacturing – Development Program), M-2-DP (Heavy Manufacturing – Development Program), RPD-5000-2.9DU (Residential Planned Development – 5000 Square Foot Lot Size – 2.9 Dwellings Per Acre), OS (Open Space)	Vacant Land, Elementary School, Single-Family Residences, Shopping Center
SOUTH	H2 (Large Lot Residential – 0-2 Dwellings Per Acre), IL, H18 (Medium Density Residential – 9-18 Dwellings Per Acre), CM (Major Commercial)	R-1 (Single-Family Residence), C-3 (Major Commercial), M-1 (Light Manufacturing)	Vacant Land, Shopping Center, Single-Family Residences, Senior Residences
WEST	RL5, RL1 (Rural Land 1 – One Dwelling Per Acre), IL, OS-C (Open Space Conservation)	A-2-2, A-2-1 (Light Agricultural – One-Acre Minimum Lot Size), M-1, M-1-DP, OS	Vacant Land, Single-Family Residences, Water Tank, Warehousing

13. **PROJECT AND SITE PLAN DESCRIPTION.**

A. Existing Site Conditions

The SP site consists of approximately 1,330 acres located north of Lake Hughes Road and Ridge Route Road, east of I-5 Freeway and west of Castaic Lake and Lagoon in the unincorporated community of Castaic. The site is comprised of vacant land, with adjacent infrastructure such as transmission towers (via utility easement through the property) and a water tank to the west, just outside of the Northlake boundary. The Northlake Parcel Map covers 1,307.4 acres of the SP area.

The property exhibits a wide range of topographic relief, with gently-rolling hills, extremely steep slopes, and a major drainage course (Grasshopper Creek) running north-south down the middle of the Northlake Parcel Map. The property is not located within and does not contain any portion of a Significant Ecological Area ("SEA").

B. Site Access

The Northlake Parcel Map is accessible via Ridge Route Road, a Limited Secondary Highway with 64 to 80 feet of width that transitions into a 80 to 90 foot-wide Secondary Highway on the County Master Plan of Highways. Primary access to the site will be via an entrance/exit on Ridge Route Road. Secondary access to

the property will be via Northlake Boulevard, a Local Collector with 64 to 80 feet of width that transitions into an 80 to 86-foot-wide Modified Industrial Collector. The Project provides a five-foot wide or greater walkway along private and future streets throughout the property, with publicly-accessible walkways of similar widths along private drives/fire lanes providing direct access to all units.

C. Tentative Map and Exhibit Map
The VTPM No. 073335 map dated August 20, 2025, requests to create 17 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only. Parcels range from 40 to 93 acres in size.

D. Grading
The grading amounts include 17.16 million cy of cut and 15.84 million cy of fill with 1.32 million cy of shrinkage to be balanced onsite, as well as 3.22 million cy of grading offsite, for a combined grading amount of 37.54 million cy.

14. **CEQA DETERMINATION.**

Supplemental Environmental Impact Report ("SEIR")
The Northlake SP Draft Supplemental EIR ("DSEIR") was released on May 2, 2017, and circulated for a 45-day public review and comment period ending on June 15, 2017. Following the close of the public comment period on the DSEIR on June 15, 2017, detailed responses to all public agency comments and comments received from members of the general public received regarding the Project and the analyses of the DSEIR were prepared and are contained in the Final SEIR ("FSEIR").

An Errata was released in February 2018, prior to the LA County Regional Planning Commission ("Planning Commission") hearing to make minor technical corrections to the SEIR and to provide further information in response to public comments received prior to the Planning Commission meeting. The Errata included only minor technical changes to the SEIR and additional information to support the SEIR's conclusions, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. At the February 21, 2018, public hearing, the Planning Commission requested that the Applicant include an affordable housing component in the Project. Based on this request, the Applicant made minor revisions to the Project analyzed in the SEIR to include an affordable component. An Errata dated April 4, 2018, was prepared which concluded that the revisions involve only minor changes to the distribution of land uses and an overall reduction in density and intensity or use, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. On April 18, 2018, the Planning Commission adopted the required findings, certified the SEIR, and granted the requested Project approvals. On April 23, 2018, appeals were filed by the Center for Biological Diversity, the Santa Monica Mountains Conservancy, and the Golden State Environmental Justice Alliance. A Second Errata dated August 2018 was prepared to make minor technical corrections in the SEIR and to provide further information in response to public comments at the Planning Commission meeting.

On September 25, 2018, the LA County Board of Supervisors ("Board") held a public hearing on the Project and the appeals and voted to reject the appeals, uphold the Planning Commission's approvals, and certify the SEIR. On April 2, 2019, the Board adopted the Project entitlements, CEQA findings and Mitigation Monitoring and Reporting Program ("MMRP"), and Project conditions.

A Petition for Writ of Mandate was filed in May 2019 challenging the Project. The Los Angeles Superior Court's ruling in Center For Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al, Case No. 19STCP01610, dated January 11, 2021 (Court Ruling), granted in part and denied in part the Petition for Writ of Mandate. Specifically, the Court Ruling held that the SEIR for Northlake failed to comply with CEQA because it contained: (1) inadequate alternatives analysis (for failing to fully analyze a creek avoidance alternative); (2) inadequate Western Spadefoot Toad (WST) baseline assessment and, therefore, inadequate mitigation (to recreate baseline conditions; mitigation inadequate in detail and commitment); and (3) improper deferred mitigation as to rare plants (measure lacked sufficient detail).

The Court denied the Petition for Writ of Mandate regarding: (1) impacts to mountain lions/wildlife crossings, (2) aesthetics, (3) air quality/public health, (4) wildfire impacts, and (5) recirculation.

Recirculated Partial Draft SEIR ("RPDSEIR")

The LA County Department of Regional Planning ("LA County Planning") prepared a RPDSEIR. The document did not revise the original SEIR in any respect other than as directed by the Court (above) and was limited to a few portions of the SEIR. Pursuant to CEQA Guidelines Section 15088.5(c), the County only needed to recirculate the portions of the SEIR that were modified by the RPDSEIR. The County did not recirculate the other portions of the SEIR for public review and comment because those portions were not modified.

The RPDSEIR was made available for public review and comment pursuant to State CEQA Guidelines Section 15087. Copies of the RPDSEIR and appendices were available for a review period of 45 calendar days from April 14, 2025 to May 29, 2025. As CEQA Guidelines Section 15088.5, subdivision (f)(2) permits, the County requested that the scope of public comment be limited to the material that was addressed within the text of the revised portions and the appendices included in the RPDSEIR.

The Recirculated Partial Final SEIR ("RPFSEIR") was completed in June 2025.

These findings incorporate by reference, as if fully set forth herein, the CEQA Supplemental Findings of Fact ("FOF") and Statement of Overriding Considerations ("SOC") regarding the RPFSEIR for the Northlake Parcel Map, which are attached hereto as Exhibit F. As stated in the FOF, the Partial Creek Avoidance Alternative ("PCAA") is the environmental superior alternative among the project alternatives summarized in the RPDSEIR. As identified in the RPDSEIR, after implementation of the MMRP, the Northlake Parcel Map would not result in any new or substantially more severe significant impacts.

15. **AGENCY RECOMMENDATIONS.**

The Los Angeles County Subdivision Committee, consisting of LA County Planning and County Departments of Public Works ("Public Works"), Fire ("Fire"), Parks and Recreation ("Parks and Recreation"), and Public Health ("Public Health"): Recommended clearance to public hearing with conditions of the VTTM No. 073336 map dated August 20, 2025.

A. In a letter dated April 9, 2024, Public Works recommended that the Project proceed to public hearing with required conditions of approval.

B. In a letter dated April 4, 2024, Fire recommended that the Project proceed to public hearing with required conditions of approval.

C. In a letter dated March 22, 2024, Parks and Recreation recommended that the Project proceed to public hearing with required conditions of approval.

D. In a letter dated April 4, 2024, Public Health recommended that the Project proceed to public hearing with required conditions of approval.

16. **LEGAL NOTIFICATION.** Pursuant to Sections 21.16.060 (Public Hearings), 21.16.070 (Notice of Public Hearing) and 21.16.075 (Posting) of the County Code, Staff properly notified the community of the public hearing. This included mailings, The Signal newspaper publication, and property posting. On December 11, 2025, Staff mailed a total of 362 Notices of Public Hearing out to all property owners as identified on the County Assessor's record within a 1,000-foot radius from the Project Site. This mailing also included 46 notices to those on the courtesy mailing list for the Castaic Canyon Zoned District and to any additional interested parties. Additionally, Staff posted the Northlake case materials and hearing notice on LA County Planning's website.

GENERAL PLAN CONSISTENCY FINDINGS

17. **LAND USE POLICY.** The Commission finds that the Project is consistent with the goals and policies of the SP, as the Northlake Parcel Map is for lease and financing only, and no development is proposed.

18. **GOALS AND POLICIES. The Commission finds that the Project is consistent with the following policies of the General Plan:**

- ***General Plan – Housing Element, Policy 3.1:*** *"Promote mixed-income neighborhoods and a diversity of housing types throughout unincorporated Los Angeles County to increase housing choices for all economic segments of the population."*

Northlake Phase 1 will include 2,295 new residential units with multiple housing types that will increase housing choices for varying economic segments of the population within the unincorporated County. There will be a total of 315 affordable units with a mix of rental and for-sale units.

- ***General Plan – Parks & Recreation, Policy P/R 4.3:*** *"Develop a network of feeder trails into regional trails."*

  A community trail system would connect Northlake Phase 1 to existing and planned trails in the vicinity and into regional trails. Within Northlake Phase 1, the proposed trail system would include community trails and recreational trails that would be linked to the overall SP trail system and the existing communities to the south. Bicycle facilities and bicycle route improvements in and around Northlake Phase 1 would connect to an extensive system of continuous bike paths within Northlake Phase 1 and to other communities outside Northlake Phase 1, consistent with the County's Bicycle Master Plan.

- ***General Plan – Economic Development, Policy ED 2.5:*** *"Encourage employment opportunities to be located in proximity to housing."*

  Northlake Phase 1 includes 70,875 sf of non-residential (commercial/office/retail) space in the southerly portion of the site, in close proximity to the proposed 2,295 new residential units as well as existing destinations further south, such as the aforementioned elementary school and senior retirement community. This supports and encourages employment opportunities and more accessible proximity to these destinations.

- ***General Plan – Land Use, Policy LU 5.2:*** *"Encourage a diversity of commercial and retail services, and public facilities at various scales to meet regional and local needs."*

  Northlake Phase 1 will result in 70,875 sf of onsite commercial, retail, and office development that will provide local residents with increased access to commercial and retail services, as well as public facilities such as parks, schools, and a fire station within and proximate to Northlake Phase 1. Therefore, it supports a diversity of commercial and retail services, and public facilities, that help meet regional and local needs.

- ***General Plan – Land Use, Policy LU 5.3:*** *"Support a mix of land uses that promote bicycling and walking, and reduce VMT."*

  Northlake Phase 1 provides ample and convenient opportunities for bicycling and walking, due to an extensive trail and sidewalk/walkway system that connects to

many destinations within and outside of Northlake Phase 1. This encourages more bicycling and walking, not only reducing VMT but also improving health.

The Commission also finds that the Project is consistent with the following policies of the Area Plan:

- ***Area Plan - Land Use, Policy LU-1.1.3:*** *Discourage urban sprawl into rural areas by limiting non-contiguous, "leap-frog" development outside of areas designated for urban use.*

The Northlake SP, adopted in 1992, has long been planned for residential and commercial development under the SP and is designated for residential and commercial uses. Northlake Phase 1 will be developed adjacent to existing communities, avoiding leapfrog development and unnecessary extension of infrastructure. The development proposed is consistent with the Area Plan, which accounts for the long-term planned development of the area in an orderly manner.

- ***Area Plan – Land Use, Policy LU-1.1.4:*** *Preserve community character by maintaining natural features that act as natural boundaries between developed areas, including significant ridgelines, canyons, rivers and drainage courses, riparian areas, topographical features, habitat preserves, or other similar features, where appropriate.*

The area of natural open space within the SP has been significantly increased from 476 acres to 783 acres compared to the original SP natural open space allotment. Much of the open space is natural and covers extensive steep slope areas that would be impractical to develop. This benefits wildlife and encourages enhancement of ecological, scenic, and cultural open space resources. Of the open space, the amount of undisturbed open space would be increased from 328 to 572 acres. Furthermore, the PCAA reduces the development footprint in the northerly portion of the site, increasing the amount of natural open space.

- ***Area Plan – Conservation and Open Space Element, Policy CO-10.1.5:*** *"Maintain open space corridors along canyons and ridgelines as a way of delineating and defining communities and neighborhoods, providing residents with access to natural areas, and preserving scenic beauty."*

The SP and part of Northlake Phase 1 utilizes the existing Grasshopper Creek area to define communities and neighborhoods by providing a linear park and multi-use trail along the creek. The park and trail link the northerly and southerly portions of the Northlake Phase 1, connecting northerly residences to the mixed-use areas in the south of the site. An equestrian staging area would also be provided in the south of the development for convenient access to the trails.

SUBDIVISION AND ZONING CODE CONSISTENCY FINDINGS

19. **LOT AREA.** The Commission finds that the Northlake Parcel Map requires lot sizes of 20 acres or more, as provided in Section 21.32.040 (Lot sizes in excess of 10 acres—Requirements). Each parcel resulting from a division of land has a minimum gross area of 20 acres or is one-half part of a quarter-quarter section resulting from the normal division of an undersized section of land, and no improvements shall be required.

20. **MINIMUM FRONTAGE.** The Commission finds that the Northlake Parcel Map is consistent with the standards identified in County Code Section 21.24.300 (Minimum Frontage), except where locations require a waiver of frontage and have provided a justification for the waiver pursuant to Section 21.24.040 (Modifications to Access and Frontage Requirements). Lots subject to waiver include the following: Lots 131-140 (10 total).

TENTATIVE PARCEL MAP FINDINGS

21. VTPM No. 073335 has been submitted as a Vesting Tentative Parcel Map. As such, it is subject to the provisions of Chapter 21.38 (Vesting Tentative Map) of the County Code.

22. **The Commission finds that the map is consistent with the goals and policies of the General Plan and has balanced the needs for housing against the public service needs of the residents and available fiscal and environmental resources.** The Northlake Parcel Map requires a minimum lot size of 20 acres and is for lease and financing only with no development proposed. The Northlake Parcel Map will help facilitate the sale and leasing of large-lot parcels for future development.

23. **The Commission finds that the design or improvement of the proposed subdivision is consistent with the goals and policies of the General Plan.** The Northlake Parcel Map requires a minimum lot size of 20 acres and is for lease and financing only with no development proposed. The Northlake Parcel Map will help facilitate the sale and leasing of large-lot parcels for future development.

24. **The Commission finds that the site is physically suitable for this type of development.** The Northlake Parcel Map requires a minimum lot size of 20 acres and is for lease and financing only with no development proposed. The Northlake Parcel Map will help facilitate the sale and leasing of large-lot parcels for future development.

25. **The Commission finds that the site is physically suitable for the proposed density of development.** The Northlake Parcel Map requires a minimum lot size of 20 acres and is for lease and financing only with no development proposed. The Northlake Parcel Map will help facilitate the sale and leasing of large-lot parcels for future development.

26. **The Commission finds the design of the subdivision, or the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.** The design of the Northlake Parcel Map and/or its improvements are not likely to cause substantial environmental damage because it protects, preserves, and enhances onsite biological resources through large open space areas and does not include an SEA.

27. **The Commission finds that the design of the subdivision or type of improvements is not likely to cause serious public health problems.** The design of the subdivision or type of improvements are not likely to cause serious health problems as the Northlake Parcel Map provides sufficient space to accommodate 2,295 dwelling units and 70,850 sf of commercial area while maintaining ample open spaces that include a 130 acres of public-accessible park space.

28. **The Commission finds that the design or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of the property within the proposed subdivision.** The design of the subdivision or type of improvements will not conflict with any easements, as all applicable easements (existing or future) have been reviewed through the subdivision process and were not found to conflict.

29. **The Commission finds that the design of the subdivision provides, to the extent feasible, for future passive or natural heating or cooling opportunities in that the subdivision complies with California Code of Regulations, Title 24 ("Building Standards Code), County Code Title 26 (Building Code), and guarantees compliance with the Net Zero Greenhouse Gas ("GHG") Program including solar water heating for swimming pools and "cool roofs" specified under the Building Retrofit Program included in the MMRP.** The Project will be consistent with Title 24 and Title 26 standards and will be implemented with GHG best practices and measures throughout the development area.

30. **The Commission finds that the design or the type of improvements comply with County Code Chapter 16.44 (Electrical Transmission and Distribution Systems) by undergrounding utilities (conduits, cables, and other facilities) providing adequate service including telephone and internet services to each parcel.** The Project will construct adequate utilities to serve the additional residents, visitors, employees, and guests within the development area.

SUPPLEMENTAL FINDINGS (VHFHSZ)

31. **The Commission finds that the design, location of, and access to each lot of the subdivision, and the subdivision as a whole, subject to the Northlake Parcel Map Permit conditions, are consistent with applicable regulations adopted by the State Board of Forestry and Fire Protection, pursuant to sections 4290 and 4291 of the Public Resources Code.** The Commission further finds that the Northlake Parcel Map site is located within a VHFHSZ and SRA. As such, the Subdivider is required to comply with applicable fire and building codes meant to create a wildfire-resistant development, including the implementation of defensible space, fire-ignition

construction and building materials, and home/structure hardening. Furthermore, the Commission finds that a conceptual fuel modification plan was reviewed and approved by Fire's Fuel Modification Division prior to approval of the VTTM. The Commission also finds that final fuel modification plans will require approval from Fire prior to the issuance of building permits. The Commission further finds that upon occupancy, the Fire Forestry Division will conduct random annual inspections for compliance with brush clearance regulations per the County's Fire Code. In addition, the Commission finds that the Northlake Parcel Map would provide emergency vehicle access in addition to the private driveway and fire lanes within the development. As such, the Northlake Parcel Map would ensure that land uses have adequate setbacks, fuel modification areas, and emergency access routes. Finally, the Commission finds that this is supported by the SEIR, including evacuation plans and a fuel modification plan, in the Administrative Record for the Northlake Parcel Map.

32. **The Commission finds that structural fire protection and suppression services will be available for the subdivision through Fire.** The Commission finds that VTPM No. 073335 dated August 20, 2025 and the RPSEIR were reviewed and approved by Fire. The Commission further finds that the subdivider would pay the Fire Facility Fee, which constitutes full mitigation for development impacts associated with the need for additional fire protection services or facilities.

ENVIRONMENTAL FINDINGS

33. As stated above, these findings incorporate by reference, as if fully set forth herein, the FOF and SOC regarding the RPFSEIR for the Northlake Parcel Map, which are attached hereto as Exhibit F. As stated in the FOF, the PCAA is the environmental superior alternative among the project alternatives summarized in the RPDSEIR. As identified in the RPDSEIR, after implementation of the MMRP, the Northlake Parcel Map would not result in any new or substantially more severe significant impacts.

34. The Commission finds that the Subdivider is subject to payment of the California Department of Fish and Wildlife fees related to the Project's effect on wildlife resources pursuant to section 711.4 of the California Fish and Game Code.

ADMINISTRATIVE FINDINGS

35. **HOUSING ACCOUNTABILITY ACT**. The Commission finds that the Northlake Parcel Map is considered a housing development that is consistent with the General Plan and would not have a specific adverse impact upon public health or safety as described in the tentative map, and environmental findings.

36. **LOCATION OF DOCUMENTS.** The location of the documents and other materials constituting the record of proceedings upon which the Commission's decision is based in this matter is at LA County Planning, 13th Floor, Hall of Records, 320 West Temple Street, Los Angeles, California 90012. The custodian of such documents and materials shall be the Section Head of the Subdivisions Section, LA County Planning.

BASED ON THE FOREGOING, THE REGIONAL PLANNING COMMISSION FINDS AND CONCLUDES THAT:

A. The map is consistent with the goals and policies of the General Plan.

B. The design or improvement of the proposed subdivision is consistent with the goals and policies of the General Plan.

C. The Northlake Property is physically suitable for this type of development since the Project complies with all development standards of the Northlake SP Overlay which provides the appropriate land use designations for the Project.

D. The Northlake Property is physically suitable for the proposed density of development since the Project is consistent with all development standards of the Northlake SP Overlay which provides the appropriate land use densities for the Project.

E. The design of the subdivision or the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

F. The design of the subdivision or type of improvements is not likely to cause serious public health problems since sewage disposal, storm drainage, fire protection, and geologic and soils factors have been considered in the County's review of the Project.

G. The design or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of property within the proposed subdivision.

H. The design, location of, and access to each lot of the subdivision, and the subdivision as a whole, subject to the Northlake Parcel Map Permit conditions, are consistent with applicable regulations adopted by the State Board of Forestry and Fire Protection, pursuant to sections 4290 and 4291 of the Public Resources Code, and are supported by the 2019 SEIR and the current RPFSEIR, and the Administrative Record for this Project.

I. The structural fire protection and fire suppression services will be available for the subdivision through Fire.

THEREFORE, THE REGIONAL PLANNING COMMISSION:

1. Certifies that the RPFSEIR for the Northlake Parcel Map by finding, pursuant to State and County CEQA Guidelines, that it was completed in compliance with CEQA, presented, reviewed and considered by the Commission prior to approving the Northlake Parcel Map, and reflects the independent judgment and analysis of the Commission.

2. Adopts the Supplemental Findings of Fact prepared pursuant to Public Resources Code Sections 21081 and 21081.5 and State CEQA Guidelines Section 15091.

3. Adopts the MMRP for the Northlake Parcel Map by finding that it is adequately designed to ensure compliance with the mitigation measures during the Northlake Parcel Map implementation.

4. Determines that the Northlake Parcel Map's significant and unavoidable impacts are outweighed by specifical social, economic, legal, technological, or other considerations by adopting the Statement of Overriding Considerations prepared pursuant to Public Resources Code Section 21081(b) and State CEQA Guidelines Section 15093.

5. Approves **VESTING TENTATIVE PARCEL MAP NO. 073335**, subject to the attached conditions.

ACTION DATE: January 28, 2026

DD:SMT:JSH:EGA:JDS
10/30/2025

c: Each Commissioner

6274854.1

LOS ANGELES COUNTY
DEPARTMENT OF LA COUNTY PLANNING

CONDITIONS OF APPROVAL
PROJECT NO. R2015-00408-(5) ("NORTHLAKE")
VESTING TENTATIVE TRACT MAP ("VTPM") NO. 073335 (RPPL2023004336)

PROJECT DESCRIPTION

Northlake Associates LLC includes the Northlake Parcel Map with 17 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only. It covers the entire Specific Plan ("SP") site with the exception of 22.6 acres removed from the development due to the prior completed construction of the Northlake Hills Elementary School.

This grant, the VTPM, is subject to the following conditions and requirements of approval:

GENERAL CONDITIONS

1. **Subdivider**. Unless otherwise apparent from the context, the term "Subdivider" shall include the applicant, owner of the property, and any other person, corporation, or other entity making use of this grant.

2. **Affidavit of Acceptance**. This grant shall not be effective for any purpose until the Subdivider, and the owner of the subject property if other than the Subdivider, have filed at the office of the Los Angeles County ("County") Department of LA County Planning ("LA County Planning") their affidavit stating that they are aware of and agree to accept all of the conditions of this grant, and until all required monies have been paid pursuant to Condition Nos. 13 and 16. Notwithstanding the foregoing, this Condition No. 2 and Condition Nos. 4, 6, and 7 shall be effective immediately upon the date of final approval of this grant by the County.

3. **Date of Final Approval**. Unless otherwise apparent from the context, the term "date of final approval" shall mean the date the County's action becomes effective pursuant to Section 21.56.010 of the County Code as provided in the Subdivision Map Act Section 66452.5 for Tentative Maps.

4. **Indemnification**. The Subdivider shall defend, indemnify, and hold harmless the County, its agents, officers, and employees from any claim, action, or proceeding against the County or its agents, officers, or employees to attack, set aside, void, or annul this subdivision approval, which action is brought within the applicable time period of Government Code Section 66499.37 or any other applicable limitations period. The County shall promptly notify the Subdivider of any claim, action, or proceeding and the County shall reasonably cooperate in the defense. If the County fails to promptly notify the Subdivider of any claim, action, or proceeding, or if the County fails to cooperate reasonably in the defense, the Subdivider shall not thereafter be responsible to defend, indemnify, or hold harmless the County.

5. **Invalidation.** If any material provision of this grant is held or declared to be invalid by a court of competent jurisdiction, the subdivision shall be void and the privileges granted hereunder shall lapse.

6. **Litigation Deposit**. In the event that any claim, action, or proceeding as described above is filed against the County, the Subdivider shall within 10 days of the filing make an initial deposit with LA County Planning in the minimum amount of $5,000.00, from which actual costs and expenses shall be billed and deducted for the purpose of defraying the costs or expenses involved in LA County Planning's cooperation in the defense, including but not limited to, depositions, testimony, and other assistance provided to the Subdivider or the Subdivider's counsel.

    A. If during the litigation process, actual costs or expenses incurred reach 80 percent of the amount on deposit, the Subdivider shall deposit additional funds sufficient to bring the balance to the minimum required amount of $5,000.00. There is no limit to the number of supplemental deposits that may be required prior to completion of the litigation.

    B. At the sole discretion of the Subdivider, the amount of an initial or any supplemental deposit may exceed the minimum amounts defined herein. Additionally, the cost for collection and duplication of records and other related documents shall be paid by the Subdivider according to County Code Section 2.170.010 (Fees for Providing County Records).

7. **Expiration**. VTPM No. 073335 shall expire on January 28, 2028. The Hearing Officer may grant one (or more) time extensions to the terms of approval of the tentative map. If requested, time extension(s) shall be requested in writing and with the payment of the applicable fee prior to such expiration date. The total number of extensions shall not exceed the maximum number of extensions authorized by the Subdivision Map Act.

8. **Exhibit Map**. The subject property shall be developed and maintained in substantial conformance with the plans marked Exhibit Map. If changes to any of the plans marked Exhibit Map are required as a result of instruction given at the public hearing, a modified Exhibit Map shall be submitted to LA County Planning by **March 29, 2026 (60 calendar days from the date of approval)**.

9. **Revisions to Exhibit Map**. In the event that subsequent revisions to the approved Exhibit Map are submitted the Subdivider shall submit the proposed plans to the Director of LA County Planning ("Planning Director") for review and approval. All revised plans must substantially conform to the originally approved Exhibit Map. All revised plans must be accompanied by the written authorization of the property owner(s) and applicable fee for such revision.

10. **Conditions Compliance**. The subject property shall be maintained and operated in full compliance with the conditions of this grant and any law, statute, ordinance, or other regulation applicable to any development or activity on the subject property. Failure of the Subdivider to cease any development or activity not in full compliance shall be a violation of these conditions. No provision of any easement of any other encumbrance on the property shall exempt the Subdivider from compliance with these conditions and applicable regulations.

11. **Inspection**. If inspections are required to ensure compliance with the conditions of this grant, or if any inspection discloses that the subject property is being used in violation of any one of the conditions of this grant, the Subdivider shall be financially responsible and shall reimburse LA County Planning for all enforcement efforts necessary to bring the subject property into compliance. The amount charged for each inspection shall be $456.00 per inspection, or the current recovery cost established by LA County Planning at the time any inspection(s) is/are required, whichever is greater.

    Inspections may be unannounced. Inspections may be conducted utilizing available technologies, including, but not limited to, unmanned aircraft systems (UAS). Use of an UAS requires the consent of the Subdivider pursuant to LA County Planning's UAS policy, which may be updated from time to time, and which shall be provided to the Subdivider upon request.

12. **Library Facilities Mitigation Fees**. Prior to the issuance of any building permit(s), the Subdivider shall remit all applicable library facilities mitigation fees to the County Librarian and pay the fees in effect at the time of payment, pursuant to Chapter 22.264 of the County Code. Questions regarding fee payment can be directed to the County Librarian at (562) 940-8430. The Subdivider shall provide proof of payment upon request from LA County Planning.

13. **Environmental Document Filing Fees**. Within five (5) working days from the day after the appeal period ends on **February 9, 2026,** (by **February 16, 2026**), the Subdivider shall remit processing fees at the County Registrar-Recorder/County Clerk Office (i.e. County Clerk's Office), payable to the County of Los Angeles, in connection with the filing and posting of a Notice of Determination ("NOD") for this project and its entitlements in compliance with section 21152 of the Public Resources Code. Unless a Certificate of Exemption is issued by the California Department of Fish and Wildlife ("CDFW") pursuant to section 711.4 of the California Fish and Game Code, the Subdivider shall pay the fees in effect at the time of filing the NOD, as provided for in section 711.4 of the Fish and Game Code, currently **$4,198.50** ($4,123.50 for an Environmental Impact Report ("EIR") plus $75.00 processing fee). No land use project subject to this requirement is final, vested or operative until the fee is paid. Fees shall apply unless waived by CDFW.

14. **Mitigation Monitoring and Reporting Program ("MMRP")**. The Subdivider shall comply with all mitigation measures as identified and revised in the MMRP, attached as Exhibit D-2, which are incorporated by this reference as if set forth fully herein.

15. **Covenant and Agreement**. Within thirty (30) days of the date of final approval of the grant by the County, the Subdivider shall record a covenant and agreement, which attaches the MMRP and agrees to comply with the mitigation measures imposed by the Supplemental EIR (including the Final Recirculated Portions of the Supplemental Environmental Impact Report) ("RPFSEIR") for this project, in the County Recorder's Office. Prior to recordation of the covenant, the Subdivider shall submit a draft copy of the covenant and agreement to LA County Planning for review and approval. As a means of ensuring the effectiveness of the mitigation measures, the Subdivider shall submit annual mitigation monitoring reports to LA County Planning for approval or as

required. The reports shall describe the status of the Subdivider's compliance with the required mitigation measures.

16. **MMRP Deposit**. The Subdivider shall deposit an initial sum of **$6,000.00** with LA County Planning within thirty (30) days of the date of final approval of this grant in order to defray the cost of reviewing and verifying the information contained in the reports required by the MMRP. The Subdivider shall replenish the mitigation monitoring account, if necessary, until all mitigation measures have been implemented and completed.

17. **Revocation**. Notice is hereby given that any person violating a provision of this grant is guilty of a misdemeanor. Notice is further given that the LA County Planning Commission ("Commission") or a Hearing Officer may, after conducting a public hearing, revoke or modify this grant, if the Commission or Hearing Officer finds that these conditions have been violated or that this grant has been exercised so as to be detrimental to the public's health or safety or so as to be a nuisance, or as otherwise authorized pursuant to County Code Chapter 22.238 (Modifications and Revocations) of the County Code.

18. **County Fire Code**. All development pursuant to this grant must be kept in full compliance with the County Fire Code to the satisfaction of the County Fire Department ("Fire").

19. **County Public Works Requirements**. All development pursuant to this grant shall conform with the requirements of County Public Works ("Public Works") to the satisfaction of said department.

20. **Compliance with County Code Title 21 and Title 22**. All development pursuant to this grant shall comply with the requirements of Title 21 (Subdivisions) and Title 22 (Planning and Zoning) of the County Code and of the specific zoning of the subject property, unless specifically modified by this grant, as set forth in these conditions, including the approved Vesting Tentative Map and Exhibit Map, or an approved Amendment Map/Amended Exhibit Map.

21. **Maintenance**. The Subdivider shall maintain the subject property in a neat and orderly fashion. The Subdivider shall maintain free of litter all areas of the premises over which The Subdivider has control. All structures, walls and fences open to public view shall remain free of graffiti or other extraneous markings, drawings, or signage that was not approved by LA County Planning. In the event of graffiti or other extraneous markings occurring, the Subdivider shall remove or cover said markings, drawings, or signage within 48 hours of such notification, weather permitting. Paint utilized in covering such markings shall be of a color that matches, as closely as possible, the color of the adjacent surfaces.

TENTATIVE PARCEL MAP SPECIFIC CONDITIONS

22. **Grant**. This grant shall authorize the creation of 17 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only.

23. **Code Compliance**. The Subdivider shall conform to the requirements of Title 21 of the Los Angeles County Code, and the Subdivision Map Act.

24. **Lot Line Adjustments**. Permission is granted to adjust lot lines to the satisfaction of LA County Planning and Public Works.

25. **Subdivision Committee Conditions**. Except as expressly modified herein, this approval is subject to all recommended conditions listed in the attached Subdivision Committee Reports (VTPM dated March 5, 2024), consisting of letters and reports from Public Works, Fire, and County Departments of Parks and Recreation ("Parks and Recreation"), and Public Health.

PRIOR TO RECORDATION OF A FINAL MAP

26. **Final Map Phasing**. A final parcel map is required**.** Permission is granted to record multiple final maps, provided that a phasing exhibit (or updated phasing exhibit) is submitted to LA County Planning for review and approval, prior to final map recordation. The phasing exhibit shall depict the timing of offsite improvements and open space dedication, number of phases, all lots to be phased, dwelling units per phase, gross and net lot area(s), and required homeowner's association ("HOA") and natural open space calculations.

Easements

27. **Easements Depicted on Final Map**. All existing and proposed easements shall be depicted on the final map, as shown on the Existing and Proposed Easements Table on the approved Tentative/Exhibit Map for ingress/egress, reciprocal access, trails, and utilities, etc. to the satisfaction of LA County Planning, Parks and Recreation, and Public Works.

28. **Easements**. The Subdivider shall submit a draft copy of the reciprocal ingress and egress easements for the private driveways to the Director for review and approval.

29. **Draft Covenant Regarding Proposed Easements**. Prior to final map recordation, the Subdivider shall submit a draft covenant to LA County Planning for review and approval, agreeing to record all proposed easements as designated on the approved Tentative/Exhibit Maps. The approved covenant shall be recorded immediately after the recordation of the final map.

Attachments:

Exhibit D-1 Subdivision Committee Reports (pages 1 to 15)

Exhibit D-2 MMRP (pages 1 to 35)

LOS ANGELES COUNTY
DEPARTMENT OF REGIONAL PLANNING
FINDINGS OF THE REGIONAL PLANNING COMMISSION
AND ORDER
PROJECT NO. R2015-00408

CONDITIONAL USE PERMIT ("CONDITIONAL USE PERMIT") NO. RPPL2023004316

RECITALS

1. **HEARING DATE.** The Los Angeles County ("County") Regional Planning Commission ("Commission") conducted a duly-noticed public hearing on January 28, 2026, in the matter of Project No. R2015-00408 ("Northlake"), consisting of CUP No. RPPL2023004316 and related entitlements Vesting Tentative Tract Map ("VTTM") No. 073336, Vesting Tentative Parcel Map ("VTPM") No. PM073335 (RPPL2023004448), and Environmental Assessment No. 201500030 [(RPPL2023004887) (State Clearinghouse No. 2015031080)]. These are collectively referred to as the "Northlake Phase 1".

2. **HEARING PROCEEDINGS.** The public hearing proceeded on Wednesday, January 28, 2026. Staff made a presentation and subsequently the applicant, Damon Mamalakis, made a presentation. The Commission then reiterated the "limited scope" of three remedies resulting from the prior court decision and order: "alternatives analysis", "spadefoot toad", and "rare plant species". County Counsel also reminded the Commission that, in addition to the three remedies, the Northlake entitlements were also required to be re-filed and re-approved. The Commission then reiterated that the PCAA only affects Phase 2, while Phase 1 (before the Commission) is unchanged by the PCAA. Commissioners asked for more information regarding affordable housing and the percentage amount of affordable units directed by the Commission back in 2018. The Commission asked questions about the fire station pad, water tanks in Phase 1, and confirmed that the HOA-funded shuttle system will include routes both internal to the project and external to offsite locations in the Santa Clarita area. There were a total of 12 public speakers, nine of them speaking virtually. A total of nine public speakers spoke-out against the project or asked for a postponement, including issues such as: suburban sprawl/leapfrog development, damage to Coastal Sage Shrub, expansion of the wildland-urban interface (WUI), fire and landslide dangers, potential gas pipeline rupture, negative effects on mountain lions, conflict with the 2022 GHG carbon reduction plan, traffic congestion, lack of discussion about new job generation, interference with wildlife linkages, lack of mitigation for the gas pipeline, and pipeline "hazard" not analyzed. Three public speakers were in favor of the project, citing reasons such as: supporting economic growth, revitalizing local commercial centers (such as re-opening a neighborhood-serving market that closed down several years ago due to poor economic conditions), more housing to help lower housing costs, developing a "thoughtful" plan that was adopted in 1992, incentivizing high school enrollment and job creation, enhancing the overall quality of life, needed transportation investments, and housing for working families that are closer to jobs. After the public speakers had concluded, the Commission made final remarks related to camera shots of wildlife movement in the culvert, gas line located offsite from the project, and that the

applicant provided support for repair work related to the pipeline rupture. Then the Commission asked about landslides and the pipeline, and grading totals. The applicant made a rebuttal of some of the remarks of those opposed to the project, stating the pipeline rupture is not located on Northlake property, the pipeline will be proposed to be located to Ridge Route Road, which is a less dangerous location further away from residences. Other applicant rebuttals included the PCAA will improve wildlife movements through the project site, the VMT appropriate baseline was used, Coastal Sage Scrub mitigation location is identified, GHG comments were upheld by the court and did not require recirculation, the third wildlife crossing is in Phase 2 and not considered at this time but could be possible to adjust the road, if needed. At the end of the hearing, during the motion, Lastly, after hearing no further testimony, comments, or rebuttal, the Commission then closed the public hearing and unanimously approved the project (5-0).

3. **ENTITLEMENTS REQUESTED.** Northlake Associates LLC ("Permittee") requests CUP No. RPPL2023004316, a request to authorize a SP site plan review procedure for development of 2,295 residential dwelling units; affordable set-aside housing and affordable senior set-aside housing; mixed-use and live-work development; onsite and offsite grading in excess of 100,000 cubic yards (“cy”) with an overall onsite and offsite total of 37.54 million cy of cut and fill material; onsite quantities include 34.32 million cy (17.16 million cy of cut, 15.84 million cy of fill, and 1.32 cy of shrinkage) to be balanced onsite; offsite grading includes an additional 2.15 million cy of cut and 1.07 million cy of fill for an offsite total of 3.22 million cy of combined cut and fill; pursuant to County Code Section 22.140.240 (Grading Projects); walls exceeding six feet in height; and construction of two water tanks with associated grading and infrastructure. As part of the proposed Project, offsite improvements would include connection to existing utilities, relocation of existing utility lines, new drainage facilities, and other related infrastructure outside the boundaries of Northlake Phase 1.

4. **RELATED ENTITLEMENT.** VTTM No. 073336 to create a total of 386 lots and 2,295 dwelling units on 720 gross acres. This includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet (“sf”) of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); one highway commercial lot (2.5 acres), 39 open space lots, 11 park lots, 13 debris basin lots, two water tank lots, one water quality basin lot, one pump station lot, and one fire station lot (1.4 acre building pad). Of the total 2,295 dwelling units in Northlake Phase 1, 1,777 units are proposed to be for-sale and 518 units expected for rental. This is pursuant to County Code Chapters 21.38 (Vesting Tentative Map) and 21.40 (Tentative Maps).

5. **RELATED ENTITLEMENT.** VTPM No. 073335 is a related request to create 17 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only.

6. **PREVIOUS ENTITLEMENTS.** Northlake Specific Plan No. 87172-(5), Sub-Plan Amendment No. 87172-(5), Zone Change No. 87172-(5), CUP No. 87172-(5), and Development Agreement ("DA") No. 87172-(5) authorized the SP and was approved in 1992. It authorized a maximum of 3,150 dwelling units on 1,330 acres of land, to include single-family and multi-family residences, schools, parks, and fire station. The DA was not used and expired in 2003. Specific Plan Amendment No. 98047, DA No. 98047, CUP No. 98047, VTTM No. 51582, and CUP No. 2004-00015 were filed in 1998 and were withdrawn in 2007. The CUP included grading and the SP site plan review procedure. Also included in prior entitlements are the 2015 requests for the VTTM, VTPM, and CUP, which were approved in 2019 and subsequently litigated.

7. **ENTITLEMENTS REQUESTOR**. Unless otherwise apparent from the context, "Permittee" shall include the Permittee, successor in interest, owner of the property, and any other person, corporation, or other entity making use of this grant.

8. **COMMISSION APPROVAL.** The approval of CUP No. RPPL2023004316 and related entitlements VTTM and VTPM will not become effective unless and until the Commission certifies the SEIR and approves Northlake Phase 1, and both have become effective.

9. **VESTING DATE.** Pursuant to Government Code Section 65866, the County and Permittee agreed to a vesting date of March 17, 2015. Accordingly, Northlake is generally subject to the applicable rules, regulations, and official policies that were in effect as of March 17, 2015.

10. **LOCATION.** The Northlake site is located north of Lake Hughes Road, east of Ridge Route Road and of Interstate 5 Freeway, and west of Castaic Lake and Lagoon in the unincorporated community of Castaic. Northlake Phase 1 Site is also located within a designated Very High Fire Hazard Severity Zone ("VHFHSZ") and State Responsibility Area ("SRA").

11. **LAND USE DESIGNATION.** Northlake Phase 1 is located within various designations within the SP, a component of the General Plan. It includes Single-Family, Multi-Family, General Commercial, Public Facilities, Recreation, and Open Space uses.

12. **ZONING.** Northlake Phase 1 is located in the Castaic Canyon Zoned District within the Santa Clarita Valley Planning Area and is currently zoned SP (Specific Plan). The surrounding zoning is listed in the table below:

LOCATION	SANTA CLARITA VALLEY AREA PLAN ("AREA PLAN") LAND USE POLICY	ZONING	EXISTING USES
SUBJECT PROPERTY	SP (Specific Plan)	SP	Vacant Land

NORTH	RL5 (Rural Land 5 – One Dwelling Per 5 Acres), BLM (Bureau of Land Management)	A-2-2 (Light Agricultural – Two-Acre Minimum Lot Size)	Vacant Land
EAST	BLM, RL10 (Rural Land 10 – One Dwelling Per 10 Acres), OS-PR (Open Space – Parks and Recreation), RL5, IL (Light Industrial)	A-2-2, M-1-DP (Light Manufacturing – Development Program), M-2-DP (Heavy Manufacturing – Development Program), RPD-5000-2.9DU (Residential Planned Development – 5000 Square Foot Lot Size – 2.9 Dwellings Per Acre), OS (Open Space)	Vacant Land, Elementary School, Single-Family Residences, Shopping Center
SOUTH	H2 (Large Lot Residential – 0-2 Dwellings Per Acre), IL, H18 (Medium Density Residential – 9-18 Dwellings Per Acre), CM (Major Commercial)	R-1 (Single-Family Residence), C-3 (Major Commercial), M-1 (Light Manufacturing)	Vacant Land, Shopping Center, Single-Family Residences, Senior Residences
WEST	RL5, RL1 (Rural Land 1 – One Dwelling Per Acre), IL, OS-C (Open Space Conservation)	A-2-2, A-2-1 (Light Agricultural – One-Acre Minimum Lot Size), M-1, M-1-DP, OS	Vacant Land, Single-Family Residences, Water Tank, Warehousing

13. **PROJECT AND SITE PLAN DESCRIPTION.**

A. Existing Site Conditions

The SP site consists of approximately 1,330 acres located north of Lake Hughes Road and Ridge Route Road, east of I-5 Freeway and west of Castaic Lake and Lagoon in the unincorporated community of Castaic. The site is comprised of vacant land, with adjacent infrastructure such as transmission towers (via utility easement through the property) and a water tank to the west, just outside of the Northlake boundary. Northlake Phase 1 consists of 720 acres.

The property exhibits a wide range of topographic relief, with gently-rolling hills, extremely steep slopes, and a major drainage course (Grasshopper Creek) running north-south down the middle of Northlake Phase 1. The property is not located within and does not contain any portion of a Significant Ecological Area ("SEA").

B. Site Access

Northlake Phase 1 is accessible via Ridge Route Road, a Limited Secondary Highway on the County Master Plan of Highways with 64 to 80 feet of width that transitions into an 80 to 90 foot-wide Secondary Highway on the County Master

Plan of Highways. Primary access to the site will be via an entrance/exit on Ridge Route Road. Secondary access to the property will be via Northlake Boulevard, a Local Collector with 64 to 80 feet of width that transitions into an 80 to 86-foot-wide Modified Industrial Collector. Northlake Phase 1 provides a five-foot wide or greater walkway along private and future streets throughout the property, with publicly-accessible walkways of similar widths along private drives/fire lanes providing direct access to all units.

C. Tentative Map and Exhibit Map

The VTTM No. 073336 tentative map and Exhibit Map dated August 20, 2025, consists of Northlake Phase 1. It depicts a total of 386 lots and 2,295 dwelling units on 720 gross acres. This includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); one highway commercial lot (2.5 acres), 39 open space lots, 11 park lots, 13 debris basin lots, two water tank lots, one water quality basin lot, one pump station lot, and one fire station lot (1.4 acre building pad). Of the total 2,295 dwelling units in Northlake Phase 1, 1,777 units are proposed to be for-sale and 518 units expected for rental. This is pursuant to County Code Chapters 21.38 (Vesting Tentative Map) and 21.40 (Tentative Maps).

D. Affordable and Senior Housing

Northlake Phase 1 proposes a total of 315 affordable attached rental units for Very Low, Lower, and Moderate Income households, of which 269 shall be affordable rental and 95 shall be senior affordable rental units. Though not subject to the IHO due to the adopted SP, the Subdivider has offered the affordable units through the CUP. The affordable units shall be dispersed throughout Northlake Phase 1. In addition, Northlake Phase 1 proposes 345 market-rate attached senior units (209 ownership, 136 rental) within the site.

E. Parking

Northlake Phase 1 requires an overall total of 5,284 parking spaces. It will provide a total of 5,670 parking spaces, to include 4,167 residential parking spaces required and provided; 639 guest parking spaces required and 1,021 provided; 65 accessible spaces required and 69 provided; and 413 commercial spaces required and provided. Lastly, there are four Type A loading spaces distributed throughout the office, commercial, and mixed-use development areas.

F. Internal Circulation

Northlake Phase 1 would incorporate various internal roadway improvements, including arterials, residential collectors, and private drives. A series of public collector streets and private drives within Northlake Phase 1 and would provide access to the various areas and land uses on-site, to include the Community Sports Park, Grasshopper Creek Park, fire station, mixed-use development, senior housing development, and potential school site. All of these internal destinations would be accessible via a shuttle system managed by the Northlake Homeowner's Association ("HOA") as detailed in the original 2019 LA County Board of Supervisors ("Board") approval and included in the Northlake Phase 1 conditions. Within Northlake Phase 1, the proposed trail system would include community trails, bike lanes, and recreational trails linked to the above-mentioned destinations. In addition to the various trail types that would serve as bicycle routes, Northlake Phase 1 would expand bicycle facilities in the area.

G. Condominium Project
Pursuant to the Subdivision Map Act, condominium units may be leased or sold. Renters of condominium units may not receive sufficient notification when an owner decides to sell the units. In order to provide renters with proper notification, notification is required 180 days prior to termination of tenancy in the event the condominium units are first leased and then later sold.

H. Grading
The grading amounts include 17.16 million cy of cut and 15.84 million cy of fill with 1.32 million cy of shrinkage to be balanced onsite, as well as 3.22 million cy of offsite grading, for a combined grading amount of 37.54 million cy.

I. Oak Trees
There are no Oak trees on the subject property.

14. **CEQA DETERMINATION.**

Supplemental Environmental Impact Report ("SEIR")
The Northlake Phase 1 Draft Supplemental EIR ("DSEIR") was released on May 2, 2017, and circulated for a 45-day public review and comment period ending on June 15, 2017. Following the close of the public comment period on the DSEIR on June 15, 2017, detailed responses to all public agency comments and comments received from members of the general public received regarding Northlake Phase 1 and the analyses of the DSEIR were prepared and were contained in the Final SEIR ("FSEIR").

An Errata was released in February 2018, prior to the Commission hearing to make minor technical corrections to the SEIR and to provide further information in response to public comments received prior to the Planning Commission meeting. The Errata included only minor technical changes to the SEIR and additional information to support the SEIR's conclusions, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. At the February 21, 2018, public hearing, the Planning Commission requested that the Subdivider include an affordable

housing component in the Project. Based on this request, the Subdivider made minor revisions to the Project analyzed in the SEIR to include an affordable component. An Errata dated April 4, 2018 was prepared which concluded that the revisions involve only minor changes to the distribution of land uses and an overall reduction in density and intensity or use, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. On April 18, 2018, the Planning Commission adopted the required findings, certified the SEIR, and granted the requested Project approvals. On April 23, 2018, appeals were filed by the Center for Biological Diversity, the Santa Monica Mountains Conservancy, and the Golden State Environmental Justice Alliance. A Second Errata dated August 2018 was prepared to make minor technical corrections in the SEIR and to provide further information in response to public comments at the Planning Commission meeting.

On September 25, 2018, the Board held a public hearing on Northlake Phase 1 and the appeals and voted to reject the appeals, uphold the Planning Commission approvals, and certify the SEIR. On April 2, 2019, the Board adopted the Northlake Phase 1 entitlements, CEQA findings and Mitigation Monitoring and Reporting Program ("MMRP"), and Northlake Phase 1 conditions.

A Petition for Writ of Mandate was filed in May 2019, challenging Northlake Phase 1. The Los Angeles Superior Court's ruling in Center For Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al, Case No. 19STCP01610, dated January 11, 2021 ("Court Ruling"), granted in part and denied in part the Petition for Writ of Mandate. Specifically, the Court Ruling held that the SEIR for Northlake Phase 1 failed to comply with CEQA because it contained: (1) inadequate alternatives analysis (for failing to fully analyze a creek avoidance alternative); (2) inadequate Western Spadefoot Toad (WST) baseline assessment and, therefore, inadequate mitigation (to recreate baseline conditions; mitigation inadequate in detail and commitment); and (3) improper deferred mitigation as to rare plants (measure lacked sufficient detail).

The Court denied the Petition for Writ of Mandate regarding: (1) impacts to mountain lions/wildlife crossings, (2) aesthetics, (3) air quality/public health, (4) wildfire impacts, and (5) recirculation.

These findings incorporate by reference, as if fully set forth herein, the CEQA Supplemental Findings of Fact ("FOF") and Statement of Overriding Considerations ("SOC") regarding the RPFSEIR for Northlake Phase 1, which are attached hereto as Exhibit F. As stated in the FOF, the Partial Creek Avoidance Alternative ("PCAA") is the environmental superior alternative among the project alternatives summarized in the RPDSEIR. As identified in the RPDSEIR, after implementation of the MMRP, Northlake Phase 1 would not result in any new or substantially more severe significant impacts.

<u>Recirculated Partial Draft SEIR ("RPDSEIR")</u>
The LA County Department of Regional Planning ("LA County Planning") prepared a RPDSEIR. The document did not revise the original SEIR in any respect other than as directed by the Court (above) and was limited to a few portions of the SEIR. Pursuant

to CEQA Guidelines Section 15088.5(c), the County only needed to recirculate the portions of the SEIR that were modified by the RPDSEIR. The County did not recirculate the other portions of the SEIR for public review and comment because those portions were not modified.

The RPDSEIR was made available for public review and comment pursuant to State CEQA Guidelines Section 15087. Copies of the RPDSEIR and appendices were available for a review period of 45 calendar days from April 14, 2025, to May 29, 2025. As CEQA Guidelines Section 15088.5, subdivision (f)(2) permits, the County requested that the scope of public comment be limited to the material that was addressed within the text of the revised portions and the appendices included in the RPDSEIR. The RPFSEIR was completed in June 2025.

The Recirculated Partial Final SEIR ("RPFSEIR") was completed in June 2025.

15. **AGENCY RECOMMENDATIONS.**

The Los Angeles County Subdivision Committee, consisting of LA County Planning and County Departments of Public Works ("Public Works"), Fire ("Fire"), Parks and Recreation ("Parks and Recreation"), and Public Health ("Public Health"): Recommended clearance to public hearing with conditions of the VTTM No. 073336 map dated August 20, 2025.

A. In a letter dated September 18, 2025, Public Works recommended that the Project proceed to public hearing with required conditions of approval.

B. In a letter dated September 23, 2025, Fire recommended that the Project proceed to public hearing with required conditions of approval.

C. In a letter dated September 24, 2025, Parks and Recreation recommended that the Project proceed to public hearing with required conditions of approval.

D. In a letter dated October 1, 2025, Public Health recommended that the Project proceed to public hearing with required conditions of approval.

16. **LEGAL NOTIFICATION.** Pursuant to Section 22.222.120 (Public Hearing Procedure) of the County Code, Staff properly notified the community of the public hearing. This included mailings, The Signal newspaper publication, and property posting. On December 11, 2025, Staff mailed a total of 362 Notices of Public Hearing out to all property owners as identified on the County Assessor's record within a 1,000-foot radius from the Project Site. This mailing also included 46 notices to those on the courtesy mailing list for the Castaic Canyon Zoned District and to any additional interested parties. Additionally, Staff posted the Northlake case materials and hearing notice on LA County Planning's website.

GENERAL PLAN CONSISTENCY FINDINGS

17. **LAND USE POLICY.** The Commission finds that Northlake Phase 1 is consistent with the goals and policies of the SP because the Single-Family, Multi-Family, General Commercial, Public Facilities, Recreation, and Open Space land use designations of the SP are being appropriately implemented as part of Northlake Phase 1. It complies with the maximum density of 2,295 dwelling units established by the SP. In addition, Northlake Phase 1 realizes a substantial amount of new housing units which are needed to address the State's housing crisis. Furthermore, Northlake Phase 1 will implement substantial open space in the forms of recreation (public parks) and preserves (undisturbed and disturbed open space).

18. **GOALS AND POLICIES. The Commission finds that Northlake Phase 1 is consistent with the following policies of the General Plan:**

- ***General Plan – Housing Element, Policy 3.1:*** *"Promote mixed-income neighborhoods and a diversity of housing types throughout the unincorporated Los Angeles County to increase housing choices for all economic segments of the population."*

  Northlake Phase 1 will include 2,295 new residential units with multiple housing types that will increase housing choices for varying economic segments of the population within the unincorporated County. There will be a total of 315 affordable units with a mix of rental and for-sale units.

- ***General Plan – Parks & Recreation, Policy P/R 4.3:*** *"Develop a network of feeder trails into regional trails."*

  A community trail system would connect Northlake Phase 1 to existing and planned trails in the vicinity and into regional trails. Within Northlake Phase 1, the proposed trail system would include community trails and recreational trails that would be linked to the overall SP trail system and the existing communities to the south. Bicycle facilities and bicycle route improvements in and around Northlake Phase 1 would connect to an extensive system of continuous bike paths within Northlake Phase 1 and to other communities outside Northlake Phase 1, consistent with the County's Bicycle Master Plan.

- ***General Plan – Economic Development, Policy ED 2.5:*** *"Encourage employment opportunities to be located in proximity to housing."*

  Northlake Phase 1 includes 70,875 sf of non-residential (commercial/office/retail) space in the southerly portion of the site, in close proximity to the proposed 2,295 new residential units as well as existing destinations further south, such as the aforementioned elementary school and senior retirement community. This supports and encourages employment opportunities and more accessible proximity to these destinations.

- ***General Plan – Land Use, Policy LU 5.2:*** *"Encourage a diversity of commercial and retail services, and public facilities at various scales to meet regional and local needs."*

  Northlake Phase 1 will result in 70,875 sf of onsite commercial, retail, and office development that will provide local residents with increased access to commercial and retail services, as well as public facilities such as parks, schools, and a fire station within and proximate to Northlake Phase 1. Therefore, it supports a diversity of commercial and retail services, and public facilities, that help meet regional and local needs.

- ***General Plan – Land Use, Policy LU 5.3:*** *"Support a mix of land uses that promote bicycling and walking, and reduce VMT."*

  Northlake Phase 1 provides ample and convenient opportunities for bicycling and walking, due to an extensive trail and sidewalk/walkway system that connects to many destinations within and outside of Northlake Phase 1. This encourages more bicycling and walking, not only reducing VMT but also improving health.

The Commission also finds that the Project is consistent with the following policies of the Area Plan:

- ***Area Plan - Land Use, Policy LU-1.1.3:*** *Discourage urban sprawl into rural areas by limiting non-contiguous, "leap-frog" development outside of areas designated for urban use.*

The Northlake SP, adopted in 1992, has long been planned for residential and commercial development under the SP and is designated for residential and commercial uses. Northlake Phase 1 will be developed adjacent to existing communities, avoiding leapfrog development and unnecessary extension of infrastructure. The development proposed is consistent with the Area Plan, which accounts for the long-term planned development of the area in an orderly manner.

- ***Area Plan – Land Use, Policy LU-1.1.4:*** *Preserve community character by maintaining natural features that act as natural boundaries between developed areas, including significant ridgelines, canyons, rivers and drainage courses, riparian areas, topographical features, habitat preserves, or other similar features, where appropriate.*

The area of natural open space within the SP has been significantly increased from 476 acres to 783 acres compared to the original SP natural open space allotment. Much of the open space is natural and covers extensive steep slope areas that would be impractical to develop. This benefits wildlife and encourages enhancement of ecological, scenic, and cultural open space resources. Of the open space, the amount

of undisturbed open space would be increased from 328 to 572 acres. Furthermore, the PCAA reduces the development footprint in the northerly portion of the site, increasing the amount of natural open space.

- ***Area Plan – Conservation and Open Space Element, Policy CO-10.1.5:*** *"Maintain open space corridors along canyons and ridgelines as a way of delineating and defining communities and neighborhoods, providing residents with access to natural areas, and preserving scenic beauty."*

The SP and part of Northlake Phase 1 utilizes the existing Grasshopper Creek area to define communities and neighborhoods by providing a linear park and multi-use trail along the creek. The park and trail link the northerly and southerly portions of the Northlake Phase 1, connecting northerly residences to the mixed-use areas in the south of the site. An equestrian staging area would also be provided in the south of the development for convenient access to the trails.

SUBDIVISION AND ZONING CODE CONSISTENCY FINDINGS

19. **PERMITTED USE IN ZONE.** The Commission finds that Northlake Phase 1 is consistent with the adopted SP land use designations, as attached and detached single-family units, apartment-style units, live-work units, commercial, recreation, and mixed residential-commercial uses are permitted in the SP in County Code Section 22.404.020 (Northlake Specific Plan). In particular, the mixed-use and senior affordable and senior market-rate units integrate a wide range of housing densities with community-serving commercial uses to serve local residents, employees, guests, and visitors. A total of 315 affordable housing units (95 senior affordable) would be provided as well as 345 market-rate senior-restricted units for a combined total of 660 affordable and senior units (209 ownership, 451 rental). The Commission finds that the development of Northlake Phase 1 is consistent with the SP that provides the appropriate land use designations mentioned above that are consistent with the adopted SP and the revised Guidebook implementing changes to Northlake Phase 1 pursuant to County Code Section 22.404.020 (Northlake Specific Plan).

20. **LOT AREA AND WIDTH.** The Commission finds that Northlake Phase 1 is consistent with the lot area and width standards identified in the Northlake SP and as modified in the revised Guidebook pursuant to County Code Section 22.404.020 (Northlake Specific Plan). Northlake Phase 1 consists only of multi-family, mixed-use, commercial, and live-work development. These uses do not have any required lot widths or sizes per the 2025 updated Land Use Plan of the revised Guidebook.

21. **MINIMUM FRONTAGE.** The Commission finds that Northlake Phase 1 is consistent with the standards identified in County Code Section 21.24.300 (Minimum Frontage), except where locations require a waiver of frontage and have provided a justification

for the waiver pursuant to Section 21.24.040 (Modifications to Access and Frontage Requirements). A waiver of public street frontage is necessary to access to some lots by private drives instead of public streets, due to topographic conditions, drainage and biological constraints, and title limitations. Lots that require a waiver of frontage are Lots 131 through 140 (10 total).

22. **REQUIRED YARDS.** The Commission finds that Northlake Phase 1 is consistent with the required yard standards identified in the SP and as modified in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan).

23. **HEIGHT.** The Commission finds that Northlake Phase 1 is consistent with the building height standards identified in the SP and as modified in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan). Northlake Phase 1 consists only of multi-family, mixed-use, commercial, and live-work development. These uses have a maximum height of four stories (three when adjacent to streets) per the 2025 updated Land Use Plan in the revised Guidebook.

24. **DISTANCE BETWEEN BUILDINGS**. The Commission finds that Northlake Phase 1 is consistent with the required distance between buildings identified in the SP and as modified in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan).

25. **FENCES AND WALLS.** The Commission finds that Northlake Phase 1 is consistent with the fence and wall standards identified in the SP and as modified, if applicable, in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan).

26. **PARKING.** The Commission finds that Northlake Phase 1 is consistent with the standard identified in County Code Section 22.112.070 (Required Parking Spaces). It requires an overall total of 5,284 parking spaces. Northlake Phase 1 will provide a total of 5,670 parking spaces, including 4,167 residential parking spaces required and provided; 639 guest parking spaces required and 1,021 provided; 65 accessible spaces required and 69 provided; and 413 commercial spaces required and provided. Lastly, there are four Type A loading spaces distributed throughout the office, commercial, and mixed-use development areas.

27. **SIGNS.** No signs are currently proposed or included as part of Northlake Phase 1. Any signage on the property will require separate approvals from LA County Planning in accordance with the SP or modified standards, if applicable, of the revised Guidebook.

28. **GRADING.** The Commission finds that Northlake Phase 1 is consistent with the standard identified in County Code Section 22.140.240 (Grading Projects). The Subdivider shall follow all applicable standards for On-Site grading to include a grading permit required for any grading project and a haul route for offsite grading, as provided in Title 26 (Building Code) of the County Code.

29. **CONDOMINIUM DEVELOPMENTS.** The Commission finds that Northlake Phase 1 is consistent with the standard identified in County Code Sections 21.16.015 (Building Location and Access Restrictions—Exhibit Map), 22.20.040 (Development Standards for Commercial Zones), and 22.22.060 (Development Standards for Industrial Zones). The Project meets the Exhibit Map requirements for the location and dimensions of all structures, buildings, yards, walls, fences, vehicle and bicycle parking and loading facilities; the vehicular, bicycle, and pedestrian access to the proposed structures, buildings, and parking and loading facilities; and the location and design of pedestrian roadway crossings (i.e., crosswalks).

30. **PLANNING AREA STANDARDS DISTRICT**. The Commission finds that Northlake Phase 1 is not subject to or located within any existing planning area standards district.

31. **COMMUNITY STANDARDS DISTRICT.** The Commission finds that Northlake Phase 1 is not subject to or located within any existing community standards district.

32. **RURAL OUTDOOR LIGHTING DISTRICT.** The Commission finds that Northlake Phase 1 is not located within a rural outdoor lighting district nor subject to the standards identified in County Code Chapter 22.80 (Rural Outdoor Lighting District).

33. **RESIDENTIAL DESIGN.** The Commission finds that Northlake Phase 1 is not subject to the standards identified in County Code Section 22.140.520 (Residential Design Standards, "RDSO"). The SP was adopted in 1992, prior to the effective date of the RDSO. The revised Guidebook provides the current residential design standards.

34. **TREE PLANTING.** The Commission finds that the Northlake Phase 1 is not subject to the tree planting standards identified in County Code Section 21.32.195 (On-Site Trees) and Chapter 22.126 (Tree Planting Requirements). The SP was adopted in 1992, prior to the effective date of the above requirements. However, Northlake Phase 1 is proposing a substantial amount of trees, a total of 6,876, to include 2,333 street trees, 2,593 residential (single and multi-family) development lot trees, and 1,950 trees to be provided in dedicated parks and recreation spaces.

35. **IMPROVEMENTS.** The Commission finds that Northlake Phase 1 is consistent with the standards identified in County Code Section 21.32.010 (Requirements Generally). The Subdivider shall improve, or agree to improve, all land dedicated or to be dedicated on a final map, or by separate instrument, for roads and easements, and all private roads and private easements laid out on a final map, with those improvements, including sanitary sewers, needed for the general use of the lot owners in the division of land and for neighborhood traffic and drainage.

36. **INCLUSIONARY HOUSING.** The Commission finds that Northlake Phase 1 is not subject to the IHO. The Northlake SP was adopted in 1992, prior to the effective date

of the IHO. The related CUP filed provides a total of 315 rental affordable housing units (269 affordable and 95 senior-affordable) at the Very Low, Lower, and Moderate household income levels and which are required per the original 2019 Board approval. Accordingly, Northlake Phase 1 is not subject to the IHO because it is subject to an affordable housing requirement pursuant to an adopted specific plan (see County Code Section 22.121.030.A.3 – Applicability).

37. **AFFORDABLE HOUSING REPLACEMENT.** The Commission finds that Northlake Phase 1 is not subject to rental replacement units because there are no existing rental units on the subject property (nor are there any units proposed for demolition). Furthermore, the Project is exempt due to the existing VHFHSZ located on the Project Site pursuant to County Code Section 22.119.040.F (Exemptions).

CUP FINDINGS

38. **The Commission finds that the proposed use at the Northlake Property will not adversely affect the health, peace, comfort, or welfare of persons residing or working in the surrounding area; will not be materially detrimental to the use, enjoyment, or valuation of property of other persons located in the vicinity of the Northlake Property; and will not jeopardize, endanger, or otherwise constitute a menace to the public health, safety, or general welfare.**

A. Northlake Phase 1 is consistent with the adopted General Plan/Area Plan for the area as well as the adopted SP. Specifically, the proposed Northlake Phase 1 is consistent with the land use designations and development standards of the SP, and may be revised or modified through the Design Guidebook. Northlake Phase 1 is adequate in size and shape to accommodate the yards, walls, fences, parking, and other development features prescribed in the Northlake SP or as otherwise required in the Design Guidebook.

The SP goals, objectives, and policies supersede those outlined both in the General Plan and in the Area Plan. The SP establishes the type, location, intensity, and character of development within the planning area as well as the required infrastructure to support the development for which the proposed Project is consistent.

Northlake Phase 1 is consistent with the goals and policies of the General Plan, Area Plan and the adopted SP. Specifically, the Area Plan was adopted in 2012 and serves as an extension of the General Plan to reflect local needs. The Area Plan guides the regulation of development within the unincorporated portions of the Santa Clarita Valley by providing focused goals, policies, and maps for the area. The SP is incorporated into the Area Plan as an adopted Specific Plan; therefore, the Area Plan accounts for development of the SP as part of its Land Use Plan. As noted in the Land Use Element of the Area Plan, Northlake Phase 1 is to be developed according to the SP and the related Design Guidebook.

The SP, adopted in June 1992, establishes comprehensive guidance and regulations for development of the 1,330 acres of the SP area. The SP provides for a total of 3,150 dwelling units, including single-family, multi-family, mixed-use, and live-work dwelling units. The SP also provides for a total of 13.2 acres of commercial use, 50.1 acres of industrial use, 643.3 acres of recreation/open space as well as schools, parks, and other facilities.

Proposed Project features and measures, such as affordable housing set aside, senior affordable housing, mixed-use and live-work development, enhanced wildlife linkages, and enhanced community transit systems are consistent with the Specific Plan as well as consistent with the goals, objectives and policies of the General Plan and Area Plan.

B. A CUP is being requested for proposed grading of approximately 19.3 million cy of cut and 17.8 mcy of fill for a clustered development. Due to shrinkage, it will be balanced on site. Included in this grading is approximately 50,000 cy of dirt for construction of the northerly off-site tanks and access road. The conceptual grading footprint was previously reviewed and approved as part of the SP.

Clustered development allowed by the SP will promote reduced-size lots in close proximity to each other to reduce grading footprints, with landscaped buffer areas set between each of the clustered development areas.

The requested uses on Northlake Phase 1 including residential, commercial, parks and open space, will not adversely affect the health, peace, comfort, or welfare of the persons residing or working in the surrounding area nor will the requested uses be materially detrimental to the use, enjoyment, or valuation of other persons located in the vicinity of Northlake Phase 1 or jeopardize, endanger, or otherwise constitute a menace to the public health, safety and general welfare as the surrounding land uses within a 500-foot radius are primarily comprised of vacant land, some single family residences and the I-5.

39. **The Commission finds that the Northlake Property is adequate in size and shape to accommodate the yards, walls, fences, parking and loading facilities, landscaping and other development features prescribed in Title 22, or as is otherwise required under the Northlake SP, in order to integrate said use with the uses in the surrounding area.** The development proposes up to 2,295 units with 719.8 acres. The development as proposed with this application, including the clustered development design, will meet all current planning and zoning requirements upon approval of this CUP request. The Northlake Phase 1 Site is adequate in size and shape to accommodate the yards, walls, fences, parking, and other development features prescribed in the Northlake SP or as otherwise required in Title 22 (Planning and Zoning) of the County Code.

40. **The Commission finds that the Northlake Property is adequately served by highways or streets of sufficient width and improved as necessary to carry the kind and quantity of traffic such use would generate, and by other public or private service facilities as are required.** Northlake Phase 1 will be served by Ridge

Route Road, a Major Highway on the County Master Plan of Highways. The infrastructure proposed with the clustered development will include grading, street, and traffic improvements to serve the development and the related increase in traffic. Mitigation requirements to offset project related grading, street, and traffic impacts will be determined during the phase-specific traffic analysis. Thus, Northlake Phase 1 is adequately served by highways and streets of sufficient width and will be improved as necessary to carry the kind and quantity of traffic such use would generate, and by other public and private service facilities as required.

SUPPLEMENTAL CUP FINDINGS (GRADING, WALLS AND FENCES)

41. **The Commission finds that the proposed use at the Northlake Property will not adversely affect the health, peace, comfort, or welfare of persons residing or working in the surrounding area; will not be materially detrimental to the use, enjoyment, or valuation of property of other persons located in the vicinity of the Northlake Property; and will not jeopardize, endanger, or otherwise constitute a menace to the public health, safety, or general welfare.** A CUP is being requested for proposed grading of approximately 17.2 million cubic yards of cut and 15.8 million cubic yards of fill. Due to shrinkage, it will balance on site. Included in this grading is approximately 80,000 cubic yards of dirt for construction of the northerly off-site tanks and access road. The grading footprint was previously reviewed and approved as part of the SP. All grading will balance on-site; no import or export is proposed.

42. **That the proposed site is adequate in size and shape to accommodate the yards, walls, fences, parking and loading facilities, landscaping and other development features prescribed in this Title 22, or as is otherwise required in order to integrate said use with the uses in the surrounding area.** Northlake Phase 1 proposes up to 2,295 units on 719.8 acres. Northlake Phase 1 as proposed with this application will meet all current planning and zoning requirements upon approval of this CUP request. All walls in excess of six feet are shown on the tentative map. These walls, six feet and above are proposed due to topographic constraints needed to achieve pad and street grades. In addition, there are two tank site locations. The water tanks proposed are at higher elevations to serve the community and maintain the fire protection zone.

SUPPLEMENTAL FINDINGS (VHFHSZ)

43. **The Commission finds that the design, location of, and access to each lot of the subdivision, and the subdivision as a whole, subject to the Northlake Project Permit conditions, are consistent with applicable regulations adopted by the State Board of Forestry and Fire Protection, pursuant to sections 4290 and 4291 of the Public Resources Code.** The Commission further finds that Northlake Phase 1 is located within a VHFHSZ and SRA. As such, the Permittee is required to comply with applicable fire and building codes meant to create a wildfire-resistant development, including the implementation of defensible space, fire-ignition construction and building materials, and home/structure hardening. Furthermore, the Commission finds that a conceptual fuel modification plan was reviewed and approved by Fire's Fuel Modification Division prior to approval of the related VTTM. The Commission also finds

that final fuel modification plans will require approval from Fire prior to the issuance of building permits. The Commission further finds that upon occupancy, the Fire Forestry Division will conduct random annual inspections for compliance with brush clearance regulations per the County's Fire Code. In addition, the Commission finds that Northlake Phase 1 would provide emergency vehicle access in addition to the private driveway and fire lanes within the development. As such, it would ensure that land uses have adequate setbacks, fuel modification areas, and emergency access routes. Finally, the Commission finds that this is supported by the SEIR, including evacuation plans and a fuel modification plan, in the Administrative Record for the Northlake Project.

44. **The Commission finds that structural fire protection and suppression services will be available for the subdivision through Fire.** The Commission finds that the related VTTM No. 073336 and Exhibit Map dated August 20, 2025, and RPSEIR were reviewed and approved by Fire. The Commission further finds that the Permittee would pay the Fire Facility Fee, which constitutes full mitigation for development impacts associated with the need for additional fire protection services or facilities.

ENVIRONMENTAL FINDINGS

45. As stated above, these findings incorporate by reference, as if fully set forth herein, the FOF and SOC regarding the RPFSEIR for Northlake Phase 1, which are attached hereto as Exhibit F. As stated in the FOF, the PCAA is the environmental superior alternative among the project alternatives summarized in the RPDSEIR. As identified in the RPDSEIR, after implementation of the MMRP, Northlake Phase 1 would not result in any new or substantially more severe significant impacts compared to the original 2019 Northlake Phase 1.

46. The Commission finds that the Permittee is subject to payment of the California Department of Fish and Wildlife fees related to Northlake Phase 1's effect on wildlife resources pursuant to section 711.4 of the California Fish and Game Code.

ADMINISTRATIVE FINDINGS

47. **HOUSING ACCOUNTABILITY ACT**. The Commission finds that the Northlake Project is considered a housing development that is consistent with the General Plan and would not have a specific adverse impact upon public health or safety as described in the tentative map, and environmental findings.

48. **LOCATION OF DOCUMENTS.** The location of the documents and other materials constituting the record of proceedings upon which the Commission's decision is based in this matter is at LA County Planning, 13th Floor, Hall of Records, 320 West Temple Street, Los Angeles, California 90012. The custodian of such documents and materials shall be the Section Head of the Subdivisions Section, LA County Planning.

49. **Dark Skies.** All exterior lighting shall be equipped with down-shields and connected to timers with automatic "on/off" lighting systems.

BASED ON THE FOREGOING, THE REGIONAL PLANNING COMMISSION FINDS AND CONCLUDES THAT:

A. The proposed use with the attached conditions will be consistent with the adopted General Plan.

B. The proposed use at Northlake Phase 1 will not adversely affect the health, peace, comfort or welfare of persons residing or working in the surrounding area, will not be materially detrimental to the use, enjoyment or valuation of property of other persons located in the vicinity of the site, and will not jeopardize, endanger or otherwise constitute a menace to the public health, safety or general welfare.

C. Northlake Phase 1 is adequate in size and shape to accommodate the yards, walls, fences, parking and loading facilities, landscaping and other development features prescribed in Title 22, or as is otherwise required in order to integrate said use with the uses in the surrounding area.

D. Northlake Phase 1 is adequately served by highways or streets of sufficient width and improved as necessary to carry the kind and quantity of traffic such use would generate, and by other public or private service facilities as are required.

E. Northlake Phase 1 is consistent with providing a broad range of housing, commercial, recreational/open space, and public facility uses as delineated in the SP.

F. Northlake Phase 1 is consistent with providing 315 affordable units out of the 2,295 total units (or 13.7 percent of the overall units) which enhance the SP and represents a reasonable range of affordable, senior affordable, and mixed-use affordable units.

G. Northlake Phase 1 is compatible with or enhances community character and provides open space as required. The Commission finds that the development is compatible with the surrounding community.

H. Northlake Phase 1 is in substantial compliance with the SP and revised Design Guidebook.

THEREFORE, THE REGIONAL PLANNING COMMISSION:

1. Certifies the RPFSEIR for the Northlake Project by finding, pursuant to State and County CEQA Guidelines, that it was completed in compliance with CEQA, presented, reviewed and considered by the Commission prior to approving the Northlake Project, and reflects the independent judgment and analysis of the Commission.

2. Adopts the Supplemental Findings of Fact prepared pursuant to Public Resources Code Sections 21081 and 21081.5 and State CEQA Guidelines Section 15091.

3. Adopts the MMRP for the Northlake Project by finding that it is adequately designed to ensure compliance with the mitigation measures during the Northlake Project implementation.

4. Determines that the Northlake Project's significant and unavoidable impacts are outweighed by specifical social, economic, legal, technological, or other considerations by adopting the Statement of Overriding Considerations prepared pursuant to Public Resources Code Section 21081(b) and State CEQA Guidelines Section 15093.

5. Approves **CONDITIONAL USE PERMIT NO. RPPL2023004316**, subject to the attached conditions.

ACTION DATE: January 28, 2026

DD:SMT:JSH:EGA:JDS
1/28/2026

c: Each Commissioner

6274854.1

LOS ANGELES COUNTY
DEPARTMENT OF LA COUNTY PLANNING

CONDITIONS OF APPROVAL
PROJECT NO. R2015-00408-(5) ("NORTHLAKE")
CONDITIONAL USE PERMIT ("CUP") NO. RPPL2023004316

PROJECT DESCRIPTION

Northlake Phase 1 includes a total of 2,295 dwelling units and 386 lots on 720 gross acres. There are 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); Other uses include highway commercial, open space, and public facilities, to include parks, fire station, potential school site, debris basins, water tanks, water quality basin, and a pump station. A shuttle service is also included to transport residents and guests within the site as well as offsite destinations (such as shopping and employment centers) in and around Santa Clarita Valley. Offsite improvements include connection to existing utilities, relocation of existing utility lines, new drainage facilities, and other related infrastructure outside the boundaries of the site.

This grant, the CUP, is subject to the following conditions and requirements of approval:

GENERAL CONDITIONS

1. **Permittee**. Unless otherwise apparent from the context, the term "Permittee" shall include the applicant, owner of the property, and any other person, corporation, or other entity making use of this grant.

2. **Affidavit of Acceptance.** This grant shall not be effective for any purpose until the Permittee, and the owner of the subject property if other than the Permittee, have filed at the office of the Los Angeles County ("County") Department of Regional Planning ("LA County Planning") their affidavit stating that they are aware of and agree to accept all of the conditions of this grant, and that the conditions of the grant have been recorded as required by Condition No. 6, and until all required monies have been paid pursuant to Condition Nos. 9, and 11. Notwithstanding the foregoing, this Condition No. 2 and Condition Nos. 3, 4, and 7 shall be effective immediately upon the date of final approval of this grant by the County.

3. **Indemnification**. The Permittee shall defend, indemnify, and hold harmless the County, its agents, officers, and employees from any claim, action, or proceeding against the County or its agents, officers, or employees to attack, set aside, void, or annul this permit approval, which action is brought within the applicable time period of Government Code sections 65009, or any other applicable limitations period. The County shall promptly notify the Permittee of any claim, action, or proceeding and the County shall reasonably cooperate in the defense. If the County fails to promptly notify

the Permittee of any claim, action, or proceeding, or if the County fails to cooperate reasonably in the defense, the Permittee shall not thereafter be responsible to defend, indemnify, or hold harmless the County.

4. **Litigation Deposit.** In the event that any claim, action, or proceeding as described above is filed against the County, the Permittee shall within ten days of the filing make an initial minimum deposit with LA County Planning of $5,000.00, from which actual costs and expenses shall be billed and deducted for the purpose of defraying the costs or expenses involved in LA County Planning's cooperation in the defense, including but not limited to, depositions, testimony, and other assistance provided to Permittee or Permittee's counsel. If during the litigation process, actual costs or expenses incurred reach 80 percent of the amount on deposit, the Permittee shall deposit additional funds sufficient to bring the balance up to the amount of $5,000.00. There is no limit to the number of supplemental deposits that may be required prior to completion of the litigation. At the sole discretion of the Permittee, the amount of an initial or any supplemental deposit may exceed the minimum amounts defined herein. Additionally, the cost for collection and duplication of records and other related documents shall be paid by the Permittee according to County Code Section 2.170.010.

5. **Invalidation.** If any material provision of this grant is held or declared to be invalid by a court of competent jurisdiction, the permit shall be void and the privileges granted hereunder shall lapse.

6. **Recordation.** Prior to the use of this grant, the Permittee, or the owner of the subject property if other than the Permittee, shall record the terms and conditions of the grant in the office of the County Registrar-Recorder/County Clerk (i.e., Recorder's Office). In addition, upon any transfer or lease of the property during the term of this grant, the Permittee, or the owner of the subject property if other than the Permittee, shall promptly provide a copy of the grant and its conditions to the transferee or lessee of the subject property.

7. **Grant Termination.** This grant shall terminate when the associated Vesting Tentative Parcel Map ("VTTM") No. 73336 expires (January 28, 2028).

8. **Conditions Compliance**. The subject property shall be maintained and operated in full compliance with the conditions of this grant and any law, statute, ordinance, or other regulation applicable to any development or activity on the subject property. Failure of the Permittee to cease any development or activity not in full compliance shall be a violation of these conditions. No provision of any easement of any other encumbrance on the property shall exempt the Permittee from compliance with these conditions and applicable regulations.

9. **Inspections.** Inspections shall be made to ensure compliance with the conditions of this grant as well as to ensure that any development undertaken on the subject property is in accordance with the approved Exhibit "A" on file. The Permittee shall deposit with the County the sum of **$2,280.00**, which shall be placed in a performance fund and be used exclusively to reimburse LA County Planning for all expenses incurred while

inspecting the premises to determine the Permittee's compliance with the conditions of this grant. The fund provides for five (5) inspections.

Inspections may be unannounced. Inspections may be conducted utilizing any available technologies, including, but not limited to, unmanned aircraft systems ("UAS"). Use of a UAS requires the consent of the Permittee pursuant to LA County Planning's UAS policy, which may be updated from time to time, and which shall be provided to the Permittee upon request.

If additional inspections are required to ensure compliance with the conditions of this grant, or if any inspection discloses that the subject property is being used in violation of any one of the conditions of this grant, the Permittee shall be financially responsible and shall reimburse LA County Planning for all enforcement efforts necessary to bring the subject property into compliance. The amount charged for each inspection shall be $456.00 per inspection, or the current recovery cost established by LA County Planning at the time any inspection(s) is/are required, whichever is greater.

10. **Library Facilities Mitigation Fees**. Prior to the issuance of any building permit(s), the Permittee shall remit all applicable library facilities mitigation fees to the County Librarian and pay the fees in effect at the time of payment, pursuant to Chapter 22.264 of the County Code. Questions regarding fee payment can be directed to the County Librarian at (562) 940-8430. The Permittee shall provide proof of payment upon request from LA County Planning.

11. **Environmental Document Filing Fees.** Within five (5) working days from the day after the appeal period ends on **February 9 , 2026,** (by **February 16, 2026**), the Subdivider shall remit processing fees at the County Registrar-Recorder/County Clerk Office (i.e. County Clerk's Office), payable to the County of Los Angeles, in connection with the filing and posting of a Notice of Determination ("NOD") for this project and its entitlements in compliance with section 21152 of the Public Resources Code. Unless a Certificate of Exemption is issued by the California Department of Fish and Wildlife ("CDFW") pursuant to section 711.4 of the California Fish and Game Code, the Subdivider shall pay the fees in effect at the time of filing the NOD, as provided for in section 711.4 of the Fish and Game Code, currently **$4,227.50** for an Environmental Impact Report ("EIR") plus $75.00 processing fee). No land use project subject to this requirement is final, vested or operative until the fee is paid. Fees are required unless waived by CDFW.

12. **Mitigation Monitoring and Reporting Program ("MMRP")**. The Permittee shall comply with all mitigation measures as identified and revised in the MMRP, attached as Exhibit D-2, which are incorporated by this reference as if set forth fully herein.

13. **Covenant and Agreement**. Within thirty (30) days of the date of final approval of the grant by the County, the Permittee shall record a covenant and agreement, which attaches the MMRP and agrees to comply with the mitigation measures imposed by the Supplemental EIR (including the Final Recirculated Portions of the Supplemental Environmental Impact Report) ("RPFSEIR") for this project, in the Recorder's Office. Prior to recordation of the covenant, the Permittee shall submit a draft copy of the

covenant and agreement to LA County Planning for review and approval. As a means of ensuring the effectiveness of the mitigation measures, the Permittee shall submit annual mitigation monitoring reports to LA County Planning for approval or as required. The reports shall describe the status of the Permittee's compliance with the required mitigation measures.

14. **MMRP Deposit**. The Permittee shall deposit an initial sum of **$6,000.00** with LA County Planning within thirty (30) days of the date of final approval of this grant in order to defray the cost of reviewing and verifying the information contained in the reports required by the MMRP. The Permittee shall replenish the mitigation monitoring account, if necessary, until all mitigation measures have been implemented and completed.

15. **Revocation**. Notice is hereby given that any person violating a provision of this grant is guilty of a misdemeanor. Notice is further given that the LA County Planning Commission ("Commission") or a Hearing Officer may, after conducting a public hearing, revoke or modify this grant, if the Commission or Hearing Officer finds that these conditions have been violated or that this grant has been exercised so as to be detrimental to the public's health or safety or so as to be a nuisance, or as otherwise authorized pursuant to County Code Chapter 22.238 (Modifications and Revocations) of the County Code.

16. **County Fire Code**. All development pursuant to this grant must be kept in full compliance with the County Fire Code to the satisfaction of the County Fire Department ("Fire").

17. **County Public Works Requirements**. All development pursuant to this grant shall conform with the requirements of County Public Works ("Public Works") to the satisfaction of said department.

18. **Compliance with County Code Title 22**. All development pursuant to this grant shall comply with the requirements of Title 22 (Planning and Zoning) of the County Code and of the specific zoning of the subject property, unless specifically modified by this grant, as set forth in these conditions, including the approved Vesting Tentative Map and Exhibit "A" Map, or an approved Amendment Map/Amended Exhibit Map.

19. **Maintenance**. The Permittee shall maintain the subject property in a neat and orderly fashion. The Permittee shall maintain free of litter all areas of the premises over which The Permittee has control. All structures, walls and fences open to public view shall remain free of graffiti or other extraneous markings, drawings, or signage that was not approved by LA County Planning. In the event of graffiti or other extraneous markings occurring, the Permittee shall remove or cover said markings, drawings, or signage within 48 hours of such notification, weather permitting. Paint utilized in covering such markings shall be of a color that matches, as closely as possible, the color of the adjacent surfaces.

20. **Graffiti.** All structures, walls and fences open to public view shall remain free of graffiti or other extraneous markings, drawings, or signage that was not approved by LA

County Planning. These shall include any of the above that do not provide pertinent information about said premises. The only exceptions shall be seasonal decorations or signage provided under the auspices of a civic or non-profit organization.

In the event of graffiti or other extraneous markings occurring, the Permittee shall remove or cover said markings, drawings, or signage within 48 hours of such notification, weather permitting. Paint utilized in covering such markings shall be of a color that matches, as closely as possible, the color of the adjacent surfaces.

PERMIT-SPECIFIC CONDITIONS – CUP

21. **Grant.** This grant authorizes onsite and offsite grading in excess of 100,000 cubic yards ("cy") with a total of 34.32 million cy (17.16 million cy of cut and 15.84 million cy of fill with 1.32 million cy of shrinkage) to be balanced onsite; and also offsite grading for an additional 2.15 million cy of cut and 1.07 million cy of fill for an offsite total of 3.22 million cy of combined cut and fill. The overall onsite and offsite grading amounts are 37.54 million cy of combined cut and fill. A revised Exhibit 'A' ("REA") shall be required for submittal to show the haul route. Bulk grading is also authorized by this grant.

22. **Grant**. This grant shall authorize early grading prior to final map approval at the discretion of the Planning Director. If authorized by the Planning Director, an REA shall be required for submittal to show the early grading.

23. **Grant**. This grant shall allow building pad elevation changes up to 10 feet in height at the discretion of the Planning Director. If authorized by the Planning Director, an REA shall be required for submittal to show the pad height changes.

24. **Grant.** This grant shall authorize walls and fences exceeding six feet in height within the required yard setbacks of the development.

25. **Grant.** This grant shall authorize 46 mixed-use affordable units and six market-rate live-work units.

26. **Grant.** This grant shall authorize a total of 315 affordable housing units, 95 senior-affordable housing units, and 345 age-restricted senior units.

PROJECT SITE-SPECIFIC CONDITIONS

27. **Vehicular Parking.** The Northlake Project requires an overall total of 5,284 parking spaces. The Project will provide a total of 5,670 parking spaces, to include 4,167 residential parking spaces required and provided; 639 guest parking spaces required and 1,021 provided; 65 handicap-accessible spaces required and 69 provided; and 413 commercial spaces required and provided. Lastly, there are four Type A loading spaces distributed throughout the office, commercial, and mixed-use development areas. All required parking spaces shall be included and designed in compliance with applicable County Code requirements. A comprehensive parking plan shall be submitted as an REA for staff review and approval prior to construction and build-out of the Project.

28. **Bicycle Parking.** Bicycle parking spaces shall be maintained within the development. All required parking spaces shall be included and designed in compliance with applicable County Code requirements. The bicycle parking spaces shall be included in the above-mentioned comprehensive parking plan REA.

29. **Internal Circulation.** As part of the final map phasing of Northlake, the Project shall provide multiple means of access to and through the Project, with major connections to Ridge Route Road and Northlake Boulevard, the "backbone" roadways for the Project. Additionally, an extensive community trail system shall connect to existing and planned trails in the vicinity of the Project site. Furthermore, within the Project, a proposed multiple-purpose trail system shall include community trails, bike lanes, paths, and recreational trails that are linked to the Northlake trail system to the west and the existing community of Westridge to the south. In addition to the various trail types serving as bicycle routes, the Project shall expand bicycle facilities in the area. To enhance community mobility within the Project, an HOA-maintained shuttle system shall circulate within the development and its destinations as well as connect to offsite destinations.

30. **Street Circulation.** Internal circulation and access for the Northlake Project shall be provided by several new internal public streets with street widths ranging from 58 to 90 feet. Development areas within the Project not fronting along public streets shall interconnect with a private drive and fire lane system, with typical widths of 26 and 28 feet to meet fire road access requirements.

31. **Open Space.** The Northlake Project shall provide no less than a total of 381.1 acres of open space areas within the Phase 1 property boundary, including 126.8 acres of recreation and park space.

32. **Tree Planting.** The Northlake Project shall provide a total of 6,876 trees throughout the Phase 1 Project area, to include 2,593 trees in the residential development areas; 2,333 street trees, and 1,950 trees in the recreational and parks areas.

OTHER CONDITIONS

33. As agreed to by the Subdivider, Northlake Phase 1 shall substantially conform to the adopted Northlake Specific Plan ("SP") and all revisions and updates to the SP associated and approved with this grant. Northlake Phase 1 and all subsequent development approvals (such as, but not limited to, Amended Exhibit Maps) shall also substantially conform to the document marked "Northlake Design Guidebook" ("Guidebook") dated April 2025, or the latest version of said document as approved by LA County Planning.

34. As agreed to by the Subdivider, the Subdivider is required to comply with the current standards in the CalGreen Code by implementing energy-efficient building designs, pre-wiring residences with electric vehicle charging ports, implementing solar-ready rooftops, reducing indoor and outdoor water demand, and installing energy-efficient appliances and equipment.

35. As agreed to by the Subdivider, the Subdivider shall fund and provide a total of 135 or more electric vehicle ("EV") charging stations within the Project site and in locations within the surrounding Castaic community to the satisfaction of LA County Planning. The specific type, and location of the charging stations shall be approved by LA County Planning in an “EV charging station infrastructure siting concept plan" submitted to LA County Planning by the Subdivider prior to the first phased map approval; and in the same manner, for all subsequent final/phased map approvals, to the satisfaction of LA County Planning. In addition, the location and type of stations shall be noted in an "EV charging station infrastructure siting detail plan" and depicted on all applicable Exhibit Maps/Revised Exhibit "A"s to the satisfaction of LA County Planning.

36. As agreed to by the Subdivider, the Subdivider shall fund and provide a community shuttle and service for the Northlake development residents and guests. The shuttle shall serve destinations within the Project site (such as the school, parks, highway commercial and mixed-use, live-work commercial areas) as well as outside the Project site (such as the Northlake Hills Elementary School, downtown Castaic shopping center, Sports Complex, and Valencia Commerce Center). The shuttle service shall substantially comply with the transit plans/exhibits depicted on the tentative map/Exhibit Map and in the Guidebook. Prior to final map approval, the Subdivider shall submit to LA County Planning a "community shuttle service plan" that describes the precise shuttle routes, stops, stop designs/amenities, destinations, vehicles, and other details to the satisfaction of LA County Planning.

37. As agreed to by the Subdivider, the Subdivider shall finalize, construct, and initiate the community shuttle service no later than the issuance of the 500th residential Certificate of Occupancy (“CofO”) for the Project site. The Subdivider shall be responsible for tracking the progress of the CofO’s and provide quarterly reports to LA County Planning for status. The community shuttle service plan is to be updated or amended every six months, or as needed, to the satisfaction of LA County Planning.

38. As agreed to by the Subdivider, the Subdivider shall construct a new school within the Northlake Phase 1, identified in Figure 5A of the Guidebook as "Alternative School Site", if requested by the local school district. The Subdivider shall notify LA County Planning in this event and shall submit an Amendment Map and Amended Exhibit Map/Revised Exhibit “A” for approval prior to final map approval and shall designate the school site/parcel on the applicable final map, to the satisfaction of LA County Planning.

39. As agreed to by the Subdivider, the Subdivider shall provide no less than 440 senior (age-restricted) housing units. Of the 440 senior units, the Subdivider shall provide no less than 345 senior (age-restricted) (136 rental, 209 for-sale) market-rate housing units and no less than 95 senior (age-restricted) for-sale affordable housing units within the Project site, and shall identify the lots containing such units on the applicable final map, to the satisfaction of LA County Planning.

40. As agreed to by the Subdivider, the Subdivider shall provide no less than 220 market rate (98 rental, 122 for-sale) housing units, no less than six live-work for-sale market

rate units and no less than 38,700 square feet of associated mixed-use commercial space within the Northlake Phase 1 General Commercial area, as presently depicted in the Guidebook, and shall identify the lots containing such units and space on the applicable final map, to the satisfaction of LA County Planning.

41. As agreed to by the Subdivider, prior to final map recordation, the Subdivider shall submit an Amendment Map and Amended Exhibit Map/Revised Exhibit "A" to LA County Planning for review and approval, depicting the General Commercial area and wildlife crossing/connection areas, as presently shown and described in the Guidebook (or in the case of wildlife movement, as presently shown on the relevant Exhibit described herein or in a separate document), as well as any other minor changes related to the two areas described in this condition, if needed and would not go beyond the scope of the Amendment Map.

42. As agreed to by the Subdivider, the Subdivider shall provide no less than 315 affordable set-aside and deed-restricted housing units within the Project site, which equates to no less than 10 percent of the overall SP unit count of 3,150 dwellings. No less than 50 percent (or 158) of the 315 units shall be set-aside for lower and very low Income households, per State and County affordable housing guidelines, with the remaining balance of 157 affordable units set-aside for moderate income households, per State and County guidelines. If the overall SP unit count shall be less than 3,150, then the Subdivider shall provide 10 percent of the reduced final overall unit count.

43. As agreed to by the Subdivider, prior to final map recordation, the Subdivider shall coordinate with the Los Angeles County Development Authority ("LACDA") to enter into an agreement for the purpose of monitoring all affordable set-aside units and ensuring that they are deed-restricted in perpetuity, to the satisfaction of the LACDA.

44. As agreed to by the Subdivider, of the 315 affordable set-aside housing units, the Subdivider shall provide no less than 95 senior affordable set-aside and deed-restricted housing units within the General Commercial area, which equates to no less than three percent of the overall Northlake housing unit count of 3,150 dwellings. The three percent senior affordable set-aside shall be included within the overall 315-unit count of affordable set-aside units within the Northlake development. The 220 non-senior affordable units shall be provided throughout the Project site residential land use planning areas.

45. As agreed to by the Subdivider, the Subdivider shall ensure that all affordable set-aside units are developed on a 10 percent pro-rata basis with the non-affordable housing units built within the Northlake development, as per the following schedule:
    a. Affordable Units 1 through 50 to be constructed before the issuance of the 500th Northlake building permit;
    b. Units 51 through 100 before the 1,000th building permit;
    c. Units 101 through 150 before the 1,500th building permit;
    d. Units 151 through 200 before the 2,000th building permit;
    e. Units 201 through 230 before the 2,295th building permit;
    f. and Units 231 through 315 before the 3,150th building permit.

46. As agreed to by the Subdivider, together with the final map recordation, the Subdivider shall record a covenant (or covenants) for all income-restricted (affordable set-aside) and income-age restricted (senior-affordable set-aside) housing units within the Northlake development, which shall describe the income and age level restrictions of the units per State and County guidelines, and shall indicate that such restrictions are to be established in perpetuity, to the satisfaction of the LACDA.

47. As agreed to by the Subdivider, the Subdivider shall ensure that additional and/or enhanced wildlife crossings and connections are provided within/through the Project and Northlake development, as depicted on the Exhibit marked "wildlife connectivity plan." This connectivity plan shall ensure that all Project and development landscaping and lighting located in applicable areas are compatible with the intended movement of wildlife as per the connectivity plan, to the satisfaction of the County Biologist; and shall ensure that sufficient schematic descriptions and depictions of roadway undercrossings, overcrossings, and culverts that are anticipated to facilitate wildlife movement are provided to LA County Planning prior to the approval of any final maps or grading permits for the Project, to the satisfaction of the County Biologist.

48. As agreed to by the Subdivider, prior to final map recordation, to help address noise impacts of the Project, the Subdivider shall confer with the Castaic Union School District to seek authorization to construct an approximately three-foot-high "noise wall" along the perimeter of the existing Northlake Hills Elementary School playground area. If the school district should authorize the construction of the wall, the Subdivider shall submit a site plan review for the wall to LA County Planning for review and approval and shall construct the wall prior to the issuance of the first residential unit building permit for the Project.

49. **Dark Skies.** All exterior lighting shall be equipped with down-shields and connected to timers with automatic “on/off” lighting systems.

Attachments:

Exhibit D-1 Subdivision Committee Reports (pages 1 to 74)

Exhibit D-2 MMRP (pages 1 to 35)

LAND DEVELOPMENT DIVISION – SUBDIVISION
PARCEL MAP NO. 73335 TENTATIVE MAP DATED 8/24/2023

The following report consisting of 10 pages are the recommendations of Public Works. The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

The following are the recommendations from Public Works.

Comply with the previously approved Public Works conditions dated 09-20-2023, Map Date 08-24-2023.

Prepared by Jose Cruz Phone (626) 458-4921 Date 4/9/2024
PM 73335_ Rev1_RPPL2023004448

The following report consisting of 9 pages are the recommendations of Public Works. The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

1. Details and notes shown on the tentative map are not necessarily approved. Any details or notes which may be inconsistent with requirements of ordinances, general conditions of approval, or Department policies must be specifically approved in other conditions, or ordinance requirements are modified to those shown on the tentative map upon approval by the Advisory agency.

2. Easements are tentatively required, subject to review by the Director of Public Works to determine the final locations and requirements.

3. Easements shall not be granted or recorded within areas proposed to be granted, dedicated, or offered for dedication for public streets, highways, access rights, building restriction rights, or other easements until after the final map is filed with the Registrar-Recorder/County Clerk's Office. If easements are granted after the date of tentative approval, a subordination must be executed by the easement holder prior to the filing of the final map.

4. In lieu of establishing the final specific locations of structures on each lot at this time, the owner, at the time of issuance of a grading or building permit, agrees to develop the property in conformance with the County Code and other appropriate ordinances such as the Building Code, Plumbing Code, Grading Ordinance, Highway Permit Ordinance, Mechanical Code, Zoning Ordinance, Undergrounding of Utilities Ordinance, Water Ordinance, Sanitary Sewer and Industrial Waste Ordinance, Electrical Code, and Fire Code. Improvements and other requirements may be imposed pursuant to such codes and ordinances.

5. Adjust, relocate, and/or eliminate lot lines, lots, streets, easements, grading, geotechnical protective devices, and/or physical improvements to comply with ordinances, policies, and standards in effect at the date the County determined the application to be complete all to the satisfaction of Public Works.

6. All easements existing at the time of final map approval must be accounted for on the approved tentative map. This includes the location, owner, purpose, and recording reference for all existing easements. If an easement is blanket or indeterminate in nature, a statement to that effect must be shown on the tentative map in lieu of its location. If all easements have not been accounted for, submit a corrected tentative map to the Department of Regional Planning for approval.

7. If applicable, quitclaim or relocate easements running through proposed structures.

8. Place standard lease purpose only/division of land for lease purpose only notes on the final map to the satisfaction of Public Works.

9. The following note shall be placed on all tract and parcel maps with lot/parcel sizes of five acres or more: "Further division of this property to lot/parcel sizes below five acres will require standard improvements be completed as a condition of approval. The improvements will include but not limited to providing access, installation of water mains, appurtenances and fire hydrants, and conformance to Los Angeles County development standards."

10. Extend lot lines to the center of private and future streets or provide separate lots for the private and future streets.

11. Grant ingress/egress and utility easements to the public over the private and future or future streets.

12. A final parcel map must be processed through the Director of Public Works priorto being filed with the Registrar-Recorder/County Clerk's Office.

13. Prior to submitting the parcel map to the Director of Public Works for examination pursuant to Section 66450 of the Government Code, obtain clearances from all affected Departments and Divisions, including a clearance from the Subdivision Mapping Section of the Land Development Division of Public Works for the following mapping items; mathematical accuracy; survey analysis; and correctness of certificates, signatures, etc.

14. If signatures of record title interests appear on the final map, a preliminary guarantee is needed. A final guarantee will be required at the time of filing of the final map with the Registrar-Recorder/County Clerk's Office. If said signatures do not appear on the final map, a title report/guarantee is needed showing all fee owners and interest holders and this account must remain open until the final parcel map is filed with the Registrar-Recorder/County Clerk's Office.

15. Permission is granted to record large lots (20-acre or more) parcel/tract map as shown on the insert map provided full street right of way and slope easements are dedicated along the latest IEC approved alignments on Ridge Route Road to the satisfaction of Public Works. In addition, make an offer of private and future right of way and dedicate slope easements along all remaining interior streets on alignments to the satisfaction of Public Works.

16. Within 30 days of the approval date of this land use entitlement or at the time of the first plan check submittal, the applicant shall deposit the sum of $5,000 with Public Works to defray the cost of verifying conditions of approval for the purpose of issuing final map clearances.

Prepared by Jose Cruz Phone (626) 458-4921 Date 9/20/2023
pm73335L-New-RPPL2023004448
N/A

TD

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
WWW.DPW.LACOUNTY.GOV

PARCEL NO.: 073335 - Rev 4

TENTATIVE MAP DATE: 08/24/2023
EXHIBIT MAP DATE: 08/24/2023

HYDROLOGY UNIT CONDITIONS OF APPROVAL, PHONE: (626) 458-4921

Approval to drainage is recommended with no drainage conditions.

Note: This clearance is only for the tentative map. If a Conditional Use Permit is required by the Department of Regional Planning, a drainage concept may be required prior to clearing the Conditional Use Permit.

Name _____ Lonnie Chung ____ Date 09/06/2023 Phone (626) 458-7102

PCA LX001129/A863
EPIC LA RPPL2023004448
Telephone: (626) 458-4925
Email: GMEDSubmittals@dpw.lacounty.gov

Los Angeles County Public Works
Geotechnical and Materials Engineering Division
GEOLOGIC AND SOILS ENGINEERING REVIEW SHEET
900 S. Fremont Avenue, Alhambra, CA 91803

Tentative Tract / Parcel Map	73335	**Tentative Map Dated** 8/24/23	**Parent Tract**
Grading By Subdivider? [N] (Y or N)	xxx yd^3	**Location**	Castaic
Geologist	---	**Subdivider**	Northlake Associates, LLC
Soils Engineer	---	**Engineer/Arch.**	Sikand

Review of:

Geologic Report(s) Dated: ---

Soils Engineering Report(s) Dated: ---

Geotechnical Report(s) Dated: ---

References: Pacific Soils Engineering (for Tract Map 51852): 3/16/06, 11/24/03, 1/31/03, 11/3/00, 7/10/00, 8/11/99, 2/13/98, 7/30/96, 12/1/95, 4/6/95, 6/16/94

BASED ON LA COUNTY SUBDIVISION CODE SECTION 21.44.320(D), TENTATIVE MAP FEASIBILITY IS RECOMMENDED FOR APPROVAL FROM A GEOTECHNICAL STANDPOINT

THE FOLLOWING INFORMATION IS APPLICABLE TO THIS DIVISION OF LAND:

- The Final Map does ***not*** need to be reviewed by the Geotechnical and Materials Engineering Division.
- Geotechnical report(s) may be required prior to approval of grading or building plans. Report(s) must comply with the provisions of the County of Los Angeles Department of Public Works *Manual for Preparation of Geotechnical Reports*. The Manual is available at: ***http://dpw.lacounty.gov/gmed/permits/docs/manual.pdf***.

Prepared by

PROFESSIONAL ENGINEER GEORGE MOLINA C 91931 CIVIL STATE OF CALIFORNIA

George Molina
Geotechnical Engineering Section

PROFESSIONAL GEOLOGIST Geir R. Mathisen No. 2376 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

Geir Mathisen
Geology Section

Date 9/19/23

Please complete a Customer Service Survey at http://dpw.lacounty.gov/go/gmedsurvey

NOTICE: Public safety, relative to geotechnical subsurface exploration, shall be provided in accordance with current codes for excavations, inclusive of the Los Angeles County Code, Chapter 11.48, and the State of California, Title 8, Construction Safety Orders.

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION – GRADING
PARCEL MAP NO. 073335 (REV.2)

TENTATIVE MAP DATED 08-24-2023
EXHIBIT MAP DATED 08-24-2023

1. Approval of this map pertaining to grading is recommended with no conditions since no grading is proposed.



Name David Esfandi Date 09/12/2023 Phone (626) 458-7130

P:\ldpub\SUBPCHECK\Grading\Tentative Map Reviews\Templates\Tentative Map Conditions(08-24-23).doc

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION - ROAD
PARCEL MAP NO. 073335 (Rev.) TENTATIVE PARCEL MAP DATED 08-24-2023

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

Approval of the map is recommended with no conditions since no street improvements are proposed. Any condition of approved will be addressed and stipulated under TR 73336.

SR Prepared by Sam Richards Phone (626) 458-4921 Date: 09-20-23

pm73335r-rev6

LAND DEVELOPMENT DIVISION
SEWER UNIT

PARCEL MAP NO.: 073335(Rev.) **TENTATIVE MAP DATED 08-24-2023**

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

1. All lots are minimum net area of 20 acres.

2. Approved without conditions. There are no existing public sewer facilities within proximity of the project and the applicant may propose to use private sewer systems in the future . The use and installation of a private sewage system (septic system) must be approved by the Department of Public Health (DPH). Please call or email Land Use Program at (626) 430-5380 or dlanduse@ph.lacounty.gov for additional information and requirements.

Prepared by Nikko Pajarillaga Phone (626) 458-3137 Date 09-21-2023

PM48307s-rev4.doc

PARCEL MAP NO. 073335 (Rev.) TENTATIVE PARCEL MAP DATED 08-24-2023

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

1. A water system (including any approved booster pump stations) maintained by the water purveyor, with appurtenant facilities to serve all lots in the land division, must be provided based on the Will Serve letter dated 7/18/23. The system shall include fire hydrants of the type and location (both on-site and off-site) as determined by the Fire Department. The water mains shall be sized to accommodate the total domestic and fire flows.

2. Easements shall be granted to the County, appropriate agency or entity for the purpose of ingress, egress, construction and maintenance of all water-related infrastructures constructed for this land division to the satisfaction of Public Works.

Prior to obtaining the building permit from the Building and Safety Office:

3. Submit landscape and irrigation plans for each open space lot in the land division, with landscape area greater than 500 square feet, in accordance with the Water Efficient Landscape Ordinance.

4. Depict all line of sight easements on the landscaping and grading plans.

5. Install a separate water irrigation systems for recycled water use per landscape plans.

6. If necessary, install off-site recycle water mainline per landscape plans to serve this subdivision to the satisfaction of Public Work.

7. The recycled water irrigation systems shall be designed and operated in accordance with all local and State Codes as required per Section 7105.6.3 Chapter 71 of Title 26 Building Code.

SR Prepared by Sam Richards Phone (626)458-4921 Date 09-20-2023
pm73335w-rev5.doc

COUNTY OF LOS ANGELES FIRE DEPARTMENT
FIRE PREVENTION DIVISION

Land Development Unit
5823 Rickenbacker Road
Commerce, CA 90040
Telephone (323) 890-4293, Fax (323) 890-9783

EPIC-LA NUMBER:	RPPL2023004448	PROJECT NUMBER:	PM073335
CITY/COMMUNITY:	Castaic	STATUS:	Cleared
PROJECT ADDRESS:		DATE:	04/04/2024

CONDITIONS

1. A digital copy of the Final Map shall be submitted to the Fire Department's Land Development Unit for review and approval prior to recordation.
2. The Fire Department did not determine any access and water requirements for this subdivision per Title 21, the County of Los Angeles Subdivision Code, Sections 21.32.040 and 21.32.110. Specific access and water requirements for the future development of this property shall be in compliance with applicable sections of Title 32, the County of Los Angeles Fire Code.

For any questions regarding the report, please contact Wally Collins at (323) 890-4243 or Wally.Collins@fire.lacounty.gov.

Reviewed by:

LOS ANGELES COUNTY
DEPARTMENT OF PARKS AND RECREATION

PARK OBLIGATION REPORT

Tentative Map # **73335** DRP Map Date: **08/24/2023** SCM Date: Report Date: **03/21/2024**
Park Planning Area # **35B** CSD: **CASTAIC AREA CSD** Map Type: **Tentative Map - Tract**

Total Units **0** = Proposed Units **0** + Exempt Units **0**

Park land obligation in acres or in-lieu fees:

ACRES:	**0.00**
IN-LIEU FEES:	**$0**

Sections 21.24.340, 21.24.350, 21.28.120, 21.28.130, and 21.28.140, the County of Los Angeles Code, Title 21, Subdivision Ordinance provide that the County will determine whether the development's park obligation is to be met by:

1) the dedication of land for public or private park purpose or,
2) the payment of in-lieu fees or,
3) the provision of amenities or any combination of the above.

The specific determination of how the park obligation will be satisfied will be based on the conditions of approval by the advisory agency as recommended by the Department of Parks and Recreation.

The Representative Land Value (RLVs) in Los Angeles County Code (LACC) Section 21.28.140 are used to calculate park fees and are adjusted annually, based on changes in the Consumer Price Index. The new RLVs become effective July 1st of each year and may apply to this subdivision map if first advertised for hearing before either a hearing officer or the Regional Planning Commission on or after July 1st pursuant to LACC Section 21.28.140, subsection 3. Accordingly, the park fee in this report is subject to change depending upon when the subdivision is first advertised for public hearing.

This project is exempt from the park obligation requirements because:

Trails:

Comments:

This project is exempt from park obligation requirements because:
Other: Large lot parcel map for sale/conveyance purposes. No development proposed. All lots are a minimum of 20 acres.

For further information or to schedule an appointment to make an in-lieu fee payment:
Please contact Clement Lau at (626) 588-5301 or Loretta Quach at (626) 588-5305
Department of Parks and Recreation, 1000 S. Fremont Avenue, Unit #40. Building A-9 West, 3rd Floor. Alhambra, California 91803.

By: _____
Clement Lau, Departmental Facilites Planner II

LOS ANGELES COUNTY
DEPARTMENT OF PARKS AND RECREATION

PARK OBLIGATION WORKSHEET

Tentative Map # **73335** DRP Map Date: **08/24/2023** SCM Date: Report Date: **03/21/2024**
Park Planning Area # **35B** CSD: **CASTAIC AREA CSD** Map Type: **Tentative Map - Tract**

The formula for calculating the acreage obligation and or in-lieu fee is as follows:

(P)eople x (0.0030) Ratio x (U)nits = (X) acres obligation
(X) acres obligation x RLV/Acre = In-Lieu Base Fee

Where P = Estimate of number of People per dwelling unit according to the type of dwelling unit as determined by the U.S. Census
Ratio = The subdivision ordinance provides a ratio of 3.0 acres of park land for each 1,000 people generated by the development. This ratio is calculated as "0.0030" in the formula.
U = Total approved number of Dwelling Units.
X = Local park space obligation expressed in terms of acres.
RLV/Acre = Representative Land Value per Acre by Park Planning Area.

Total Units **0** = Proposed Units **0** + Exempt Units **0**

Park Planning Area = **35B**

Type of dwelling unit	People *	Ratio 3.0 Acres/ 1000 People	Number of Units	Acre Obligation
Detached S.F. Units	**3.44**	**0.0030**	**0**	**0.00**
M.F. < 5 Units	**3.12**	**0.0030**	**0**	**0.00**
M.F. >= 5 Units	**2.65**	**0.0030**	**0**	**0.00**
Mobile Units	**2.78**	**0.0030**	**0**	**0.00**
Exempt Units			**0**	**0.00**
TOTAL			**0**	**0.00**

Ratio	Acre Obligation	RLV / Acre	In-Lieu Base Fee
@ (0.0030)	0.00	$203,614	**$0**

Lot #	Provided Space	Provided Acres	Credit (%)	Acre Credit
0		0.00	100.00%	0.00
			Total Provided Acre Credit:	**0.00**

Acre Obligation		Net Obligation	RLV / Acre	**In-Lieu Fee Due**
0.00	0.00	0.00	$203,614	**$0**

COUNTY OF LOS ANGELES
Public Health

BARBARA FERRER, Ph.D., M.P.H., M.Ed.
Director

MUNTU DAVIS, M.D., M.P.H.
County Health Officer

MEGAN McCLAIRE, M.S.P.H.
Chief Deputy Director

LIZA FRIAS, REHS
Director of Environmental Health

BRENDA LOPEZ, REHS
Assistant Director of Environmental Health

SCOTT ABBOTT, REHS, M.P.A.
Assistant Director of Environmental Health

5050 Commerce Drive
Baldwin Park, California 91706
TEL (626) 430-5374 • FAX (626) 813-3000

www.publichealth.lacounty.gov/eh/

BOARD OF SUPERVISORS

Hilda L. Solis
First District

Holly J. Mitchell
Second District

Lindsey P. Horvath
Third District

Janice Hahn
Fourth District

Kathryn Barger
Fifth District

April 04, 2024

TO: Joshua Huntington
Supervising Regional Planner
Department of Regional Planning

Attention: Jodie Sackett

FROM: Charlene Contreras
Director, Community Protection Branch
Department of Public Health

SUBJECT: LAND DIVISION – TENTATIVE MAP - TRACT
CASE: RPPL2023004448
PROJECT: PM073335
APN: 2865-003-013

Thank you for the opportunity to review the application of tentative map tract request for the subject property. The project is a resubmittal of previously approved Northlake Tentative Parcel Map. The applicant provided a tentative map dated August 24, 2023.

Public Health recommends the approval of this subject project. This approval is conditioned by the proposed use of public water and sewer systems. The applicant provided a "Water Availability Letter" from Santa Clarita Valley Water dated July 18, 2023, and a "Sewer Will Serve Letter" from the Los Angeles County Sanitation Districts dated June 05, 2023. Any change of methods for the provision of potable water and sewage disposal shall invalidate this approval.

The applicant shall abide by the requirements contained in Title 12, Section 12.08, Noise Control Ordinance for the County of Los Angeles. During soil excavation and grading activities, the contractor should apply dust control measures to reduce exposure to fungal spores like Coccidioides Immitis, which can cause Valley Fever.

☒ Public Health recommends the approval of this subject project.

☐ Public Health does not recommend the approval of this subject project.

If you have any other questions or require additional information, please contact

Veronica Aranda of Public Health, Planning and Land Use Liaison at (626) 430-5201 or varanda@ph.lacounty.gov.

CC:va
DPH_CLEARED_APN-2865-003-013_RPPL2023004448_04.04.2024

The following report consisting of 29 pages are the recommendations of Public Works.

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

1. Details and notes shown on the tentative map are not necessarily approved. Any details or notes which may be inconsistent with requirements of ordinances, general conditions of approval, or Department policies must be specifically approved in other conditions, or ordinance requirements are modified to those shown on the tentative map upon approval by the Advisory agency.

2. Easements are tentatively required, subject to review by the Director of Public Works to determine the final locations and requirements.

3. Easements shall not be granted or recorded within areas proposed to be granted, dedicated, or offered for dedication for public streets, highways, access rights, building restriction rights, or other easements until after the final map is filed with the Registrar-Recorder/County Clerk's Office. If easements are granted after the date of tentative approval, a subordination must be executed by the easement holder prior to the filing of the final map.

4. In lieu of establishing the final specific locations of structures on each lot at this time, the owner, at the time of issuance of a grading or building permit, agrees to develop the property in conformance with the County Code and other appropriate ordinances such as the Building Code, Plumbing Code, Grading Ordinance, Highway Permit Ordinance, Mechanical Code, Zoning Ordinance, Undergrounding of Utilities Ordinance, Water Ordinance, Sanitary Sewer and Industrial Waste Ordinance, Electrical Code, and Fire Code. Improvements and other requirements may be imposed pursuant to such codes and ordinances.

5. Adjust, relocate, and/or eliminate lot lines, lots, streets, easements, grading, geotechnical protective devices, and/or physical improvements to comply with ordinances, policies, and standards in effect at the date the County determined the application to be complete all to the satisfaction of Public Works.

6. All easements existing at the time of final map approval must be accounted for on the approved tentative map. This includes the location, owner, purpose, and recording reference for all existing easements. If an easement is blanket or indeterminate in nature, a statement to that effect must be shown on the tentative map in lieu of its location. If all easements have not been accounted for, submit a corrected tentative map to the Department of Regional Planning for approval.

7. If applicable, quitclaim or relocate easements running through proposed structures.

8. Show the remainder of the last legally created parcel as "Not a Part" on any final map to the satisfaction of the Director of Public Works.

9. If applicable, place standard residential planned development/commercial planned development/residential condominium notes on the final map to the satisfaction of Public Works.

10. Prior to final approval of the tract map, submit a notarized affidavit to the Director of Public Works, signed by all owners of record at the time of filing of the map with the Registrar-Recorder/County Clerk's Office, stating that any proposed condominium building has not been constructed or that all buildings have not been occupied or rented and that said building will not be occupied or rented until after the filing of the map with the Registrar-Recorder/County Clerk's Office.

11. Label driveways and multiple access strips as "Private Driveway and Fire Lane" and delineate on the final map to the satisfaction of Public Works and Fire Department.

12. Reserve reciprocal easements for drainage, ingress/egress, sewer, water, utilities, right to grade, and maintenance purposes, in documents over the common private driveways to the satisfaction of Public Works.

13. Furnish Public Works' Street Name Unit with a list of street names acceptable to the subdivider. These names must not be duplicated within a radius of 20 miles.

14. A Mapping & Property Management Division house numbering clearance is required prior to approval of the final map.

15. If unit filing occurs, reserve reciprocal easements for drainage, ingress/egress, utilities, and maintenance purposes, in documents over the private driveways and delineate on the final map to the satisfaction of Public Works.

16. The boundaries of the unit final maps shall be designed to the satisfaction of the Departments of Regional Planning and Public Works.

17. The first unit of this subdivision shall be filed as Tract No. 73336-01, the second unit, Tract No. 73336-02, and so forth and the last unit, Tract No. 73336.

18. Show open space lots on the final map and dedicate residential construction rights over the open space lots.

19. Depict all line of sight easements on grading and/or landscaping plans.

20. If possible, modify the boundaries of the open space lots or add additional open space lots to include the airspace easements for sight distance to the satisfaction of Regional Planning and Public Works.

21. A final tract map must be processed through the Director of Public Works prior to being filed with the Registrar-Recorder/County Clerk’s Office.

22. Prior to submitting the tract map to the Director of Public Works for examination pursuant to Section 66442 of the Government Code, obtain clearances from all affected Departments and Divisions, including a clearance from the Subdivision Mapping Section of the Land Development Division of Public Works for the following mapping items; mathematical accuracy; survey analysis; and correctness of certificates, signatures, etc.

23. A final guarantee will be required at the time of filing of the final map with the Registrar-Recorder/County Clerk’s Office.

24. Permission is granted to record large lots (20-acre or more) parcel/tract map as shown on the insert map provided full street right of way and slope easements are dedicated along the latest IEC approved alignments on Ridge Route Road to the satisfaction of Public Works. In addition, make an offer of private and future right of way and dedicate slope easements along all remaining interior streets on alignments to the satisfaction of Public Works.

25. Within 30 days of the approval date of this land use entitlement or at the time of the first plan check submittal, the applicant shall deposit the sum of $5,000 with Public Works to defray the cost of verifying conditions of approval for the purpose of issuing final map clearances.

Prepared by Jose Cruz Phone (626) 458-4921 Date 9/17/2025
tr73336L-Rev2-RPPL2023004336
N/A

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
WWW.DPW.LACOUNTY.GOV

TRACT NO.: 073336 – rev 2

TENTATIVE MAP DATE: 08/20/2025
EXHIBIT "A" DATE: 08/20/2025

HYDROLOGY UNIT CONDITIONS OF APPROVAL

Prior to Improvement Plans Approval:

1. Comply with hydrology study, which was approved on 04/27/2017, or the latest revision, to the satisfaction of the Department of Public Works.

2. FEMA flood zone must be analyzed and mapped to determine whether a Conditional Letter of Map Revision (CLOMR) from FEMA is required. Public Works, Stormwater Engineering Division, should be contacted to obtain required procedures.

Prior to recordation of a Final Map or Parcel map Waiver:

1. Submit plans of drainage facilities as required by hydrology study for design of drainage facilities to the satisfaction of Department of Public Works.

2. Show and dedicate to Flood Control District or to the County of Los Angeles easements and/or right of way on the final map to the satisfaction of the Department of Public Works.

3. An assessment district shall be formed to finance the future ongoing maintenance and capital replacement of all water quality devices/systems identified by the Department of Public Works. The Subdivider shall deposit the first year's total assessment based on the Public Works engineering report. This will fund the first year's maintenance after the facilities are accepted. The second and subsequent years assessment will be collected through the property tax bill. This is required to the satisfaction of the Department of Public Works.

Prior to Improvement Acceptance for Public Maintenance:

1. A maintenance permit is required from the State Department of Fish and Wildlife, the Army Corps of Engineers, and the State Water Resources Control Board to the satisfaction of the Department of Public Works. All maintenance permits of the regulatory agencies must be active at the time of acceptance.

Review by: _____ Date: 08/21/2025 Phone: (626) 458-7102
Alex Mikhailpoor

PCA LX001129/A863
EPIC LA RPPL2023004336
Telephone: (626) 458-4925
Email: GMEDSubmittals@dpw.lacounty.gov

Los Angeles County Public Works
Geotechnical and Materials Engineering Division
GEOLOGIC AND GEOTECHNICAL ENGINEERING REVIEW SHEET
900 S. Fremont Avenue, Alhambra, CA 91803

Tentative Tract / Parcel Map	73336	**Tentative Map Dated**	**8/20/25 (Rev./Exhib.)**	**Parent Tract**	
Grading By Subdivider? [Y] (Y or N)	19,400,000 yd³	**Location**	Castaic	**APN**	
Geologist	G3SoilWorks	**Subdivider**	Northlake Associates, LLC		
Soils Engineer	G3SoilWorks	**Engineer/Arch.**	Sikand		

Review of:
Geologic Report(s) Dated:
Soils Engineering Report(s) Dated:
Geotechnical Report(s) Dated: 5/19/16, 4/18/16, 2/10/16
References: Petra Geosciences: 9/30/15, 4/28/15
Pacific Soils Engineering (for Tract Map 51852): 3/16/06, 11/24/03, 1/31/03, 11/3/00, 7/10/00, 8/11/99, 2/13/98, 7/30/96, 12/1/95, 4/6/95, 6/16/94

TENTATIVE MAP FEASIBILITY IS RECOMMENDED FOR APPROVAL FROM A GEOTECHNICAL STANDPOINT

THE FOLLOWING CONDITIONS MUST BE FULFILLED:

G1. The final map must be approved by the Geotechnical and Materials Engineering Division (GMED) to assure that all geotechnical requirements have been properly depicted. For Final Map clearance guidelines refer to policy memo GS051.0 in the County of Los Angeles Department of Public Works *Manual for Preparation of Geotechnical Reports.* The Manual is available at: ***http://dpw.lacounty.gov/gmed/permits/docs/manual.pdf***.

G2. A grading plan must be geotechnically approved by the GMED prior to Final Map approval. The grading depicted on the plan must agree with the grading depicted on the tentative tract or parcel map and the conditions approved by the Planning Commission. If the subdivision is to be recorded prior to the completion and acceptance of grading, corrective geologic bonds may be required.

G3. Prior to grading plan approval, a detailed geotechnical report must be submitted that addresses the proposed grading. All recommendations of the geotechnical consultant(s) must be incorporated into the plan. The report must comply with the provisions of the County of Los Angeles Department of Public Works *Manual for Preparation of Geotechnical Reports*. The Manual is available at: ***http://dpw.lacounty.gov/gmed/permits/docs/manual.pdf***.

G4. All geologic hazards associated with this proposed development must be eliminated. Alternatively, the geologic hazards may be designated as restricted use areas (RUA), and their boundaries delineated on the Final Map. These RUAs must be approved by the GMED, and the subdivider must dedicate to the County the right to prohibit the erection of buildings or other structures within the restricted use areas. For information on the RUA policy refer to policy memo GS063.0 in the County of Los Angeles Department of Public Works *Manual for Preparation of Geotechnical Reports.* The Manual is available at: ***http://dpw.lacounty.gov/gmed/permits/docs/manual.pdf***..

S1. At the grading plan stage, submit grading plans to the GMED for verification of compliance with County Codes and policies.

NOTE(S) TO THE PLAN CHECKER/BUILDING AND SAFETY DISTRICT ENGINEER:
A. THE GEOTECHNICAL MAPS DEPICT ADDITIONAL GRADING LOCATED EAST OF THE INTERSECTION OF PROPOSED O-STREET AND P-STREET THAT IS NOT SHOWN ON THE TENTATIVE MAP.
B. OFF-SITE GRADING IS PROPOSED.
PER THE SOILS ENGINEER:
C. ON-SITE SOILS ARE SEVERELY DELETERIOUS TO CONCRETE AND EXTREMELY CORROSIVE TO FERROUS METALS. THE USE OF TYPE V CEMENT SHOULD BE ANTICIPATED.
D. ON-SITE SOILS HAVE A VERY HIGH EXPANSION POTENTIAL.

Prepared by

George Molina
Geotechnical Section

Karin Burger
Engineering Geology Section

Date 9/18/25

NOTICE: Public safety, relative to geotechnical subsurface exploration, shall be provided in accordance with current codes for excavations, inclusive of the Los Angeles County Code, Chapter 11.48, and the State of California, Title 8, Construction Safety Orders.

1. Approval of this map pertaining to grading is recommended.

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

REQUIREMENTS PRIOR TO GRADING PLAN APPROVAL:

2. Notarized covenants shall be prepared and recorded by the applicant for any offsite impacts, as determined by Public Works. By acceptance of this condition, the applicant acknowledges and agrees that this condition does not require the construction or installation of an off-site improvement, and that the offsite covenants referenced above do not constitute an offsite easement, license, title or interest in favor of the County. Therefore, the applicant acknowledges and agrees that the provisions of Government Code Section 66462.5 do not apply to this condition and that the County shall have no duty or obligation to acquire by negotiation or by eminent domain any land or any interest in any land in connection with this condition. (Offsite work is shown on the tentative map, but not required for public improvements, and design changes during the improvement change may allow the offsite improvements or impacts to be omitted or mitigated, respectively.)

3. The BMP system currently proposed in the hydrology report is not necessarily approved and shall be subject to final engineering review. If the BMP system is found to not meet, satisfy, or conform to Public Works standards or requirements then the applicant is responsible for proposing alternate methods of satisfying the LID requirements. Alternate methods may cause alterations to the project substantial enough that the project may no longer be deemed substantially conforming with the original tentative map approval or conditions. If so, the applicant is responsible for processing any required amendments or revisions to the tentative map and any related engineering reports to attain substantial conformity.

4. Provide approval of:

   a. The latest hydrology study by the Storm Drain and Hydrology Section of Land Development Division.

   b. The location/alignment and details/typical sections of any park/trail, as shown on the grading plan, to the satisfaction of the Department of Parks and Recreation.

   c. The grading plan by the Geotechnical & Materials Engineering Division (GMED).

   d. Permits and/or letters of non-jurisdiction from all State and Federal Agencies, as

applicable. These agencies may include but may not be limited to the State of California Regional Water Quality Control Board, State of California Department of Fish and Wildlife, State of California Department of Conservation, California Geologic Energy Management Division (CalGEM), and the Army Corps of Engineers.

REQUIREMENTS PRIOR TO FINAL MAP RECORDATION:

5. Submit a grading plan for approval. The grading plan must show and call out the following items, including but not limited to: construction of all drainage devices and details, paved driveways, elevation and drainage of all pads, SUSMP and LID devices (fill in whichever is applicable), and any required landscaping and irrigation not within a common area or maintenance easement. Acknowledgement and/or approval from all easement holders may be required.

6. A maintenance agreement or CC&Rs may be required for all privately maintained drainage devices, slopes, and other facilities.



Name Nargiss Majrooh Date 9/8/2025 Phone (626) 458-4921

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

Comply with the attached approved road conditions per tentative and exhibit maps dated 9/13/17 to the satisfaction of Public Works except for the following revisions:

A. Condition 33. Shall be deleted and replaced with the following: Comply with the streetlighting conditions dated 9/4/2025.

B. Condition 35. Shall be revised to read as follows: The existing approved conceptual signing and striping plan dated 06/29/16 has expired, submit a new conceptual signing and striping plan to Traffic Safety and Mobility for review and approval. After the approval of the aforementioned conceptual signing and striping plan, submit detailed signing and striping plans (scale 1"=40') for all multi-lane streets, private drive, and highways in the vicinity of this project at any other offisite location if required to mitigate any traffic impact (per the attached letter from Traffic Safety and Mobility dated 08/28/25) to the satisfaction of Public Works.

C. Conditions 36, 38 & 39. Shall replace the Traffic Safety and Mobility letter dated 10/16/16 with the attached letter dated 8/28/25.

D. Condition 43. shall be deleted.

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

1. A minimum centerline curve length of 100 feet shall be maintained on all local streets and a minimum centerline curve radius of 100 feet on all cul-de-sac streets. Curves through intersections should be avoided when possible. If unavoidable, the alignment shall be adjusted so that the proposed BC and EC of the curve through the intersection are set back a minimum of 100 feet away from the BCR's of the intersection. Reversing curves of local streets need not exceed a radius of 1,500 feet and any curve need not exceed a radius of 3,000 feet.

2. Compound curves are preferred over broken-back curves. Broken-back curves must be separated by a minimum of 200 feet of tangent (1,000 feet for multi-lane highways or industrial collectors). If compound curves are used, the radius of the smaller curve shall not be less than two-thirds of the larger curve. The curve length of compound curves shall be adjusted to exceed a minimum curve length of 100 feet, when appropriate, in accordance with AASHTO guidelines.

3. The minimum centerline radius is 350 feet on all local streets with 64 feet of right of way and on all the streets where grades exceed 10 percent.

4. The central angles of the right of way radius returns shall not differ by more than 10 degrees on local streets.

5. Driveways will not be permitted within 25 feet upstream of any catch basins when street grades exceed six (6) percent.

6. Provide maximum 6% grade through the knuckles.

7. Provide standard and modified knuckles on streets as shown on the tentative map to the satisfaction of Public Works.

8. Provide standard and modified cul-de-sacs on streets as shown on the tentative map.

9. Provide minimum landing area of 100 feet for local collectors, 50 feet for local access roads, and 25 feet for cul-de-sacs at a maximum three (3) percent grade on all "tee" intersections.

10. The centerline alignment of Ridge Route Road shall conform to the approved Interdepartmental Engineering Committee (IEC) P-273 (PW) to the satisfaction of Public Works.

11. Dedicate variable width right of way on Ridge Route Road, varying from 40 feet from centerline to 45 feet from centerline, to the satisfaction of Public Works.

12. Dedicate variable width right of way on Northlake Boulevard, varying from 32 feet from centerline to 43 feet from centerline, to the satisfaction of Public Works.

13. Dedicate right of way 35 feet from centerline on "A" Street to the satisfaction of Public Works.

14. Dedicate right of way 33 feet from centerline on "S" Street to the satisfaction of Public works.

15. Dedicate right of way 32 feet from centerline on "A" Street, "B" Street, "D" Street, "E" Street", "F" Street, "H" Street and, "O" Street to the satisfaction of Public Works.

16. Dedicate right of way 30 feet from centerline on "C" Street, "G" Street, "I" Street, "J" Street, "P" Street, "AA" Street, "DD" Street, "EE" Street, "GG" Street, "HH" Street, "PP" street, and "QQ" Street to the satisfaction of Public Works.

17. Dedicate right of way 29 feet from centerline on "O" Street, "BB" Street, "CC" Street, "FF" Street, "II" Street, "JJ" Street, "KK" Street, "LL" Street, "MM" street, "NN" Street, "OO" Street, "PP" Street, "QQ" Street, "RR" Street, and "SS" Street to the satisfaction of Public Works.

18. The design elements (alignment, curvature, slopes, easement widths) of the Private Drives are not necessarily approved. Conform to the final design criteria (alignment, curvature, slopes, right-of-way widths) of the approved "Private Drives and Traffic Calming Design Guidelines Manual". All private drives shall be constructed per an approved grading plan to the satisfaction of Public Works.

19. Provide a minimum of 25 feet curb return radii at all local street intersections to the satisfaction of Public Works. Minimum of 35 feet radius or larger radius returns shall be provided at all highway intersections and other intersections where larger radii are warranted to provide adequate design features at the discretion of Public Works.

20. Dedicate adequate property line return radii at all intersections to adequately construct a curb ramp to Americans with Disabilities Act (ADA) standards and to

the satisfaction of Public Works. At a minimum, the property line return radii shall be consistent with the necessary curb return radii and parkway widths that are deemed appropriate by Public Works. Additional right of way corner cut offs shall be dedicated at all signalized intersections and other locations where deemed appropriate by Public Works.

21. Secure offsite easements for road and slopes prior to tentative map approval.

22. Reserve easements for ingress/egress purposes over any sidewalks or multi-purpose use trails constructed outside the public right of way to the satisfaction of Public Works.

23. Construct curb, gutter, base, pavement, and sidewalk (if applicable) on all private drives to the satisfaction of Public Works. In addition, if applicable, construct additional sidewalk pop-outs in the vicinity of any above ground utilities to meet current Americans with Disabilities Act (ADA) requirements to the satisfaction of Public Works. All final design criteria (alignment, curvature, slopes, right-of-way widths) for private drives shall conform to the approved "Private Drives and Traffic Calming Design Guidelines Manual". All private drives shall be constructed per an approved grading plan to the satisfaction of Public Works.

24. Construct a slough wall outside the street right of way when the height of the slope is greater than five feet above the sidewalk and the sidewalk is adjacent to the street right of way. The wall shall not impede any required line of sight. Slough wall is not required if there is a minimum of 3 feet wide flat area between the right of way and the toe of the slope provided there is appropriate drainage system to minimize the sloughing of the slope.

25. Permission is granted to reduce the centerline curve radius to 250 feet on "AA" Street and "C" street, and 300 feet on "G" Street to the satisfaction of Public Works.

26. Monument signs located on medians (within private drives or driveways to individual lots) shall not impede adequate line of sight to vehicles or pedestrians.

27. Provide adequate curb transitions on streets with variable right of way to the satisfaction of Public Works.

28. All gated entries proposed for any commercial lots shall substantially conform to the typical gate details provided in the "Private Drives and Traffic Calming Design Guidelines Manual" to the satisfaction of Public Works. Provide additional stacking distance if determined to be necessary to the satisfaction of Public Works.

29. All emergency vehicle access gates shall remain closed at all times, except during an emergency.

30. Provide intersection sight distance to the satisfaction of Public Works for a design speed of:

    (1) 55 mph (585 feet) on Ridge Route Road from North Lake Boulevard, "B" Street and "S" Street, on as depicted on the tentative map.

    (2) 40 mph (415 feet) on "A" Street from "D" Street and G" Street and driveway to lot 301, on "B" Street from "P" Street and driveway to lot 290, on "E" Street from "H" Street, on "I" Street from "J" Street, on "H" street from driveway to lot 304, on "O" Street from "G" Street, "P" Street, driveway to lot 293 and driveway to lot 296, as depicted on the tentative map.

    (3) 30 mph (310 feet) on "I" Street from "J" Street as depicted on the tentative map.

    Line of sight requirements for corner sight distance are not necessarily restricted to the above intersections. Additional line of sight for all other intersections and driveways shall be required if deemed necessary by the Department of Public Works. Line of sight shall be within right of way or dedicate airspace easements to the satisfaction of Public Works. Additional grading may be required.

31. Provide stopping sight distance as depicted on the tentative map and where applicable along all public streets. Line of sight shall be within right of way or dedicated airspace easements to the satisfaction of Public Works. In areas where the intersection sight distance overlaps with the stopping sight distance, the more stringent of the two shall govern.

32. All line of sight easements shall be depicted on grading and landscaping plans to the satisfaction of Public Works.

33. Comply with the street lighting requirements identified in the attached March 11, 2015 letter from our Traffic and Lighting Division to the satisfaction of Public works.

34. The roadway median layouts (pocket lengths, widths, etc) shown in the plan view of the tentative map are not necessarily approved.

35. Conform to the approved conceptual signing and striping plan (approved on June

29, 2016) and submit detailed signing and striping plans (scale 1" = 40') for all multi-lane streets, private drives, and highways in the vicinity of this project and at any other offsite location if required to mitigate any traffic impact (per the attached letter from our Traffic and Lighting Division dated October 3, 2016) to the satisfaction of Public Works.

36. Traffic Signal Plans (scale 1"=20') shall be required at any location where modification to the existing traffic signal has been deemed necessary and at locations where new traffic signals are to be installed (per the attached letter from our Traffic and Lighting Division dated October 3, 2016 to the satisfaction of Public Works.

37. Provide adequate signal easements at the entrance to any public street from a private drive/ fire lane to the satisfaction of Public Works.

38. Signing and striping plans, signal plans (where applicable), and cost estimates, are required for any segment of roadway or intersection identified in the approved traffic study as one for which the project is obligated to submit a pro-rata share payment. Should improvements to any segment of roadway or intersection as described above be included in a full mitigation for the Castaic Bridge and Major Thoroughfare (B&T) District, the project shall be exempt from submitting signing and striping, signal plans, and corresponding cost estimates for those improvements and shall only be responsible for paying the appropriate B&T District fees in effect at the time of final map recordation. If required, signing and striping plans, signal plans, and cost estimates may be conceptual in nature and shall be used solely as a tool to obtain a monetary value for the pro-rata share percentages identified in the approved traffic study. Approved cost estimates from Public Works must be obtained and the appropriate payments made prior to final map recordation.

39. Comply with the mitigation measures identified in the attached October 3, 2016 letter from our Traffic and Lighting Division to the satisfaction of Public Works. If a Bridge and Thoroughfare District is formed, and if signals identified in the study are included as facilities specifically identified for inclusion in that approved District, then the amount and eligibility for a credit against your District obligation may be given if approved by Public Works.

40. Plant street trees on all public and private streets to the satisfaction of Public Works.

41. Install postal delivery receptacles in groups to serve two or more residential units to the satisfaction of Public Works.

42. Underground all new and existing service lines and distribution lines that are less than 50 KV and new utility lines to the satisfaction of Public Works and Southern California Edison. Please contact Construction Division at (626) 458-3129 for new location of any above ground utility structure in the parkway.

43. Establish a Landscape Maintenance District (LMD), subject to the approval of Department of Public Works, Road maintenance Division, for the purpose of maintaining landscaped medians and parkways on all streets and highways to the satisfaction of Public Works. If for any reason, the LMD is not established, or ceases to exist, the maintenance responsibility will revert back to the Home Owners Association.

44. Prior to final map approval, pay the fees established by the Board of Supervisors for the Castaic Bridge and Major Thoroughfare Construction Fee District in effect at the time of recordation.

Prepared by Sam Richards Phone (626) 458-4921 Date: 10-11-17
tr73336r-rev5

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

MARK PESTRELLA, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

August 28, 2025

IN REPLY PLEASE
REFER TO FILE: T-4

Ms. Maria Morris and Mr. Daryl Zerfass
Stantec
38 Technology Drive
Irvine, CA 92618

Dear Ms. Morris and Mr. Zerfass:

NORTHLAKE SPECIFIC PLAN
TRANSPORTATION ANALYSIS FOR CALIFORNIA
ENVIRONMENTAL QUALITY ACT – NOVEMBER 19, 2024
UNINCORPORATED CASTAIC AREA

Public Works reviewed the Transportation Impact Analysis dated November 19, 2024 (2024 TIA), for the proposed Northlake Specific Plan Development located east of the Interstate 5 freeway and north of Lake Hughes Road in the unincorporated Castaic area. This letter supersedes the previous letter dated December 2, 2024.

Project Description

The project proposed the development of 1,143 single family residential units, 1,341 multi-family residential units, 345 age qualified single family residential units, and 315 affordable mixed-use housing units and 6 market-rate live-work units for a total of 3,150 residential units. The project also proposed highway commercial (e.g., retail near the highway), a middle school (as an option), private and public recreational parks, and a fire station.

Project's Transportation Impact

According to the 2024 TIA, the project would not result in new transportation impacts to the unincorporated County. We generally agree with the findings in the 2024 TIA.

In addition to the 2024 TIA, Public Works also reviewed the Traffic Impact Analysis dated September 2016 (2016 TIA), and the Supplemental Analysis for School Site Relocation (SASSR) dated September 2016 for the proposed Northlake Development project located east of the Interstate 5 (I-5) Freeway and north of Lake Hughes Road in the

unincorporated Castaic/Lake Hughes area. This letter includes all previous requirements from the previous letter dated October 3, 2016.

Project's Phase 1 Transportation Impact

According to the 2016 TIA, the traffic generated by Phase 1 of the project alone will not have a significant transportation impact to County roadways or intersections in the area based on the County's Traffic Impact Analysis (TIA) Guidelines. We generally agree with the findings of the 2016 TIA.

Project's Phase 1 Alternative Transportation Impact

According to the SASSR, the traffic generated by the Phase 1 Alternative of the project alone will not have a significant transportation impact on County roadways or intersections in the area based on the County's TIA Guidelines. We generally agree with the findings of the SASSR.

Project's Build-Out Transportation Impact

According to the 2016 TIA, the traffic generated by the project alone will have a significant transportation impact at the three intersections listed below based on the County's TIA Guidelines. We generally agree with the findings of the 2016 TIA.

- Ridge Route Road at Lake Hughes Road
- I-5 Freeway Southbound On-Ramp at Parker Road
- I-5 Freeway Northbound Off-Ramp at Ridge Route Road

Mitigation of Project's Transportation Impact

According to the 2016 TIA, the following improvements are proposed at the intersection listed below to address the project's transportation impact. However, the proposed improvements do not fully mitigate the impact. Since no additional mitigation measures are feasible within the available right of way, the project's applicant shall appropriately describe this significant and unavoidable transportation impact in the project's Environmental Impact Report.

Ridge Route Road at Lake Hughes Road

- South Approach Mitigation: Add a right-turn lane.
- East Approach Mitigation: Add a right-turn lane.
- West Approach Mitigation: Add a left-turn lane, remove one through lane, and add a right-turn lane.
- This intersection will also require the installation of a traffic signal with southbound right-turn overlap phasing.
- The above improvements are identified as Castaic Bridge and Thoroughfare (B&T) District improvements. Construction of these improvements may qualify for a B&T District credit.

According to the 2016 TIA, the project's transportation impact could be mitigated at the two intersections listed below by implementing the following improvements:

I-5 Freeway Southbound On-Ramp at Parker Road

- East Approach Mitigation: Add two left-turn lanes.
- West Approach Mitigation: Add a right-turn lane.
- This intersection will also require the installation of a traffic signal.
- The above improvements are identified as Castaic B&T District improvements. Construction of these improvements may qualify for a B&T District credit.

I-5 Freeway Northbound Off-Ramp at Ridge Route Road

- South Approach Mitigation: Add a right-turn lane.
- East Approach Mitigation: Add a through lane.
- This intersection will also require the installation of a traffic signal.
- The above improvements are identified as Castaic B&T District improvements. Construction of these improvements may qualify for a B&T District credit.

We generally agree with the mitigation measures recommended in the 2016 TIA. Detailed traffic signal plans and signing and striping plans for the above improvements shall be submitted to Public Works for review and approval.

The project shall be responsible for monitoring traffic conditions at the three above-mentioned intersections beginning at the time of first occupancy to determine when the identified improvements for each intersection are required to

be constructed. A monitoring report to determine the appropriate installation period for the identified improvements shall be submitted to Public Works for review and approval at the following milestones:

1) 1,000 residential units or 100,000 square feet non-residential uses
2) 2,000 residential units or 200,000 square feet non-residential uses
3) 3,000 residential units or 300,000 square feet non-residential uses

Project's Cumulative Transportation Impact

According to the 2016 TIA, the cumulative traffic generated by the project and other related projects will have a significant transportation impact at the six intersections listed below based on the County's TIA Guidelines. We generally agree with the findings of the 2016 TIA.

- Castaic Road at Ridge Route Road
- Ridge Route Road and Lake Hughes Road
- The Old Road at I-5 Freeway Southbound On/Off-Ramps
- I-5 Freeway Northbound On/Off-Ramps at Lake Hughes Road
- I-5 Freeway Southbound On-Ramp at Parker Road
- I-5 Freeway Northbound Off-Ramp at Ridge Route Road

Mitigation of Project's Cumulative Transportation Impact

According to the 2016 TIA, the project's cumulative transportation impacts could be mitigated at the intersections listed below by implementing the following improvements:

Castaic Road at Ridge Route Road

- South Approach Mitigation: Add a left-turn lane.
- West Approach Mitigation: Add a right turn lane.
- This intersection will also require the installation of a traffic signal with southbound right-turn overlap phasing.
- The above improvements are identified as Castaic B&T District improvements. Payment of the Castaic B&T District fees in lieu of a pro rata share would address the cumulative impact at this intersection.

The Old Road at I-5 Freeway Southbound On/Off-Ramps

- Install traffic signal with northbound right-turn overlap phasing.
- The above improvement is identified as a Castaic B&T District improvement. Payment of the Castaic B&T District fees in lieu of a pro rata share would address the cumulative impact at this intersection.

I-5 Freeway Northbound On/Off-Ramps at Lake Hughes Road

- South Approach Mitigation: Add alert-turn lane and convert shared left-turn/ through lane to a shared left-turn/through/right-turn lane.
- This intersection will also require the installation of a traffic signal.
- The above improvements are identified as Castaic B&T District improvements. Payment of the Castaic B&T District fees in lieu of a pro rata share would address the cumulative impact at this intersection.

I-5 Freeway Southbound On-Ramp at Parker Road

The following improvements could mitigate the cumulative impact but are the same as those required to mitigate the project's transportation impact.

- East Approach Mitigation: Add two left-turn lanes.
- West Approach Mitigation: Add a right-turn lane.
- This intersection will also require the installation of a traffic signal.
- The above improvements are identified as Castaic B&T District improvements. Construction of these improvements may qualify for a B&T District credit.

I-5 Freeway Northbound Off-Ramp at Ridge Route Road

- East Approach Mitigation: Add a third through lane
- Modify the traffic signal in accordance with the above improvement.
- The above improvements are identified as Castaic B&T District improvements. Payment of the Castaic B&T District fees in lieu of a pro rata share would address the cumulative impact at this intersection.

Ridge Route Road at Lake Hughes Road

The following improvements could mitigate the cumulative impact but are the same as those required to mitigate the project's transportation impact. However, the proposed improvements do not fully mitigate the impact. Since no additional mitigation measures are feasible within the available right of way, the project's applicant shall appropriately describe this significant and unavoidable cumulative impact in the project's Environmental Impact Report.

- South Approach Mitigation: Add a right-turn lane.
- East Approach Mitigation: Add a right-turn lane.
- West Approach Mitigation: Add a left-turn lane, remove one through lane, and add a right-turn lane.
- This intersection will also require the installation of a traffic signal with southbound right-turn overlap phasing.
- The above improvements are identified as Castaic B&T District improvements. Construction of these improvements may qualify for a B&T District credit.

We generally agree with the mitigation measures recommended in the 2016 TIA. The project is located within the Castaic B&T District. Consequently, the project shall pay its share of the Castaic B&T District fees prior to approval of the final map. Please contact Land Development Division for the determination and payment of these fees.

The project shall be responsible for monitoring traffic conditions at the above-mentioned intersections beginning at the time of first occupancy to determine when the identified improvements for each intersection are required to be constructed. A monitoring report to determine the appropriate installation period for the identified improvements shall be submitted to Public Works for review and approval at the following milestones:

1) 1,000 residential units or 100,000 square feet non-residential uses
2) 2,000 residential units or 200,000 square feet non-residential uses
3) 3,000 residential units or 300,000 square feet non-residential uses

Site Access Requirements

Traffic signals shall be installed at the five intersections listed below within the project site. The street names for these intersections are taken from the 2016 TIA and were not checked against the latest tentative tract maps. The project shall solely design and construct the traffic signals to the satisfaction of Public Works. The traffic signals shall be installed and operational concurrent with the installation of the curb, gutter, and the first lift of asphalt pavement. Detailed signing/striping and traffic signal plans shall be submitted to Public Works for review and approval.

- Ridge Route Road at B Street
- Ridge Route Road at Northlake Boulevard
- Northlake Boulevard at A Street
- Northlake Boulevard at E Street
- Ridge Route Road at SS Street

Additionally, traffic signals may be warranted in the future at the following intersections:

- School Driveway at Northlake Boulevard
- Ridge Route Road at Shadow Lake Lane
- Ridge Route Road at Elk Ridge Road

The project shall enter into a secured agreement with Public Works to guarantee the design and construction of the three traffic signals when the traffic conditions warrant their installation. The intersections shall be monitored for the installation of the signals every year for up to 5 years after the certificate of occupancy of the last unit is issued. Upon Public Works' determination that the traffic signals are warranted, the project's developer shall design the necessary plans and construct the signal to the satisfaction of Public Works. Any security previously submitted for traffic signal construction will be returned once the construction is completed to the satisfaction of Public Works or at the expiration of the above-mentioned monitoring period.

Flashing beacons shall be installed at the Fire Station within the project site. The project shall solely design and construct the flashing beacons to the satisfaction of Public Works. The flashing beacon shall be installed and be operational concurrent with the installation of the curb, gutter, and the first lift of asphalt pavement. Detailed signing/striping and traffic signal plans shall be submitted to Public Works for review and approval.

Other Jurisdictions

We recommend the applicant consult with the City of Santa Clarita and the California Department of Transportation to obtain concurrence with any potential transportation impacts within their jurisdiction.

If you have any questions, please contact Mr. Stephen Lamm, Traffic Safety and Mobility Division, at (626) 300-4764 or slamm@pw.lacounty.gov.

Very truly yours,

MARK PESTRELLA, PE
Director of Public Works



JULIAN GARCIA, P.E.
Assistant Division Head
Traffic Safety and Mobility Division

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bc: Land Development (Suarez, Lasso)

THE PROJECT DOES REQUIRE NEW STREETLIGHTS AND ANNEXATION IS REQUIRED. SEE BELOW FOR FURTHER DETAILS.

Project is not in the County Lighting Maintenance District (CLMD) 1687. The Subdivision project shall conform to the design standards and policies of Public Works, in particular, but not limited to the statements and conditions below:

STREETLIGHT REQUIREMENTS

1. Streetlight(s) shall be provided to the satisfaction of Public Works or as modified by Public Works on all public streets/highways within and around TR 73336.

2. Provide streetlights on new concrete pole(s) with underground wiring. The streetlights shall be designed as a County owned and maintained system.

3. Prior to recordation of final map, submit street lighting plans along with existing and/or proposed underground utilities plans to Traffic Safety and Mobility Division, Street Lighting Section, for processing and approval.

4. If annexation is required for the project, street lighting plans cannot be approved until the Board of Supervisors approve the annexation.

5. If phasing of the project is approved, each phase of the project shall be subject to the conditions for each individual phase.

6. For subdivisions, Street lighting plans shall be approved prior to map recordation.

7. Street lighting improvements shall be installed per approved plans prior to the issuance of a certificate of occupancy.

ANNEXATION AND ASSESSMENT BALLOTING REQUIREMENTS

8. The proposed project or a portion(s) of the proposed project is not within the existing CLMD and annexation to the CLMD is required, prior to recordation of final map or parcel map waiver. The Board of Supervisors must approve the annexation and levy of assessments prior to Public Works approving the street lighting plans.

9. Upon approval of the Tentative Map, the developer must notify schavez@pw.lacounty.gov in order to initiate the annexation process.

10. Upon approval of the Tentative Map, the applicant (property owner or authorized representative) shall comply with the Conditions of Annexation listed below in order for the CLMD to pay the future operation and maintenance costs of streetlight(s):

    a. Submit a street lighting plan for the proposed streetlight(s) meeting County lighting standards to the satisfaction of Public Works.

b. Provide business address and developer/property owners name(s), mailing address(es), site address, Assessor Parcel Number(s), and Parcel Boundaries in either MicroStation or Auto CADD format of territory to be developed to the Street Lighting Section.
c. Submit site map of the proposed project including any roadways conditioned for streetlights that are outside the proposed project area to the Street Lighting Section. Contact the Street Lighting Section at (800) 618-7575 for map requirements and/or questions you may have.
d. If no new streetlights are required but annexation is required, submit a street lighting plan showing the location of existing streetlights.
e. For subdivisions, provide a copy of the recorded subdivision map, if recorded.

11. The annexation and assessment balloting process takes approximately 18 months to complete once the annexation and levy of assessment timeline acknowledgment form is signed by the developer after the above information is received and approved. Therefore, untimely submittal of the above information may result in delaying the approval of the street lighting plans.

12. Upon project recordation, the developer must notify Public Works, Street Lighting Section. The applicant shall provide the status of this approval to schavez@pw.lacounty.gov.

TRANSFER REQUIREMENTS

13. The applicant (property owner or authorized representative) shall be responsible for the operation and maintenance of streetlights along with their associated costs that are installed as a condition of development. The applicant will remain responsible until the streetlights are formally accepted into the County Lighting District for operation and maintenance and their billing is transferred into a County Lighting District account with Southern California Edison.

14. Public Works can assume the responsibility for operation, maintenance, and funding all associated costs of all streetlights installed and transfer the billing when all of the following conditions are met (the transfer of billing may be delayed one or more years if the conditions are not met):

a. All required streetlights (LS-2/LS-3) in the project have been constructed per Public Works approved street lighting plan, energized, and field accepted.
b. The County Lighting Districts is receiving revenue from the benefitting properties via the annual property tax bill.
c. The County have formally accepted the transfer and conveyance of the streetlights. To initiate the process, the applicant must make a written request to schavez@pw.lacounty.gov. Alternatively, the applicant can call (800) 618-7575 to make the request over the phone. When completed, Public Works will issue a letter to the developer that the streetlights have been formally accepted.

d. Any underlying road(s) or any associated road improvements have been accepted for public use.

Once the transfer is complete, the County will authorize the release of any remaining bond, if any.

15. Prior to the County accepting the streetlights into the County Highway System to assume the operation and maintenance responsibilities for the streetlights, a final field review will be conducted to ensure all streetlights are installed per approved plans and no knockdowns have occurred at the time of transfer.

16. The County Lighting Districts cannot assume responsibility for streetlights located within gated communities or on roadways designated as a private or private-future street.

Additional Conditions for Edison owned Streetlight Transfer of Billing:

17. Comments/Additional Requirements:

None.

Prepared by: Sergio Chavez Phone: (626) 300-4733 Date: 09/04/2025

LAND DEVELOPMENT DIVISION
SEWER UNIT

TRACT MAP NO.: 73336

TENTATIVE MAP DATED 08-20-2025
EXHIBIT "A" MAP DATED 08-20-2025

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

1. The subdivider shall install and dedicate main line sewers and serve each building/lot with a separate house lateral or have approved and bonded sewer plans on file with Public Works.

2. The subdivider shall comply with the mitigation measures as identified in the approved sewer area study (PC 12245AS, dated 01/23/2024) to the satisfaction of Public Works. If the existing sewer system is found to have insufficient capacity, upgrade of the proposed and existing sewerage system is required to the satisfaction of Public Works. The approved sewer area study shall remain valid for two years after initial approval of the tentative map. After this period of time, an update of the area study shall be submitted by the applicant if determined to be warranted by Public Works.

3. The sewer area study shall be invalidated should there be an increase in the total number of dwelling units, an increase in the density, dwelling units occur on previously identified building restricted lots, a change in the proposed sewer alignment, an increase in the tributary sewershed, a change in the sewer connection points, or the adoption of a land use plan or a revision to the current plan. A revision to the approved sewer area study may be allowed at the discretion of the Director of Public Works. The approved sewer area study shall remain valid for two years from the date of sewer area study approval. After this period of time, an update of the area study shall be submitted by the applicant if determined to be warranted by Public Works.

4. All sewer pump stations shall be constructed to the satisfaction of Public Works.

5. Ingress and egress easements are required, subject to review by Public Works to determine the final locations and requirements.

6. Provide a minimum 10-foot sewer easement on the private driveway and fire lane to the satisfaction of Public Works.

LAND DEVELOPMENT DIVISION
SEWER UNIT

TRACT MAP NO.: 73336

TENTATIVE MAP DATED 08-20-2025
EXHIBIT "A" MAP DATED 08-20-2025

Prepared by P.R. Pedro Romero Phone (626) 458-4957 Date 09-04-2025

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

1. Easements shall be granted to the County, appropriate agency or entity for the purpose of ingress, egress, construction and maintenance of all water-related infrastructures constructed for this land division to the satisfaction of Public Works.

2. A water system (including any approved booster pump stations) maintained by the water purveyor, with appurtenant facilities to serve all lots in the land division, must be provided. The system shall include fire hydrants of the type and location (both on-site and off-site) as determined by the Fire Department. The water mains shall be sized to accommodate the total domestic and fire flows.

3. It is the sole responsibility of the applicant to provide the most up to date Will Serve Letter from the Santa Clarita Valley Water Agency and meet all of their requirements/clearances prior to filing or recording of any final map.

Prior to obtaining the building permit from the Building and Safety Office:

4. Submit landscape and irrigation plans for each open space lot in the land division, with landscape area greater than 500 square feet, in accordance with the Model Water Efficient Landscape Ordinance.

5. Depict all line-of-sight easements on the landscaping and grading plans.

6. Install a separate irrigation system for recycled water use per landscape plans.

7. If necessary, install off-site recycle water mainline per landscape plans to serve this subdivision to the satisfaction of Public Work.

8. The recycled water irrigation systems shall be designed and operated in accordance with all local and State Codes as required per Section 7105.6.3 Chapter 71 of Title 26 Building Code.

COUNTY OF LOS ANGELES FIRE DEPARTMENT
FIRE PREVENTION DIVISION

Land Development Unit
5823 Rickenbacker Road
Commerce, CA 90040
Telephone (323) 890-4243, Fax (323) 890-9783

EPIC-LA NUMBER:	RPPL2023004336	PROJECT NUMBER:	TR 73336 (Northlake - Master Project)
CITY/COMMUNITY:	Castaic	STATUS:	Cleared
PROJECT ADDRESS:		DATE:	09/23/2025

CONDITIONS

1. A digital copy of the Final Map shall be submitted to the Fire Department's Land Development Unit for review and approval prior to recordation.
2. The driveways required for Fire Apparatus Access Roads shall be indicated on the Final Map as "Private Driveway and Fire Lane" with the widths clearly depicted. The required fire apparatus access, the fire lanes and turnarounds, shall be labeled as “Fire Lane” on the Final Map. Any proposed parking area, walkway, or other amenities within the private driveway shall be outside the required fire lane. Clearly delineate on the Final Map and submit to the Fire Department for approval.
3. A digital copy of the Grading Plan shall be submitted to the Fire Department's Land Development Unit for review and approval. Compliance is required prior to Final Map clearance.
4. A digital copy of the Water Plans for the required public fire hydrants shall be submitted to the Fire Department's Land Development Unit for review and approval. Compliance is required prior to prior to project construction. Submittal shall be provided through EPIC-LA using the following Plan Type: Fire Land Development–City Request–Water Plan & System Review.
5. Prior Final Map recordation, provide written verification stating the required public fire hydrants have been bonded for in lieu of installation. Submittal shall be provided through EPIC-LA in the project's Final Map or Water Plan plan number.
6. Prior to Final Map clearance, a copy of the Road Improvement plans shall be submitted to the Fire Department for review and approval of the proposed center medians on Ridge Route Road and Northlake Boulevard confirming they will not impact the fire apparatus access.
7. Water and access requirements for this development shall comply with the approved Tentative Map. The Exhibit Maps as part of the subdivision process are subject to change and shall be in compliance with Title 32 (County of Los Angeles Fire Code).
8. This property is located within the area described by the Fire Department as "Very High Fire Hazard Severity Zone". A "Fuel Modification Plan" shall be submitted and approved prior to building permit issuance. (Contact: Fuel Modification Unit, Fire Station #32, 605 North Angeleno Avenue, Azusa, CA 91702-2904, Phone (626) 969-5205 for details)
9. Due to the proximity of the existing overhead High Voltage Electric Power Transmission Lines to the south of the property, all proposed buildings shall be in compliance with the Fire Department’s Regulation 27. Verification for compliance will be performed during the architectural plan review prior to building permit issuance.
10. All proposed buildings shall be places such that a fire lane is provided to within 150 feet of all exterior walls of the first story. This measurement shall be by an approved route around the exterior of the building or facility. Verification for compliance will be performed during the Fire Department review of the architectural plan or the revised Exhibit A process prior to building permit issuance.
11. The fire lane for the single-family lots or detached condominium lots shall provide a minimum paved unobstructed width of 20 feet, clear to the sky. Verification for compliance will be performed during the Fire Department review of the architectural plan or the revised Exhibit A process prior to building permit issuance.
12. The fire lanes for any other lot such as multi-family residential, senior housing, commercial/industrial, or recreational/park where the vertical distance between the access roadway and the highest roof surface does

Reviewed by:

not exceed 30 feet, provide a minimum unobstructed width of 26 feet, exclusive of shoulders and an unobstructed vertical clearance “clear to sky” Fire Apparatus Access Roads to within 150 feet of all portions of the exterior walls of the first story of the building, as measured by an approved route around the exterior of the building. The highest roof surface shall be determined by measurement of the vertical distance between the access roadway and the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of parapet walls, whichever is greater. Verification for compliance will be performed during the Fire Department review of the architectural plan or the revised Exhibit A process prior to building permit issuance.

13. For buildings where the vertical distance between the access roadway and the highest roof surface exceeds 30 feet from the lowest level of the Fire Apparatus Access Road, provide a minimum unobstructed width of 28 feet, exclusive of shoulders and an unobstructed vertical clearance “clear to sky” Fire Apparatus Access Roads to within 150 feet of all portions of the exterior walls of the first story of the building, as measured by an approved route around the exterior of the building. At least one required access route meeting this condition shall be located such that the edge of the Fire Apparatus Access Roadway, not including shoulders, that is closest to the building being served, is between 10 feet and 30 feet from the building, as determined by the fire code official, and shall be positioned parallel to one entire side of the building. The side of the building on which the Fire Apparatus Access Road is positioned shall be approved by the fire code official.
14. Fire lanes, exceeding a length of 150 feet that dead end, are required to provide an approved Fire Department turnaround. All required Fire Department turnarounds shall be designed to accommodate the required fire apparatus as mentioned on the Fire Department standards due to the size of the building and shall be clearly depicted on the final design plans. Verification for compliance will be performed during the Fire Department review of the architectural plan or the revised Exhibit A process prior to building permit issuance.
15. Any change of direction within a private driveway shall provide a 32 feet centerline turning radius. Verification for compliance will be performed during the Fire Department review of the architectural plan or the revised Exhibit A process prior to building permit issuance.
16. The gradient of a fire lane shall not exceed 15 percent. Any changes in grade shall not exceed 10 percent within a 10 feet distance or 5.7 degrees. Cross slopes and required Fire Department turnarounds shall not exceed 2 percent grades. Verification for compliance will be performed during the Fire Department review of the architectural plan or the revised Exhibit A process prior to building permit issuance.
17. Parallel parking shall be restricted 30 feet adjacent to any public or private fire hydrant located on the public or private street, 15 feet on each side measured from the center of the fire hydrant. Adequate signage and/or stripping shall be required prior to occupancy.
18. The driveways required for fire apparatus access shall be posted with signs stating "No Parking-Fire Lane" and/or stripped accordingly in compliance with the County of Los Angeles Fire Code prior to occupancy.
19. All proposed streets and driveways within this development shall provide approved street names and signs. All proposed buildings shall provide approved address numbers. Compliance required prior to occupancy to the satisfaction of the Department of Public Works and the County of Los Angeles Fire Code
20. Install a total of 227 public fire hydrants as noted by the Fire Department on the Revised Tentative Track Map & Revised Exhibit A-Fire Hydrant Plan with the review date of 04/03/2024. All required public fire hydrants shall be installed, tested and accepted prior to beginning construction. All fire hydrants shall measure 6”x 4"x 2-1/2" brass or bronze, conforming to current AWWA standard C503 or approved equal, and shall be installed in accordance with the County of Los Angeles Fire Code. Fire Code 501.4
21. Install 17 public fire hydrants as noted by the Fire Department on the tentative tract map for the single family detached homes. All required public fire hydrants shall be installed, tested and accepted prior to beginning construction. All fire hydrants shall measure 6”x 4"x 2-1/2" brass or bronze, conforming to current AWWA standard C503 or approved equal, and shall be installed in accordance with the County of Los Angeles Fire Code. Fire Code 501.4
22. The following information is the total number of public fire hydrants on each sheet in the Revised Exhibit A Planning Area's:
    Sheet 2 - Exterior (off-site)-11, Interior (on-site)-8 & Single Family Residential (on-site)-2
    Sheet 3 - Exterior (off-site)-11, Interior (on-site)-13 & Single Family Residential (on-site)-0
    Sheet 4 - Exterior (off-site)-7, Interior (on-site)-3 & Single Family Residential (on-site)-5
    Sheet 5 - Exterior (off-site)-14, Interior (on-site)-0 & Single Family Residential (on-site)-7
    Sheet 6 - Exterior (off-site)-12, Interior (on-site)-6 & Single Family Residential (on-site)-0
    Sheet 7 - Exterior (off-site)-21, Interior (on-site)-9 & Single Family Residential (on-site)-0
    Sheet 8 - Exterior (off-site)-14, Interior (on-site)-0 & Single Family Residential (on-site)-6
    Sheet 9 - Exterior (off-site)-14, Interior (on-site)-0 & Single Family Residential (on-site)-4
    Sheet 10 - Exterior (off-site)-16, Interior (on-site)-0 & Single Family Residential (on-site)-1
    Sheet 11 - Exterior (off-site)-2
    Sheet 12 - Exterior (off-site)-24
23. Additional fire hydrants will be required on Lots 312, 313, 316, 317 & 318, and possibly on the park site.
24. The required fire flow for the public fire hydrants for this project other than single-family residential is 4000 GPM

Reviewed by:

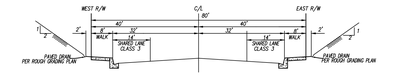


at 20 psi residual pressure for 4 hours. Three (3) public fire hydrants flowing simultaneously may be used to achieve the required fire flow. Fire Code 507.3 & Appendix B

25. The fire flow is subject to reduction during the building plan check process. Provide the type of construction and total square footage for each proposed and existing building, along with written verification of an approved automatic fire sprinkler system in conformance of NFPA 13.
26. An approved automatic fire sprinkler system is required for the proposed buildings within this development. Submit design plans to the Fire Department Sprinkler Plan Check Unit for review and approval prior to installation.
27. The required fire flow for the public fire hydrants for single family residential homes less than a total square footage of 3600 feet is 1250 gpm at 20 psi residual pressure for 2 hours with one public fire hydrant flowing. Any single family residential home 3601 square feet or greater shall comply too Table B105.1 of the Fire Code in Appendix B.
28. Fire hydrant locations and other water system requirements within the Exhibit Maps will be determined when final design plans are submitted to the Fire Department for review as architectural plans or revised Exhibit A prior to building permit issuance.
29. The fire station requirements and conditions will remain the same as previously agreed upon between the Fire Department and the applicant. The fire station site will be located on Lot 386, adjacent to Planning Area 13.

For any questions regarding the report, please contact Wally Collins at (323) 890-4243 or Wally.Collins@fire.lacounty.gov.

Reviewed by:



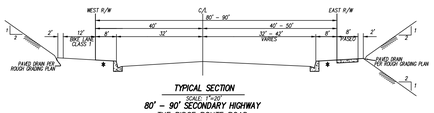
TYPICAL SECTION

SCALE: 1"=20'

80' SECONDARY HIGHWAY

THE RIDGE ROUTE ROAD

(FROM TR. 44429 TO 1200' N'LY TR. 44429)



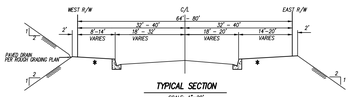
TYPICAL SECTION

SCALE: 1"=20'

80' - 90' SECONDARY HIGHWAY

THE RIDGE ROUTE ROAD

(FROM 1200' N'LY TR. 44429 TO NORTHLAKE BLVD.)



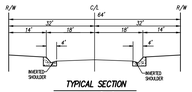
TYPICAL SECTION

SCALE: 1"=20'

64' - 80' LIMITED SECONDARY HWY

THE RIDGE ROUTE ROAD

(FROM NORTHLAKE BLVD. TO 900' N'LY NORTHLAKE BLVD.)



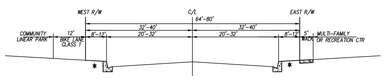
TYPICAL SECTION

SCALE: 1"=20'

64' LIMITED SECONDARY HWY

THE RIDGE ROUTE ROAD

(FROM 900' N'LY NORTHLAKE BLVD. TO 3200' N'LY OF NORTHLAKE BLVD.)



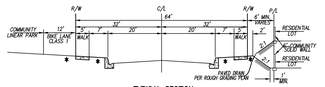
TYPICAL SECTION

SCALE: 1"=20'

80' STREET (MOD. INDUSTRIAL COLLECTOR)

NORTHLAKE BLVD.

(FROM "A" ST. TO 600' NE'LY "A" ST.)



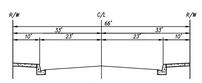
TYPICAL SECTION

SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)

NORTHLAKE BLVD.

(FROM 600 NE'LY "A" ST. TO "E" ST.)



TYPICAL SECTION

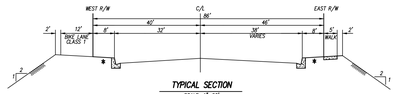
SCALE: 1"=20'

66' STREET

"S" ST.

NOTES FOR STREET SECTIONS:

1. SLOUGH WALL REQUIRED AT TOE OF ADJACENT SLOPE IF TOE OF SLOPE IS CLOSER THAN 3' TO THE BACK OF WALK, AND SLOPE IS OVER 5' HIGH.
2. PUBLICLY MAINTAINED SIDEWALKS SHALL BE PLACED 6" FROM RIGHT OF WAY UNLESS SIDEWALK ABUTS A PROPOSED WALL IN WHICH CASE IT SHOULD BE PLACED AGAINST THE WALL.
3. LANDSCAPE SLOPING AWAY FROM R/W TO BE 2:1 MAX.
4. NO RAISED MEDIAN PROPOSED.



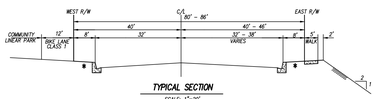
TYPICAL SECTION

SCALE: 1"=20'

86' STREET (MOD. INDUSTRIAL COLLECTOR)

NORTHLAKE BLVD.

(FROM RIDGE ROUTE ROAD TO 1000' SE'LY "A" ST)



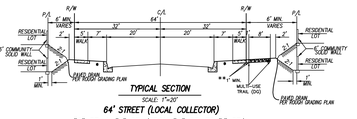
TYPICAL SECTION

SCALE: 1"=20'

80' - 86' STREET (MOD. INDUSTRIAL COLLECTOR)

NORTHLAKE BLVD.

(FROM 1000' SE'LY "A" ST TO "A" ST)

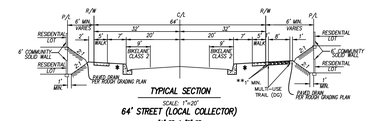


TYPICAL SECTION

SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)

"O" ST. & "F" ST. (FROM "O" ST. TO "I" ST.)

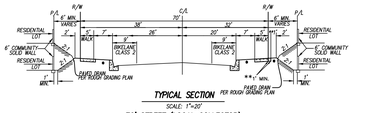


TYPICAL SECTION

SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)

"A" ST. & "B" ST.

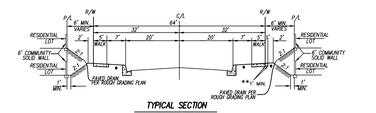


TYPICAL SECTION

SCALE: 1"=20'

70' STREET (LOCAL COLLECTOR)

"A" ST. (FROM NORTHLAKE BLVD TO "B" ST.)

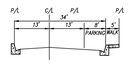


TYPICAL SECTION

SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)

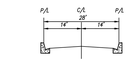
"D" ST.,"E" ST., "F" ST. (FROM "A" ST. TO "I" ST.) & "H" ST.,



TYPICAL SECTION

SCALE: 1"=20'

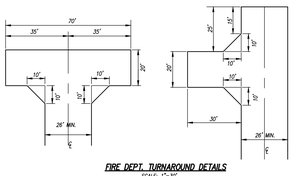
PRIVATE DRIVEWAY & FIRE LANE W/ PARKING ONE SIDE FOR MULTI-FAMILY PLANNING AREA



TYPICAL SECTION

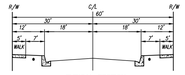
SCALE: 1"=20'

PRIVATE DRIVEWAY & FIRE LANE, NO PARKING FOR MULTI-FAMILY PLANNING AREA



FIRE DEPT. TURNAROUND DETAILS

SCALE: 1"=30'

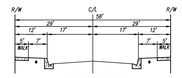


TYPICAL SECTION

SCALE: 1"=20'

60' STREET

"C" ST., "AA" ST., "DD" ST.,"EE" ST., "GG" ST., "HH" ST., & "PP" ST., & "QQ" ST.

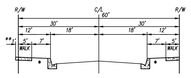


TYPICAL SECTION

SCALE: 1"=20'

58' STREET

"BB" ST., "CC" ST., "FF" ST., "II" ST., "JJ" ST., "KK" ST., "LL" ST., "MM" ST., "NN" ST., "OO" ST. & "PP" ST., "QQ" ST., "RR" ST., & "SS" ST.

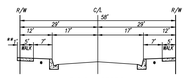


TYPICAL SECTION

SCALE: 1"=20'

60' STREET

"G" ST., "J" ST.& "P" ST.



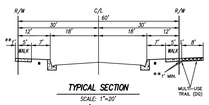
TYPICAL SECTION

SCALE: 1"=20'

58' STREET

"O" ST.

(FROM "P" ST. TO CUL-DE-SAC)



TYPICAL SECTION

SCALE: 1"=20'

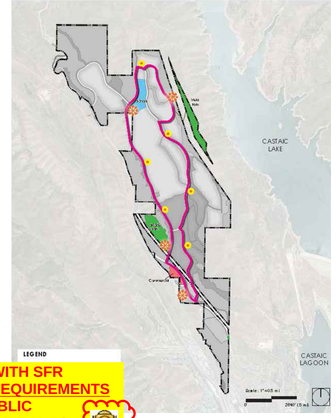
60' STREET

"I" ST.

* LANDSCAPE AREA – SEE LANDSCAPE PLAN FOR DETAILS (TO BE MAINTAINED BY A LMD OR HOA)

** HARDSCAPE: DELINEATION FOR TRAIL PURPOSES WHERE AVAILABLE.

SHEET INDEX	
SHEET NO.	SHEET TITLE
1	TITLE SHEET
2	P-1 AND P-2
3	P-9 , P-10 AND P-12
4	P-11 AND P-13
5	P-4, P-15 AND P-16 / MIDDLE SCHOOL ALT
6	P-3, P-4, P-5 AND P-6
7	P-7 AND P-8
8	P-24 AND P-25
9	P-28
10	P-26 AND P-27
11	SPORT PARK LOT
12	GENERAL COMMERCIAL LOTS



CITY TRANSIT SYSTEM

NOT TO SCALE

PARCEL NUMBERS BASED ON FIDELITY NATIONAL TITLE COMPNAY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 6, 2023.

P.T.R. PARCEL NO	A.P.N.
1*	3247-010-049 and 3247-010-050
2*	3244-003-018
3	3247-040-008 (PORTION)
4	3247-040-008 (PORTION)
5	3247-040-008 (PORTION)
6	3247-040-008 (PORTION)
7	3247-040-013 (PORTION)
8	3247-040-009 (PORTION)
9	3247-040-009 (PORTION)
10	3247-040-009 (PORTION)
11	3247-040-009 (PORTION)
12	3247-040-013 (PORTION)
13	3247-040-013 (PORTION)
14	3247-040-013 (PORTION)
15	3244-012-054 & 059
16	3244-012-057
17	3244-012-013
18	3247-041-008
19	3247-041-020
20	3247-041-021
21	3247-041-023
22	3247-041-022
23	2865-036-003
24	2865-036-002
25	2865-036-001 AND 2865-003-013
26	2865-003-035
27	3244-004-051
28	3244-004-053
29	3244-012-049
30	3244-012-048
31	3244-012-046
32	3244-012-058
33	3244-004-052
34	3244-004-024
35	3244-013-001
36	3244-012-045
37	3247-017-019
38	3244-012-050
39	3244-014-015
40	3244-014-067 & 068
41	3247-041-018
42	3247-041-015
43	3244-014-053
44*	3244-014-044
45*	3244-014-038
46*	3247-041-012
47*	3244-013-004
48*	3244-013-002
49*	3244-013-005
50*	3244-013-009
51*	3244-013-010
52	3244-014-050
53*	3244-015-018
54*	3244-014-022
55*	3244-014-021
56	3244-014-062
57*	3244-014-063
60	3247-041-007
61	3247-041-009
66	3247-041-010
68*	3244-012-056
69*	3244-014-045
70**	3244-012-904
71**	3244-004-906
72*	3244-014-902
73*	3247-017-900

*ASTERISK INDICATES PARCEL IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP OR OFFSITE IMPROVEMENT

**ASTERISK INDICATES PARCEL TO BE AQUIRED

NOTE: NORTHEASTERLY PORTION OF PARCEL 32 IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP

PARKING SPACE SUMMARY TABLE								
P.A	Product	DU	Res. Parking Req.	Res. Parking Provided	Guest Parking Req.	Guest Parking Provided	Handicap Req.	Handicap Provided
1	Valmont	189	334	334	48	48	2	3
2	Santa Rosa	91	156	156	23	24	1	1
	Magnolia	40	80	80	10	12	1	1
3	Santa Rosa	49	98	98	13	14	1	1
4	Caserta	48	96	96	12	13	2	2
5	Brookland	38	76	76	10	11	1	1
6	Brookland	21	42	42	6	8	1	1
7	Caserta	88	176	176	22	28	2	2
8	Meriwether	111	222	222	28	33	2	3
9	Santa Rosa	112	192	192	28	31	2	2
10	Caserta	100	200	200	25	25	1	2
11	Meriwether	81	162	162	21	29	2	2
12	Brookland	117	234	234	30	32	2	2
13	Knolls	71	142	142	18	29	1	2
14	Magnolia	36	72	72	9	12	1	1
	Knolls	44	88	88	11	17	1	1
15	Magnolia	31	62	62	8	10	1	1
	Knolls	32	64	64	8	13	1	1
16	Knolls	42	84	84	11	18	1	1
24	Bungalows	138	276	276	35	44	2	2
25	Casitas	61	122	122	16	18	2	2
26	Casitas	61	122	116	16	19	1	1

MANUFACTURED OS	
Lot	Area (Ac.)
330	3.4
331	8.4
332	2.8
333	1.7
335	3.6
336	14.2
337	9.4
338	6.8
339	4.4
340	0.2
341	14.3
342	0.7
343	18.9
344	10.1
345	7.8
346	5.5
347	4.8
348	1.7
349	2.7
350	3.1
351	0.7
352	12.3
353	10.5
354	3.8
355	5.1
	9.5
	0.7
	1.6
	3.1
	21.
	7
	sle

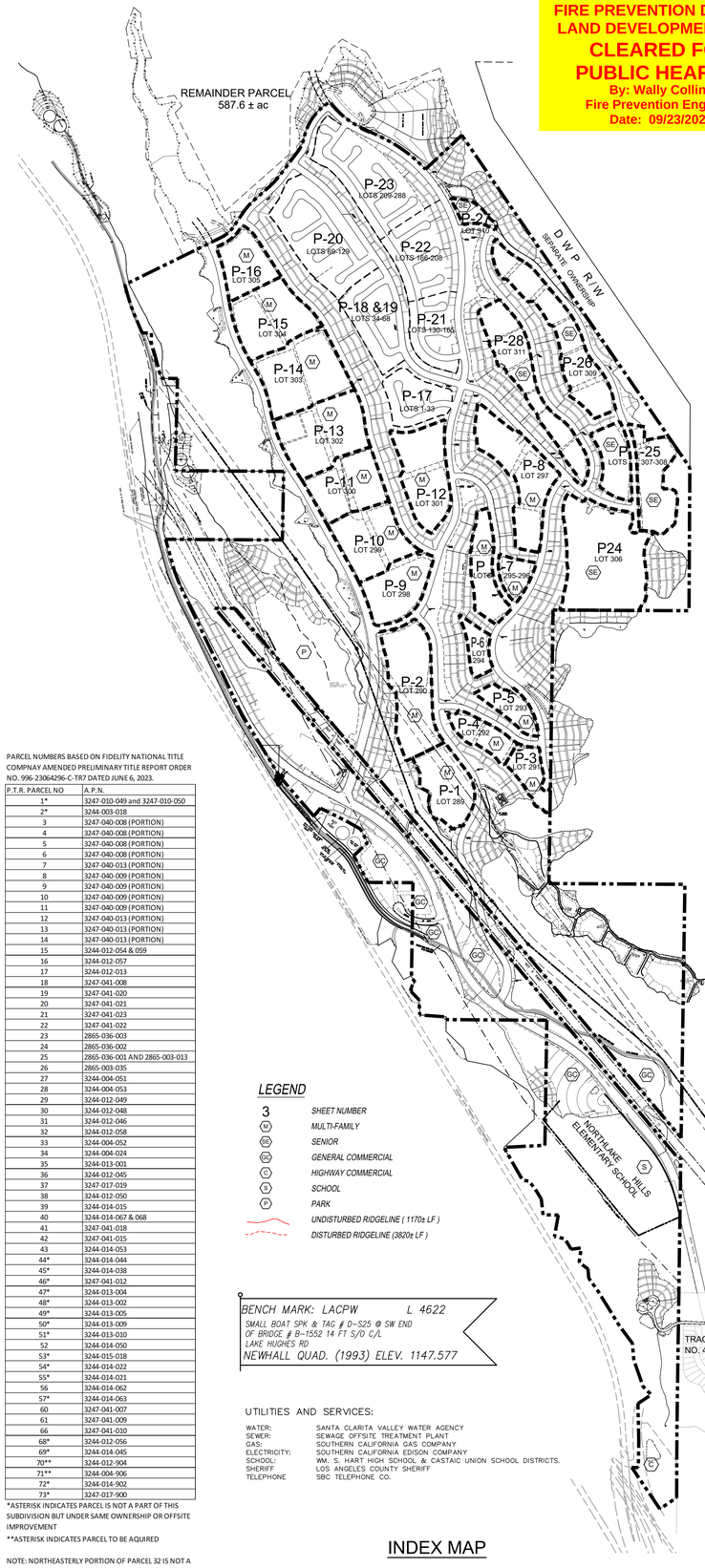
NATURAL OS	
Lot	Area (Ac.)
334	2.5
358	39.6
359	33.0
360	12.4
361	9.3
362	4.8
363	10.2
364	10.9
365	34.6
366	6.6
	163.9

TOTAL EXTERIOR PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 146 PUBLIC 6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503
PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

TOTAL INTERIOR W/O SFR PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 39 PUBLIC 6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503
PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

TOTAL INTERIOR WITH SFR PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 34 PUBLIC 6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503
PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR

COUNTY OF LOS ANGELES FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025



LEGEND

3	SHEET NUMBER
M	MULTI-FAMILY
SE	SENIOR
GC	GENERAL COMMERCIAL
C	HIGHWAY COMMERCIAL
S	SCHOOL
P	PARK
	UNDISTURBED RIDGELINE (1170± LF)
	DISTURBED RIDGELINE (3820± LF)

BENCH MARK: LACPW L 4622
SMALL BOAT SPK & TAG @ D-S25 @ SW END OF BRIDGE @ B-1552 14 FT S/O C/L LAKE HUGHES RD
NEWHALL QUAD. (1993) ELEV. 1147.577

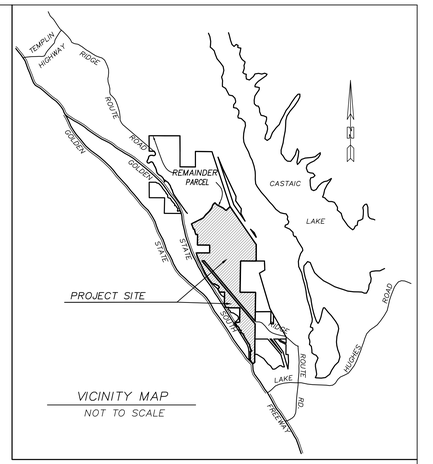
UTILITIES AND SERVICES:

WATER:	SANTA CLARITA VALLEY WATER AGENCY
SEWER:	SEWAGE OFFSITE TREATMENT PLANT
GAS:	SOUTHERN CALIFORNIA GAS COMPANY
ELECTRICITY:	SOUTHERN CALIFORNIA EDISON COMPANY
SCHOOL:	WM. S. HART HIGH SCHOOL & CASTAIC UNION SCHOOL DISTRICTS.
SHERIFF	LOS ANGELES COUNTY SHERIFF
TELEPHONE	SBC TELEPHONE CO.

INDEX MAP

0 500 1000 2000 Feet

1"=500'



DATA SUMMARY:

ACRES(GROSS)	719.8 ± AC
ACRES(NET)	635.5 ± AC
EXISTING & PROPOSED ZONING	NORTHLAKE S.P
EXISTING & PROPOSED GENERAL PLAN (2012 SCVAP)	NORTHLAKE S.P
EXISTING LAND USE	VACANT
PROPOSED LAND USE	SINGLE & MULTIFAMILY RESIDENTIAL COMMERCIAL AND OPEN SPACE

LOT SUMMARY:

SINGLE FAMILY LOTS	(40.6 Ac.) – 288 DU'S	1 TO 288	(288)
MULTI-FAMILY LOTS	(107.2 Ac.) – 1341 DU'S	289 TO 305	(17)
SENIOR M.F. LOTS	(49.1 Ac.) – 345 DU'S	306 TO 311	(6)
GENERAL COMMERCIAL	(20.4 Ac.) – 321 DU'S	312 TO 313	(2)
		315 TO 318	(4)
HIGHWAY COMMERCIAL	(2.5 Ac.)	314	(1)
PUBLIC PARK LOT	(16.3 Ac.)	319	(1)
PRIVATE PARK LOTS	(8.0 Ac.)	320 TO 329	(10)
OPEN SPACE (MFD)	(192.9 Ac.)	330 TO 368	(39)
OPEN SPACE (NATURAL)	(163.9 Ac.)		
TANK SITE	(6.5 Ac.)	369 TO 370	(2)
DEBRIS BASIN LOTS	(11.5 Ac.)	371 TO 383	(13)
WATER QUALITY BASIN	(15.0 Ac.)	384	(1)
PUMP STATION	(0.2 Ac.)	385	(1)
FIRE STATION	(1.4 Ac.)	386	(1)
PUBLIC R/W	(84.3 Ac.)		
TOTAL LOTS	(719.8 Ac.) – TOTAL 2295 DU'S	386	

NOTES

1. TOTAL EARTHWORK APPROXIMATELY CUT 17,160,000 C.Y. ± FILL 15,840,000 C.Y. ± EARTHWORK WILL BE BALANCED ON-SITE DUE TO SHRINKAGE.
2. TOPOGRAPHIC MAPPING BY HORIZON SURVEYS, 2 FT CONTOUR INTERVAL. (JULY 8, 2002)
3. REQUEST PERMISSION TO ADJUST LOT LINES TO THE SATISFACTION OF DRP.
4. REQUEST PERMISSION TO RECORD UNIT TRACT MAPS TO THE SATISFACTION OF DRP.
5. REQUEST PERMISSION TO CREATE ADDITIONAL OPEN SPACE LOTS.
6. BOUNDARY LINE DIMENSIONS ARE TAKEN FROM RECORD DATA.
7. THE APPLICANT IS REQUESTING THE RIGHT TO ADJUST STREET AND BUILDING PAD ELEVATIONS UP TO 10 FEET ON THE FINAL GRADING PLAN TO THE SATISFACTION OF DRP AND DPW.
8. TOPS AND TOES OF SLOPES ARE SUBJECT TO CHANGE IN FINAL ENGINEERING TO SATISFACTION OF DRP AND DPW.
9. MAXIMUM SLOPE GRADE IS 2:1 FOR ALL SLOPES.
10. A LANDSCAPE MAINTENANCE DISTRICT OR HOMEOWNER'S ASSOCIATION WILL BE ESTABLISHED FOR MAINTENANCE OF OPEN SPACE AREAS AND ALL COMMON SLOPE AREAS.
11. ALL SLOPES WITHIN HOMEOWNER'S ASSOCIATION COMMON AREAS OR LANDSCAPE MAINTENANCE DISTRICTS ARE TO BE PLANTED AND IRRIGATED WITH COUNTY APPROVED MATERIAL.
12. PORTIONS OF THE OLD RIDGE ROUTE ROAD TO BE ABANDONED AND REPLACED WITH A ROAD PER CURRENT COUNTY STANDARDS.
13. MULTI-FAMILY LOTS ARE FOR CONDO PURPOSES.
14. REQUEST PERMISSION TO CREATE A LARGE LOT PARCEL MAP FOR SALES PURPOSES AND WHERE EACH LOT IS GREATER THAN 40 ACRES.
15. SITE CONTAINS NO OAK TREES.
16. ALL STREET LANDINGS ARE 3% OR LESS EXCEPT WHERE NOTED.
17. ALL GRADING ELEVATIONS ARE ± 10 FEET.
18. ALL ITEMS REQUESTED WITH CUP NO. RPPL2023004316 (i.e. GRADING, WATER TANKS, SP SITE PLAN/SCR REVIEW, AND WALLS EXCEEDING 6 FEET IN HEIGHTS), AS WELL AS THAT IN PHASE 2 WILL REQUIRE A NEW CUP. ENVIRONMENTAL ASSESSMENT NO. RPPL2023004887.
19. PRIVATE DRIVES SHALL BE DESIGNED ACCORDING TO THE WESTSIDE COMMUNITIES PRIVATE DRIVE AND TRAFFIC CALMING DESIGN GUIDELINES CONSISTENT WITH HEALTHY DESIGN REQUIREMENTS.
20. ALL STREET CURB RETURNS ARE 25' RADII UNLESS SPECIFIED ON THE PLAN.
21. LANDSCAPING IN THE COMMON AREAS AND DRIVES INCLUDING COMMON AREAS FENCING AND WALL WILL BE DROUGHT TOLERANT IN NATURE. DETAILED LANDSCAPING WILL BE PROVIDED ONCE THE PLOT PLANS ARE FINALIZED AND SUBMITTED TO THE COUNTY FOR APPROVAL.
22. BICYCLE SHOWER AND CHANGING FACILITIES (BSF) WILL BE PROVIDED FOR ALL BUILDINGS ≥ 75,000 S.F. AND WILL BE DEPICTED IN DETAIL ON FUTURE PLOT PLANS
23. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 6 22.52.1225.
24. PER THE APPROVED NORTHLAKE SPECIFIC PLAN THE MAXIMUM ALLOWED COMMERCIAL SQUARE FOOTAGE IS 67,000± AND THE MAXIMUM ALLOWED INDUSTRIAL SQUARE FOOTAGE IS 305,000±.
25. ALL SINGLE FAMILY LOTS WILL BE SERVED BY SEPARATE SEWER LATERAL FOR EACH INDIVIDUAL LOT. ALL MULTI-FAMILY, COMMERCIAL, AND INDUSTRIAL BUILDINGS WILL BE SERVED BY SEPARATE SEWER LATERAL FOR EACH INDIVIDUAL BUILDING.
26. THE CLIENT PROPOSED A POSSIBLE TRANSIT SYSTEM WITHIN THE PROJECT BOUNDARY. FOR MORE DETAILS SEE THE PLANNING NOTEBOOK.
27. ALL PARKS ARE PRIVATE EXCEPT WHERE NOTED.
28. PRIOR TO THE ISSUANCE OF 1750th BUILDING PERMIT, FIRE STATION TO BE CONVEYED TO THE CONSOLIDATED PROTECTION DISTRICT OF LOS ANGELES COUNTY.
29. A NEW TENTATIVE MAP NUMBER & CUP WILL BE ISSUED IF AND WHEN A NEW MAP IS FILED OVER THE N'LY PORTION OF NORTHLAKE SPECIFIC PLAN BOUNDARY.
30. NO PROPOSED GATES WITHIN PROJECT SITE.

EXHIBIT "A"
2015-0408

PREPARED FOR:

NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER WILLIAM R. SIKAND No.35453 Exp. 09-30-25 CIVIL STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET OF
AS SHOWN			08/13/2025	5090-033-35	1 12

NO.	DATE	REVISION	BY	APP
7	8-13-2025	REVISED PRODUCT TYPE FROM AFFORDABLE HOUSING TO MULTI-FAMILY ON SHEET 12	TH	–
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	TH	–
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016	YL	–
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016	YL	–
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	–
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	–

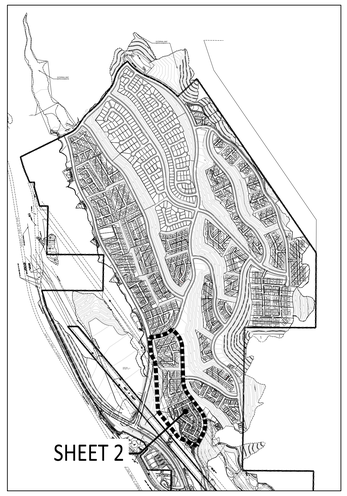
SIKAND Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT

CLEARED FOR PUBLIC HEARING

By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025



KEY MAP
SCALE: 1"=1000'

SHEET 2 - PLANNING AREA 2A INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 2 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR

SHEET 2 - PLANNING AREA'S 1 & 2B INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 8 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

PLANNING AREA 2A
SUMMARY:

PRODUCT	MAGNOLIA	
GROSS AREA	NOT APPLICABLE	
NET AREA	5.3	ACRES
TOTAL UNITS	40	UNITS
DENSITY	7.5	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	80	SPACES
GUEST PARKING REQUIRED	10	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	90	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	80	SPACES
GUEST PARKING PROVIDED	12	SPACES
(GUEST PARKING INCLUDED HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	92	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

SHEET 2 - PLANNING AREA'S 1 & 2 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 11 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

PLANNING AREA 2B
SUMMARY:

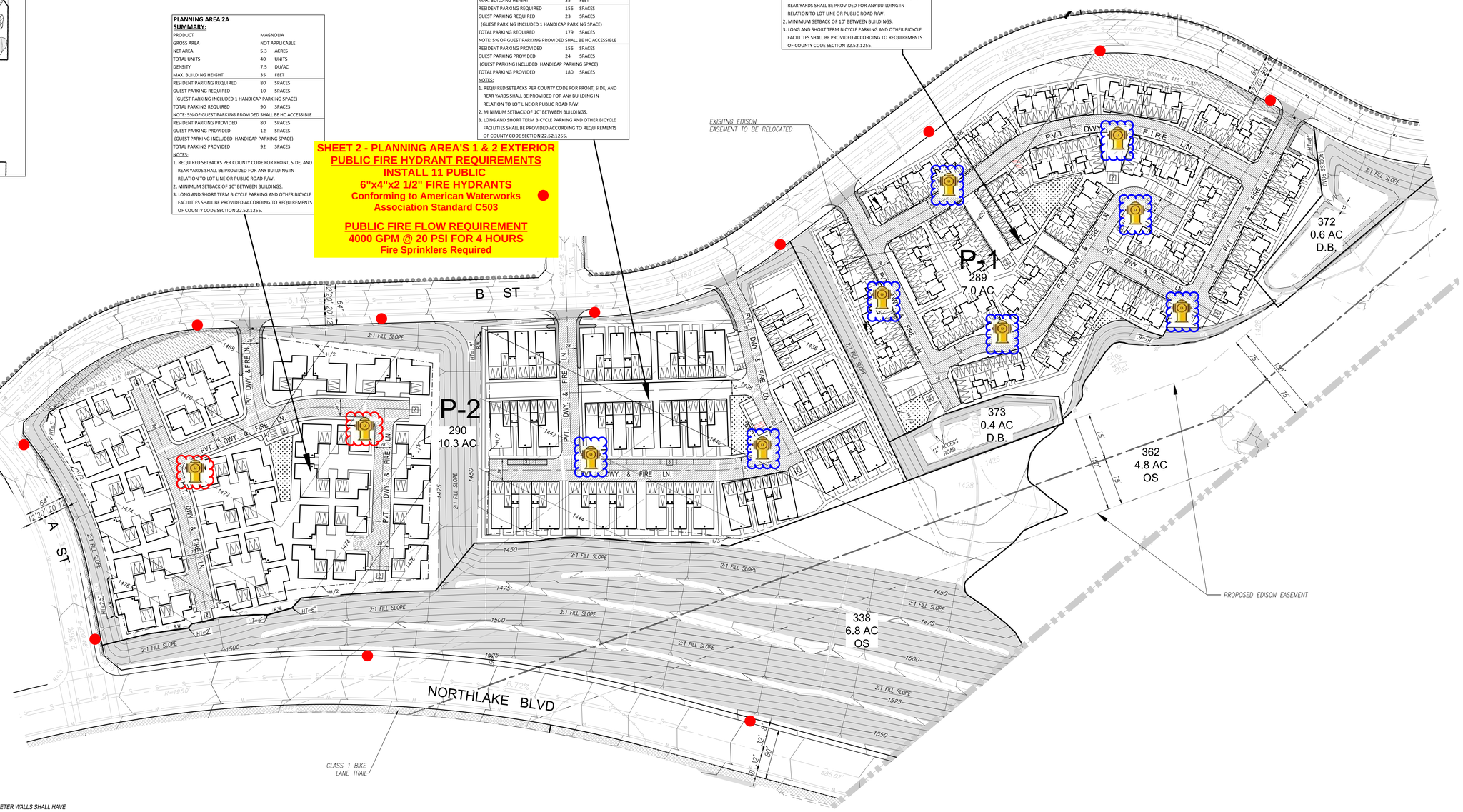
PRODUCT	SANTA ROSA	
GROSS AREA	11.6	ACRES
NET AREA	5.0	ACRES
TOTAL UNITS	91	UNITS
DENSITY	18.2	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	156	SPACES
GUEST PARKING REQUIRED	23	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	179	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	156	SPACES
GUEST PARKING PROVIDED	24	SPACES
(GUEST PARKING INCLUDED HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	180	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 1
SUMMARY:

PRODUCT	VALMONT	
GROSS AREA	7.3	ACRES
NET AREA	7.0	ACRES
TOTAL UNITS	189	UNITS
DENSITY	27.0	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	334	SPACES
GUEST PARKING REQUIRED	48	SPACES
(GUEST PARKING INCLUDED 3 HANDICAP PARKING SPACES)		
TOTAL PARKING REQUIRED	382	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	334	SPACES
GUEST PARKING PROVIDED	48	SPACES
(GUEST PARKING INCLUDED 3 HANDICAP PARKING SPACES)		
TOTAL PARKING PROVIDED	382	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.



LEGEND

- LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- PROPOSED CONTOUR
- LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (8' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

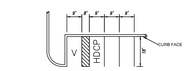
NOTES:

1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

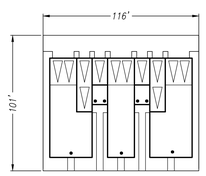
PROPOSED WALKWAY'S TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.



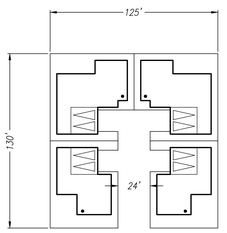
TYPICAL PARALLEL PARKING
NOT TO SCALE



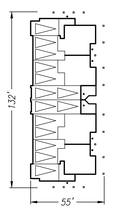
TYPICAL STANDARD PARKING WITH HANDICAPPED
NOT TO SCALE



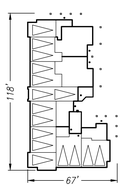
SANTA ROSA
SCALE: 1" = 40'
7 PLEX



MAGNOLIA
SCALE: 1" = 40'
4 MOTORCOURT



VALMONT I
SCALE: 1" = 40'
8 PLEX



VALMONT L
SCALE: 1" = 40'
9 PLEX

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No.35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

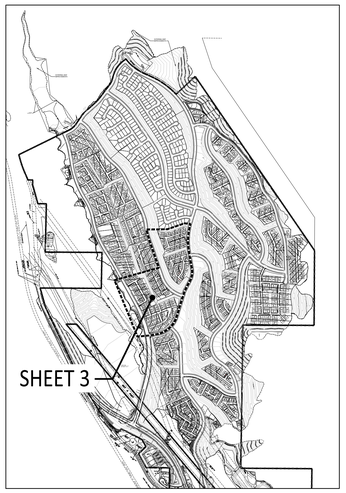
NO.	DATE	REVISION	BY	APP'D
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	TH	–
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016	YL	–
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016	YL	–
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	–
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	–

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET OF
1"=60'			08/13/2025	5090-033-35	2 OF 12

SIKAND Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025



KEY MAP
SCALE: 1"=1000'



PLANNING AREA 12
SUMMARY:

PRODUCT	BROOKLAND	
GROSS AREA	10.3	ACRES
NET AREA	8.6	ACRES
TOTAL UNITS	117	UNITS
DENSITY	11.4	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	234	SPACES
GUEST PARKING REQUIRED	30	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING REQUIRED	264	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	234	SPACES
GUEST PARKING PROVIDED	32	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING PROVIDED	266	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 10
SUMMARY:

PRODUCT	CASERTA	
GROSS AREA	8.5	ACRES
NET AREA	7.4	ACRES
TOTAL UNITS	100	UNITS
DENSITY	11.8	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	200	SPACES
GUEST PARKING REQUIRED	25	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	225	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	200	SPACES
GUEST PARKING PROVIDED	25	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	225	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 9
SUMMARY:

PRODUCT	SANTA ROSA	
GROSS AREA	7.2	ACRES
NET AREA	6.1	ACRES
TOTAL UNITS	112	UNITS
DENSITY	15.6	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	192	SPACES
GUEST PARKING REQUIRED	28	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING REQUIRED	220	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	192	SPACES
GUEST PARKING PROVIDED	31	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING PROVIDED	223	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

SHEET 3 - PLANNING AREA'S 9, 10 & 12 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 11 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

SHEET 3 - PLANNING AREA'S 9, 10 & 12 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 13 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

LEGEND

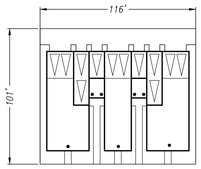
- 336 — LOT NO.
- P-1 — PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

NOTES:

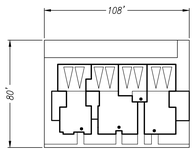
1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.

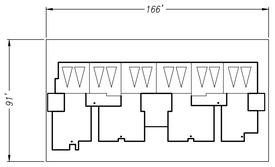
0 30 60 120 Feet
SCALE: 1" = 60'



SANTA ROSA
SCALE: 1" = 40'
7 PLEX



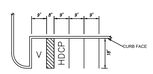
CASERTA
SCALE: 1" = 40'
4 PLEX



BROOKLAND
SCALE: 1" = 40'
6 PLEX



TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAPPED
NOT TO SCALE

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER
MARK R. SIKAND
No. 35453
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

LEGAL DESCRIPTION:
A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

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1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015				YL	--
	DATE	REVISION				BY	APP
SCALE: 1"=60'	CHK'D BY:	APPROVED BY:	DATE: 08/13/2025	W.O. NO. 5090-033-35	SHEET 3	OF 12	

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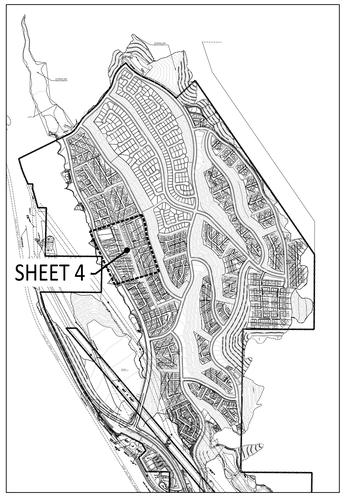
MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

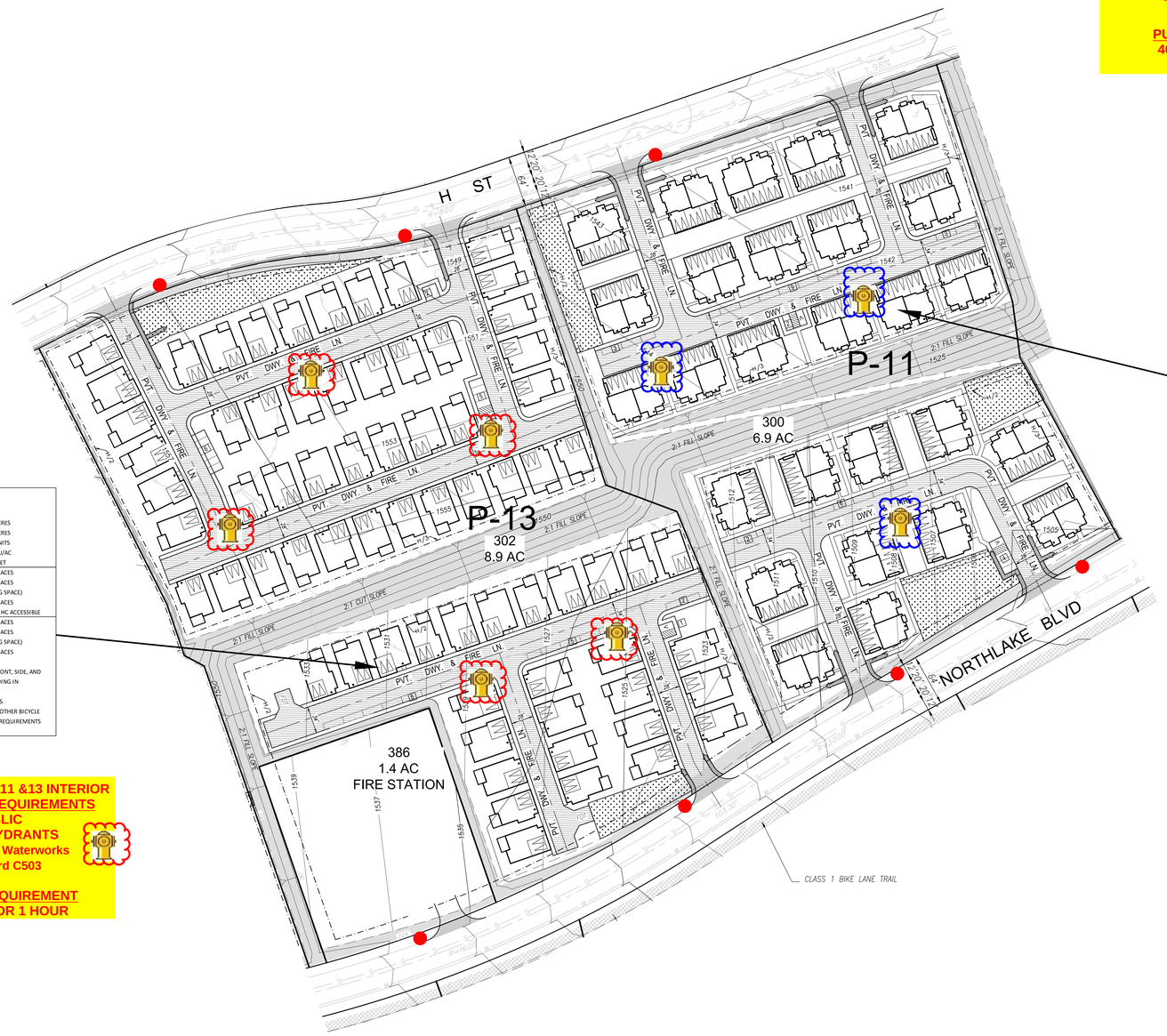


KEY MAP
SCALE: 1"=1000'

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

SHEET 4 - PLANNING AREA'S 11 & 13 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 7 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required



PLANNING AREA 11
SUMMARY:

PRODUCT	MERIWETHER	
GROSS AREA	8.4	ACRES
NET AREA	6.9	ACRES
TOTAL UNITS	81	UNITS
DENSITY	11.7	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	162	SPACES
GUEST PARKING REQUIRED	21	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	183	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	162	SPACES
GUEST PARKING PROVIDED	29	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	191	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 13
SUMMARY:

PRODUCT	KNOLLS	
GROSS ACRES	10.3	ACRES
NET AREA	8.9	ACRES
TOTAL UNITS	71	UNITS
DENSITY	8.0	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	142	SPACES
GUEST PARKING REQUIRED	18	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	160	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	142	SPACES
GUEST PARKING PROVIDED	29	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	171	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

SHEET 4 - PLANNING AREA'S 11 & 13 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 3 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

SHEET 4 - PLANNING AREA 11 &13 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 5 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR

LEGEND

- 336 / P1 — *LOT NO. / PLANNING AREA NUMBER*
- *VTTM 73336 BOUNDARY*
- *RIGHT OF WAY*
- *PROPOSED LOT LINE*
- *PROPOSED EASEMENT*
- *EXISTING EASEMENT*
- *H/2 & H/3 SETBACK LINE*
- 1000 — *PROPOSED CONTOUR*
- 415' — *LINE OF SIGHT / LINE OF SIGHT EASEMENT*
- *PROPOSED DRIVEWAY*
- *PRIVATE DRIVE AND FIRE LANE*
- *RETAINING WALL*
- *ENTRY MONUMENT (TYPE PER PLAN)*
- *MULTI-USE TRAIL (14' TRAIL)*
- *EXPANDED SIDEWALK (6' TRAIL)*
- *5' CONCRETE TRAIL*
- FDT — *FIRE DEPT. TURNAROUND*
- *DWELLING UNIT ENTRANCE*
- 3 — *GUEST PARKING*
- *RECREATION\COMMON AREA*
- *PROPOSED FIRE HYDRANT*

NOTES:

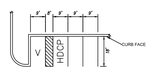
1. *ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).*
2. *ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.*
3. *FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.*
4. *FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.*
5. *NO PROPOSED GATE WITHIN PROJECT SITE.*

PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.

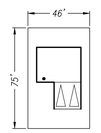
0 30 60 120 Feet
SCALE: 1" = 60'



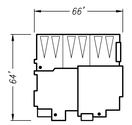
TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAPPED
NOT TO SCALE



KNOLLS
SCALE: 1" = 40'



MERIWETHER
SCALE: 1" = 40'
TRIPLEX

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — WAYNE R. SIKAND — No. 35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

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SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
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MAJOR LAND DIVISION
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LOCATED IN THE UNINCORPORATED TERRITORY OF
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COUNTY OF LOS ANGELES
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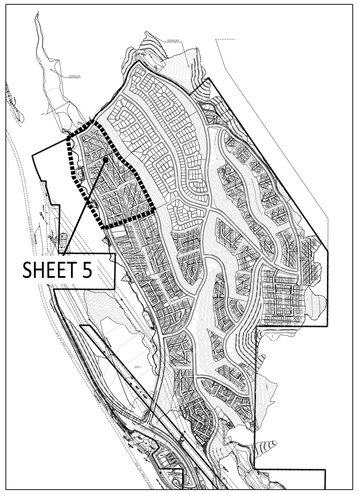
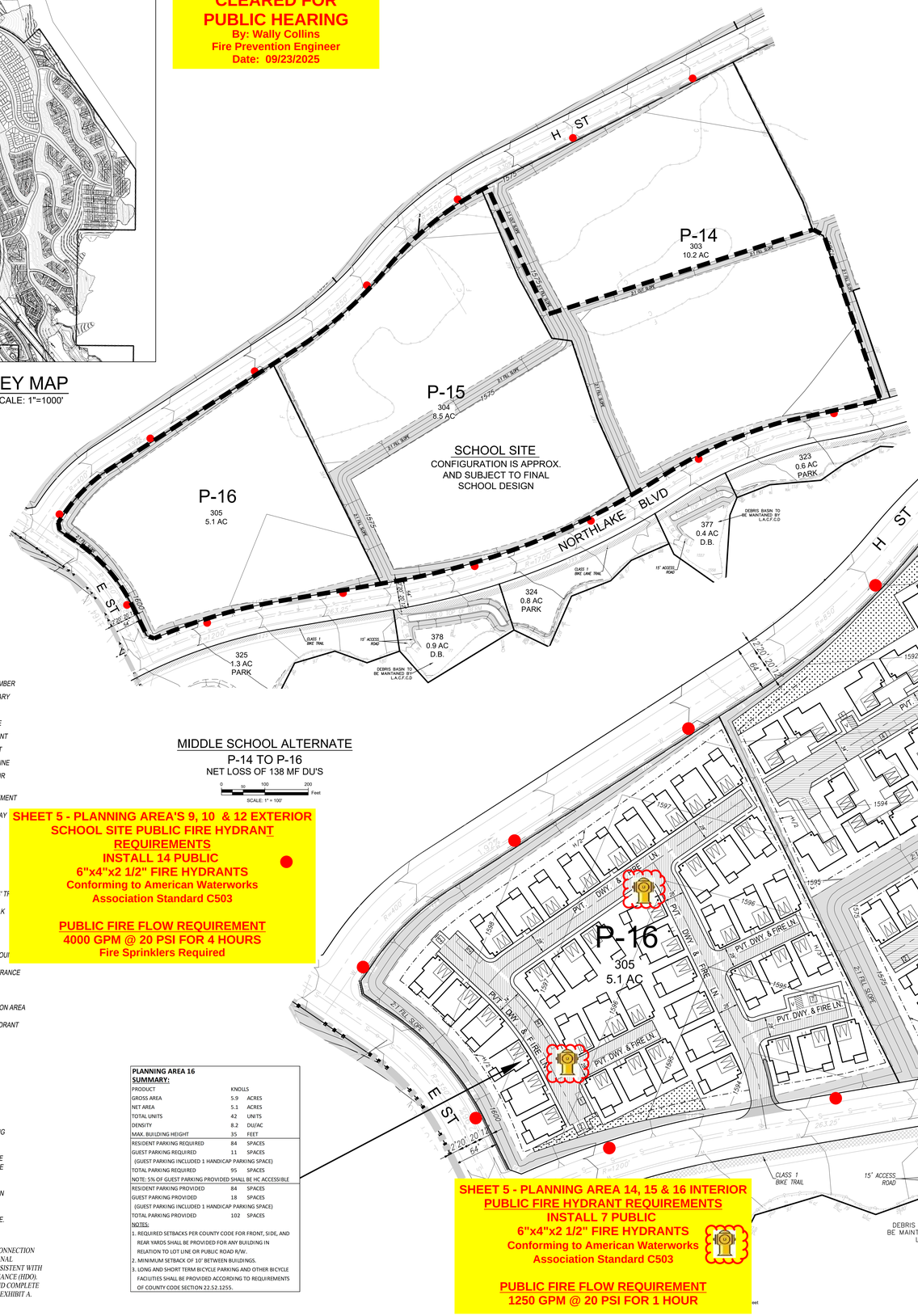
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT

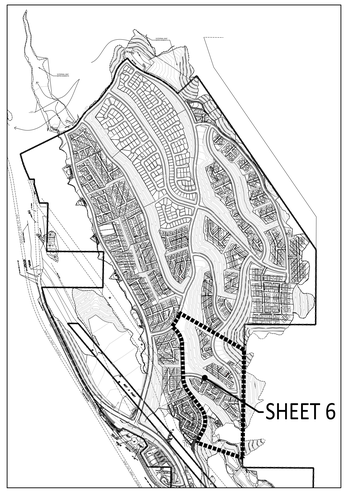
CLEARED FOR PUBLIC HEARING

By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025



KEY MAP
SCALE: 1"=1000'





KEY MAP
SCALE: 1"=1000'

SHEET 6 - PLANNING AREA'S 3, 4, 5 & 6 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 12 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA 5
SUMMARY:

PRODUCT	BROOKLAND	
GROSS AREA	3.3	ACRES
NET AREA	3.0	ACRES
TOTAL UNITS	38	UNITS
DENSITY	12.7	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	76	SPACES
GUEST PARKING REQUIRED	10	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	86	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	76	SPACES
GUEST PARKING PROVIDED	11	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	87	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 6
SUMMARY:

PRODUCT	BROOKLAND	
GROSS REA	2.4	ACRES
NET AREA	2.2	ACRES
TOTAL UNITS	21	UNITS
DENSITY	9.5	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	42	SPACES
GUEST PARKING REQUIRED	6	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	48	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	42	SPACES
GUEST PARKING PROVIDED	8	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	50	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 3
SUMMARY:

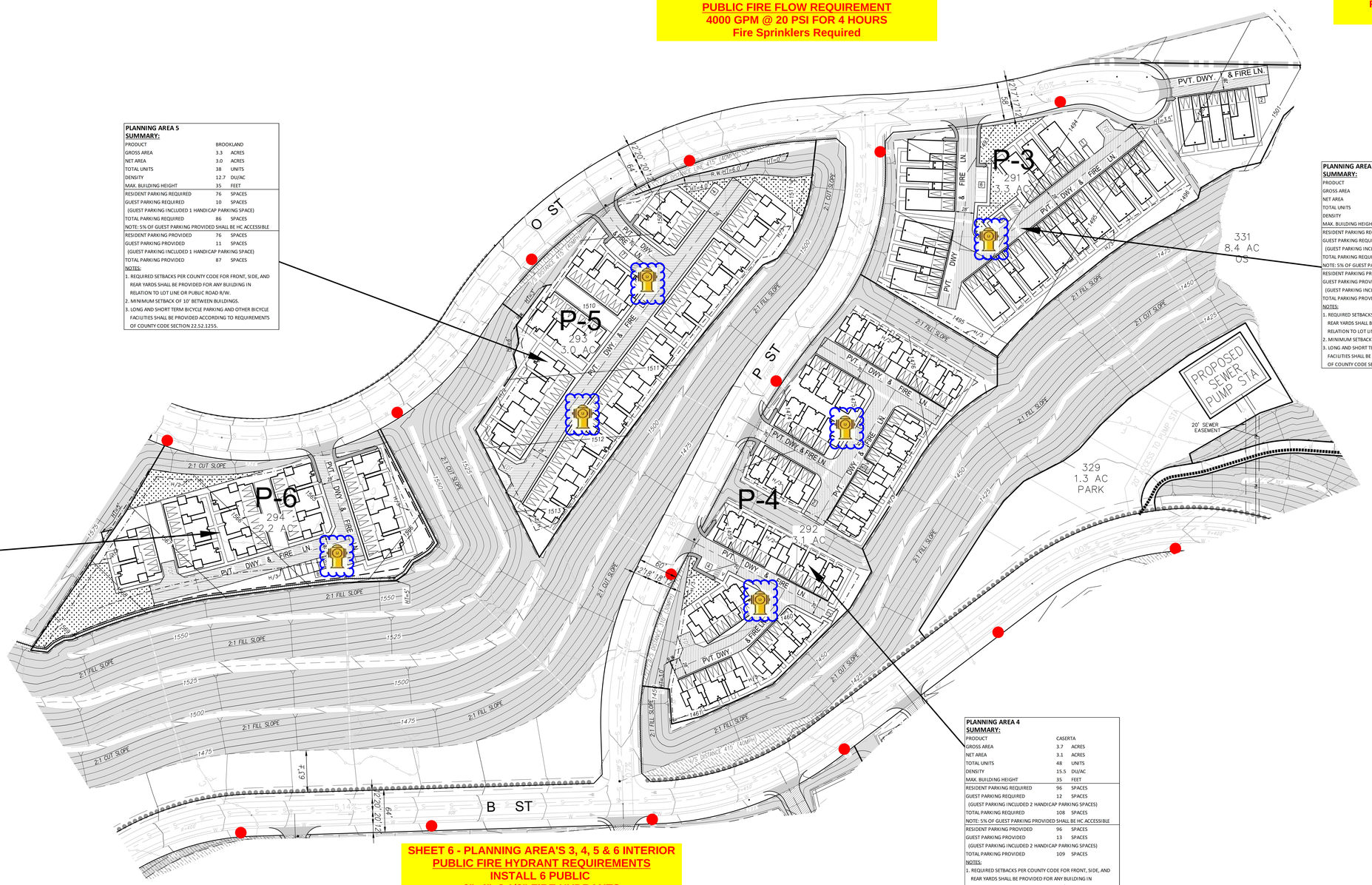
PRODUCT	SANTA ROSA	
GROSS AREA	3.5	ACRES
NET AREA	3.2	ACRES
TOTAL UNITS	49	UNITS
DENSITY	15.3	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	84	SPACES
GUEST PARKING REQUIRED	13	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	97	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	84	SPACES
GUEST PARKING PROVIDED	14	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	98	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 4
SUMMARY:

PRODUCT	CASERTA	
GROSS AREA	3.7	ACRES
NET AREA	3.1	ACRES
TOTAL UNITS	48	UNITS
DENSITY	15.5	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	96	SPACES
GUEST PARKING REQUIRED	12	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING REQUIRED	108	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	96	SPACES
GUEST PARKING PROVIDED	13	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING PROVIDED	109	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.



SHEET 6 - PLANNING AREA'S 3, 4, 5 & 6 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 6 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

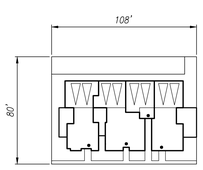
LEGEND

- 336 / P-1 — LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

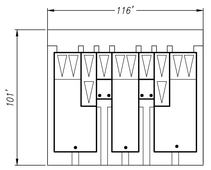
NOTES:

1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

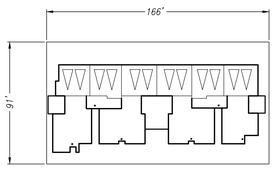
PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.



CASERTA
SCALE: 1" = 40'
4 PLEX



SANTA ROSA
SCALE: 1" = 40'
7 PLEX

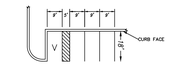


BROOKLAND
SCALE: 1" = 40'
6 PLEX
SFA





TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAP
NOT TO SCALE

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No. 35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

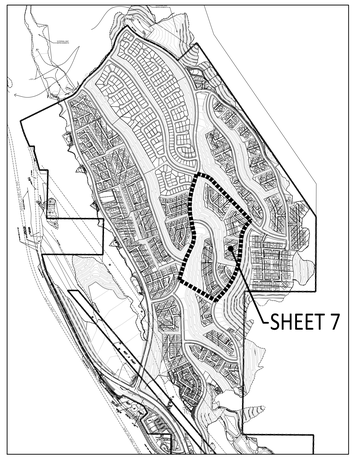
NO.	DATE	REVISION	BY	APP
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	TH	--
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016	YL	--
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016	YL	--
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	--
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	--
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	--

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=60'			08/13/2025	5090-033-35	6	12

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025



KEY MAP
SCALE: 1"=1000'

SHEET 7 - PLANNING AREA'S 7 & 8 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 21 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

SHEET 7 - PLANNING AREA'S 7 & 8 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 9 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

PLANNING AREA 8
SUMMARY:

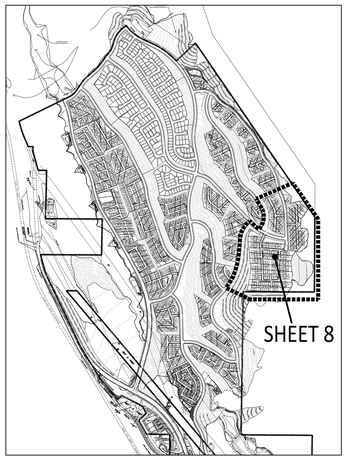
PRODUCT	MERIWETHER	
GROSS AREA	11	ACRES
NET AREA	9.9	ACRES
TOTAL UNITS	111	UNITS
DENSITY	11.2	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	222	SPACES
GUEST PARKING REQUIRED	28	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING REQUIRED	250	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	222	SPACES
GUEST PARKING PROVIDED	33	SPACES
(GUEST PARKING INCLUDED 3 HANDICAP PARKING SPACES)		
TOTAL PARKING PROVIDED	255	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 7
SUMMARY:

PRODUCT	CASERTA	
GROSS AREA	7.6	ACRES
NET AREA	6.8	ACRES
TOTAL UNITS	88	UNITS
DENSITY	12.9	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	176	SPACES
GUEST PARKING REQUIRED	22	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	198	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	176	SPACES
GUEST PARKING PROVIDED	28	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	204	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.



KEY MAP
SCALE: 1"=1000'

SHEET 8 - PLANNING AREA'S 24 & 25 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 14 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA 24
SUMMARY:

PRODUCT	BUNGALOWS	
GROSS AREA	18.4	ACRES
NET AREA	17.7	ACRES
TOTAL UNITS	138	UNITS
DENSITY	7.8	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	276	SPACES
GUEST PARKING REQUIRED (GUEST PARKING INCLUDED 2 HANDICAPS PARKINGS)	35	SPACES
TOTAL PARKING REQUIRED	311	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	276	SPACES
GUEST PARKING PROVIDED (GUEST PARKING INCLUDED 2 HANDICAPS PARKINGS)	44	SPACES
TOTAL PARKING PROVIDED	320	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 25
SUMMARY:

PRODUCT	CASITAS	
GROSS AREA	12.2	ACRES
NET AREA	10.6	ACRES
TOTAL UNITS	61	UNITS
DENSITY	5.8	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	122	SPACES
GUEST PARKING REQUIRED (GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)	16	SPACES
TOTAL PARKING REQUIRED	138	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	122	SPACES
GUEST PARKING PROVIDED (GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)	18	SPACES
TOTAL PARKING PROVIDED	140	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

LEGEND

- (336) / P-1 — LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

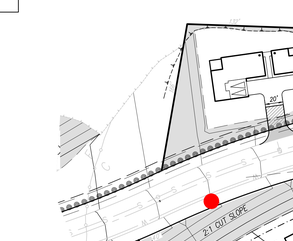
NOTES:

1. *ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).*
2. *ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.*
3. *FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.*
4. *FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.*
5. *NO PROPOSED GATE WITHIN PROJECT SITE.*

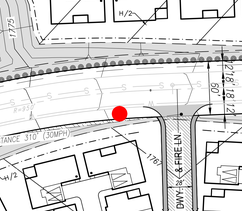
PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.

SHEET 3 - PLANNING AREA 24 & 25 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 6 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR



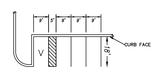
BUNGALOWS
SCALE: 1"=40'
6 HOME MOTORCOURT



CASITAS
SCALE: 1"=40'
4 HOME MOTOR COURT



TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAP
NOT TO SCALE

0 30 60 120 Feet
1"=60'

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No. 35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:
A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

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	DATE	REVISION	BY	APP
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	TH	--
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016	YL	--
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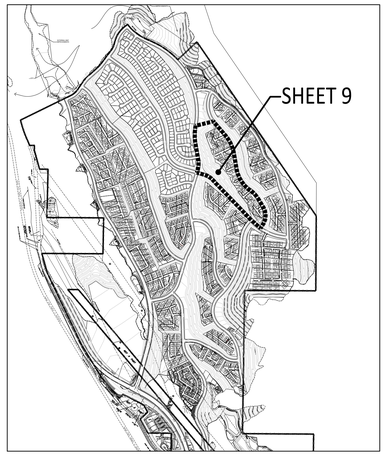
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	--
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	--
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	--

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=60'			08/13/2025	5090-033-35	8	12

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA



KEY MAP
SCALE: 1"=1000'

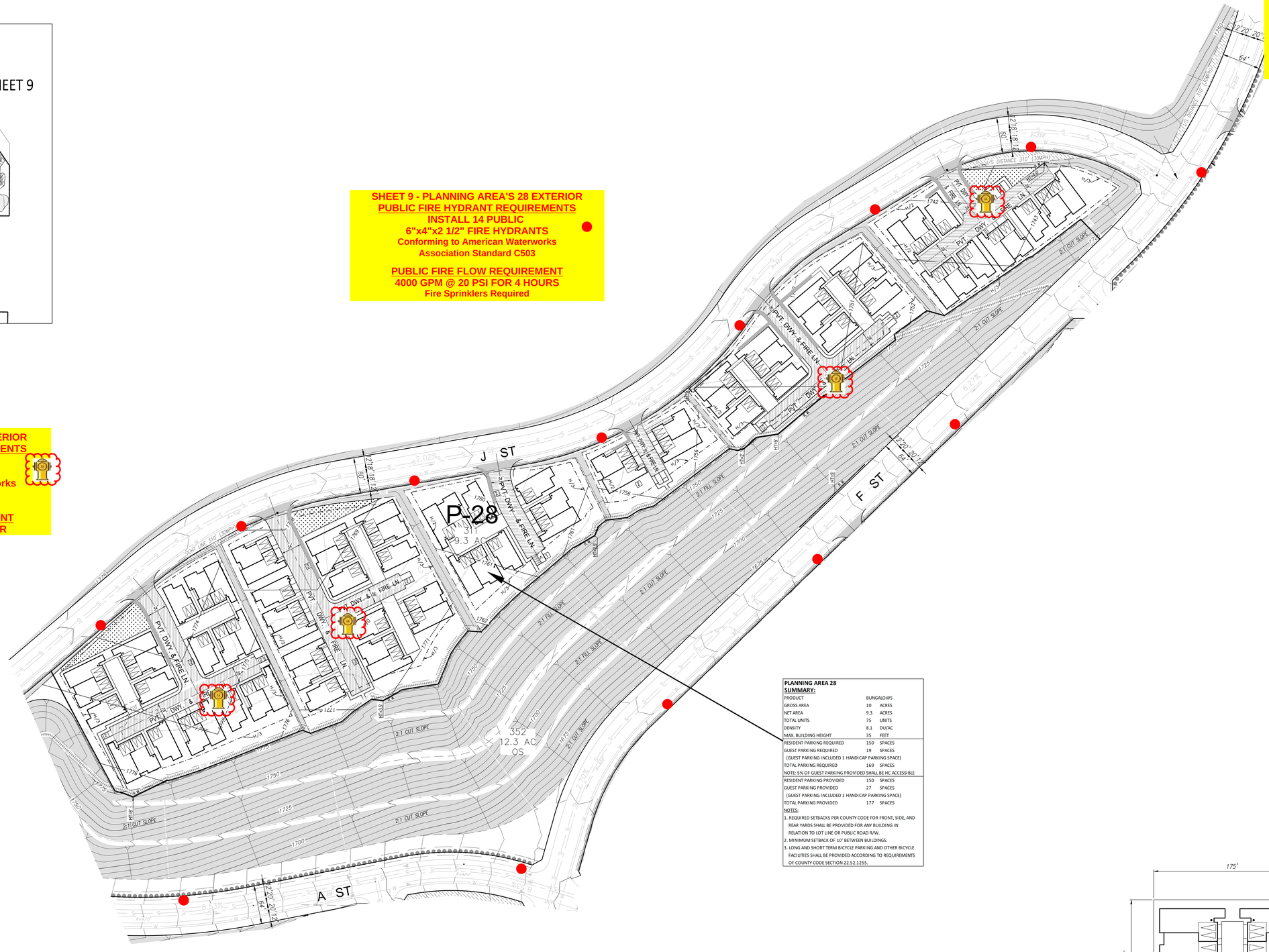
SHEET 9 - PLANNING AREA 28 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 4 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

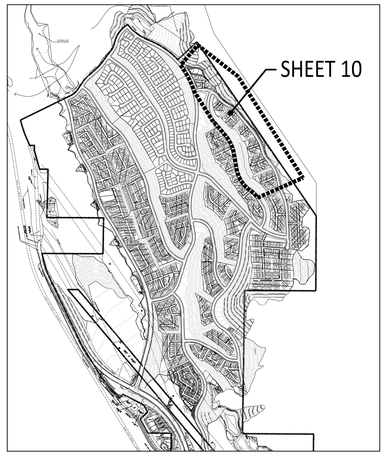
PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR

SHEET 9 - PLANNING AREA'S 28 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 14 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025





KEY MAP
SCALE: 1"=1000'

SHEET 10 - PLANNING AREA 26 & 27 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 1 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR

SHEET 10 - PLANNING AREA'S 26 & 27 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 16 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA 26
SUMMARY:

PRODUCT	CASITAS	
GROSS AREA	11.7	ACRES
NET AREA	10.2	ACRES
TOTAL UNITS	61	UNITS
DENSITY	6.0	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	122	SPACES
GUEST PARKING REQUIRED	16	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	138	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	122	SPACES
GUEST PARKING PROVIDED	19	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	141	SPACES

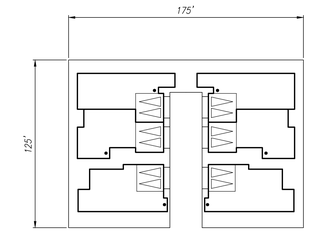
NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 27
SUMMARY:

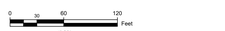
PRODUCT	BUNGALOWS	
GROSS AREA	1.5	ACRES
NET AREA	1.3	ACRES
TOTAL UNITS	10	UNITS
DENSITY	7.7	DU/AC
MAX. BUILDING HEIGHT	25	FEET
RESIDENT PARKING REQUIRED	20	SPACES
GUEST PARKING REQUIRED	3	SPACES
(GUEST PARK INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	23	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	20	SPACES
GUEST PARKING PROVIDED	3	SPACES
(GUEST PARK INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	23	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

CASITAS
SCALE: 1"=40'
4 HOME MOTOR COURT

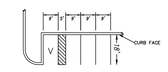


BUNGALOWS
SCALE: 1" = 40'
6 HOME MOTORCOURT





TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAP
NOT TO SCALE

LEGEND

- 336 / P-1 — LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.

NOTES:

1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No. 35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S		TH	--
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016		YL	--
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016		YL	--
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015		YL	--
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015		YL	--
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015		YL	--
	DATE	REVISION		BY	APP
SCALE: 1"=60'	CHK'D BY:	APPROVED BY:	DATE: 08/13/2025	W.O. NO. 5090-033-35	SHEET 10 OF 12

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

LEGEND

- 336 — LOT NO.
- P-1 — PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- PROPOSED FIRE HYDRANT

NOTES:

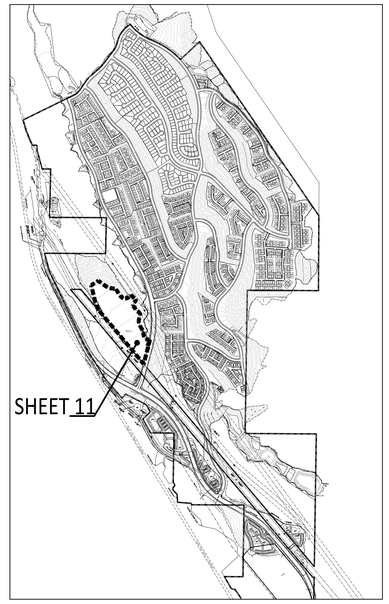
1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

SHEET 11 - PARK SITE
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 2 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

ON-SITE FIRE HYDRANTS MAYBE REQUIRED



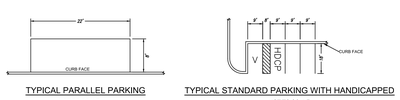
KEY MAP
SCALE: 1"=1000'



Program Summary

Item	Quantities	Size
Multi-Use Grass Areas	2	310,000 Sq.Ft.
Basketball Court	1	
Restroom and Storage	1	250 Sq.Ft. Storage
Individual Picnic Areas	5	
Family Picnic Pavilions	2	
Community / Park Monumnent	1	
Parking	160	90,000 Sq.Ft.
10' Walking Path		4,600 LFT
Maintenance Yard	1	3,500 Sq.Ft
Benches	4	

PARK SITE: SUBJECT TO MINOR MODIFICATION PRIOR TO FINAL DESIGN



TYPICAL PARALLEL PARKING
NOT TO SCALE

TYPICAL STANDARD PARKING WITH HANDICAPPED
NOT TO SCALE

0 30 60 120 Feet
1"=60'

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No.35453 — Exp. 09-30-25 — STATE OF CALIFORNIA — CIVIL

LEGAL DESCRIPTION:

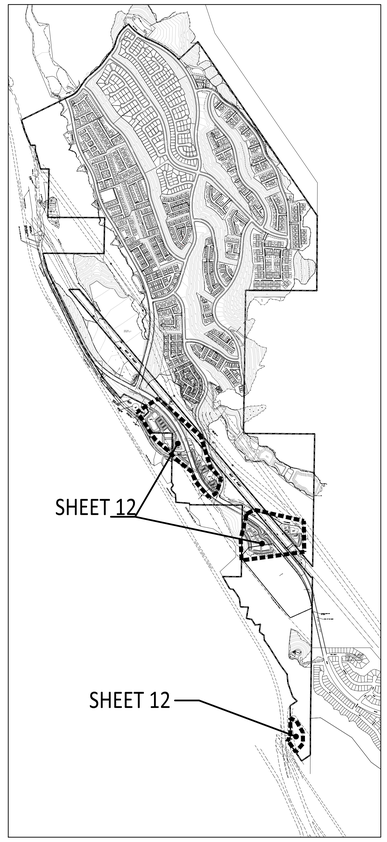
A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

NO.	DATE	REVISION	BY	APP
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	TH	--
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016	YL	--
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016	YL	--
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	--
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	--
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	--

SCALE: 1"=60' | CHK'D BY: | APPROVED BY: | DATE: 08/13/2025 | W.O. NO. 5090-033-35 | SHEET 11 OF 12

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA



KEY MAP
SCALE: 1"=1000'

LEGEND

- LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
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- FDT — FIRE DEPT. TURNAROUND
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- 3 — GUEST PARKING
- PROPOSED FIRE HYDRANT

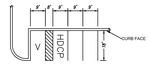
PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.

NOTES:

1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.



TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAPPED
NOT TO SCALE

LOT NO. 317 SUMMARY:		
PRODUCT	MULTI-FAMILY	
GROSS AREA	5.3	ACRES
NET AREA	4.1	ACRES
TOTAL UNITS	102	UNITS
DENSITY	24.9	DU/AC
MAX. BUILDING HEIGHT	4 STORIES, 3 STORIES ALONG THE STREET	
RESIDENT PARKING REQUIRED	102	SPACES
GUEST PARKING REQUIRED (GUEST PARKING INCLUDED 7 HANDICAP PARKING SPACE)	26	SPACES
TOTAL PARKING REQUIRED	128	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	102	SPACES
GUEST PARKING PROVIDED (GUEST PARKING INCLUDED 7 HANDICAP PARKING SPACE)	76	SPACES
TOTAL PARKING PROVIDED	178	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

SHEET 12 - LOT'S 312, 313, 314, 316, 317 & 318
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 24 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

LOT NO. 312 & 313 SUMMARY:		
PRODUCT	MULTI-FAMILY & LIVE-WORK	
GROSS AREA	6.7	ACRES
NET AREA	5.1	ACRES
TOTAL UNITS	78	UNITS
BUILDING AREA	7,500	SQ.FT.
DENSITY	15.3	DU/AC
MAX. BUILDING HEIGHT	4 STORIES, 3 STORIES ALONG THE STREET	
RESIDENT PARKING REQUIRED	78	SPACES
GUEST PARKING REQUIRED (GUEST PARKING INCLUDED 6 HANDICAP PARKING SPACE)	39	SPACES
TOTAL PARKING REQUIRED	117	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	78	SPACES
GUEST PARKING PROVIDED (GUEST PARKING INCLUDED 6 HANDICAP PARKING SPACE)	147	SPACES
TOTAL PARKING PROVIDED	225	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

GOLDEN STATE FREEWAY I-5 (SOUTHBOUND)

314
2.5 AC
HWY COMMERICAL
DEVELOPMENT

LOT NO. 316 SUMMARY:		
PRODUCT	MIXED USE	
GROSS AREA	4.3	ACRES
NET AREA	4.3	ACRES
TOTAL UNITS	46	UNITS
BUILDING AREA	31,200	SQ.FT.
DENSITY	10.7	DU/AC
MAX. BUILDING HEIGHT	4 STORIES, 3 STORIES ALONG THE STREET	
RESIDENT PARKING REQUIRED	46	SPACES
GUEST PARKING REQUIRED (GUEST PARKING INCLUDED 7 HANDICAP PARKING SPACE)	90	SPACES
TOTAL PARKING REQUIRED	136	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	46	SPACES
GUEST PARKING PROVIDED (GUEST PARKING INCLUDED 7 HANDICAP PARKING SPACE)	92	SPACES
TOTAL PARKING PROVIDED	138	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS

LOT NO. 318 SUMMARY:		
PRODUCT	MULTI-FAMILY	
GROSS AREA	2.9	ACRES
NET AREA	2.9	ACRES
TOTAL UNITS	95	UNITS
DENSITY	32.8	DU/AC
MAX. BUILDING HEIGHT	4 STORIES, 3 STORIES ALONG THE STREET	
RESIDENT PARKING REQUIRED	95	SPACES
GUEST PARKING REQUIRED (GUEST PARKING INCLUDED 6 HANDICAP PARKING SPACE)	24	SPACES
TOTAL PARKING REQUIRED	119	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	95	SPACES
GUEST PARKING PROVIDED (GUEST PARKING INCLUDED 6 HANDICAP PARKING SPACE)	30	SPACES
TOTAL PARKING PROVIDED	125	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

NORTHLAKE HILLS ELEMENTARY SCHOOL

0 30 60 120 Feet
1"=60'

EXHIBIT "A"
2015-0408

7	8-13-2025	REVISED PRODUCT TYPE FROM AFFORDABLE HOUSING TO MULTI-FAMILY ON SHEET 12		TH	–
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S		TH	–
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016		YL	–
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016		YL	–
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015		YL	–
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015		YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015		YL	–
	DATE	REVISION		BY	APP

SCALE: 1"=60' | CHK'D BY: | APPROVED BY: | DATE: 08/13/2025 | W.O. NO. 5090-033-35 | SHEET 12 OF 12

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — WAYNE R. SIKAND — No. 35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:
A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
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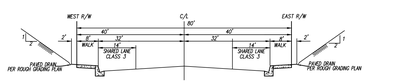
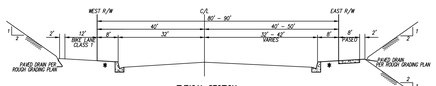


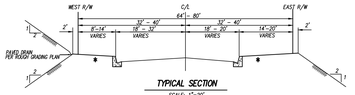
TYPICAL SECTION
SCALE: 1"=20'

80' SECONDARY HIGHWAY
THE RIDGE ROUTE ROAD
(FROM TR. 44429 TO 1200' N'LY TR. 44429)



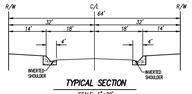
TYPICAL SECTION
SCALE: 1"=20'

80' – 90' SECONDARY HIGHWAY
THE RIDGE ROUTE ROAD
(FROM 1200' N'LY TR. 44429 TO NORTHLAKE BLVD.)



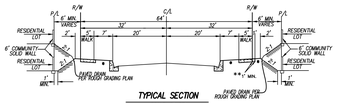
TYPICAL SECTION
SCALE: 1"=20'

64' – 80' LIMITED SECONDARY HWY
THE RIDGE ROUTE ROAD
(FROM NORTHLAKE BLVD. TO 900' N'LY NORTHLAKE BLVD.)



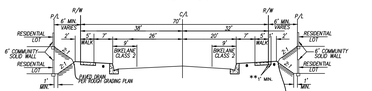
TYPICAL SECTION
SCALE: 1"=20'

64' LIMITED SECONDARY HWY
THE RIDGE ROUTE ROAD
(FROM 900' N'LY NORTHLAKE BLVD. TO 3200' N'LY OF NORTHLAKE BLVD.)



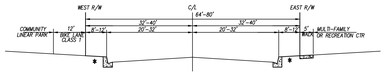
TYPICAL SECTION
SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)
"D" ST.,"E" ST.,"F" ST. (FROM "A" ST. TO "I" ST.)
& "H" ST.



TYPICAL SECTION
SCALE: 1"=20'

70' STREET (LOCAL COLLECTOR)
"A" ST. (FROM NORTHLAKE BLVD TO "B" ST.)



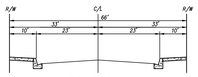
TYPICAL SECTION
SCALE: 1"=20'

80' STREET (MOD. INDUSTRIAL COLLECTOR)
NORTHLAKE BLVD.
(FROM "A" ST. TO 600' NE'LY "A" ST.)



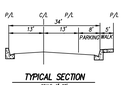
TYPICAL SECTION
SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)
NORTHLAKE BLVD.
(FROM 600 NE'LY "A" ST. TO "E" ST.)

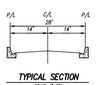


TYPICAL SECTION
SCALE: 1"=20'

66' STREET
"S" ST.



TYPICAL SECTION
PRIVATE DRIVEWAY & FIRE LANE W/ PARKING ONE SIDE FOR MULTI-FAMILY PLANNING AREA



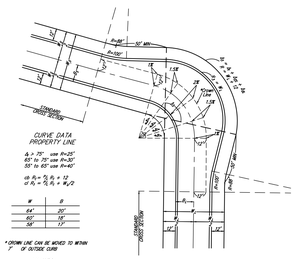
TYPICAL SECTION
PRIVATE DRIVEWAY & FIRE LANE, NO PARKING FOR MULTI-FAMILY PLANNING AREA

✱ LANDSCAPE AREA – SEE LANDSCAPE PLAN FOR DETAILS (TO BE MAINTAINED BY A LMD OR HOA)

✱✱ HARDSCAPE – DELINATION FOR TRAIL PURPOSES WHERE AVAILABLE.

NOTES FOR STREET SECTIONS:

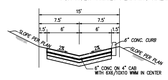
1. SLOUGH WALL REQUIRED AT TOE OF ADJACENT SLOPE IF TOE OF SLOPE IS CLOSER THAN 3' TO THE BACK OF WALK, AND SLOPE IS OVER 5' HIGH.
2. PUBLICLY MAINTAINED SIDEWALKS SHALL BE PLACED 6" FROM RIGHT OF WAY UNLESS SIDEWALK ABUTS A PROPOSED WALL IN WHICH CASE IT SHOULD BE PLACED AGAINST THE WALL.
3. LANDSCAPE SLOPING AWAY FROM R/W TO BE 2:1 MAX.
4. NO RAISED MEDIANS PROPOSED.



NOTES:
1. SUBSCRIPTS "S" AND "L" DENOTE SMALLER AND LARGER WIDTHS RESPECTIVELY.
2. ELEVATIONS ARE REQUIRED WHERE CIRCLED.
3. TRANSVERSE SLOPES SHOWN ABOVE ARE TYPICAL FOR FLAT APPROACH GRADES AND CAN BE INCREASED TO A MAXIMUM OF 4% AT CENTER OF CURVE FOR STEEP APPROACH GRADES.
4. LIMITS OF SLOPE, CROWN LINE TO OUTSIDE GUTTER, MAXIMUM = 2.2% FOR 8" C.F. AND 3.8% FOR 6" C.F.; MINIMUM = 1%

KNUCKLE
NOT TO SCALE

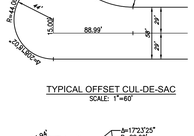
TYPICAL SECTION
PRIVATE DRIVEWAY & FIRE LANE, NO PARKING FOR MULTI-FAMILY PLANNING AREA



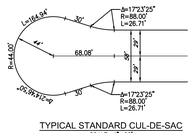
TYPICAL ACCESS ROAD DETAIL FOR BASINS
SCALE: 1"=10'



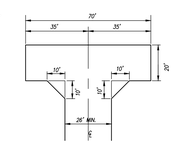
TYPICAL ACCESS ROAD DETAIL FOR WATER TANK
SCALE: 1"=10'



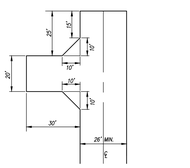
TYPICAL OFFSET CUL-DE-SAC
SCALE: 1"=60'



TYPICAL STANDARD CUL-DE-SAC
SCALE: 1"=40'

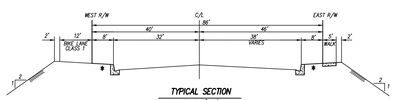


FIRE DEPT. TURNAROUND DETAILS
SCALE: 1"=30'



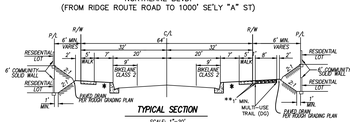
TYPICAL SECTION
SCALE: 1"=20'

80' – 86' STREET (MOD. INDUSTRIAL COLLECTOR)
NORTHLAKE BLVD.
(FROM 1000' SE'LY "A" ST TO "A" ST)



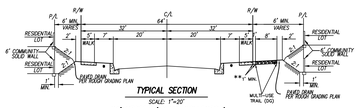
TYPICAL SECTION
SCALE: 1"=20'

86' STREET (MOD. INDUSTRIAL COLLECTOR)
NORTHLAKE BLVD.
(FROM RIDGE ROUTE ROAD TO 1000' SE'LY "A" ST)



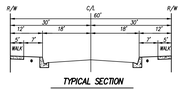
TYPICAL SECTION
SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)
"A" ST. & "B" ST.



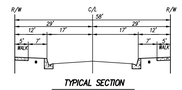
TYPICAL SECTION
SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)
"F" ST. & "O" ST. (FROM "I" ST. TO "O" ST.)



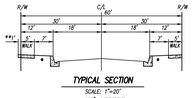
TYPICAL SECTION
SCALE: 1"=20'

60' STREET
"C" ST., "AA" ST., "DD" ST.,"EE" ST., "GG" ST.,
"HH" ST., & "PP" ST., & "QQ" ST.



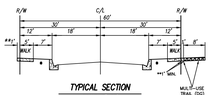
TYPICAL SECTION
SCALE: 1"=20'

58' STREET
"BB" ST., "CC" ST., "FF" ST., "II" ST., "JJ" ST., "KK" ST., "LL" ST.,
"MM" ST., "NN" ST., "OO" ST. & "PP" ST., "QQ" ST", RR" ST.,
& "SS" ST.,



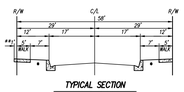
TYPICAL SECTION
SCALE: 1"=20'

60' STREET
"G" ST., "J" ST.& "P" ST.



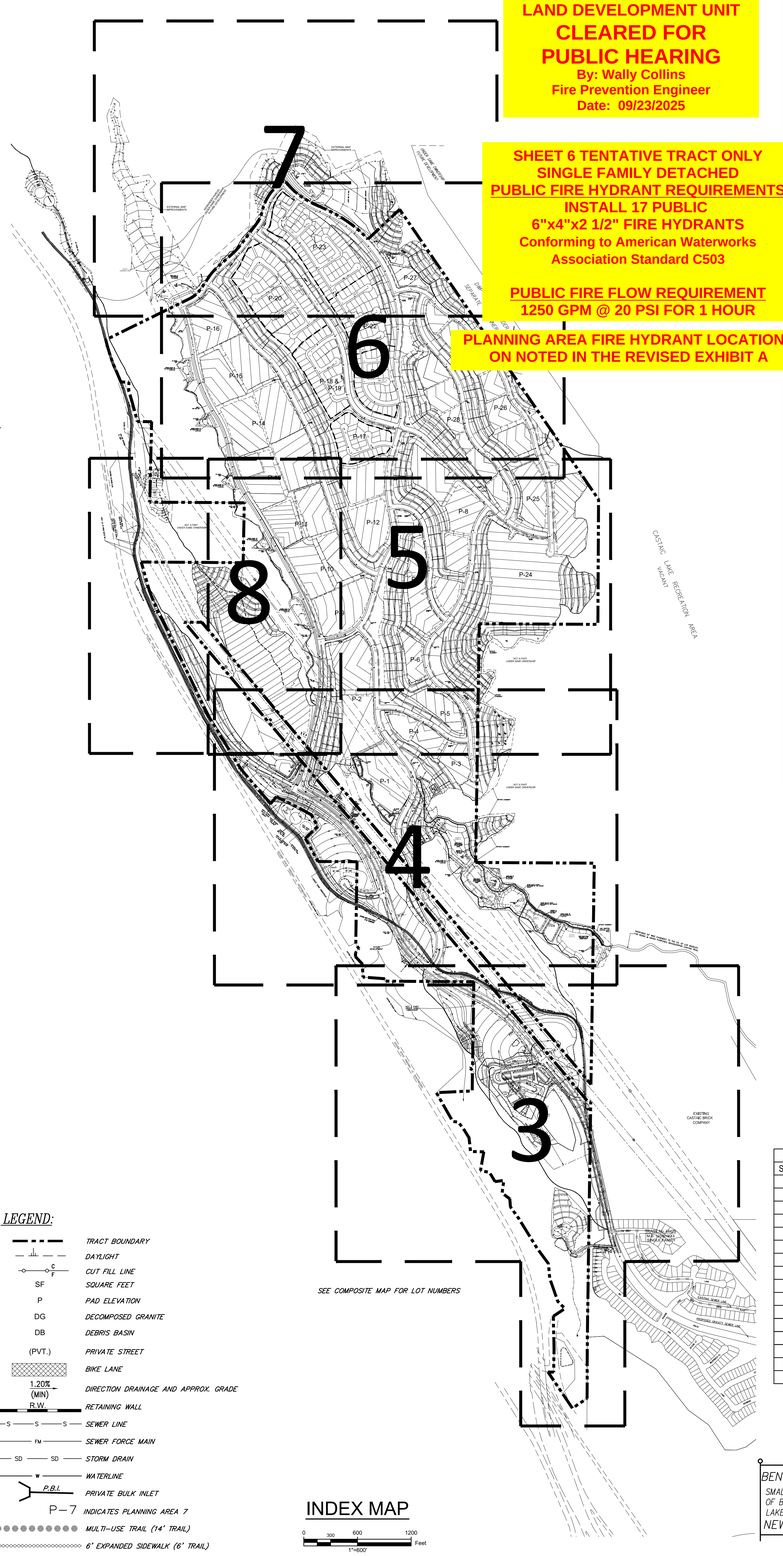
TYPICAL SECTION
SCALE: 1"=20'

60' STREET
"I" ST.



TYPICAL SECTION
SCALE: 1"=20'

58' STREET
"O" ST.
(FROM "P" ST. TO CUL-DE-SAC)



COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

SHEET 6 TENTATIVE TRACT ONLY
SINGLE FAMILY DETACHED
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 17 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR

PLANNING AREA FIRE HYDRANT LOCATIONS ON NOTED IN THE REVISED EXHIBIT A

LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF — SQUARE FEET
- P — PAD ELEVATION
- DG — DECOMPOSED GRANITE
- DB — DEBRIS BASIN
- (PVT.) — PRIVATE STREET
- BIKE LANE
- 1.20% (MIN) R.W. — DIRECTION DRAINAGE AND APPROX. GRADE
- RETAINING WALL
- S — S — S — SEWER LINE
- FM — SEWER FORCE MAIN
- SD — SD — STORM DRAIN
- W — WATERLINE
- P.B.I. — PRIVATE BULK INLET
- P–7 — INDICATES PLANNING AREA 7
- MULTI–USE TRAIL (14' TRAIL)
- 6' EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL (5' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- 1 — IRREVOCABLE OFFER TO DEDICATE. SEE TABLE ON SHT. 3
- DISTURBED SIGNIFICANT RIDGELINE
- UNDISTURBED SIGNIFICANT RIDGELINE

INDEX MAP
0 300 600 1200 Feet
1"=600'

Lot Numbers	No. of Lots	Sheet No.	Type (Use)	Dwelling Units	Total Acres
Area P-1					
289	1	4	Multi-family	189	7.0
372-373	2	4	Debris Basin		1.1
Area P-2					
290	1	4	Multi-family	91	5.0
		5	Multi-family	40	5.3
Area P-3					
291	1	4	Multi-family	49	3.3
Area P-4					
292	1	4	Multi-family	48	3.1
Area P-5					
293	1	5	Multi-family	38	3.0
Area P-6					
294	1	5	Multi-family	21	2.2
Area P-7					
295, 296	2	5	Multi-family	88	6.8
Area P-8					
297	1	5	Multi-family	111	9.9
Area P-9					
298	1	5	Multi-family	112	6.1
Area P-10					
299	1	5	Multi-family	100	7.4
Area P-11					
300	1	5	Multi-family	81	6.9
Area P-12					
301	1	5	Multi-family	117	8.6
Area P-13					
302	1	5	Multi-family	71	8.9
Area P-14					
303	1	6	Multi-family	44	5.1
		4	Multi-family	36	5.1
Area P-15					
304	1	6	Multi-family	32	4.3
		4	Multi-family	31	4.2
Area P-16					
305	1	6	Multi-family	42	5.1
Area P-17					
1–33	33	6	50'X80' SF (4000 sf) min.	33	4.5
Area P-18 & P-19					
34-68	35	6	55'X90' SF (4950 sf) min.	35	5.8
Area P-20					
69-129	61	6	60'X100' SF (6000 sf) min.	61	11.2
Area P-21					
130-165	36	6	50'X80' SF (4000 sf) min.	36	4.2
Area P-22					
166-178	13		50'X80' SF (4000 sf) min.	13	1.3
179-205	30	6	55'X90' SF (4950 sf) min.	30	4.3
Area P-23					
209-288	80	6	50'X80' SF (4000 sf) min.	80	9.4
Area P-24					
306	1	5	Senior	138	17.7
Area P-25					
307, 308	2	5	Senior	61	10.6
Area P-26					
309	1	6	Senior	61	10.2
Area P-27					
310	1	6	Senior	10	1.3
Area P-28					
311	1	6	Senior	75	9.3
Miscellaneous					
312-313,315-318	6	4	General Commercial***	321	20.4
314	1	1	Highway Commercial		2.5
319	1	6	Public Park		16.3
320-329	10	5 & 6	Private Park		8.0
330-333, 335-357, 367-368	29		Open Space		192.9
334, 358-366	10		Open Space (Natural)		163.9
369-370	2	3 & 8	Water Tank		6.5
371, 374-383	11	4, 5 & 6, 8	Debris Basin *		10.4
384	1	4	Water Quality Basin Lot **		15.0
385	1	4	Pump station		0.2
386	1	4	Fire station		1.4
			Public R/W		84.3

* DEBRIS BASINS TO BE MAINTAINED BY LA COUNTY PUBLIC WORK FLOOD CONTROL DISTRICT (LACFCD).

** WATER QUALITY BASIN TO BE MAINTAINED BY LA COUNTY THROUGH DRAINAGE BENEFIT ASSESSMENT AREA (DBAA).

*** AFFORDABLE HOUSING AND LIVE WORK (LOT 313).

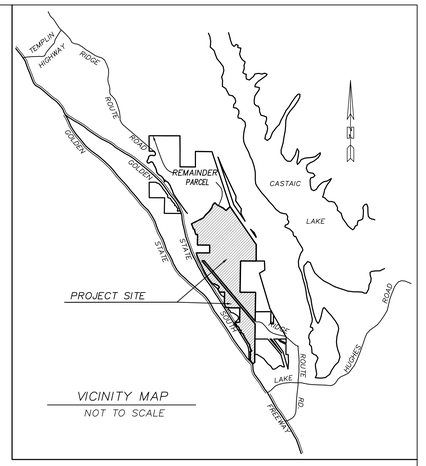
LOT SUMMARY TABLE	
Type (Use)	Quantity
Multi-family	23
50'X80' SF (4,000 sf) min.	162
55'X90' SF (4,950 sf) min.	65
60'X100' SF (6,000 sf) min.	61
Open Space (Manufactured Slopes)	29
Open Space (natural)	10
General Commercial	6
Highway Commercial	1
Public Park	1
Private Park	10
Debris Basin	13
Water Quality Basin Lot	1
Water Tank	2
Pump Station	1
Fire Station	1
Total	**386**

SHEET INDEX	
SHEET NO.	SHEET TITLE
1	TITLE SHEET
2	COMPOSITE MAP
3	TENTATIVE MAP - SOUTHERLY IMPROVEMENTS
4	TENTATIVE MAP - PA 1, 3 AND 4
5	TENTATIVE MAP - PA 2, 5 -13 AND 24 - 25
6	TENTATIVE MAP - PA 14 - 23 AND 26 - 28
7	TENTATIVE MAP - EXTERNAL IMPROVEMENTS
8	TENTATIVE MAP - PA 10, 11 AND SPORT PARK
9	UNIT PHASING MAP
10	LARGE LOT MAP
11	TRAIL MAP
12	EASEMENT MAP TITLE SHEET
13	EASEMENT MAP
14	EASEMENT MAP
15	EASEMENT MAP
16	EASEMENT MAP

BENCH MARK: LACPW L 4622
SMALL BOAT SPK & TAG @ D–S25 @ SW END OF BRIDGE @ B–1552 14 FT S/O C/L LAKE HUGHES RD
NEWHALL QUAD. (1993) ELEV. 1147.577

UTILITIES AND SERVICES:

WATER:	SANTA CLARITA VALLEY WATER AGENCY
SEWER:	SEWAGE OFFSITE TREATMENT PLANT
GAS:	SOUTHERN CALIFORNIA GAS COMPANY
ELECTRICITY:	SOUTHERN CALIFORNIA EDISON COMPANY
SCHOOL:	WM. S. HART HIGH SCHOOL & CASTAIC UNION SCHOOL DISTRICTS.
SHERIFF	LOS ANGELES COUNTY SHERIFF
TELEPHONE	SBC TELEPHONE CO.



DATA SUMMARY:

ACRES(GROSS)	719.8 ± AC
ACRES(NET)	635.5 ± AC
EXISTING & PROPOSED ZONING	NORTHLAKE S.P
EXISTING & PROPOSED GENERAL PLAN (2012 SCVGP)	NORTHLAKE S.P
EXISTING LAND USE	VACANT
PROPOSED LAND USE	SINGLE & MULTIFAMILY RESIDENTIAL COMMERCIAL AND OPEN SPACE

LOT SUMMARY:

SINGLE FAMILY LOTS	(40.6 Ac.) –	288 DU'S	1 TO 288 (288)
MULTI–FAMILY LOTS	(107.2 Ac.) –	1341 DU'S	289 TO 305 (17)
SENIOR M.F. LOTS	(49.1 Ac.) –	345 DU'S	306 TO 311 (6)
GENERAL COMMERCIAL	(20.4 Ac.) –	321 DU'S	312 TO 313 (2)
			315 TO 318 (4)
HIGHWAY COMMERCIAL	(2.5 Ac.)		314 (1)
PUBLIC PARK LOT	(16.3 Ac.)		319 (1)
PRIVATE PARK LOTS	(8.0 Ac.)		320 TO 329 (10)
OPEN SPACE (MFD)	(192.9 Ac.)		330 TO 368 (39)
OPEN SPACE (NATURAL)	(163.9 Ac.)		
TANK SITE	(6.5 Ac.)		369 TO 370 (2)
DEBRIS BASIN LOTS	(11.5 Ac.)		371 TO 383 (13)
WATER QUALITY BASIN	(15.0 Ac.)		384 (1)
PUMP STATION	(0.2 Ac.)		385 (1)
FIRE STATION	(1.4 Ac.)		386 (1)
PUBLIC R/W	(84.3 Ac.)		
TOTAL LOTS	(719.8 Ac.) –	TOTAL 2295 DU'S	386

NOTES

1. TOTAL EARTHWORK APPROXIMATELY CUT 17,160,000 C.Y. ± FILL 15,840,000 C.Y. ± EARTHWORK WILL BE BALANCED ON–SITE DUE TO SHRINKAGE.
2. TOPOGRAPHIC MAPPING BY HORIZON SURVEYS, 2 FT CONTOUR INTERVAL. (JULY 8, 2002)
3. REQUEST PERMISSION TO ADJUST LOT LINES TO THE SATISFACTION OF DRP.
4. REQUEST PERMISSION TO RECORD UNIT TRACT MAPS TO THE SATISFACTION OF DRP.
5. REQUEST PERMISSION TO CREATE ADDITIONAL OPEN SPACE LOTS.
6. BOUNDARY LINE DIMENSIONS ARE TAKEN FROM RECORD DATA.
7. THE APPLICANT IS REQUESTING THE RIGHT TO ADJUST STREET AND BUILDING PAD ELEVATIONS UP TO 10 FEET ON THE FINAL GRADING PLAN TO THE SATISFACTION OF DRP AND DPW.
8. TOPS AND TOES OF SLOPES ARE SUBJECT TO CHANGE IN FINAL ENGINEERING TO SATISFACTION OF DRP AND DPW.
9. MAXIMUM SLOPE GRADE IS 2:1 FOR ALL SLOPES.
10. A LANDSCAPE MAINTENANCE DISTRICT OR HOMEOWNER'S ASSOCIATION WILL BE ESTABLISHED FOR MAINTENANCE OF OPEN SPACE AREAS AND ALL COMMON SLOPE AREAS.
11. ALL SLOPES WITHIN HOMEOWNER'S ASSOCIATION COMMON AREAS OR LANDSCAPE MAINTENANCE DISTRICTS ARE TO BE PLANTED AND IRRIGATED WITH COUNTY APPROVED MATERIAL.
12. PORTIONS OF THE OLD RIDGE ROUTE ROAD TO BE ABANDONED AND REPLACED WITH A ROAD PER CURRENT COUNTY STANDARDS.
13. MULTI–FAMILY LOTS ARE FOR CONDO PURPOSES.
14. REQUEST PERMISSION TO CREATE A LARGE LOT PARCEL MAP FOR SALES AND LEASING PURPOSES AND WHERE EACH LOT IS GREATER THAN 40 ACRES.
15. SITE CONTAINS NO OAK TREES.
16. ALL STREET LANDINGS ARE 3% OR LESS EXCEPT WHERE NOTED.
17. ALL GRADING ELEVATIONS ARE ± 10 FEET.
18. ALL ITEMS REQUESTED WITH CUP NO. RPPL2023004316 (i.e. GRADING, WATER TANKS, SP SITE PLAN/SCR REVIEW, AND WALLS EXCEEDING 6 FEET IN HEIGHT), AS WELL AS THAT IN PHASE 2 WILL REQUIRE A NEW CUP. ENVIRONMENTAL ASSESSMENT NO. RPPL2023004887.
19. PRIVATE DRIVES SHALL BE DESIGNED ACCORDING TO THE WESTSIDE COMMUNITIES PRIVATE DRIVE AND TRAFFIC CALMING DESIGN GUIDELINES CONSISTENT WITH HEALTHY DESIGN REQUIREMENTS.
20. ALL STREET CURB RETURNS ARE 25' RADII UNLESS SPECIFIED ON THE PLAN.
21. LANDSCAPING IN THE COMMON AREAS AND DRIVES INCLUDING COMMON AREAS FENCING AND WALL WILL BE DROUGHT TOLERANT IN NATURE. DETAILED LANDSCAPING WILL BE PROVIDED ONCE THE PLOT PLANS ARE FINALIZED AND SUBMITTED TO THE COUNTY FOR APPROVAL.
22. BICYCLE SHOWER AND CHANGING FACILITIES (BSF) WILL BE PROVIDED FOR ALL BUILDINGS ≥ 75,000 S.F. AND WILL BE DEPICTED IN DETAIL ON FUTURE PLOT PLANS.
23. ALL SINGLE FAMILY LOTS WILL BE SERVED BY SEPARATE SEWER LATERAL FOR EACH INDIVIDUAL LOT. ALL MULTI–FAMILY, COMMERCIAL, AND INDUSTRIAL BUILDINGS WILL BE SERVED BY SEPARATE SEWER LATERAL FOR EACH INDIVIDUAL BUILDING.
24. THE CLIENT PROPOSED A TRANSIT SYSTEM WITHIN THE PROJECT BOUNDARY, FOR MORE DETAILS SEE PLANNING NOTEBOOK.
25. ALL PARKS AREA PRIVATE EXCEPT WHERE NOTED.
26. PRIOR TO THE ISSUANCE OF 1750TH BUILDING PERMIT, FIRE STATION TO BE CONVEYED TO THE CONSOLIDATED PROTECTION DISTRICT OF LOS ANGELES COUNTY.
27. A NEW TENTATIVE MAP NUMBER & CUP WILL BE ISSUED IF AND WHEN A NEW MAP IS FILED OVER THE N'LY PORTION OF NORTHLAKE SPECIFIC PLAN BOUNDARY.
28. NO PROPOSED GATES WITHIN PROJECT SITE.

PARCEL NUMBERS BASED ON FIDELITY NATIONAL TITLE COMPNAY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 6, 2023.

P.T.R. PARCEL NO	A.P.N.
1*	3247-010-049 and 3247-010-050
2*	3244-003-018
3	3247-040-008 (PORTION)
4	3247-040-008 (PORTION)
5	3247-040-008 (PORTION)
6	3247-040-008 (PORTION)
7	3247-040-013 (PORTION)
8	3247-040-009 (PORTION)
9	3247-040-009 (PORTION)
10	3247-040-009 (PORTION)
11	3247-040-009 (PORTION)
12	3247-040-013 (PORTION)
13	3247-040-013 (PORTION)
14	3247-040-013 (PORTION)
15	3244-012-054 & 059
16	3244-012-057
17	3244-012-013
18	3247-041-008
19	3247-041-020
20	3247-041-021
21	3247-041-023
22	3247-041-022
23	2865-036-003
24	2865-036-002
25	2865-036-001 AND 2865-003-013
26	2865-003-035
27	3244-004-051
28	3244-004-053
29	3244-012-049
30	3244-012-048
31	3244-012-046
32	3244-012-058
33	3244-004-052
34	3244-004-024
35	3244-013-001
36	3244-012-045
37	3247-017-019
38	3244-012-050
39	3244-014-015
40	3244-014-067 & 068
41	3247-041-018
42	3247-041-015
43	3244-014-053
44*	3244-014-044
45*	3244-014-038
46*	3247-041-012
47*	3244-013-004
48*	3244-013-002
49*	3244-013-005
50*	3244-013-009
51*	3244-013-010
52	3244-014-050
53*	3244-015-018
54*	3244-014-022
55*	3244-014-021
56	3244-014-062
57*	3244-014-063
60	3247-041-007
61	3247-041-009
66	3247-041-010
68*	3244-012-056
69*	3244-014-045
70**	3244-012-904
71**	3244-004-906
72*	3244-014-902
73*	3247-017-900

*ASTERISK INDICATES PARCEL IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP OR OFFSITE IMPROVEMENT

**ASTERISK INDICATES PARCEL TO BE AQUIRED

NOTE: NORTHEASTERLY PORTION OF PARCEL 32 IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP

7	08–12–2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP		TH	–
6	07–11–2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S		TH	–
5	6–27–2017	PER SCM COMMENTS DATED 11–3–2016		YL	–
4	9–27–2016	PER SCM COMMENTS DATED 7–21–2016		YL	–
3	6–6–2016	PER SCM COMMENTS DATED 10–7–2015		YL	–
2	9–9–2015	PER SCM COMMENTS DATED 7–16–2015		YL	–
1	6–1–2015	PER SCM COMMENTS DATED 2–17–2015		YL	–
	DATE	REVISION		BY	APP

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET OF
AS SHOWN			08/12/2025	5090–033–35	1 16

PREPARED FOR:

NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER MARK R. SIKAND No.35453 Exp. 09-30-25 CIVIL STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

SIKAND Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
*LOCATED IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA FIRE HYDRANT LOCATIONS ON NOTED IN THE REVISED EXHIBIT A



FOR SPECIFIC PLAN DETAILS, SEE THE REV. EXHIBIT "A" MAP

COMPOSITE MAP

7	08-12-2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP	TH	--
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	DATE	REVISION	BY	APP

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
AS SHOWN			08/12/2025	5090-033-35	2	16

PREPARED FOR:

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1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
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REGISTERED PROFESSIONAL ENGINEER
MARK R. SIKAND
No.35453
Exp. 09-30-25
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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

MATCH LINE SEE SHEET 4

MATCH LINE SEE LEFT

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA FIRE HYDRANT LOCATIONS ON NOTED IN THE REVISED EXHIBIT A

359
33.0 AC
OS

330
3.4 AC
OS

340
0.2 AC
OS

318
2.9 AC
GENERAL
COMMERCIAL

317
5.3 AC
GENERAL
COMMERCIAL

358
39.6 AC
OS

314
2.5 AC
HWY. COMMERICAL
DEVELOPMENT

369
4.9 AC
WATER TANK

NOT A PART UNDER SAME OWNERSHIP

GOLDEN STATE FREEWAY I-5 (SOUTHBOUND)

SO. CALIF. EDISON R/W

RIDGE ROUTE ROAD

CASTAIC ROAD

TRACT BOUNDARY

EXISTING NORTHLAKE HILLS ELEMENTARY SCHOOL
SCHOOL SITE
AREA = 20.6± Acres (GROSS)
AREA = 13.0± Acres NET PAD

NOT A PART

100' RIDGE ROUTE

REALIGNED C/L 80' WIDE RIDGE ROUTE PER TR. 44429 M.B. 1233-19-43 (NOT REFLECTED IN TITLE REPORT)

JOIN EXISTING RIDGE ROUTE RD. BEGIN IEC RE-ALIGNMENT PER P-273(FW)

EXISTING SEWER PER PC 11670

PROP. 15" VCP SEWER WILL EXTEND AND CONNECT TO EXISTING SEWER LINE LOCATED AT RIDGE ROUTE ROAD AND CASTAIC LAKE ROAD

PROPOSED TANK

20' ACCESS ROAD

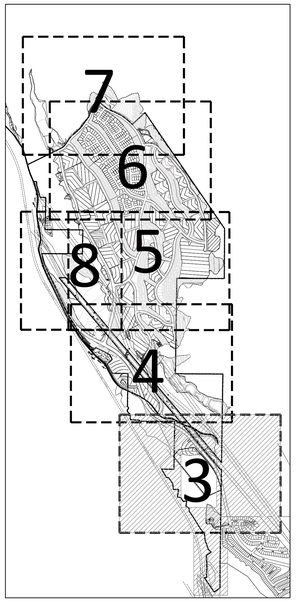
BUILDING SETBACK

EXIST. GAS LINE TO REMAIN

NW'LY LINE 10'

SE'LY LINE 10'

MATCH LINE SEE SHEET 8 INSET "A"



KEY MAP
SCALE: 1" = 1500'

LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF — SQUARE FEET
- D.B. — DEBRIS BASIN
- I/S — INTERSECTION SIGHT
- P — PAD ELEVATION
- (PVT.) — PRIVATE STREET
- BIKE LANE
- 1.20% (MIN) — DIRECTION DRAINAGE AND APPROX. GRADE
- R.W — TYPICAL RETAINING WALL
- DISTURBED SIGNIFICANT RIDGELINE
- UNDISTURBED SIGNIFICANT RIDGELINE
- RIDGELINE
- SEWER LINE
- SEWER FORCE MAIN
- STORM DRAIN
- WATERLINE
- P.B.I. — PRIVATE BULK INLET
- P-7 — INDICATES PLANNING AREA 7
- MULTI-USE TRAIL (10' TRAIL)
- NEIGHBORHOOD PEDESTRAIN TRAIL (6' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- (1) — IRREVOCABLE OFFER TO DEDICATE. SEE TABLE ON SHT. 3

0 50 100 200 Feet
1"=100'

OFFER OF DEDICATION TO THE PUBLIC AN EASEMENT FOR OFFSITE GRADING PURPOSES TO BE RECORDED BY SEPARATE INSTRUMENT

ITEM NO.	APN
(1)	3244-014-038
(2)	3244-014-045
(3)	3244-012-045 3244-012-046 3244-012-049 3244-004-051
(4)	3244-014-044 3244-014-063
(5)	3244-014-021 3244-014-022
(10)	3244-013-005 3244-013-010 3244-012-056

IRREVOCABLE OFFER TO DEDICATE TO THE COUNTY OF LOS ANGELES AN EASEMENT FOR PERMANENT ROAD PURPOSES TO BE RECORDED BY SEPARATE INSTRUMENT

ITEM NO.	APN
(6)	3244-014-038
(7)	3244-014-045
(8)	3244-014-063

IRREVOCABLE OFFER TO DEDICATE TO THE COUNTY OF LOS ANGELES AN EASEMENT FOR PERMANENT WATER QUALITY BASIN, DEBRIS BASIN OR PERMANENT ACCESS ROAD PURPOSES TO BE RECORDED BY SEPARATE INSTRUMENT

ITEM NO.	APN
(9)	3244-015-018
(11)	3244-014-022
(12)	3244-012-046
(13)	3244-012-045, 3247-041-012

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER
MARK R. SIKAND
No.35453
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

LEGAL DESCRIPTION:

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2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	–

SCALE: 1"=100' | CHK'D BY: | APPROVED BY: | DATE: 08/12/2025 | W.O. NO. 5090-033-35 | SHEET 3 OF 16

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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

MATCH LINE SEE SHEET 8

MATCH LINE SEE SHEET 5

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA FIRE HYDRANT LOCATIONS ON NOTED IN THE REVISED EXHIBIT A

336
14.2 AC
OS

338
6.8 AC
OS

371
2.5 AC
D.B.

374
0.4 AC
D.B.

P-1
289
7.2 AC

P-2
290
3.1 AC

P-3
291
3.3 AC

P-4
292
3.1 AC

P-5
293
3.0 AC

329
1.3 AC
PARK

331
8.4 AC
OS

380
1.1 AC
D.B

342
0.7 AC
OS

335
3.6 AC
OS

333
1.7 AC
OS

362
4.8 AC
OS

372
0.6 AC
D.B.

339
4.4 AC
OS

385
0.2 AC
PUMP STATION

312
5.1 AC
GENERAL
COMMERICAL

313
1.6 AC
GENERAL
COMMERCIAL

315
1.2 AC
GENERAL
COMMERCIAL

316
4.3 AC
GENERAL
COMMERCIAL

361
9.3 AC
OS
FUTURE DEVELOPMENT

332
2.8 AC
OS

334
2.5 AC
OS

359
33.0 AC
OS

381
0.7 AC
D.B.

382
0.7 AC
D.B.

383
0.8 AC
D.B.

384
15.0 AC
WATER QUALITY BASIN

360
12.4 AC
OS

NOT A PART
UNDER SAME OWNERSHIP

NOT A PART

UNDER SAME OWNERSHIP

NORTHLAKE BLVD

P ST

O ST

R ST

RIDGE ROUTE ROAD

GOLDEN STATE FREEWAY I-5 (SOUTHBOUND)

EXISTING CALTRANS R/W

SO. CALIF. EDISON R/W

PROPOSED 150' EDISON EASEMENT

EX. EDISON R/W TO BE RELOCATED

TRACT BOUNDARY

± 1326'

TRACT BOUNDARY

± 1610'

± 2669'

± 672'

OFFSITE EASEMENT

JOIN ADOPTED CASTAIC LAKE TRAIL

TOWER TO BE RELOCATED

GRADE TO DRAIN

DEBRIS BASIN TO BE MAINTAINED BY L.A.C.F.C.D

WATER QUALITY BASIN MAINTAINED BY LOS ANGELES COUNTY

INGRESS & EGRESS OF SD ESMT.

15' ACCESS ROAD

20' SEWER EASEMENT

PROPOSED WATER TANK

EXISTING WATER TANK

PROPOSED WATER TANK PER THIS MAP

POINT OF CONNECTION TO PROPOSED WATER LINE

WATER LINE POINT OF CONNECTION

JOIN EXIST. 30" WATER MAIN

EXIST. 30" WATER LINE

RELOCATED 30" WATER MAIN

PROP. FORCE MAIN SEWER LINE

EXIST. 24" CMP DRAIN PIPE TO BE REPLACED BY 36" RCP

EXIST. 30" WATER LINE

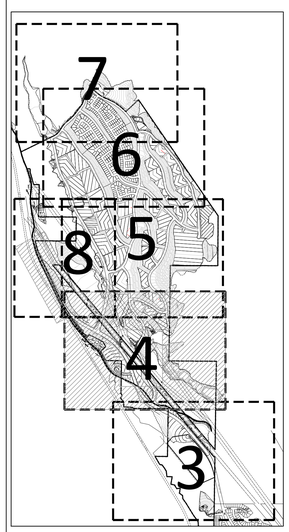
CLASS 1 BIKE LANE TRAIL

14' MULTI-USE TRAIL

8' NEIGHBORHOOD PEDESTRIAN TRAIL

0 50 100 200
SCALE: 1" = 100' Feet

KEY MAP
SCALE: 1" = 1500'



LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF — SQUARE FEET
- D.B. — DEBRIS BASIN
- I/S — INTERSECTION SIGHT
- P — PAD ELEVATION
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- 1.20% (MIN) — DIRECTION DRAINAGE AND APPROX. GRADE
- R.W. — TYPICAL RETAINING WALL
- DISTURBED SIGNIFICANT RIDGELINE
- UNDISTURBED SIGNIFICANT RIDGELINE
- R — R — R — RIDGELINE
- S — S — S — SEWER LINE
- FM — SEWER FORCE MAIN
- SD — SD — SD — STORM DRAIN
- W — WATERLINE
- P.B.I. — PRIVATE BULK INLET
- P–7 — INDICATES PLANNING AREA 7
- MULTI-USE TRAIL (10' TRAIL)
- NEIGHBORHOOD PEDESTRAIN TRAIL (6' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- 1 — IRREVOCABLE OFFER TO DEDICATE. SEE TABLE ON SHT. 3

MATCH LINE SEE SHEET 3

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DATE		REVISION	BY	APP

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=100'			08/12/2025	5090-033-35	4	16

PREPARED FOR:

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1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
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REGISTERED PROFESSIONAL ENGINEER
WAYNE R. SIKAND
No.35453
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

LEGAL DESCRIPTION:

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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

MATCH LINE SEE SHEET 6

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA FIRE HYDRANT LOCATIONS ON NOTED IN THE REVISED EXHIBIT A



MATCH LINE SEE SHEET 4

NOT A PART UNDER SAME OWNERSHIP

LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF — SQUARE FEET
- D.B. — DEBRIS BASIN
- I/S — INTERSECTION SIGHT
- P — PAD ELEVATION
- (PVT.) — PRIVATE STREET
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- 1.20% (MIN) — DIRECTION DRAINAGE AND APPROX. GRADE
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- MULTI–USE TRAIL (10' TRAIL)
- NEIGHBORHOOD PEDESTRAIN TRAIL (6' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- (7) — IRREVOCABLE OFFER TO DEDICATE. SEE TABLE ON SHT. 3

KEY MAP
SCALE: 1" = 1500'

0 50 100 200 Feet
1"=100'

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	DATE	REVISION	BY APP

SCALE: 1"=100' | CHK'D BY: | APPROVED BY: | DATE: 08/12/2025 | W.O. NO. 5090-033-35 | SHEET 5 OF 16

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
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REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No.35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT

CLEARED FOR PUBLIC HEARING

By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

SINGLE FAMILY DETACHED
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 17 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR

MATCH LINE SEE SHEET 7

MATCH LINE SEE SHEET 5

KEY MAP
SCALE: 1" = 1500'

LEGEND:
- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF SQUARE FEET
- D.B. DEBRIS BASIN
- I/S INTERSECTION SIGHT
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- NATURAL TRAIL (8' TRAIL)
- 1 IRREVOCABLE OFFER TO DEDICATE, SEE TABLE ON SHT. 3

0 50 100 200 Feet
1"=100'

N

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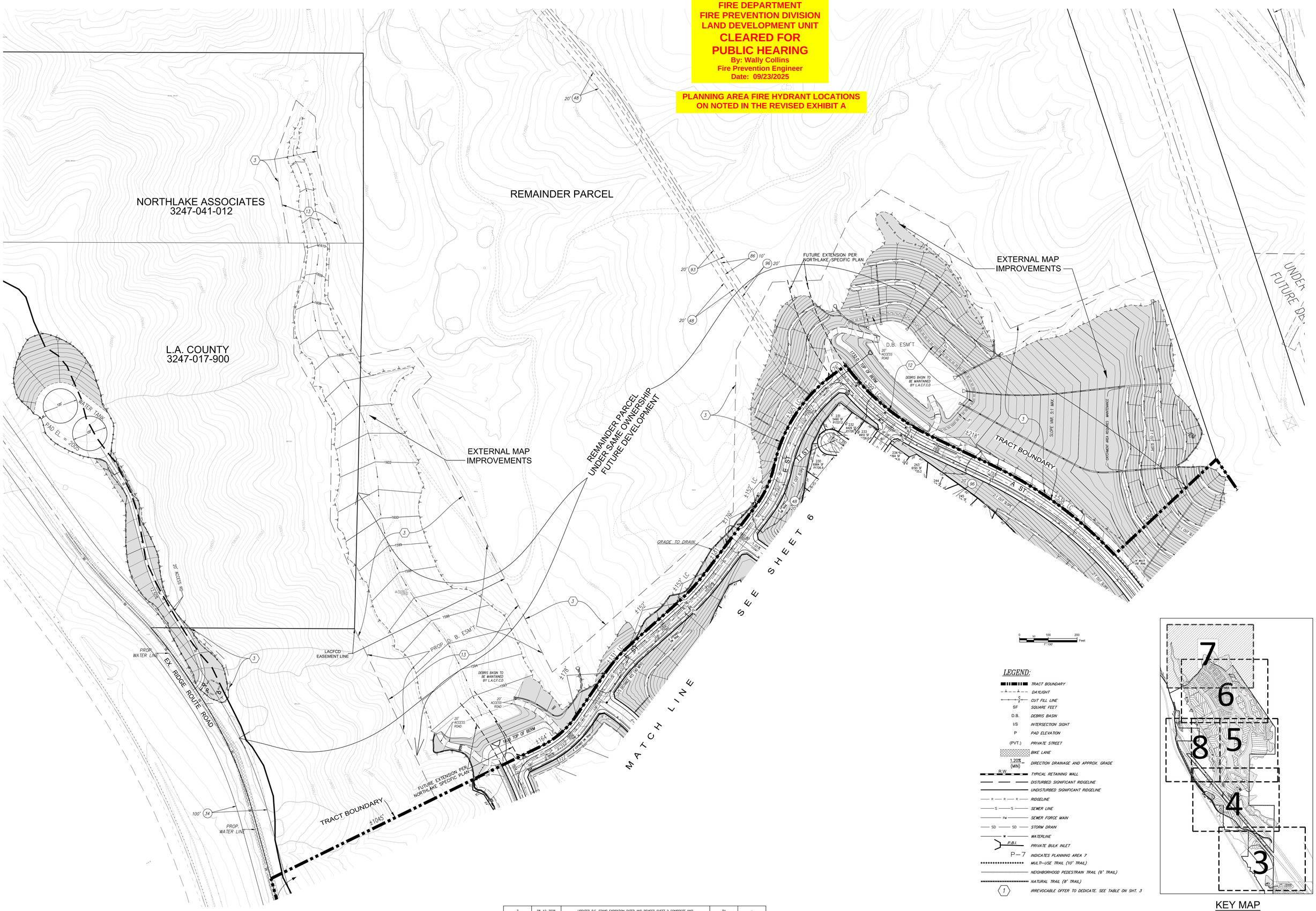
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA FIRE HYDRANT LOCATIONS ON NOTED IN THE REVISED EXHIBIT A



0 50 100 200 Feet
1"=100'

LEGEND:

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- NATURAL TRAIL (8' TRAIL)
- 1 — IRREVOCABLE OFFER TO DEDICATE. SEE TABLE ON SHT. 3

KEY MAP
SCALE: 1" = 1500'

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	DATE	REVISION	BY	APP

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=100'			08/12/2025	5090-033-35	7	16

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER
MARK R. SIKAND
No. 35453
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

LEGAL DESCRIPTION:
A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

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Van Nuys, CA 91411
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Fax: (818) 901-7451
info@sikand.com

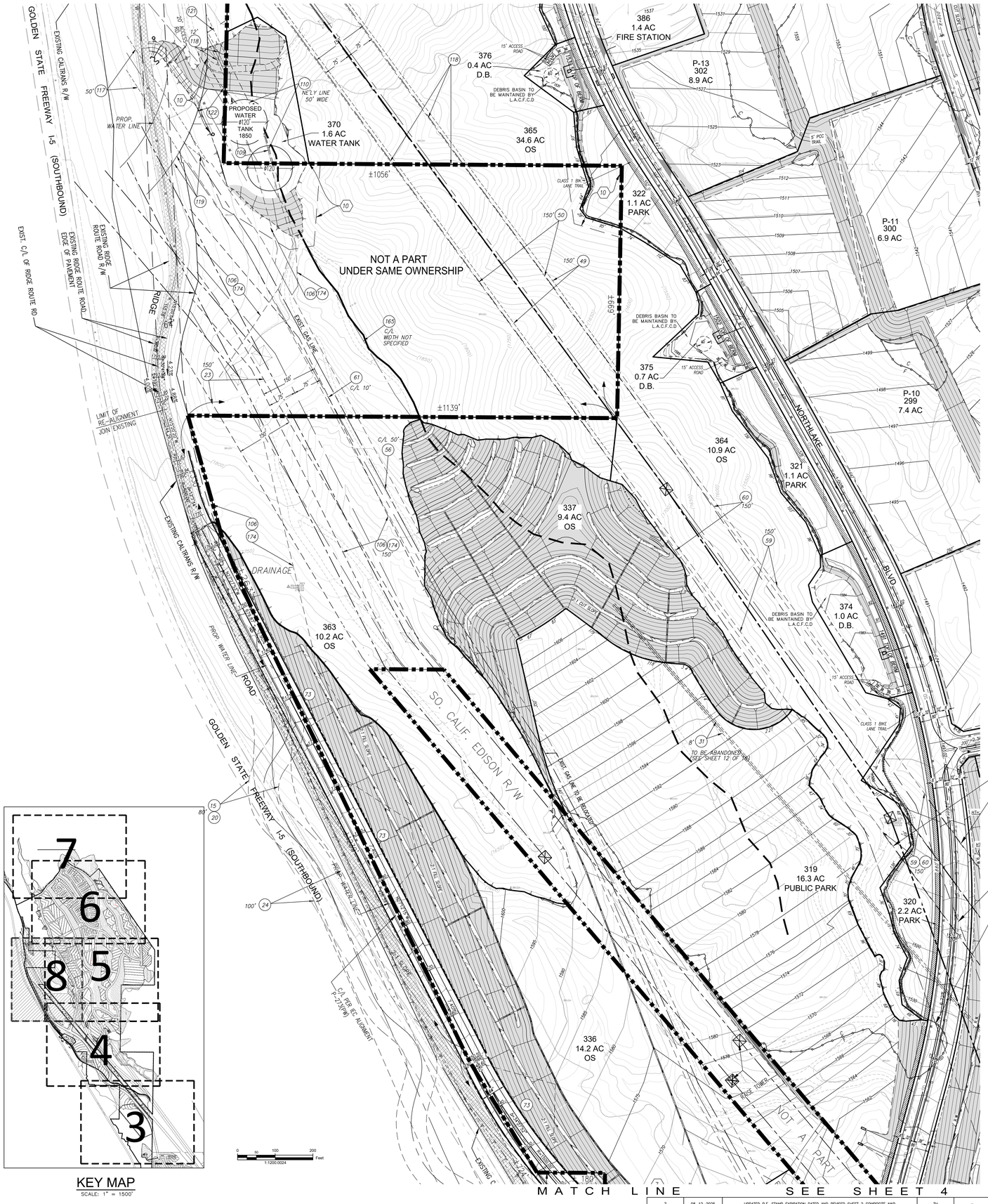
MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT

CLEARED FOR PUBLIC HEARING

By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA FIRE HYDRANT LOCATIONS ON NOTED IN THE REVISED EXHIBIT A



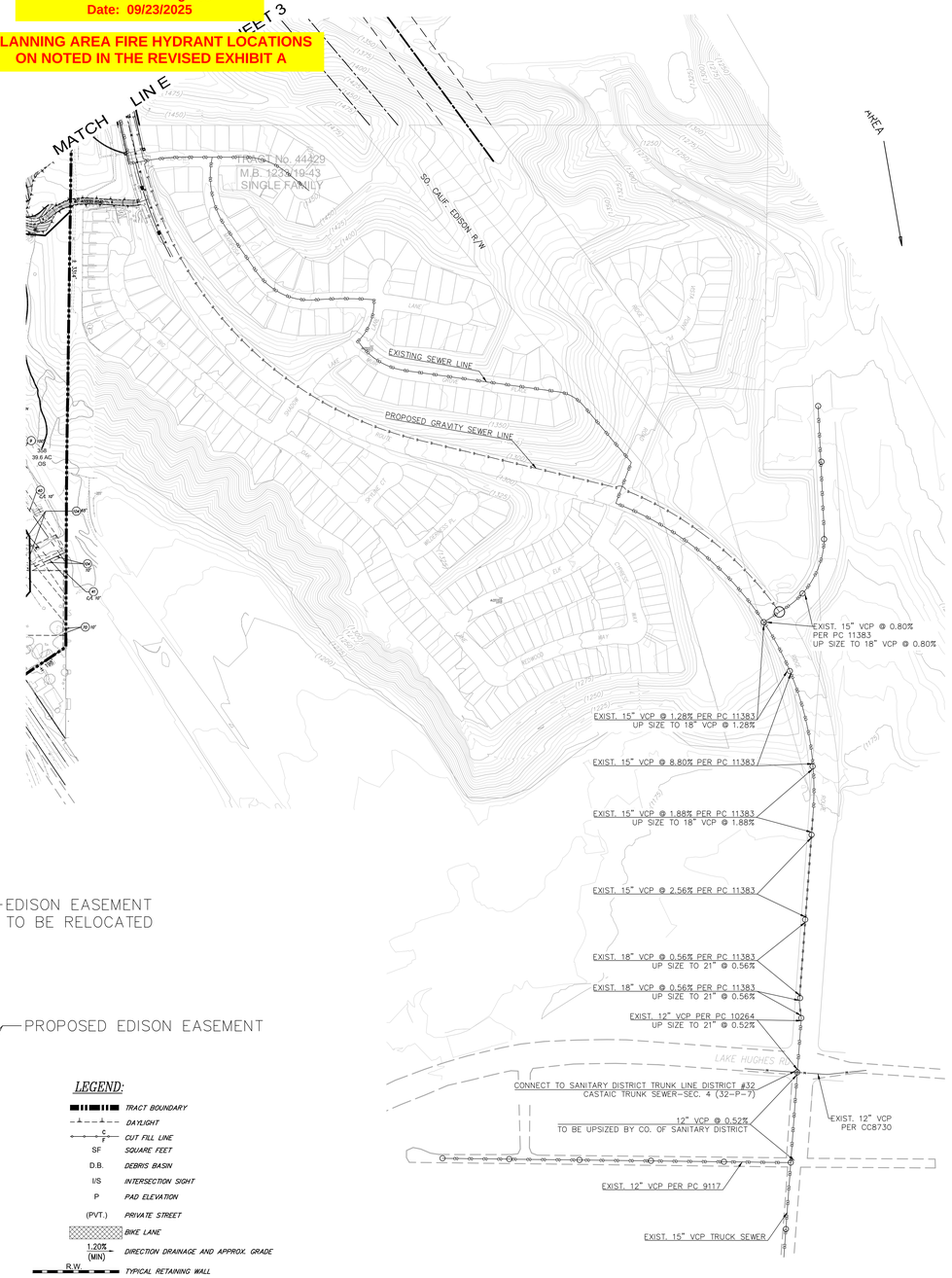
KEY MAP
SCALE: 1" = 1500'

EDISON EASEMENT TO BE RELOCATED

PROPOSED EDISON EASEMENT

LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- C / F — CUT FILL LINE
- SF — SQUARE FEET
- D.B. — DEBRIS BASIN
- I/S — INTERSECTION SIGHT
- P — PAD ELEVATION
- (PVT.) — PRIVATE STREET
- BIKE LANE
- 1.20% (MIN) — DIRECTION DRAINAGE AND APPROX. GRADE
- R.W. — TYPICAL RETAINING WALL
- DISTURBED SIGNIFICANT RIDGELINE
- UNDISTURBED SIGNIFICANT RIDGELINE
- R — RIDGELINE
- S — SEWER LINE
- FM — SEWER FORCE MAIN
- SD — STORM DRAIN
- W — WATERLINE
- P.B.I. — PRIVATE BULK INLET
- P–7 — INDICATES PLANNING AREA 7
- MULTI-USE TRAIL (10' TRAIL)
- NEIGHBORHOOD PEDESTRAIN TRAIL (6' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- 1 — IRREVOCABLE OFFER TO DEDICATE. SEE TABLE ON SHT. 3



INSET "A"

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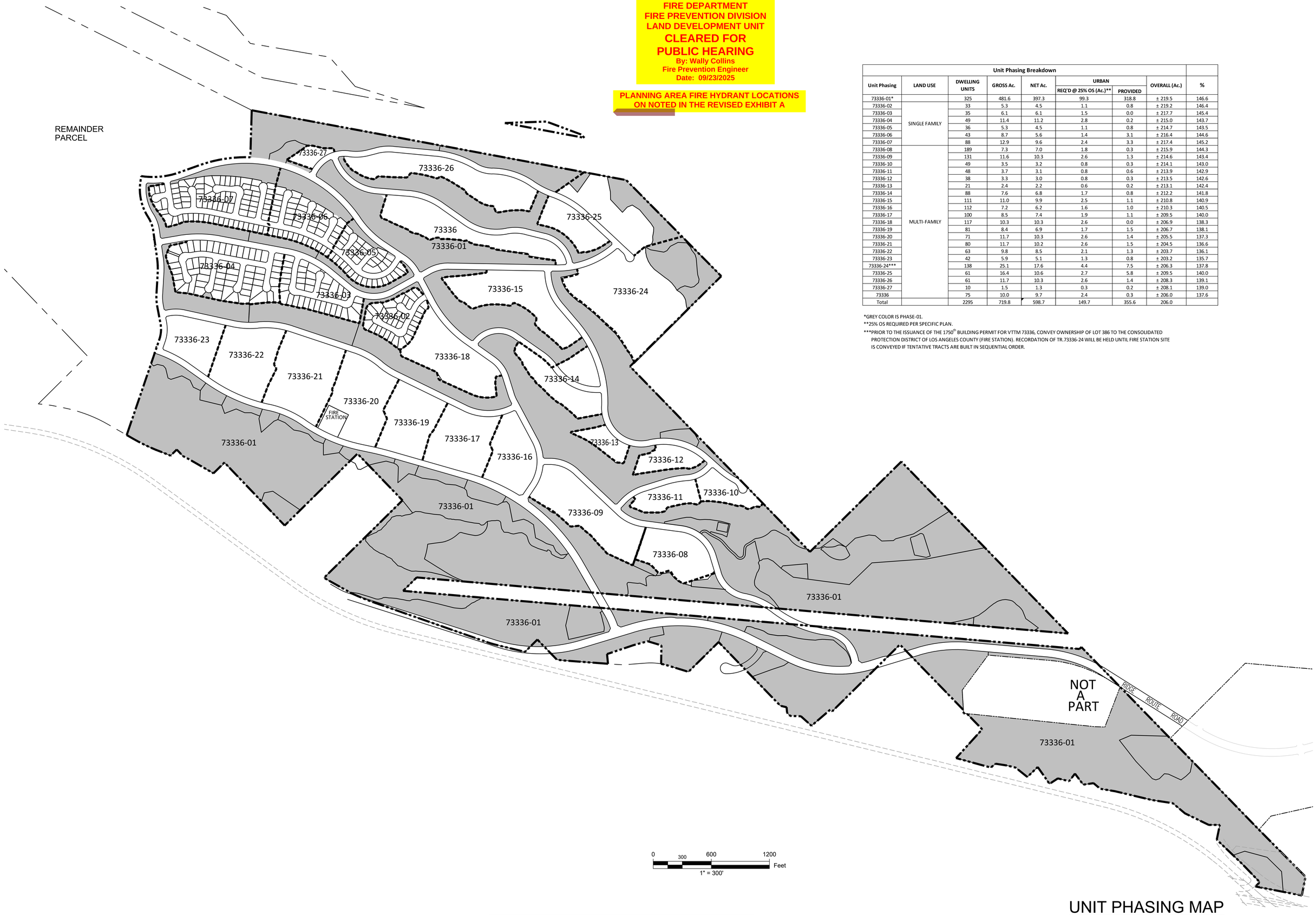

Unit Phasing Breakdown

Unit Phasing	LAND USE	DWELLING UNITS	GROSS Ac.	NET Ac.	URBAN		OVERALL (Ac.)	%
					REQ'D @ 25% OS (Ac.)**	PROVIDED		
73336-01*		325	481.6	397.3	99.3	318.8	± 219.5	146.6
73336-02		33	5.3	4.5	1.1	0.8	± 219.2	146.4
73336-03		35	6.1	6.1	1.5	0.0	± 217.7	145.4
73336-04	SINGLE FAMILY	49	11.4	11.2	2.8	0.2	± 215.0	143.7
73336-05		36	5.3	4.5	1.1	0.8	± 214.7	143.5
73336-06		43	8.7	5.6	1.4	3.1	± 216.4	144.6
73336-07		88	12.9	9.6	2.4	3.3	± 217.4	145.2
73336-08		189	7.3	7.0	1.8	0.3	± 215.9	144.3
73336-09		131	11.6	10.3	2.6	1.3	± 214.6	143.4
73336-10		49	3.5	3.2	0.8	0.3	± 214.1	143.0
73336-11		48	3.7	3.1	0.8	0.6	± 213.9	142.9
73336-12		38	3.3	3.0	0.8	0.3	± 213.5	142.6
73336-13		21	2.4	2.2	0.6	0.2	± 213.1	142.4
73336-14		88	7.6	6.8	1.7	0.8	± 212.2	141.8
73336-15		111	11.0	9.9	2.5	1.1	± 210.8	140.9
73336-16		112	7.2	6.2	1.6	1.0	± 210.3	140.5
73336-17		100	8.5	7.4	1.9	1.1	± 209.5	140.0
73336-18	MULTI-FAMILY	117	10.3	10.3	2.6	0.0	± 206.9	138.3
73336-19		81	8.4	6.9	1.7	1.5	± 206.7	138.1
73336-20		71	11.7	10.3	2.6	1.4	± 205.5	137.3
73336-21		80	11.7	10.2	2.6	1.5	± 204.5	136.6
73336-22		63	9.8	8.5	2.1	1.3	± 203.7	136.1
73336-23		42	5.9	5.1	1.3	0.8	± 203.2	135.7
73336-24***		138	25.1	17.6	4.4	7.5	± 206.3	137.8
73336-25		61	16.4	10.6	2.7	5.8	± 209.5	140.0
73336-26		61	11.7	10.3	2.6	1.4	± 208.3	139.1
73336-27		10	1.5	1.3	0.3	0.2	± 208.1	139.0
73336		75	10.0	9.7	2.4	0.3	± 206.0	137.6
Total		2295	719.8	598.7	149.7	355.6	206.0	

*GREY COLOR IS PHASE-01.
**25% OS REQUIRED PER SPECIFIC PLAN.
***PRIOR TO THE ISSUANCE OF THE 1750th BUILDING PERMIT FOR VTTM 73336, CONVEY OWNERSHIP OF LOT 386 TO THE CONSOLIDATED PROTECTION DISTRICT OF LOS ANGELES COUNTY (FIRE STATION). RECORDATION OF TR.73336-24 WILL BE HELD UNTIL FIRE STATION SITE IS CONVEYED IF TENTATIVE TRACTS ARE BUILT IN SEQUENTIAL ORDER.

UNIT PHASING MAP

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1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
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REGISTERED PROFESSIONAL ENGINEER MARK R. SIKAND No.35453 Exp. 09-30-25 CIVIL STATE OF CALIFORNIA

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SCALE: 1"=300' | CHK'D BY: | APPROVED BY: | DATE: 08/12/2025 | W.O. NO. 5090-033-35 | SHEET 9 OF 16

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MAJOR LAND DIVISION
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FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PARCEL REMAINDER

SPECIFIC PLAN BOUNDARY

SOUTHERN CALIFORNIA EDISON RIGHT-OF-WAY

RIDGE ROUTE ROAD

NOT A PART
EXISTING NORTHLAKE HILLS ELEMENTARY SCHOOL

NORTHLAKE BLVD

A ST · B ST · D ST · F ST · G ST · H ST · I ST · J ST · O ST · P ST

1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11 · 12

0 150 300 600 Feet
1"=300'

LARGE LOT TABLE			
LOT NO.	**GROSS AC. +/-**	**NET AC. +/-**	**SPCIFIC PLAN LAND USE TYPE**
1	58.4	54.5	OPEN SPACE/GENERAL COMMERCIAL
2	63.4	53.8	OPEN SPACE/GENERAL COMMERCIAL
3	54.2	48.8	OPEN SPACE
4	93.0	87.5	MULTI-FAMILY/OPEN SPACE
5	43.8	40.1	OPEN SPACE
6	69.6	61.4	MULTI-FAMILY/OPEN SPACE
7	69.6	63.4	MULTI-FAMILY/OPEN SPACE
8	45.3	40.0	MULTI-FAMILY/OPEN SPACE
9	42.4	41.0	MULTI-FAMILY/OPEN SPACE
10	71.5	63.2	MULTI-FAMLY/SINGLE FAMILY
11	61.9	55.8	MUTLI-FAMLY /OPEN SPACE
12	46.0	40.7	MULTI-FAMILY/SINGLE FAMILY/OPENSPACE
TOTAL	719.1	650.2	

ACREAGE APPROXIMATED TO THE NEAREST TENTH.

GROSS ACREAGE (INLCUDING STREET RIGHT-OF WAYS AND EXISTING RIDGE ROUTE ROAD RIGHT-OF WAY)

NET ACREAGE (EXCLUDING STREET RIGHT-OF WAYS AND EXISTING RIDGE ROUTE ROAD RIGHT-OF WAY)

(A) INDICATES A NON-EXCLUSIVE EASEMENT FOR INGRESS AND EGRESS PURPOSES

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ADOPTED CASTAIC LAKE TRAIL

P-27 P-26 P-23 P-22 P-28 P-25 P-21 P-20 P-18 & 19 P-8 P-24 P-17 P-16 P-15 P-14 P-12 P-7 P-13 P-11 P-10 P-6 P-9 P-5 P-3 P-4 P-2 P-1

TRAIL CONNECTIONS / TRAIL CONNECTION

FUTURE EXTENSION TO BE BUILT WITH PHASE II

REMAINDER PARCEL UNDER SAME OWNERSHIP FUTURE DEVELOPMENT

EXISTING DIRT ROAD

FIRE HYDRANT

JOIN ADOPTED CASTAIC LAKE TRAIL

SO. CALIF. EDISON R/W

PROPOSED 150' EDISON EASEMENT

EX. EDISON R/W TO BE RELOCATED

TRAIL CONNECTION

CONNECT TO EX. TRAIL

NORTHLAKE HILLS ELEMENTARY SCHOOL

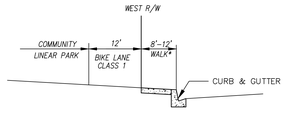
8' DG TRAIL

SOUGHT WEST FREEWAY TO SOUTHBOUND

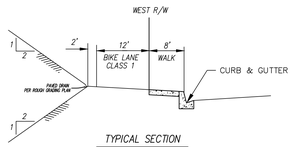
0 150' 300' 600' Feet
1" = 300'

LEGEND:

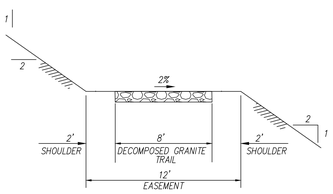
- TRACT BOUNDARY
- CLASS 1 BIKE LANE (20' TRAIL)
- NORTHLAKE MULTI-USE TRAIL (14' TRAIL)
- 6' EXPANDED SIDEWALK (6' TRAIL)
- 5' PCC TRAIL (CONCRETE TRAIL)
- ADOPTED CASTAIC LAKE TRAIL (VARIES 7'-10' WIDTH)
- NATURAL TRAILS (8' DECOMPOSED GRANITE TRAIL)
- DISTRUBED SIGNIFICANT RIDGELINE
- UNDISTRUBED SIGNIFICANT RIDGELINE



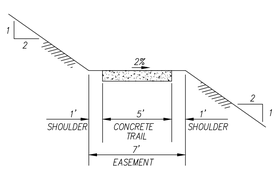
TYPICAL SECTION
N.T.S.
NORTHLAKE BLVD.
(FROM 100' NE'LY "R" ST. TO "A" ST.)
(FROM "A" ST TO "E" ST)



TYPICAL SECTION
N.T.S.
THE RIDGE ROUTE ROAD
(FROM 1200' N'LY TR. 44429 TO NORTHLAKE BLVD.)
NORTHLAKE BLVD.
(FROM RIDGE ROUTE ROAD TO 100' NE'LY "R" ST)



TYPICAL TRAIL SECTION
N.T.S.



TYPICAL TRAIL SECTION
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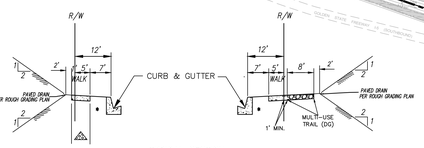
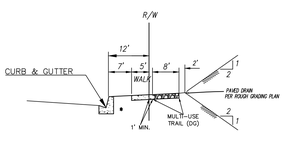
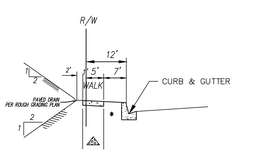


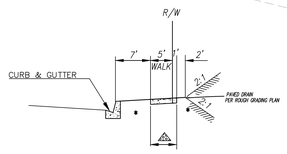
TYPICAL SECTION
N.T.S.
PORTION OF "O" ST.
"I" ST.
(FROM "A" ST. TO "J" ST.)



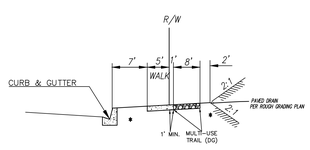
TYPICAL SECTION
N.T.S.
"I" ST.



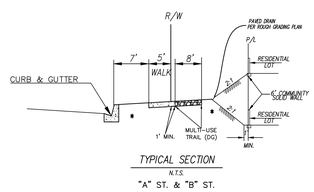
TYPICAL SECTION
N.T.S.
"D" ST., "E" ST., "G" ST., "H" ST., "J" ST.& "P" ST.



TYPICAL SECTION
N.T.S.
"F" ST. (FROM "A" ST. TO "O"ST.)



TYPICAL SECTION
N.T.S.
"O" ST. & "F" ST. (FROM "O" ST. TO "I" ST.)



TYPICAL SECTION
N.T.S.
"A" ST. & "B" ST.

NOTES:
⚠ 6' EXPANDED SIDEWALK

TRAIL MAP

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MAJOR LAND DIVISION
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LOCATED IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
6 *OO	PACIFIC LIGHT AND POWER CORPORATION	TRANSMISSION LINE	SERIAL REGISTER NO. L.A. 020100	TO REMAIN
9	THE EDISON ELECTRIC COMPANY	POLE LINES	JANUARY 29, 1906 BOOK 2580 PAGE 13 Dds.	TO REMAIN
10 *T	EDISON ELECTRIC COMPANY	ROAD	FEBRUARY 2, 1906 BOOK 2554 PAGE 237 Dds.	TO REMAIN
11	C. W. WALLER	PIPE AND POLE LINES	2/17/12 BOOK 4855-311 Dds. 10/10/23 BOOK 2985-371 O.R.	TO REMAIN
12	GENERAL PIPE LINE COMPANY OF CALIFORNIA	PIPE AND POLE LINES	6/01/12 BOOK 5010-253 Dds. 6/20/12 BOOK 5087-38 Dds.	TO REMAIN
13	PACIFIC LIGHT AND POWER CORPORATION	STEEL TOWERS	DECEMBER 19, 1912 BOOK 5320 PAGE 84 Dds.	TO REMAIN
14	PACIFIC LIGHT & POWER CORPORATION	POLE LINES	NOVEMBER 4, 1913 BOOK 5640 PAGE 81 Dds.	TO BE ABANDONED
15 *D	STATE OF CALIFORNIA	STATE HIGHWAY	10/30/14 BK 5893 PG 250 Dds.	TO BE ABANDONED
16 *PP	STATE OF CALIFORNIA	SLOPE	OCTOBER 30, 1914 BOOK 5893 PAGE 250 Dds.	TO REMAIN
18 *Y	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND ANCHORS	DECEMBER 9, 1914 BOOK 5951 PAGE 73 Dds.	TO REMAIN
19	PACIFIC LIGHT & POWER CORPORATION	POLES	JUNE 16, 1915 BOOK 6035 PAGE 337 Dds.	TO BE ABANDONED
20 *D	STATE OF CALIFORNIA	STATE HIGHWAY	05/16/16 INST.#107 BOOK 6255 PAGE 297 Dds.	TO BE ABANDONED
21 *L	STATE OF CALIFORNIA	DRAINAGE AND SLOPES	BOOK 6255 PAGE 297 Dds. BOOK 7494 PAGE 334 O.R.	TO REMAIN
23	SOUTHERN CALIFORNIA EDISON COMPANY	TOWERS, POLES AND CONDUITS	10/05/18 INST. NO. 842 BOOK 6736 PAGE 88 Dds.	TO REMAIN
24 *D	STATE OF CALIFORNIA	STATE HIGHWAY	MAY 3, 1929 BOOK 8140 PAGE 116 O.R.	TO BE ABANDONED
26 *I	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND CONDUITS	OCTOBER 2, 1929 BOOK 9300 PAGE 280 O.R.	TO REMAIN
27 *OO	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND CONDUITS	OCTOBER 2, 1929 BOOK 9314 PAGE 322 O.R.	TO REMAIN
28	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND CONDUITS	OCTOBER 2, 1929 BOOK 9329 PGS 364, 365 O.R.	TO BE ABANDONED
29 *W	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLES, PIPES, AND CONDUITS	OCTOBER 2, 1929 BOOK 9360 PAGE 305 O.R.	TO REMAIN
30 *A	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLES	OCTOBER 2, 1929 BOOK 9428 PAGE 117 O.R.	TO REMAIN
31	SOUTHERN CALIFORNIA EDISON COMPANY	PUBLIC UTILITIES	FEBRUARY 1, 1930 BOOK 9697 PAGE 210 O.R.	TO BE ABANDONED
32 *MM	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	WIRES, POLES	02/19/30 INST.#1122 BOOK 9767 PAGE 105 O.R.	TO REMAIN
33 *OO	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES	FEBRUARY 19, 1930 BOOK 9771 PAGE 117 O.R.	TO REMAIN
34	STATE OF CALIFORNIA	STATE HIGHWAY	OCTOBER 8, 1930 BOOK 10273 PAGE 360 O.R.	TO REMAIN
35 *E	STATE OF CALIFORNIA	SLOPES	OCTOBER 8, 1930 BOOK 10273 PAGE 360 O.R.	TO REMAIN
37	UNITED STATES OF AMERICA	POLES AND WIRES	01/05/31 INST.#939 BOOK 10612 PAGE 31 O.R.	TO REMAIN
38	SOUTHERN FUEL COMPANY	PIPE LINES	7/08/31 BK 10883-388 O.R. 10/11/39 BK 16940-144 O.R.	TO REMAIN
39	GENERAL PIPE LINE COMPANY OF CALIFORNIA	PIPE LINES	JUNE 17, 1935 BOOK 13447 PAGE 257 O.R.	TO REMAIN
40	SOUTHERN CALIFORNIA GAS COMPANY	PIPE LINES	MAY 19, 1937 BOOK 14942 PAGE 296 O.R.	TO REMAIN
41	SOUTHERN CALIFORNIA GAS COMPANY	PIPE LINES	NOVEMBER 26, 1937 BOOK 15491 PAGE 16 O.R.	TO REMAIN
42 *M	SOUTHERN CALIFORNIA EDISON COMPANY, LTD.	POLE LINES	AUGUST 26, 1942 BOOK 19516 PAGE 195 O.R.	TO REMAIN
43	SOUTHERN CALIFORNIA EDISON COMPANY, LTD.	POLES	NOVEMBER 1, 1945 BOOK 22495 PAGE 27 O.R.	TO REMAIN
45 *C	RICHFIELD OIL CORPORATION	PIPE LINES	MAY 16, 1950, #3204 BOOK 33139 PAGE 376 O.R.	TO REMAIN
46 *O	RICHFIELD OIL CORPORATION	PIPE LINES	MAY 18, 1950, #3189 BOOK 33167 PAGE 362 O.R.	TO BE RELOCATED
47 *O	RICHFIELD OIL CORPORATION	PIPE LINES	JUNE 2, 1950, #1963 BOOK 33288 PAGE 385 O.R.	TO REMAIN
48 *BB	RICHFIELD OIL CORPORATION	PIPE LINES	JUNE 12, 1950, #3031 BOOK 33364 PAGE 308 O.R.	TO BE RELOCATED
49	SOUTHERN CALIFORNIA EDISON COMPANY	POLES, CABLES GROUND WIRES	07/25/56 INST.#4187 BOOK 51833 PAGE 316 O.R.	TO REMAIN
50	SOUTHERN CALIFORNIA EDISON COMPANY	ELECTRICAL TRANSMISSION	OCTOBER 11, 1957 BOOK 55831 PAGE 430 O.R.	TO REMAIN
51	PACIFIC LIGHTING GAS SUPPLY COMPANY	PIPE LINES	11/25/57 INST.#841 BOOK 56127 PAGE 303 O.R.	TO REMAIN
52	PACIFIC LIGHTING GAS SUPPLY COMPANY	PIPE LINES	11/25/57 INST.#842 BOOK 56127 PAGE 309 O.R.	TO REMAIN
53	SOUTHERN CALIFORNIA EDISON COMPANY	PUBLIC UTILITIES	JANUARY 23, 1958, #280 BOOK 56422 PAGE 93 O.R.	TO REMAIN
54	PACIFIC LIGHTING GAS SUPPLY CO.	PIPE LINES	2/06/58 INST.2564 BK D-5 PG 475 O.R. 2/06/58 INST.2565 BK D-5 PG 479 O.R.	TO REMAIN
55	SOUTHERN CALIFORNIA EDISON COMPANY	PIPE LINES POLE LINES	FEBRUARY 18, 1958 BOOK D-15 PAGE 339 O.R.	TO BE RELOCATED
56	PACIFIC LIGHTING GAS SUPPLY CO.	PIPE LINES	10/08/58 INST.#1114 BOOK D-238 PAGE 799 O.R.	TO REMAIN
57	PACIFIC LIGHTING GAS SUPPLY CO.	PIPE LINES	02/20/59 INST.#327 BOOK D-372 PAGE 114 O.R.	TO BE RELOCATED
58	PACIFIC LIGHTING GAS SUPPLY CO.	ROAD	02/20/59 INST.#328 BOOK D-372 PAGE 120 O.R.	TO REMAIN
59	SOUTHERN CALIFORNIA EDISON COMPANY	ELECTRICAL TRANSMISSION	MARCH 31, 1959, #3995 BOOK D-416 PAGE 584 O.R.	TO BE RELOCATED
60	SOUTHERN CALIFORNIA EDISON COMPANY	ELECTRICAL TRANSMISSION	06/12/59 INST.#3440 BOOK D-500 PAGE 761 O.R.	TO BE RELOCATED
61	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND CONDUITS	12/03/65 INST.#4431 BOOK D-3135 PAGE 598 O.R.	TO REMAIN
62	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	CABLES, AND APPURTENANCES	12/03/65 INST.#4432 BOOK D-3135 PAGE 599 O.R.	TO REMAIN
63	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	PUBLIC UTILITIES	12/27/65 INST.#1854 BOOK D-3157 PAGE 454 O.R.	TO REMAIN
64	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	CONDUITS	12/27/65 INST.#1857 BOOK D-3157 PAGE 457 O.R.	TO REMAIN
65	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	UNDERGROUND CONDUITS	BOOK D.3174 PAGE 371 O.R. BOOK D.3195 PAGE 736 O.R.	TO REMAIN
66 *D	STATE OF CALIFORNIA	PIPE LINES	JUNE 23, 1966 BK D3344-729 INSTRUMENT NO. 561 O.R.	TO REMAIN
67	NEWHALL COUNTY WATER DISTRICT	WATER LINE	08/24/66 INST.#1924 BOOK D-3407 PAGE 943 O.R.	TO REMAIN
68 *E	STATE OF CALIFORNIA	PIPE LINES	8/31/66 BK D-3414 PG.381 INSTRUMENT NO. 566 O.R.	TO REMAIN
69 *N *J	STATE OF CALIFORNIA	PIPE, TELEPHONE OR TELEGRAPH	12/20/66 BK D-3511-140 INST.#360 O.R. 3/05/74 BK D6190 PG. 701 O.R	TO REMAIN
70	NEWHALL COUNTY WATER DISTRICT	UTILITY AND PIPE LINES	3/08/67 BK D-3579-144 INSTRUMENT NO. 2567 O.R.	TO REMAIN

* SEE NOTES HEREON

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
71	STATE OF CALIFORNIA	SLOPE	06/21/67 INST.#422 BOOK D-3678 PAGE 472 O.R.	TO REMAIN
73	STATE OF CALIFORNIA	SLOPE	10/06/67 INST.#994 BOOK D-3790 PAGE 908 O.R.	TO REMAIN
76	NEWHALL COUNTY WATER DISTRICT	ROAD, PIPE LINE, DRAINAGE	11/06/67 BK 3822-117 INSTRUMENT NO. 3575 O.R.	TO REMAIN
77	NEWHALL COUNTY WATER DISTRICT	ROAD, WATER & PIPE LINES	12/20/67 INST.#3096 BOOK D-3864 PAGE 411 O.R.	TO REMAIN
78	PACIFIC LIGHTING SERVICE AND SUPPLY COMPANY	PIPE LINES	12/27/67 INST.#483 BOOK D-3867 PAGE 971 O.R.	TO REMAIN
80	STATE OF CALIFORNIA	SLOPE	12/27/67 INST.#484 BOOK D-3867 PAGE 977 O.R.	TO REMAIN
81 *H	STATE OF CALIFORNIA	PIPE LINE	03/28/68 INST.#404 BOOK D-3952 PAGE 972 O.R.	TO BE RELOCATED
82 *Q	STATE OF CALIFORNIA	PIPE LINE	9/11/68, INST. #610 BOOK D-4127 PAGE 640 O.R.	TO REMAIN
83	MOBIL OIL CORPORATION	PIPE AND POLE LINE	OCTOBER 18, 1968 INSTRUMENT NO. 907 O.R.	TO REMAIN
84	SOUTHERN CALIFORNIA GAS COMPANY	PIPE LINES	10/18/68 BK D-4167 PG. 816 INSTRUMENT NO. 908 O.R.	TO REMAIN
85	SOUTHERN CALIFORNIA EDISON COMPANY	POLE LINES AND TOWERS	10/18/68 BK D-4167 PG. 847 INSTRUMENT NO. 909 O.R.	TO REMAIN
86 *JJ *J	STATE OF CALIFORNIA	PIPELINE	01/23/69 INST.#320 BOOK D4258 PAGE 977 O.R.	TO REMAIN
87 *AA	STATE OF CALIFORNIA	AQUEDUCT AND PIPELINE	01/27/69 INST.#358 BOOK D-4261 PAGE 520 O.R.	TO REMAIN
88	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	COMMUNICATION FACILITIES	3/21/69 BK D-4315 PG. 347 INSTRUMENT NO. 3135 O.R.	TO REMAIN
89	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	COMMUNICATION FACILITIES	3/21/69 BK D-4315 PG. 352 INSTRUMENT NO. 3136 O.R.	TO REMAIN
90	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	CABLES, WIRES AND CONDUITS	03/25/69 INST.#2523 BOOK D-4317 PAGE 902 O.R.	TO REMAIN
91 *GG	STATE OF CALIFORNIA	PIPELINES, CONDUITS	3/27/69 BK D-4319 PG. 805 INSTRUMENT NO. 302 O.R.	TO BE RELOCATED
92 *HH *J	STATE OF CALIFORNIA	PIPE LINE	3/27/69 BK D-4319 PG. 812 INSTRUMENT NO. 303 O.R.	TO REMAIN
93	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	CABLES, WIRES AND CONDUITS	06/03/69 INST.#3060 BOOK D4389 PAGE 996 O.R.	TO REMAIN
94	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	CABLES, WIRES AND CONDUITS	06/09/69 INST.#3041 BOOK D-4395 PAGE 823 O.R.	TO REMAIN
95	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	PUBLIC UTILITIES	07/14/69 INST.#2929 BOOK D-4434 PAGE 33 O.R.	TO REMAIN
96	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND CONDUITS	7/14/69 BK D-4434 PG. 39 INSTRUMENT NO. 2930 O.R.	TO BE RELOCATED
97	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	COMMUNICATION FACILITIES	5/14/70 BK M-3465 PG. 765 INSTRUMENT NO. 1734 O.R.	TO REMAIN
98	CITY OF LOS ANGELES	ROADWAY	01/11/72 INST.#2792 BOOK D-5316 PAGE 295 O.R.	TO REMAIN
99	CITY OF LOS ANGELES	ROADWAY	01/11/72 INST.#2793 BOOK D-5316 PAGE 301 O.R.	TO BE RELOCATED
100	CITY OF LOS ANGELES	ROADWAY	01/11/72 INST.#2794 BOOK D-5316 PAGE 314 O.R.	TO REMAIN
101	CITY OF LOS ANGELES	ROADWAY	01/11/72 INST.#2795 BOOK D-5316 PAGE 308 O.R.	TO REMAIN
102	CITY OF LOS ANGELES	ROADWAY	2/09/72 BK D-5348 PG. 40 INSTRUMENT NO. 2359 O.R.	TO REMAIN
103	THE CITY OF LOS ANGELES	ROAD FOR INGRESS, EGRESS	6/01/72 BK D5480 PG. 183 INSTRUMENT NO. 4488 O.R.	TO REMAIN
104	STATE OF CALIFORNIA	POLE LINES	12/24/73 BK D6119 PG. 946 INSTRUMENT NO. 273 O.R.	TO REMAIN
106	STATE OF CALIFORNIA	DRAINAGE	2/15/74 INST.#3091 BK. D-6171 PG. 742 O.R.	TO REMAIN
108	STATE OF CALIFORNIA	SLOPE	05/29/74 INST.#384 BOOK D-6287 PAGE 495 O.R.	TO REMAIN
109	STATE OF CALIFORNIA	HIGHWAY SLOPE	07/05/74 INST.#434 BOOK D6333 PAGE 930 O.R.	TO REMAIN
110	PACIFIC LIGHTING SERVICE COMPANY	GAS PIPE LINES	07/05/74 INST.#435 BOOK D6333 PAGE 933 O.R.	TO REMAIN
112	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	COMMUNICATION FACILITIES	3/11/83 INST. #83-272545 O.R. 4/23/83 INST. #83-442645 O.R.	TO REMAIN
113 *L	GEORGIA GEORGE	INGRESS AND EGRESS	APRIL 11, 1983 INST. NO.83-394248 O.R.	TO REMAIN
117	PACIFIC LIGHTING GAS SUPPLY CO.	PIPE LINES	02/07/58 INST.#2964 BOOK D-6 PAGE 787 O.R.	TO REMAIN
118	SOUTHERN CALIFORNIA EDISON COMPANY	UTILITY	07/23/59 INST.#4563 BOOK D547 PAGE 50 O.R.	TO BE RELOCATED
119	SOUTHERN CALIFORNIA EDISON COMPANY	UTILITIES	10/31/67 INST.#594 O.R.	TO REMAIN
120 *RR	SUTTER INVESTMENT CORPORATION	SLOPE PURPOSES INGRESS, EGRESS	01/08/74 INST.#1770 O.R.	TO REMAIN
121	PACIFIC LIGHTING SERVICE COMPANY	PIPE LINES	07/30/75 INST.#508 O.R.	TO REMAIN
122	STATE OF CALIFORNIA	HIGHWAY SLOPES	07/30/75 INST.#509 O.R.	TO REMAIN
124 *SS	STATE OF CALIFORNIA	SLOPE	08/21/75 INST.#2444 O.R.	TO REMAIN
125	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES	BOOK 9344 PAGE 4, O.R. 6/03/74 INST. #3880 O.R.	TO BE RELOCATED
127	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	BURIED COMMUNICATION LINE EASEMENT	06/08/72 INST.#3758 O.R. 06/03/74 INST.#3880 O.R.	TO REMAIN
128 *EE	RICHFIELD OIL CORPORATION	PIPE LINE	06/07/50 INST. #2764 BK. 33323 PG. 54 DEEDS.	TO REMAIN
129	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES, ANCHORS, CONDUITS, PIPES	10/02/29 BK. 9314 PG. 321 O.R.	TO BE RELOCATED
130	RICHFIELD OIL CORPORATION	PIPE LINES	06/29/50 BK. 33543 PG. 228 O.R.	TO BE RELOCATED
131 *J	STATE OF CALIFORNIA	PIPE LINE	11/09/66 BK. D-3476 PG. 326 O.R.	TO BE RELOCATED
132	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	COMMUNICATION FACILITIES	01/17/69 INST.#3276 O.R.	TO REMAIN
133	CASTAIC UNIFIED SCHOOL DISTRICT	ROAD, INGRESS, EGRESS STORM DRAINS, GRADING SLOPES, UTILITIES	03/18/03 INST.#03-753979 OFFICIAL RECORDS.	TO REMAIN
194	THE COUNTY OF LOS ANGELES	PERMANENT DEBRIS BASIN	OCTOBER 05, 2017 INSTRUMENT NO. 20171143994	TO REMAIN
195	THE COUNTY OF LOS ANGELES	PERMANENT ROAD ACCESS AND WATER QUALITY BASIN	OCTOBER 05, 2017 INSTRUMENT NO. 20171143995	TO REMAIN
196	THE COUNTY OF LOS ANGELES	WATER QUALITY BASIN	OCTOBER 05, 2017 INSTRUMENT NO. 20171143996	TO REMAIN
197	THE COUNTY OF LOS ANGELES	OFFSITE GRADING	OCTOBER 05, 2017 INSTRUMENT NO. 20171143997	TO REMAIN
198	THE COUNTY OF LOS ANGELES	OFFSITE GRADING	OCTOBER 05, 2017 INSTRUMENT NO. 20171143998	TO REMAIN
199	THE COUNTY OF LOS ANGELES	OFFSITE GRADING	OCTOBER 05, 2017 INSTRUMENT NO. 20171143999	TO REMAIN
200	THE COUNTY OF LOS ANGELES	OFFSITE GRADING	OCTOBER 05, 2017 INSTRUMENT NO. 20171144001	TO REMAIN

* SEE NOTES HEREON

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
201	THE COUNTY OF LOS ANGELES	PERMANENT ROADWAY	OCTOBER 05, 2017 INSTRUMENT NO. 20171144002	TO REMAIN
202	THE COUNTY OF LOS ANGELES	PERMANENT ROADWAY	OCTOBER 05, 2017 INSTRUMENT NO. 20171144003	TO REMAIN
203	THE COUNTY OF LOS ANGELES	OFFSITE GRADING	OCTOBER 05, 2017 INSTRUMENT NO. 20171144004	TO REMAIN
204	THE COUNTY OF LOS ANGELES	PERMANENT ROADWAY	OCTOBER 05, 2017 INSTRUMENT NO. 20171144005	TO REMAIN
205	THE COUNTY OF LOS ANGELES	PERMANENT DEBRIS BASIN	OCTOBER 05, 2017 INSTRUMENT NO. 20171144006	TO REMAIN

* SEE NOTES HEREON

THE FOLLOWING ITEMS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023, AFFECT THE SUBJECT PROPERTY: (NOT PLOTTED)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
17	STATE OF CALIFORNIA	WAIVER OF CLAIMS	OCTOBER 30, 1914 BOOK 5893 PAGE 250 Dds.	TO REMAIN
22	STATE OF CALIFORNIA	WAIVER OF CLAIMS	5/16/16 BK 6255-297 Dds. 6/04/29 BK 7494-334 O.R.	TO REMAIN
25	STATE OF CALIFORNIA	WAIVER OF CLAIMS	MAY 3, 1929 BOOK 8140 PAGE 116 O.R.	TO REMAIN
36	STATE OF CALIFORNIA	WAIVER OF CLAIMS	OCTOBER 8, 1930 BOOK 10273 PAGE 360 O.R.	TO REMAIN
44	STATE OF CALIFORNIA	WAIVER OF CLAIMS	OCTOBER 31, 1947 BOOK 25630 PAGE 260 O.R.	TO REMAIN
72 *P	STATE OF CALIFORNIA	RELINQUISHED FREEWAY ACCESS	6/21/67 INST.422 BK D3678 PG 473 O.R. 5/29/74 INST.384 BK D6287 PG 495 O.R.	TO REMAIN
74	STATE OF CALIFORNIA	RELINQUISHED FREEWAY ACCESS	10/06/67 INST.#994 BOOK D-3790 PAGE 908 O.R.	TO REMAIN
75	STATE OF CALIFORNIA	WAIVER OF CLAIMS	10/06/67 INST.#994 BOOK D-3790 PAGE 908 O.R.	TO REMAIN
79	STATE OF CALIFORNIA	RELINQUISHED FREEWAY ACCESS	12/27/67 INST.#484 BOOK D-3867 PAGE 977 O.R.	TO REMAIN
105 *S	STATE OF CALIFORNIA	RELINQUISHED FREEWAY ACCESS	12/24/73 BK D6119 PG. 946 INSTRUMENT NO. 273 O.R.	TO REMAIN
107 *K	STATE OF CALIFORNIA	NO RIGHT OF ACCESS	2/15/74 INST. #3091 BK. D-6171 PG. 742 O.R.	TO REMAIN
111	COUNTY OF LOS ANGELES DEPT. OF REGIONAL PLANNING	CERTIFICATE OF COMPLIANCE	JULY 28, 1982 INST. NO.82-757295 O.R.	TO REMAIN
114	COUNTY OF LOS ANGELES DEPT. OF REGIONAL PLANNING	BRIDGE AND THOROUGHFARE	APRIL 1, 1992 INST. NO.92-560916 O.R.	TO REMAIN
115	COOK RANCH ASSOCIATES & CASTAIC UNION SCHOOL DISTRICT	MEMORANDUM OF AGREEMENT	9/14/92 INST. #92-1701972 O.R.	TO REMAIN
116	COUNTY OF LOS ANGELES & COOK RANCH ASSOCIATES	DEVELOPMENT AGREEMENT	5/28/93 INST. #93-1023682 O.R.	TO REMAIN
123	STATE OF CALIFORNIA	SEVERED HIGHWAY ACCESS	08/21/75 INST.#2444 O.R.	TO REMAIN
126 *TT	SOUTHERN CALIFORNIA TELEPHONE COMPANY	BRUSH REMOVAL	BOOK 18631 PAGE 2, O.R. 06/03/74 INST#3880 O.R.	TO REMAIN
134	NORTHLAKE LLC, CASTAIC CLAY MANUFACTURING CO. & MIKE MALOR	PROHIBIT RESIDENTIAL CONSTRUCTION WITHIN LOT 293	6/24/03 INST. #03-1160727 O.R.	TO REMAIN

* SEE NOTES HEREON

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 (SAID EASEMENT AFFECTS PARCEL 54)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
153	NADINE B. JOST ADELE TRUITT	INGRESS, EGRESS & INCIDENTAL	8/27/65 INST. NO. 5414 O.R.	TO REMAIN

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 (SAID EASEMENTS PER REPORT AFFECT PARCELS 7, 18-A, 60, 61 & 66.)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
156	MILTON B. EPSTEIN LILLIAN EPSTEIN	INGRESS, EGRESS & INCIDENTAL	3/25/66 INST. NO. 2321 O.R.	TO REMAIN
158	WILLIAM P. SCHIMMEL & NANCI SCHIMMEL	INGRESS, EGRESS & INCIDENTAL	3/9/67 INST. NO. 1253 O.R.	TO REMAIN
159	PACIFIC TELEPHONE & TELEGRAPH COMPANY	PUBLIC UTILITIES & INCIDENTAL	6/26/73 INST. NO. 2736 O.R.	TO REMAIN
163	MARK C. CRAVENS	INGRESS, EGRESS & INCIDENTAL	3/27/64 INST. NO. 1898 O.R.	TO REMAIN
164	PACIFIC TELEPHONE & TELEGRAPH COMPANY	PUBLIC UTILITIES & INCIDENTAL	4/23/69 INST. NO. 2941 O.R.	TO REMAIN

THE FOLLOWING ITEM BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 AFFECTS PARCELS 60, 61 AND 66 (NOT PLOTTABLE)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
161	PACIFIC LIGHT AND POWER	TELEPHONE LINES	9/13/34 BK. 12982 PG. 174 O.R.	TO REMAIN

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 (SAID EASEMENTS PER REPORT AFFECT PARCELS 16, 35, 49 AND 68.)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
165	SOUTHERN CALIFORNIA EDISON	POLES, CONDUITS & INCIDENTAL	10/05/18 INST. NO. 842 O.R.	TO REMAIN
174	JOHN & TERRY SCHNEIDER	INGRESS, EGRESS & INCIDENTAL	4/11/83 INST. NO. 83-394249 O.R.	TO REMAIN

THE FOLLOWING EASEMENT ITEM BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 AFFECTS PARCEL 68 (NOT PLOTTABLE) (INDETERMINATE IN NATURE)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
171 *OOO	PACIFIC LIGHTING SERVICE COMPANY	PIPE LINES	1/21/75 INST. NO. 2685 O.R.	TO REMAIN

* SEE NOTES HEREON

THE FOLLOWING ITEMS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 AFFECTS PARCEL 68 (NOT PLOTTED)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
171	PACIFIC LIGHTING SERVICE COMPANY	NO ABUTTERS RIGHTS	1/21/75 INST. NO. 2685 O.R.	TO REMAIN
172	GEORGIA GEORGE	CERTIFICATE OF COMPLIANCE	7/28/82 INST. NO. 82-757296 O.R.	TO REMAIN

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 (SAID EASEMENTS PER REPORT AFFECT PARCEL 69.)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
182 *MMM	MIDWAY GAS COMPANY	PIPE LINE & INCIDENTAL	BK. 7444 PG. 247 Dds.	TO REMAIN
186 *UUU	INDUSTRIAL FUEL SUPPLY A. CORPORATION	PIPE LINE & INCIDENTAL	BK. 11010 PG. 138 O.R. BK. 16970 PG. 39 O.R.	TO REMAIN
187 *PPP	GENERAL PIPELINE COMPANY OF CALIFORNIA	PIPE LINE & INCIDENTAL	BK. 13454 PG. 235 O.R.	TO REMAIN
188 *QQQ	GENERAL PIPELINE COMPANY OF CALIFORNIA	PRIVATE ROAD	BK. 13492 PG. 142 O.R.	TO REMAIN
190 *RRR	GENERAL PETROLEUM CORPORATION OF CALIFORNIA	TELEPHONE, TELEGRAPH POLES & INCIDENTAL	5/08/41 BK. 18368 PG. 348 O.R.	TO REMAIN

* SEE NOTES HEREON

THE FOLLOWING ITEM BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 AFFECTS PARCEL 69 (NOT PLOTTABLE)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
191	CARLOS MARTINEZ	DISCHARGE OF CLAIMS	6/28/43 BK. 20055 PG. 333 O.R.	TO REMAIN

THE FOLLOWING ITEM BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 AFFECT THE SUBJECT PROPERTY AND IS NOT PLOTTED FOR THE THE REASON LISTED BELOW THE ITEM:

ITEM 7.) RESERVATIONS, EXCEPTIONS AND PROVISIONS INCLUDING THE RIGHT OF THE UNITED STATES OF AMERICA, ITS PERMITTEE OR LICENSEE, TO ENTER UPON, OCCUPY AND USE ANY PART OR ALL THAT PORTION OF SAID LAND DESCRIBED THEREIN, LYING WITHIN A STRIP OF LAND 264 FEET IN WIDTH BEING THE TRANSMISSION LINE RIGHT OF WAY OF THE PACIFIC LIGHT AND POWER COMPANY FOR THE PURPOSES PROVIDED IN THE ACT OF JUNE 10, 1920 (41 STAT., 1063) AND SUBJECT TO THE CONDITIONS AND LIMITATIONS OF SECTION 24 OF SAID ACT, AS SET FORTH IN PATENT NO. 910117, ISSUED JUNE 26, 1923, TO FRANK POWELL, AND IN OTHER PATENTS AS DISCLOSED BY THE RECORDS OF THE BUREAU OF LAND MANAGEMENT IN SACRAMENTO, CALIFORNIA.

SAID PATENTS ALSO RECITE THE FOLLOWING:

SUBJECT TO ANY VESTED AND ACCRUED WATER RIGHTS FOR MINING, AGRICULTURAL, MANUFACTURING, OR OTHER PURPOSES AND RIGHTS TO DITCHES AND RESERVOIRS USED IN CONNECTION WITH SUCH WATER RIGHTS, AS MAY BE RECOGNIZED AND ACKNOWLEDGED BY THE LOCAL CUSTOMS, LAWS AND DECISIONS OF THE COURTS, AND THE RESERVATION FROM THE LANDS HEREBY GRANTED, A RIGHT OF WAY HEREON FOR DITCHES OR CANALS CONSTRUCTED BY THE AUTHORITY OF THE UNITED STATES.

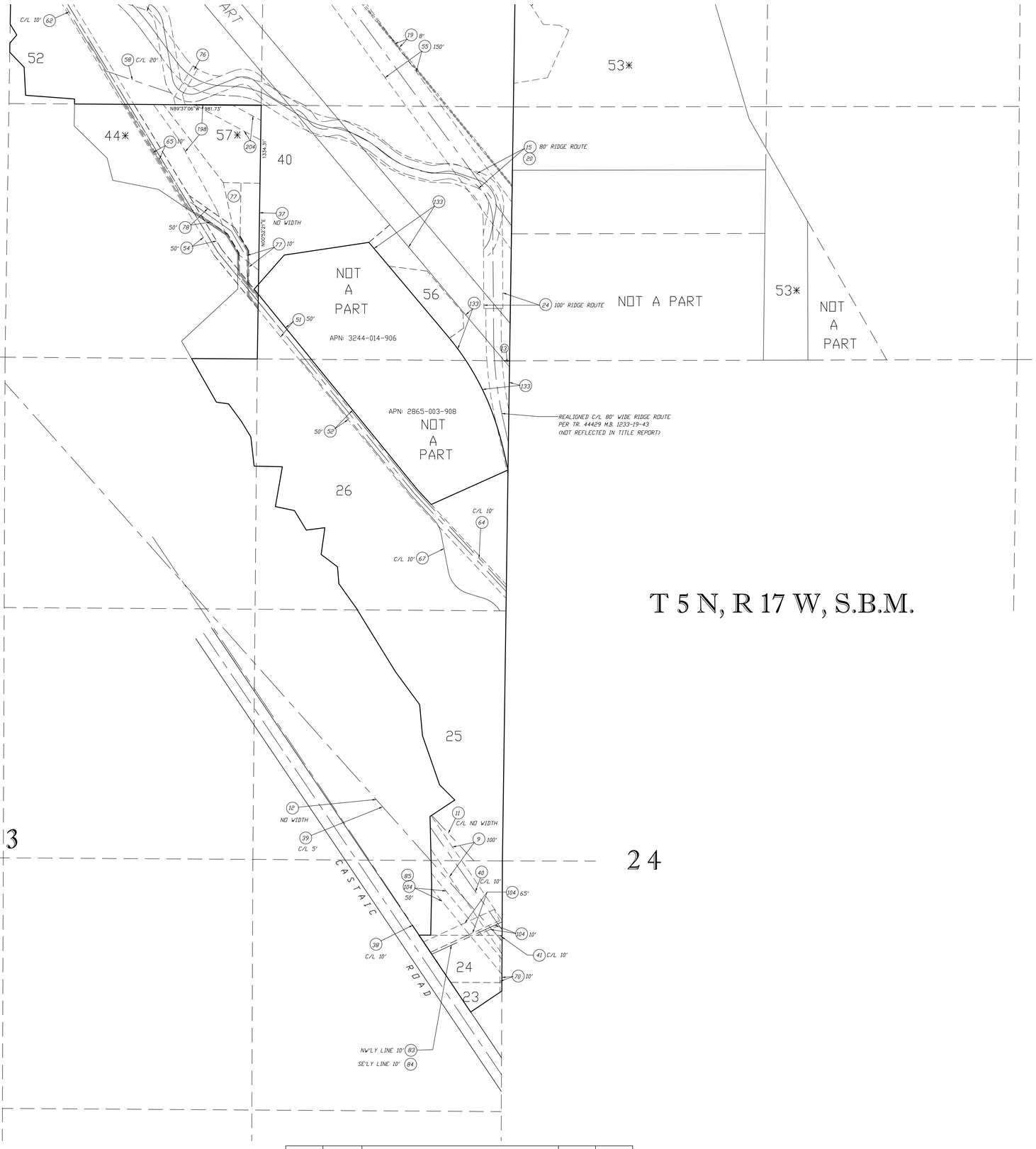
SAID LAND WAS WITHDRAWN FOR POWER SITE RESERVE NO. 489 FOR THE PURPOSES PROVIDED IN THE FEDERAL POWER ACT OF JUNE 10, 1920 (41 STAT. 1063) AS AMENDED, SUBJECT TO THE CONDITIONS AND LIMITATION OF SECTION 24, OF SAID ACT, AS AMENDED, AS DISCLOSED BY THE RECORDS OF THE BUREAU OF LAND MANAGEMENT IN SACRAMENTO, CALIFORNIA.

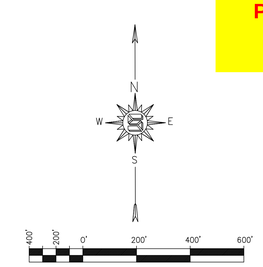
AFFECTS: PARCELS 17, 19, 20, 31, 37, 39, 40, 43 AND 56

(LOCATION OF SAID 264 FOOT WIDE STRIP IS INDETERM

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR
PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

SEE SHEET 14





Scale: 1"= 200'

T 5 N, R 17 W, S.B.M.

EASEMENTS SHOWN HEREON ARE BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023.

SEE SHEET 8 FOR EASEMENT TABLES.

NOTE: PARCELS FOLLOWED BY AN ASTERISK (46*) INDICATES SAID PARCEL IS NOT PART OF THIS SUBDIVISION BUT IS UNDER SAME OWNERSHIP.

NOTE: BOUNDARY LAYOUT BASED ON CONCEPTUAL LAND USE PLAN PROJECT WCP-01-0 DATED 01-08-2014.

PARCEL NUMBERS BASED ON FIDELITY NATIONAL TITLE COMPNAY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 6,

P.T.R. PARCEL NO	A.P.N.
1*	3247-010-049 and 3247-010-050
2*	3244-003-018
3	3247-040-008 (PORTION)
4	3247-040-008 (PORTION)
5	3247-040-008 (PORTION)
6	3247-040-008 (PORTION)
7	3247-040-013 (PORTION)
8	3247-040-009 (PORTION)
9	3247-040-009 (PORTION)
10	3247-040-009 (PORTION)
11	3247-040-009 (PORTION)
12	3247-040-013 (PORTION)
13	3247-040-013 (PORTION)
14	3247-040-013 (PORTION)
15	3244-012-054 & 059
16	3244-012-057
17	3244-012-013
18	3247-041-008
19	3247-041-020
20	3247-041-021
21	3247-041-023
22	3247-041-022
23	2865-036-003
24	2865-036-002
25	2865-036-001 AND 2865-003-013
26	2865-003-035
27	3244-004-051
28	3244-004-053
29	3244-012-049
30	3244-012-048
31	3244-012-046
32	3244-012-058
33	3244-004-052
34	3244-004-024
35	3244-013-001
36	3244-012-045
37	3247-017-019
38	3244-012-050
39	3244-014-015
40	3244-014-067 & 068
41	3247-041-018
42	3247-041-015
43	3244-014-053
44*	3244-014-044
45*	3244-014-038
46*	3247-041-012
47*	3244-013-004
48*	3244-013-002
49*	3244-013-005
50*	3244-013-009
51*	3244-013-010
52	3244-014-050
53*	3244-015-018
54*	3244-014-022
55*	3244-014-021
56	3244-014-062
57*	3244-014-063
60	3247-041-007
61	3247-041-009
66	3247-041-010
68*	3244-012-056
69*	3244-014-045
70**	3244-012-904
71**	3244-004-906
72*	3244-014-902
73*	3247-017-900

*ASTERISK INDICATES PARCEL IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP OR OFFSITE IMPROVEMENT

**ASTERISK INDICATES PARCEL TO BE AQUIRED

NOTE: NORTHEASTERLY PORTION OF PARCEL 32 IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP

7	08-12-2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP	TH	--
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	TH	--
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016	YL	--
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016	YL	--
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	--
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	--
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	--
	DATE	REVISION	BY	APP

SCALE: 1"=200' | CH'D BY: | APPROVED BY: | DATE: 08/12/2025 | W.O. NO. 5090-033-35 | SHEET 13 OF 16

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER MARK R. SIKAND No. 35453 Exp. 09-30-25 CIVIL STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

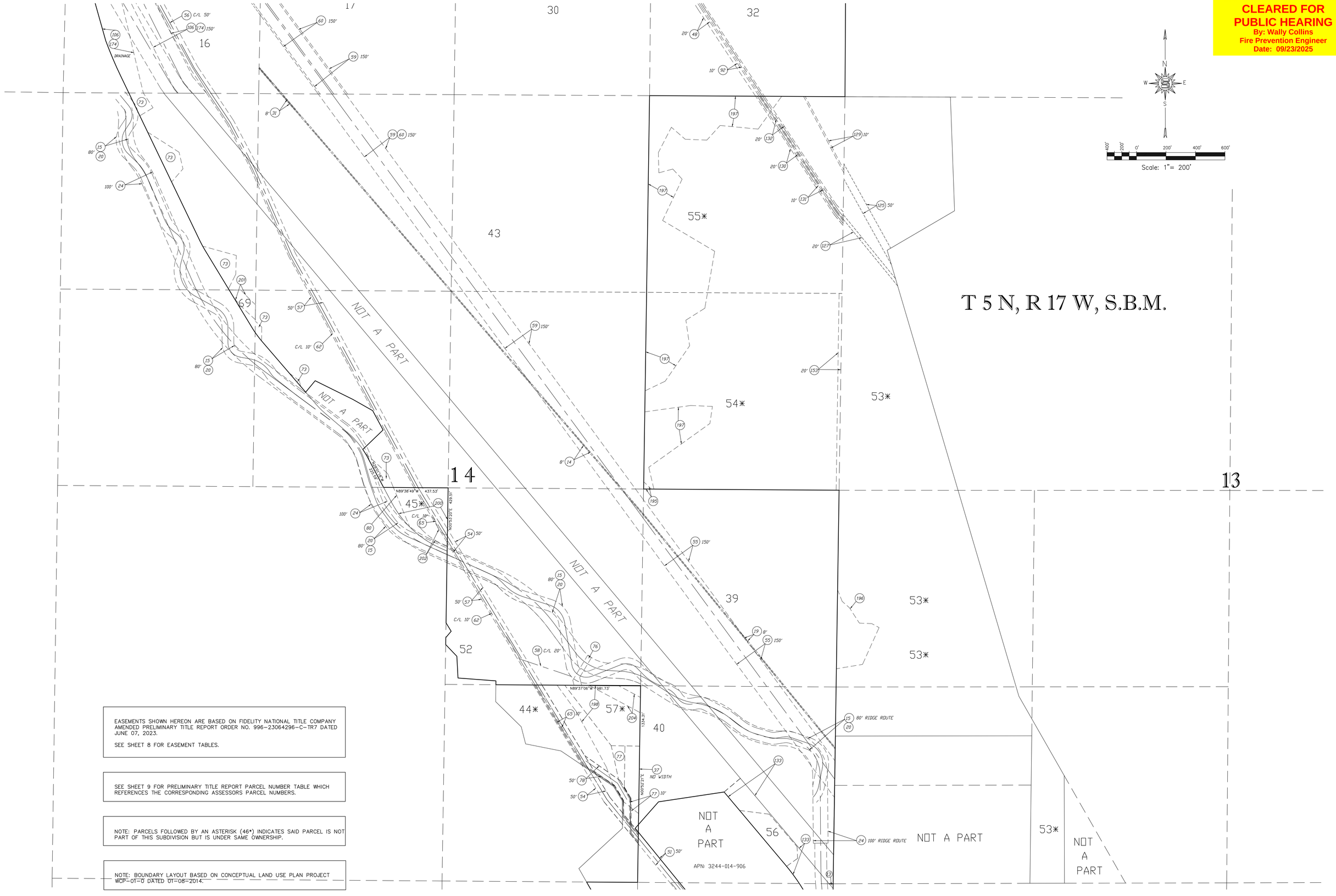
SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

EASEMENT MAP

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR
PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

SEE SHEET 15



EASEMENTS SHOWN HEREON ARE BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023.

SEE SHEET 8 FOR EASEMENT TABLES.

SEE SHEET 9 FOR PRELIMINARY TITLE REPORT PARCEL NUMBER TABLE WHICH REFERENCES THE CORRESPONDING ASSESSORS PARCEL NUMBERS.

NOTE: PARCELS FOLLOWED BY AN ASTERISK (46*) INDICATES SAID PARCEL IS NOT PART OF THIS SUBDIVISION BUT IS UNDER SAME OWNERSHIP.

NOTE: BOUNDARY LAYOUT BASED ON CONCEPTUAL LAND USE PLAN PROJECT WCP-01-0 DATED 01-08-2014.

SEE SHEET 13

EASEMENT MAP

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1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015		YL	–
	DATE	REVISION		BY	APP
SCALE: 1"=200'	CHK'D BY:	APPROVED BY:	DATE: 08/12/2025	W.O. NO. 5090-033-35	SHEET 14 OF 16

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MAJOR LAND DIVISION
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COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

SEE SHEET 16

T 5 N, R 17 W, S.B.M.

NOT A PART

RIDGE ROUTE

Scale: 1"= 200'

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NOT A PART APN: 3244-012-904

SEE SHEET 14

EASEMENT MAP

7	08-12-2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP	TH	–
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SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=200'			08/12/2025	5090-033-35	15	16

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
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MAJOR LAND DIVISION
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COUNTY OF LOS ANGELES
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CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

N
W E
S

400' 200' 0' 200' 400' 600'
Scale: 1"= 200'

T 5 N, R 17 W, S.B.M.

30' 18-A, 62 (ESMT)
45 20'
89
10' 68
5 3 10 8
12 14 13 7
30' 156 163
88
4 6 11 9
68 10'
30' 62 (ESMT)
30' 62 (ESMT)
30' 158 163
158 156 20'
20' 159
62 60' (ESMT)
67 30' (ESMT)
18 61
20' 45
164 20'
164 VARIES
159 20'
60' 63 (ESMT)
30' 65 (ESMT)
66
158 20'
64 30' (ESMT)
100' 34
42 60 66
3
34
RIDGE
41
10' 82
C/L 20' 90
47 20'
90 NE'LY LINE
22
C/L 20' 112
C/L 20' 90
C/L 20' 112
C/L 20' 90
NOT A PART
APN: 3244-004-906
21
ROUTE
108
20
48 20'
97
10' 87
28
63 C/L 10'
19
20' 48
27
46*
71
199
205
20' 93
86 10'
96 20'
20' 48
199
194
98 50'
2
98 50'
350' 59 (ESMT)
33
50' 98
98 50'
98 50'
27

SEE SHEET 15

EASEMENT MAP

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SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET OF
1"=200'			08/12/2025	5090-033-35	16 16

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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

LOS ANGELES COUNTY
DEPARTMENT OF PARKS AND RECREATION

PARK OBLIGATION REPORT

Tentative Map # **73336**	DRP Map Date: **08/20/2025**	SCM Date:	Report Date: **09/24/2025**
Park Planning Area # **35B**	CSD: **CASTAIC AREA CSD**		Map Type: **Tentative Map - Tract**

Total Units **2,295** = Proposed Units **2,295** + Exempt Units **0**

Park land obligation in acres or in-lieu fees:

ACRES:	**16.23**
IN-LIEU FEES:	**$4,421,514**

Sections 21.24.340, 21.24.350, 21.28.120, 21.28.130, and 21.28.140, the County of Los Angeles Code, Title 21, Subdivision Ordinance provide that the County will determine whether the development's park obligation is to be met by:

1) the dedication of land for public or private park purpose or,
2) the payment of in-lieu fees or,
3) the provision of amenities or any combination of the above.

The specific determination of how the park obligation will be satisfied will be based on the conditions of approval by the advisory agency as recommended by the Department of Parks and Recreation.

The Representative Land Value (RLVs) in Los Angeles County Code (LACC) Section 21.28.140 are used to calculate park fees and are adjusted annually, based on changes in the Consumer Price Index. The new RLVs become effective July 1st of each year and may apply to this subdivision map if first advertised for hearing before either a hearing officer or the Regional Planning Commission on or after July 1st pursuant to LACC Section 21.28.140, subsection 3. Accordingly, the park fee in this report is subject to change depending upon when the subdivision is first advertised for public hearing.

The park obligation for this development will be met by:

The dedication of 16.3 acres for public park.
Conditions of approval attached to report.

Trails:

See also attached Trail Report

Comments:

The map was approved April 2, 2019 and will continue to adhere to the attached conditions of approval

For further information or to schedule an appointment to make an in-lieu fee payment:
Please contact Loretta Quach at lquach@parks.lacounty.gov or (626) 588-5305
Department of Parks and Recreation, 1000 S. Fremont Avenue, Building A-9 West, Alhambra, California 91803.

By: Loretta Quach

Loretta Quach, Departmental Facilities Planner I

LOS ANGELES COUNTY
DEPARTMENT OF PARKS AND RECREATION

PARK OBLIGATION WORKSHEET

Tentative Map # **73336** DRP Map Date: **08/20/2025** SCM Date: Report Date: **09/24/2025**
Park Planning Area # **35B** CSD: **CASTAIC AREA CSD** Map Type: **Tentative Map - Tract**

The formula for calculating the acreage obligation and or in-lieu fee is as follows:

(P)eople x (0.0030) Ratio x (U)nits = (X) acres obligation
(X) acres obligation x RLV/Acre = In-Lieu Base Fee

Where P = Estimate of number of People per dwelling unit according to the type of dwelling unit as determined by the U.S. Census
Ratio = The subdivision ordinance provides a ratio of 3.0 acres of park land for each 1,000 people generated by the development. This ratio is calculated as "0.0030" in the formula.
U = Total approved number of Dwelling Units.
X = Local park space obligation expressed in terms of acres.
RLV/Acre = Representative Land Value per Acre by Park Planning Area.

Total Units **2,295** = Proposed Units **2,295** + Exempt Units **0**

Park Planning Area = **35B**

Type of dwelling unit	People *	Ratio 3.0 Acres/ 1000 People	Number of Units	Acre Obligation
Detached S.F. Units	**3.35**	**0.0030**	**288**	**2.89**
M.F. < 5 Units	**2.52**	**0.0030**	**803**	**6.07**
M.F. >= 5 Units	**2.01**	**0.0030**	**1,204**	**7.26**
Mobile Units	**3.22**	**0.0030**	**0**	**0.00**
Exempt Units			**0**	**0.00**
TOTAL			**2,295**	**16.23**

Ratio	Acre Obligation	RLV / Acre	In-Lieu Base Fee
@ (0.0030)	16.23	$272,509	**$4,421,514**

Lot #	Provided Space	Provided Acres	Credit (%)	Acre Credit
0	public park	16.30	100.00%	16.30
			Total Provided Acre Credit:	**16.30**

Acre Obligation	Private and Crdt.	Net Obligation	RLV / Acre	**In-Lieu Fee Due**
16.23	16.30	-0.07	$272,509	**$0**

COUNTY OF LOS ANGELES
DEPARTMENT OF PARKS AND RECREATION
"Parks Make Life Better!"
John Wicker, Director
Norma E. Garcia, Chief Deputy Director

October 19, 2017

Mr. Jodie Sackett
Senior Regional Planning Assistant
Department of Regional Planning
320 West Temple Street, Room 1346
Los Angeles, California 90012

Dear Mr. Sackett:

VESTING TENTATIVE TRACT MAP 073336 (NORTHLAKE)
PARK AND TRAIL CONDITIONS OF MAP APPROVAL
REGIONAL PLANNING MAP DATED SEPTEMBER 27, 2017
SUBDIVISION COMMITTEE MEETING ON OCTOBER 19, 2017

This letter details the Department of Parks and Recreation (Department)'s park and trail conditions of map approval for the above map

PARK CONDITIONS

The proposed project is a residential subdivision located within the Northlake Specific Plan area. As shown in the attached Park Obligation Report, the basic Quimby park land obligation for this proposed residential subdivision is 17.51 net acres (maximum slope 3 percent). For details, see attached Park Obligation Report and Worksheet. The Subdivider is proposing to include one public park as part of the subdivision: Lot 319 (16.3 net acres). The Department recommends that the Subdivider develop and then convey to the County the public park provided that the site is deemed acceptable after a review of the required submittals listed below. The Subdivider is responsible for the total development costs of the public park. For detailed requirements for pre-public hearing submittals referenced in the following conditions, please refer to the Public Park Checklist of Required Submittals attached to this report.

1. Subdivider shall convey to the County a developed, 16.3 net-acre Public Park ("the Public Park"), shown on Lot 319 within the Vesting Tract Map No. 73336.

2. The Public Park shall contain the following improvements which are shown in the park schematic design approved on August 8, 2016: ADA compliant parking lot; restroom/office building; multi-use grass areas including two (2) softball fields with seating; one (1) full basketball court, drinking fountains; a 10-ft wide ADA compliant walking path; park benches; two (2) group picnic areas; five (5) individual picnic areas; Children's Play Areas to accommodate ages 2-5 and ages

5-11; maintenance yard; trash enclosure; landscaping, lighting, irrigation and park signage.

3. The following off-site improvements to the public park shall be provided without receiving Quimby credit: full street improvements and utilities/utility connections, including, but not limited to curbs, gutters, relocation of existing public utility facilities, street paving, traffic control devices, public trees, public streets and sidewalks. Utility types, sizes, and locations shall be to the satisfaction of the Department. Utilities shall include water meter and utility lines (electricity, gas, sewer, and telephone).

4. Prior to the Department clearing the first final (unit) map containing housing, enter into a Park Development Agreement (PDA) and post Faithful Performance and Labor and Materials bonds with the Department to cover design and construction of the public park in accordance with updated costs estimates for the park. The PDA shall be substantially similar in form and content to the PDA approved by the Board of Supervisors on November 15, 2011, and the content of the bonds shall be substantially similar in form and content to the bonds used by the Los Angeles County Department of Public Works (DPW). Bonds may need to be updated prior to construction commencement if contracted construction costs change. For more information, please refer to http://file.lacounty.gov/bos/supdocs/64684.pdf.

5. Prior to the Department clearing the first final (unit) map containing housing, and for the public park, Subdivider shall submit a critical path method (CPM) schedule ("Park Delivery Schedule"). Said schedule shall include design development submittals and submittals required for the various stages of construction document development, permits and approvals, park construction commencement and completion dates, ALTA title policy, deed preparation and review, and deed recordation. The Initial Park Delivery Schedule shall serve as the baseline for all activities. Subdivider shall update the Park Delivery Schedule on a monthly basis to show actual progress compared to planned progress and submit the updates to the Department on the first County business day of each month. If as a result of these monthly schedule updates it appears that the Park Delivery Schedule does not comply with the critical path, the Subdivider shall submit a Recovery Schedule as a revision to the Park Delivery Schedule showing how all work will be completed within the period for park delivery. In the event Subdivider fails to comply with this condition, the Department shall give written notice to Subdivider requesting submittal of the delinquent schedule update. Notice shall be deemed given when deposited in the U.S. Post Office or reliable over-night courier; postage prepaid, addressed to Subdivider, or by personal delivery to Subdivider's relevant address set forth in the PDA. If the requested update is not received within thirty (30) days after such notice is given, the Department will withhold further clearance of unit maps until the delinquent schedule update is received.

6. Subdivider shall submit park plans and specifications to the Department for review and approval during the design development stage (100 percent), fifty percent (50 percent), seventy five percent (75 percent), ninety percent (90 percent), and one hundred percent (100 percent) stages of construction document development. Specifications shall be in Construction Specification Institute (CSI) 8 ½-inch by 11-inch book format. Specifications and a grading plan (scale 1 inch = 40 feet or as required by the Department) shall be submitted to the Department concurrent with the final grading plan submittal to DPW. The respective stage of each submittal shall be clearly labeled on the drawings and specifications. Plan submittals shall be made by giving the Department three (3) sets of drawings and a CD-ROM containing the drawings in AutoCAD format. The Department shall have twenty-one (21) County business days from receipt of any design/construction document submittal to review and approve it. If the Department does not respond within said time period, the submittal shall be deemed approved by the Department. Any corrections or changes made by the Department during review of one stage shall be incorporated into a revision of the current drawings and specifications and resubmitted for the Department's approval of the next said stage unless it is determined that the change is significant whereas the construction document would be resubmitted prior to permission by Department for Subdivider to proceed with the next stage. The public park shall be developed in accordance with park improvement plans approved by the Department, using standard construction activities and responsible contractors licensed by the State of California to perform this type of work. Sole responsibility for completion of the park improvements, and payment of all costs incurred, lies with the Subdivider.

7. Subdivider shall obtain all applicable jurisdictional approvals, comply with all applicable federal, state, and local laws, rules, codes, and regulations; obtain, coordinate and pay for all studies, permits, fees and agency inspections required to design and build the public park; provide one (1) copy of all studies, permits, inspection reports, and written approvals to the Department's representative; provide the County with certification that the playground(s) constructed in the public park meet American Society for Testing and Materials (ASTM) standards, United States Consumer Product Safety Commission (USCPSC) standards, and all State of California accessibility playground guidelines. Playground certification shall be met by providing a satisfactory report from a third party independent auditor that holds a current certification as a Playground Safety Inspector in good standing by the National Playground Safety Institute.

8. Subdivider shall designate and identify a project manager who will oversee design and construction of the public park. The project manager shall communicate by providing written documentation via facsimile or mail to County's representative and abide by County's requirements and direction to ensure acceptable park completion; provide the County with reasonable access to the public park site and the park improvements for inspection purposes and at a minimum initiate and

coordinate the following inspections and approvals during the course of construction with not less than two County business days advanced notice of any request for inspection or approval: (1) contractor orientation/pre-construction meeting; (2) construction staking and layout; (3) progress/installation inspections to be scheduled on a weekly basis or as required to insure conformance with construction documents; (4) irrigation mainline and equipment layout; (5) irrigation pressure test; (6) irrigation coverage test; (7) weed abatement after abatement cycle, to review degree of kill; (8) plant material approval; (9) plant material/Hydroseed/pre-maintenance inspection; (10) substantial completion and commencement of maintenance period; (11) final walk through and acceptance. Continued work without inspection and approval shall make Subdivider and its subcontractors solely responsible for any and all expenses incurred for required changes or modifications. County reserves the right to reject all work not approved in conformance with this condition.

9. Subdivider shall provide the Department with written Notice of Construction Commencement for the public park site. Construction Commencement is defined as when the Subdivider starts installing utilities for the public park. The Construction Phase is defined as the period of time from said notice to the date the Department issues its Notice of Acceptance of Completed Park Improvements, inclusive of the 90-day plant establishment period. Upon completing park construction, and obtaining final sign off from DPW on all code compliance issues, notify the Department in writing by submitting a Notice of Completion of Park Construction. Within thirty (30) days after receipt of said notice, Department shall inspect the park and reasonably determine whether or not the park improvements have been constructed in accordance with the construction documents, and to a level of quality and workmanship for the Department to issue its Notice of Acceptance of Completed Park Improvements. If park construction is unacceptable, within fifteen (15) County business days after inspection, Department shall provide Subdivider with a list of items that need to be corrected, after receipt of said list, in order for the Department to issue its Notice of Acceptance of Completed Park Improvements, or issuance of said notice will be delayed until the items on the list are corrected.

10. Upon Department's Notice of Acceptance of Completed Park Improvements, Subdivider shall provide the Department with two (2) sets of record drawings, maintenance manuals, and irrigation controller charts, and contact information for utility companies and utility account codes in order for the Department to request timely transfer of utilities serving the public park. These documents shall also be submitted on a CD-ROM with the drawings in AutoCAD format.

11. Subdivider shall convey the public park by recordable grant deed showing the fee vested with the County of Los Angeles, and free of all encumbrances except those not interfering with the use of the property for park or recreational purposes.

Subdivider's designated title company shall provide the County with an ALTA title policy and survey and shall record the park deed simultaneously to County's acceptance of the park improvements, as evidenced by the County's issuance of a Certificate of Acceptance for the public park, and shall deliver the recorded deed to the Chief Executive Office - Real Estate Division, Property Management Section, 222 South Hill Street, Third Floor, Los Angeles, CA 90012.

12. Any major change proposed by the Subdivider to the public park's size (not more than a variance of two (2) acres), shape, location, or terrain as shown on the approved tentative tract or parcel map, or to the schematic design approved by the Department's Design Review Committee, shall be deemed a revision of the tentative tract or parcel map and shall require the filing of a revised map, as described in Los Angeles County Code Section 21.62.030.

TRAIL CONDITIONS

The Department has completed the trail review of Vesting Tentative Tract Map No. 073336 - Northlake. The proposed Castaic Lake Trail alignments, as shown on subject map page eleven (11) of sixteen (16) are approved.

The Department is requiring the Subdivider to dedicate twenty foot (20') wide trail easements and construct variable-width seven to ten foot (7'-10') wide multi-use (hiking, mountain biking, and equestrian) trails, to the satisfaction of the Department.

Department trail conditions of map approval, prior to final map are as follows:

1. Subdivider shall dedicate twenty foot (20') wide multi-use easements for the "Castaic Lake Trail" alignments and construct variable-width seven to ten foot (7'-10') wide natural surface trails within APN 3244-015-018 and APN 3244-014-021, as shown on subject map page eleven (11) of sixteen (16).

2. The required trail easements shall be recorded via separate instrument, prior to final map recordation. Upon request, the Department will provide a trail easement recordation template.

3. Full public access shall be provided in perpetuity for the multi-use trail.

4. Easement dedications must be outside the public road right-of-way.

5. Subdivider shall include the Department in the transmittal of the project grading plan to Regional Planning.

    a. Submit project grading plans, including trail grading information to the Department for review and approval. The trail grading information shall

conform to the County of Los Angeles Trails Manual (Trails Manual) and any applicable County codes, including but not limited to the following:

i. Cross slope gradients on natural soil not to exceed four percent (4 percent) and longitudinal (running) slope gradients not to exceed twelve percent (12 percent) for more than fifty feet (50').

ii. Typical trail section and details to include:
- Width and name of trail
- Longitudinal (running) gradients
- Cross slope gradients

iii. Appropriate drainage culverts, as appropriate.

6. After project trail grading plan approvals, but prior to building permit issuance, the Subdivider shall:

a. Submit a preliminary construction schedule showing milestones for completing the trail. Provide updated trail construction schedules, as needed, to the Department on a monthly basis.

b. Stake the centerline of the trail and then schedule a site meeting with Department Trails Section Planner for trail alignment inspection and approval.

7. Construction of trail:

a. **Trail:** Construct the Natural Trail 1 variable-width seven to ten foot (7'-10') wide trail within the twenty foot (20') wide dedicated easement in a manner consistent with the Trails Manual. The Trails Manual is available at **http://trails.lacounty.gov**. Out-slope of trail tread at 2 percent to 4 percent with trail running grade up to 8 percent for <100' or 12 percent for <50'. Significant deviation from the design guidelines in the Trails Manual must be reviewed and approved by the Department. See Section 4: "Trail Designs Trail Classification Guidelines," for trail construction guidelines and/or contact Trails Section Planner.

8. Notify the Department within five (5) business days of trail construction completion for the "Final Trail Inspection". The Final Inspection is required to obtain Department approval and ensure the trail is in compliance with the trail construction guidelines within the Trails Manual. Any portions of the constructed trail not approved, shall be corrected and brought into compliance within thirty (30) calendar days. The Subdivider shall then contact the Department to schedule another site inspection.

9. Prior to the Department's final acceptance of the constructed, "Castaic Lake Trail" alignments, the Subdivider shall:

    a. Submit electronic copy on CD (AutoCAD) of the as-built trail grading/construction drawings to the Department Trails Planning Section.

    b. Submit a letter to the Department requesting acceptance of the dedicated constructed trail. The Department will then issue an acceptance letter only after receiving a written request for final trail approval, including a single copy of the as-built trail drawings.

    c. **Note:** The Department is responsible to install appropriate trail signage and maintain the trail tread and easement area after final trail construction and easement recordation acceptance.

If you have any questions regarding the park conditions, please contact Loretta Quach of my staff at (213) 351-5120 or by email at lquach@parks.lacounty.gov. For questions regarding the trail comments, please contact Robert Ettleman at (213) 351-5134 or by email at rettleman@parks.lacounty.gov.

Sincerely,

Kathline King

Kathline J. King
Chief of Planning

KK:LQ:RE:ner

Enclosures

c: Northlake Associates, LLC (J. Arvin)
Sikand Engineering (R. Gaur)
CEO Real Estate Division (R. Hernandez)
Parks and Recreation (J. Gargan, J. McCarthy, C. Lau, L. Quach, R. Ettleman)

SUBDIVISION MAP REVIEW
TENTATIVE MAP STAGE - PRE-PUBLIC HEARING
PUBLIC PARK CHECKLIST OF REQUIRED SUBMITTALS

When proposing a public park, please submit the following items to the Department of Parks and Recreation (Department) for the Department's clearance for the public hearing stage. Include an electronic file (PDF) for each submittal:

☐ **PARK SITE GRADING PLAN** - Provide a small scale (1" = 40') drawing that shows park lot boundary lines and the proposed limits of grading to achieve the level (net acreage: maximum slope 3%) pad upon which the park will be developed. Note the net acreage, the park's lot number, and identify land use adjacent to the park lot. Include a vicinity map insert showing the park in context to the subdivision and the subdivision's surrounding area. This submittal will be used by the Department when developing the Facility Program that will be given to the Subdivider to base the park's schematic design on.

☐ **PARK SCHEMATIC DESIGN** -Schematic design at scale 1" = 40' for proposed park(s) showing proposed improvements, their relationships, and space requirements. Submit this plan on sheets 24" x 36" In size or larger and include the following information:

- Gross Acreage Notation;
- Net Acreage (maximum slope 3%) Notation and limits of grading line for net acreage;
- Park Site(s) Lot Number(s)
- Park Lot Boundary Lines;
- Layout of Park Improvements;
- Owner and Consultant/Designer Information and Drawing Date;
- Pertinent topographical features;
- Hazard Zone Information (flood plains, seismic set back zones etc.);
- Easements(s) or Rights-of-Way Lines (including conservation easements) - existing and proposed;
- Trails and Staging Area(s);
- Names of Adjacent Streets;
- Graphic Scale (1" = 40');
- North Arrow; and
- Legend of Improvements and Symbols;
- Parking Space Calculation Table showing: 1) total number of parking spaces required by Section 22.52.1175 of the Los Angeles County Code; 2) total number of parking spaces provided; and 3) number of handicapped accessible spaces.

The Park Schematic Design must be reviewed and approved by the Department's Design Review Committee (DRC).

☐ **PARK EXHIBIT MAP** (include as sheet to the Tentative Map/C.U.P Exhibit A): Thisis the DRC-approved Schematic Design converted into a line-preferably CAD-drawing.

☐ **PHASING MAP, EXHIBIT & TABLE** (Include as a sheet to the Tentative Map) - Map must show each phase and related unit map numbers. Include a table which shows for each unit map, the number of residential units in column form for each of the following categories:

- Single-family detached;
- Multi-family dwelling units, less than 5 units per building;

SUBDIVISION MAP REVIEW
TENTATIVE MAP STAGE - PRE-PUBLIC HEARING
PUBLIC PARK CHECKLIST OF REQUIRED SUBMITTALS

- Multi-family dwelling units, 5 or more units per building;
- Total number of residential units in each column category; and
- Cumulative total for all units combined (phase-to-phase running total amount of units), and projected recordation dates of each unit map.

☐ **SCHEMATIC DESIGN LEVEL COST ESTIMATE** - Provide schematic design level cost estimate to design and build the proposed park(s).

☐ **PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)** - Submit one (1) hardcopy of the ESA and a CD-ROM containing the report. The ESA must:

- Be prepared for each proposed public park site by a State of California Registered Professional Geologist or Registered Civil Engineer;
- Meet all current Environmental Protection Agency (EPA) requirements;
- Meet ASTM E1527-05 or current standards; and
- Be less than one year old.

Submit copies of all existing Phase I, Phase II ESAs, and Phase 111 Site Remediation Reports for each park site and/or for the proposed land subdivision.

☐ **GEOTECHNICAL REPORT** - The Department will request Public Works' Geotechnical and Engineering Division to review the geotechnical report that the applicant submits to Public Works to determine the geotechnical stability of each proposed park site.

☐ **PRELIMINARY TITLE REPORT** - Submit a preliminary title report on the park site(s) and copies of all existing easements affecting the park site.

☐ **COPIES OF ALL EASEMENT DOCUMENTS AFFECTING PARK SITE(S)** - Submit copies of all recorded easements or other encumbrances affecting the proposed park site(s) with a notation on the Park Exhibit Map stating Subdivider's intent to coordinate the quit claim of particular easements with the Chief Executive Office's Real Estate Division.

☐ **LETTER FROM SCHOOL DISTRICT** (if applicable) - Submit a letter from the school district serving the proposed subdivision that certifies that the school sited adjacent to the proposed public park can meet its recreational requirement without using land dedicated for park purposes.

COUNTY OF LOS ANGELES
Public Health

BARBARA FERRER, Ph.D., M.P.H., M.Ed.
Director

MUNTU DAVIS, M.D., M.P.H.
County Health Officer

ANISH P. MAHAJAN, M.D., M.S., M.P.H.
Chief Deputy Director

AZAR KATTAN, J.D., M.P.H.
Deputy Director for Health Protection

LIZA FRIAS, REHS
Director of Environmental Health

SCOTT ABBOTT, REHS, M.P.A.
Assistant Director of Environmental Health

5050 Commerce Drive
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Fifth District

September 29, 2025

TO: Joshua Huntington
Supervising Regional Planner
Department of Regional Planning

Attention: Jodie Sackett

FROM: Lusi Mkhitaryan, REHS, MPH
Lusi Mkhitaryan
Branch Director, Environmental Protection Branch
Department of Public Health

SUBJECT: LAND DIVISION TENTATIVE- MAP TRACT
APN-2865-003-013
PROJECT: TR73336
RPPL2023004336

Thank you for the opportunity to review the application and site plan for the subject project. The proposed project will develop the existing vacant land with a variety of residential units and related improvements such as infrastructure and parks.

☐ Public Health has no conditions to impose on this project should the advisory agency grant its approval.

☒ Public Health conditions for this project have been met as of the date of this letter. Public Health recommends approval of the aforementioned project.

☐ Public Health DOES NOT recommend approval of the subject project and requires that the following conditions and/or information requested below are addressed prior to agency approval.

Drinking Water Program: Potable Water

The proposed project is required to have an approved, safe and reliable potable water source, either from an approved onsite source (e.g., groundwater well) or a permitted public water system that can meet the project's water demands.

The applicant provided an updated signed Water Availability Form from Santa Clarita Valley Water Agency (SCVWA), signed and dated by Brent Payne, Principal Engineer, on September 26, 2025.

Onsite Wastewater Treatment (OWT) Program: Wastewater

The proposed project is required to have an approved, safe and reliable method of wastewater disposal, either from an approved onsite wastewater treatment system or a permitted public sewer system that can meet the project's load demands.

The applicant provided an updated "Will Serve" letter from the Los Angeles County Sanitation Districts dated September 24, 2025, stating that the previous comments on the letter dated June 05, 2023, still apply to the subject project.

Community Protection Branch: Environmental Hygiene

Please Note: The following are general requirements for Noise and Air Quality recommendations for the proposed projects.

The applicant shall comply with the requirements outlined in Title 12, Section 12.08.390, of the Noise Control Ordinance for the County of Los Angeles. The following section contains recommendations along with excerpts of the code, presented in italics for reference. The full text of the codes is available for review at https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances.

Recommendations

1. Based on the proposed plan and findings, activities from the subject property should comply with requirements contained in Title 12, Section 12.08.390 Noise Control Ordinance for the County of Los Angeles.

2. Operational noise generated from the project shall comply with Title 12, Section 12.08.390, Noise Control Ordinance for the County of Los Angeles.

Exterior Noise Ordinance: Exterior Noise Standards (12.08.390)

No person shall operate or cause to be operated, any source of sound at any location within the unincorporated county, or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person which causes the noise level, when measured on any other property either incorporated or unincorporated, to exceed any of the following exterior noise standards:

Exterior Noise Standards, dBA						
Area	**Duration**	**Std # 1**	**Std # 2**	**Std # 3**	**Std # 4**	**Std # 5**
		30min/hr L50	**15min/hr L25**	**5 min/hr L8.3**	**1 min/hr L1.7**	**At no time L0**
Residential	7 am – 10 pm	50	55	60	65	70
	10 pm – 7 am	45	50	55	60	65
Commercial	7 am – 10 pm	60	65	70	75	80
	10 pm – 7 am	55	60	65	70	75
Industrial:	Anytime	70	75	80	85	90

Table 1. *Std = Standard dB that may not exceed the cumulative period*

Construction Noise Ordinance: Construction Noise Standards (12.08.440)
Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on Sunday or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real-property line, except for emergency work or public service utilities or by variance issued by the health officer is prohibited.

A. *Mobile Equipment – Maximum noise levels for nonscheduled intermittent, short-term operation (less than 10 days) of mobile equipment shall not exceed:*

	Single-family Residential	**Multi-family Residential**	**Semi residential/ Commercial**
Daily, except Sundays and legal holidays, 7:00 a.m. to 7:00 p.m.	75 dBA	80 dBA	85 dBA

Table 2. *Std = Standard dB that may not exceed*

B. *Stationary Equipment – Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment shall not exceed:*

	Single-family Residential	**Multi-family Residential**	**Semi residential/ Commercial**
Daily, except Sundays and legal holidays, 7:00 a.m. to 7:00 p.m.	60 dBA	65 dBA	70 dBA

Table 3. *Std = Standard dB that may not exceed*

For questions regarding the above comments, please contact Makkaphoeum Em at (626) 430-5201 or mem@ph.lacounty.gov.

For any additional questions regarding this report, please contact Veronica Aranda, DRP Liaison for Public Health at DPH-EHDRPLiaison@ph.lacounty.gov.

LM:va
DPH_CLEARED_APN-2865-003-013_RPPL2023004336_09.29.2025

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Air Quality (Section 5.1 of the Draft SEIR)					
MM 5.1-1	Prior to grading permit issuance, applicants shall develop a Construction Traffic Emission Management Plan to minimize emissions from vehicles including, but not limited to, scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes. (SCVAP MM 3.3-1)	Prior to grading permit issuance	Applicant	County of Los Angeles Department of Regional Planning	
MM 5.1-2	Prior to grading permit issuance, applicants shall develop a Construction Dust Emission Management Plan to minimize construction-related dust and particulate emissions. The Construction Emission Management Plan shall require the use of Best Available Control Measures, as specified in Table 1 of SCAQMD's Rule 403. If potentially significant impacts are identified after the implementation of the SCAQMD recommended Best Available Control Measures, the Construction Emission Management Plan shall include the following additional elements: (SCVAP MM 3.3-2 dust measures) • Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. When wind speeds exceed 15 miles per hour the operators shall increase watering frequency. • Active sites shall be watered at least three times daily during dry weather. • Increase watering frequency during construction or use non-toxic chemical stabilizers if it would provide higher control efficiencies. • Suspend grading and excavation activities during windy periods (i.e., surface winds in excess of 25 miles per hour). • Suspend the use of all construction equipment during first-stage smog alerts. • Application of non-toxic chemical soil stabilizers or apply water to form and maintain a crust on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). • Application of non-toxic binders to exposed areas after cut and fill operations and hydroseeded areas. • Cover or application of water or non-toxic chemical suppressants to form and maintain a crust on inactive storage piles. • Planting of vegetative ground cover in disturbed areas as soon as possible and where feasible. • Operate street sweepers that comply with SCAQMD Rules 1186 and 1186.1 on roads adjacent to the construction site so as to minimize dust emissions. Paved parking and staging areas shall be swept daily. • Reduce traffic speeds on all unpaved roads to 15 miles per hour or less. • Pave or apply gravel on roads used to access the construction sites when possible. • Designate personnel to monitor dust control measures to ensure effectiveness in minimizing fugitive dust emissions. • An information sign shall be posted at the entrance to each construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. Any reasonable complaints shall be rectified within 24 hours of their receipt.	Prior to grading permit issuance	Applicant and Future Developers	County of Los Angeles Department of Regional Planning; SCAQMD	
MM 5.1-3	Prior to grading permit issuance, applicants shall develop a Construction Equipment Exhaust Emission Management Plan to minimize construction-related exhaust emissions. The Construction Equipment Exhaust Emission Management Plan shall require the following elements: (SCVAP MM 3.3-2 exhaust emission measures) • Scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes.	Prior to grading permit issuance	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)

• Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 10:00 AM and 3:00 PM, and between 7:00 PM and 6:00 AM provided that a noise disturbance is not generated across a residential or commercial property line).
• Use of diesel-powered construction equipment shall use ultra-low sulfur diesel fuel.
• Use electric welders to avoid emissions from gas or diesel welders when such equipment is commercially available.
• Use electricity or alternate fuels for on-site mobile equipment instead of diesel equipment when such equipment is commercially available.
• Use on-site electricity or alternative fuels rather than diesel-powered or gasoline powered generators when such equipment is commercially available.
• Maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations.
• Minimize idling time either by shutting equipment when not in use or reducing the time of idling to 5 minutes as a maximum.
• Limit, to the extent feasible, the hours of operation of heavy duty equipment and/or the amount of equipment in use.
• Retrofit large off-road construction equipment that will be operating for significant periods. Retrofit technologies such as particulate traps, selective catalytic reduction, oxidation catalysts, air enhancement technologies, etc., shall be evaluated. These technologies will be required if they are certified by CARB and/or the US EPA, and are commercially available and can feasibly be retrofitted onto construction equipment.
• The project applicant shall require all on-site construction equipment to meet US EPA Tier 4 or higher emissions standards according to the following:
  ○ April 2010 through December 31, 2011: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 2 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
  ○ January 1, 2012 through December 31, 2014: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
  ○ Post-January 1, 2015: All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. A copy of each unit's certified tier specification, BACT documentations, and CARB, SCAQMD, or ICAPCD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.
• The contractor shall utilize low-VOC content coatings and solvents that are consistent with applicable SCAQMD and ICAPCD rules and regulations.				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	• Consideration shall be given to use of other transportation methods to deliver materials to the construction sites (for example, trains or conveyors) if it would result in a reduction of criteria pollutant emissions.				
MM 5.1-4	The Project Applicant or Construction Manager shall ensure that, during all grading activities, construction grading shall be discontinued on days forecasted for first-stage alerts.	During all grading activities	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-5	Prior to grading permit issuance, applicants shall be required to conduct an LST analysis (SCVAP MM 3.3-3).	Prior to grading permit issuance	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-6	The Project Applicant or Construction Manager shall ensure that, during mass grading activities, mass grading shall not occur within 1,600 feet of the Northlake Hills Elementary School when school is in session to the maximum extent feasible.	Prior to issuance of grading permits for areas within 1,600 feet of the Northlake Hills Elementary School	Construction Contractor, Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-7	Prior to final building inspection, the applicant shall provide preferential parking spaces for carpools and vanpools at major commercial and office locations. The spaces shall be clearly identified on plot plans and may not be pooled in one location (SCVAP MM 3.3-6).	Prior to final building inspection	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-8	New residential developments shall allow only natural gas-fired hearths and shall prohibit the installation of wood-burning hearths and wood-burning stoves (SCVAP MM 3.3-7).	Prior to issuance of each residential building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-9	A commuter computer program shall be developed for the NorthLake residents in an attempt to reduce commuter vehicle trips generated by the proposed projects. (1992 SP EIR MM 4.5-9).	Prior to issuance of the first residential occupancy permit	Applicant	County of Los Angeles Department of Regional Planning	
MM 5.1-10	Prior to the issuance of each non-residential building permit, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the building designs. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits. ▪ For buildings that are greater than 100,000 square feet of building space or with more than ten tenant-occupants, changing/shower facilities shall be provided as specified in Section A5.106.4.3, Nonresidential Voluntary Measures, of the California Green Building Standards (CALGreen) Code. • Facilities shall be installed to support future electric vehicle charging at each non-residential building with 30 or more parking spaces. Installation shall be consistent with Section A5.106.5.3, Nonresidential Voluntary Measures (Tier 1), of the CALGreen Code. • The Project shall install 135 electric vehicle (EV) chargers[4] at non-residential parking spaces within the Project limits and/or the greater Castaic community.	Prior to the issuance of each non-residential building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-11	Prior to the issuance of each residential building permit, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the building designs or specifications. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits ▪ Visitor parking shall include preferentially located parking spaces for alternative-fueled vehicles. • Bicycle parking shall be provided as specified in Section A4.106.9, Residential Voluntary Measures, of the CALGreen Code, or, provide required long-term and short-term bicycle parking for buildings as specified in Section 22.52.1225 of the County Zoning Ordinance, whichever is more stringent. • 100 percent of residences shall be pre-wired for an EV charging station and at least 10 percent of residences shall have an EV charging station.	Prior to the issuance of each residential building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

[4] Assumed to be Level 2 chargers that can provide enough electricity to provide a 25 mile driving range per hour spent charging.

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.1-12	Prior to issuance of each building permit for parking structures and parking lots with 20 or more parking spaces, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the parking facility. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits. • The parking facility shall include a minimum of five percent preferentially located parking spaces for alternative-fueled (electric, natural gas, or similar low-emitting technology) vehicles. • The parking facility shall include at least one electric vehicle charging station. Electrical lines shall be designed and sized to add additional charging stations for up to three percent of the total parking spaces when a demand is demonstrated. The design and installation shall be consistent with Section A4.106.8.2, Residential Voluntary Measures, of the CALGreen Code. • For residential parking facilities, bicycle parking shall be provided as specified in Section A4.106.9, Residential Voluntary Measures, of the CALGreen code.	Prior to issuance of each building permit for parking structures and parking lots with 20 or more parking spaces	Construction Contractor, Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-13	Once constructed, the Applicant shall ensure that the tenants/operators of non-residential uses include the following features and procedures. Proof of compliance shall be provided to the County within one month following the issuance of each occupancy permit. • Post signs requiring that trucks shall not be left idling for prolonged periods (i.e., in excess of 5 minutes, as required by State law). • Post both bus and Metrolink schedules in conspicuous areas. • Configure the employee work schedules around the local bus schedule and provide said schedules as evidence of compliance to Regional Planning upon request.	Within one month following the issuance of each occupancy permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-14	Prior to the issue of occupancy permits for each industrial building, the Permit Applicant/Developer shall demonstrate that ambient air quality concentrations of criteria pollutants at sensitive receptors resulting from the proposed use(s) shall not exceed the following: • Nitrogen dioxide (NO_2) – 0.10 parts per million (ppm), 1 hour average; 0.03 ppm, annual arithmetic mean • Inhalable particulate matter (PM10) – 2.5 micrograms per cubic meter ($\mu g/m^3$), 24-hour average; 1.0 $\mu g/m^3$-annual average • Fine particulate matter (PM2.5) – 2.5 $\mu g/m^3$, 24-hour average The Permit Applicant/Developer shall also demonstrate through preparation of a subsequent health risk assessment that the incremental health risks from toxic air pollutants at sensitive receptors resulting from the proposed use(s) shall not exceed the following: • Maximum incremental cancer risk – 10 in 1 million • Cancer burden – 0.5 excess cancer cases in areas where the cancer risk exceeds 1 in 1 million • Chronic hazard index – 1.0 • Acute hazard index – 1.0	Prior to the issuance of occupancy permits for each industrial building	Applicant and Future Developers	County of Los Angeles Department of Regional Planning and Department of Public Health	
MM 5.1-15	No playgrounds, ball fields, or other facilities that encourage active recreation shall be built west of the Southern California Edison (SCE) easement.	Prior to tract map approval	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-16	Prior to the commencement of brush clearing, grading, or other activity that would generate fugitive dust, the Property Owner/Developer shall employ a Dust-Control Supervisor who will be on the site within 30 minutes of the start of work taking place each morning; will have the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all South Coast Air Quality Management District (SCAQMD) Rule 403 requirements; and will have completed the SCAQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class.	Prior to brush clearing activities, issuance of grading permits, or other construction activities	Construction Contractor	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.1-17	To aid in the prevention of Valley Fever among construction crews on the Project site, the following measures shall be implemented by the Construction Contractor during all construction activities: • Hire crews from local populations where possible, since it is more likely that they have been previously exposed to the fungus and are therefore immune. • Require crews to use NIOSH-approved respiratory protection with particulate filters to restrict inhalation of particulates during Project clearing, grading, and excavation operations in accordance with California Division of Occupational Safety and Health regulations. • Where acceptable to the County of Los Angeles Fire Department, control weed growth by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering. • During rough grading and construction, the access way into the Project site from adjoining paved roadways shall be paved or treated with environmentally safe dust-control agents.	Prior to issuance of grading permits and through duration of construction activities	Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.1-18	Prior to sale, lease, or rental of any residential structure or portion thereof on the NorthLake Project site, the Property Owner/Developer shall provide to each prospective purchaser or tenant a notice and statement of acknowledgment that shall be executed (i.e., read and signed) by the prospective purchaser, lessee, or tenant that the property within NorthLake may present a temporary risk of exposure to Valley Fever spores during construction or other earth-moving activities. The form shall include strategies to reduce potential exposure to Valley Fever spores. The form and method of distribution of said notice and statement of acknowledgment shall be as approved by the County of Los Angeles Department of Regional Planning**.**	Prior to sale, lease, or rental of any residential structure or portion thereof on the NorthLake Project site	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-19	Prior to issuance of each grading and building permit, the applicant/developer shall require in contract specifications, that contractors set goals to limit unnecessary construction equipment idling to 3 minutes and include methods to encourage equipment operators to achieve the 3-minute goal.	Prior to each grading and building permit	Project Applicant and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.1-20	Prior to the issue of the first occupancy permit for commercial or industrial facilities, the master developer shall establish the NorthLake Community Transportation Program that would be established through the creation of Covenants, Codes and Restrictions (CC&Rs) for all commercial and industrial properties within the Specific Plan to establish and coordinate the following programs that would reduce single-vehicle commuting and the associated criteria pollutant and GHG emissions: • Ride share program – The program will establish a system for coordinating ride sharing among employees of on-site commercial and industrial businesses. The program will also work with employers to support vanpools. • Commuter bus program – The program will coordinate with Santa Clarita Valley Transit to (1) extend the existing bus routes into the NorthLake Project area and (2) determine employee demand for express commuter buses to the Project Site and establish commuter bus service in response to demand.	Prior to issuance of the first occupancy permit for commercial or industrial facilities	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
Biological Resources (Section 5.2 of the Draft EIR)					
MM 5.2-1	If special-status species may potentially be subject to direct loss through implementation of construction activities, mitigation measures proposed as part of biological site survey reports shall include a requirement for preconstruction special-status species surveys, followed by measures to ensure avoidance, relocation or safe escape of special-status species from construction activity, whichever action is the most appropriate. If special status species are found to be brooding, denning, nesting, etc. on site during the preconstruction survey, construction activity shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate off-site habitat areas. A qualified biologist shall be on site to conduct surveys, to perform or oversee implementation of protective measures, and to determine when construction activity may resume. **(SCVAP 2012 EIR MM 3.7-2)**	Prior to issuance of grading permits	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	
MM 5.2-2	Impacts on sensitive habitats resulting from implementation of the Area Plan shall be compensated for through the acquisition of lands described in Policies CO 10.1.3, CO 10.1.11 and CO 10.1.12. Said acquisition shall prioritize habitat types that are particularly at risk in the region. At risk habitats include but are not limited to waterways, wetlands and vernal pools; alluvial scrub; native grasslands; savannas, woodlands and forests; holly-leaf cherry and Great basin sagebrush associations; and rocklands. **(SCVAP 2012 EIR MM 3.7-2)**	Prior to issuance of grading permit(s) and during construction	Project Applicant, Future Developers, and Construction Contractor	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.2-3	Removal of riparian habitat will require coordination with the California Department of Fish and Wildlife and the U.S. Army Corps of Engineers. Mitigation for riparian habitat lost may include one or a combination of the following measures: 1) project alteration to avoid impacting the onsite riparian habitat; 2) the onsite creation of at least an equal amount of equal quality habitat; 3) enhancement of poor quality onsite habitat, usually greater than 1:1 ratio (habitat lost to habitat enhanced); and 4) creation of offsite habitat where none currently exists. Final mitigation requirements shall be determined through consultation with the appropriate agencies. **(1992 SP EIR MM 4.7-5)**	Prior to issuance of grading permit(s) and during construction	Project Applicant, Future Developers, and Construction Contractor	County of Los Angeles Department of Regional Planning and California Department of Fish and Wildlife and U.S. Army Corps of Engineers	
MM 5.2-4	Mitigation for the club-haired mariposa lily and the slender mariposa lily shall consist of transplantation of lilies to a mitigation site and establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*).[5] The *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from lilies that are located within the impact boundaries and bulbs will be subsequently excavated and stored for later transplantation to the translocation site depicted on Exhibit 5 of the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the club-haired mariposa lily and the slender mariposa lily: • A pre-grading survey shall be conducted for two seasons following emergence of leaves and during the peak flowering period (approximately March through June) by the Biological Monitor. The Biological Monitor shall clearly identify each lily location within the impact area with a pin flag for later collection. The pre-grading survey shall also document the approximate coverage of native and non-native plants at each lily population to be impacted. • Prior to seed collection, the existing lily locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities. • Individual lily bulbs shall be excavated and collected following the seed collection and once the bulbs have entered their winter dormancy period (approximately September 1). The bulbs shall be stored by a qualified nursery or institution with appropriate storage facilities and all non-target bulbiferous species shall be discarded. • A portion of the collected seeds will be used to grow 500 slender/club-haired mariposa lilies for contingency purposes and stored a native plant nursery until needed as determined by the project biologist. • Receptor site or sites identified in BonTerra's *Feasibility Analysis of NorthLake Biological Mitigation Requirements* and refined by GLA (as shown on Exhibit 5 of the *Special-Status Plants Impact Assessment and Habitat Mitigation and* Monitoring *Plan*) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. • Receptor sites on lands currently owned by NorthLake will be managed by SMMC or other approved entities. Prior to commencing the actions set forth in this plan, the applicant shall submit final agreements to CDFW and the County with the acceptable entities that will hold the Conservation Easement(s) (CE) and provide long-term management. • Funding for this measure shall be suitably established to the County's satisfaction.	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[5] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• Performance criteria have been developed in the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan,* dated February 2023, and pre-approved by the LACDRP and CDFW. The performance criteria shall address (1) native and non-native plant coverage requirements (mitigation site conditions should be consistent with lily populations in the impact area) and (2) percentage of lilies that exhibit emergent leaves that that bloom each year as follows (because the salvaged plantings will be phased over a three-year period as described above, the monitoring period would be ten years for each phase or a minimum of 13 years beginning from the start of phase 1. As set forth in Table 3 of the of the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan*, under the phased translocation, 40-percent of plants would be translocated in year 1, 40-percent in year 2 and 20-percent in year 3): **Year One** • Emergence of leaves of a minimum of 70-percent of the translocated bulbs • Flowering of a minimum of 50-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Two** • Emergence of leaves of a minimum of 60-percent of the translocated bulbs • Flowering of a minimum of 40-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Three** • Emergence of leaves of a minimum of 50-percent of the translocated bulbs • Flowering of a minimum of 30-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Four** • Emergence of leaves of a minimum of 50-percent of the translocated bulbs • Flowering of a minimum of 30-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Five** • Emergence of leaves of a minimum of 60-percent of the translocated bulbs • Flowering of a minimum of 40-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and				

TABLE 4-1
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Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• No evidence of herbivory **Year Six** • Emergence of leaves of a minimum of 70-percent of the translocated bulbs • Flowering of a minimum of 50-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Seven** • Emergence of leaves of a minimum of 70-percent of the translocated bulbs • Flowering of a minimum of 50-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Eight** • Emergence of leaves of a minimum of 80-percent of the translocated bulbs • Flowering of a minimum of 60-percent of the translocated bulbs **Year Nine** • Emergence of leaves of a minimum of 90-percent of the translocated bulbs • Flowering of a minimum of 70-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Ten** • Emergence of leaves of a minimum of 100-percent of the translocated bulbs • Flowering of a minimum of 70-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory • Potential seed sources from additional donor sites shall also be identified in case it becomes necessary to collect additional seed for use on the site following performance of remedial measures. The monitoring shall be conducted for ten years (for each phase) from installation of the translocated bulbs or from installation of container plants. As noted, this could result in two separate and unrelated ten-year monitoring efforts, including one that originates with bulb installation and a subsequent effort that begins with container stock installation. If the performance standards are not being met during the first year, additional measures may be suggested as determined appropriate by the Project Biologist as set forth in the Contingency				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Plan set forth in the Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan as set follows: • If any of the translocation/receptor sites are observed to be failing significantly to achieve the performance standard during the ten-year monitoring period, the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be stored at a nursery for the first year of the program. • If the receptor sites appear on track to meet the performance standards no sooner than year seven of the monitoring and maintenance period, the remaining plant material may be planted at the receptor sites (if space allows) or additional acceptable receptor sites will be identified. • Seeds and/or bulbs will continue to be harvested from lilies maintained in the nursery and installed in the receptor sites on an as-needed basis to ensure receptor sites are progressing toward final performance. • If the receptor sites fail to achieve the performance standards by the tenth year of the program, the monitoring period may be extended if the Project Biologist in consultation with LACDRP and CDFW, determines that the site is continuing to progress and can ultimately achieve the performance standards. Alternatively, if it is determined that a particular receptor site is not able to meet performance standards, then additional receptor sites will be identified to make up the difference. Thus, for example, if a receptor site received 500 bulbs, at the 80-percent success criteria it must have 400 emergent plants or 300 flowering plants to be successful. If the site only exhibits 40-percent emergent plants and 30-percent of flowering Mariposa lilies, then the site would be credited with the partial success achieved and an additional site where the shortfall could be made up would be identified. • Potential seed sources from additional donor sites shall also be identified in case it becomes necessary to collect additional seed for use on the site following performance of remedial measures.				
MM 5.2-5a Mitigation for the round-leaved filaree shall consist of transplantation of round-leaved filaree to a mitigation site and establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*).[6] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from round-leaved filaree that are located within the impact boundaries and stored for propagation of container plants to provide for introduction of propagated plants to the translocation site depicted on Exhibit 4A of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the round-leaved filaree: • A pre-grading survey shall be conducted for two seasons, prior to grading of the occupied area, during the peak flowering period (approximately March through May) by the Biological Monitor. The Biological Monitor shall clearly identify the extent of the round-leaved filaree location within the impact area with pin flags and record the extent of the population using sub-meter GPS for later collection. The pre-grading surveys shall also document the approximate coverage of native and non-native plants at the location of the population to be impacted. • Prior to seed collection, the existing round-leaved filaree locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities.	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[6] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
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Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• Collected seeds, up to one half, will be used to grow a minimum of 300 plants and the remaining half will be stored to allow for contingency purposes all of which would be planted at the receptor site once performance standards are achieved. • Receptor site or sites identified by GLA during site assessments in 2021 (see Exhibit 4A in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[7]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP and CDFW. In developing the performance standards for the round-leaved filaree, it is important to consider the primary goal of the plan referenced above, which is to establish a self-sustaining population of this plant consisting of the number of individuals/population size determined during pre-construction surveys. With replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors: • The number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe the translocated populations over a period of years to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track emergent plants along with flowering individuals which in combination provides the best and easiest indicators to track that the translocation is succeeding. • Various threats to the plants must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of recruited individuals, with seed set, leading to future germination/successful reproduction. • Habitat characteristics, including non-native grasses and herbaceous weeds, are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory. Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the variability in the number of flowering individuals from year-to-year, the performance standards will have been achieved during at least three years of the ten-year monitoring program. Thus, the standards provide specific criteria showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction. **Year One Through Year Ten** • Flowering of a minimum of 100-percent of the total number of flowering plants counted during pre-construction surveys originating from container stock or seed bank. As noted, the number of container stock individuals planted or plants originating from seed following the initial establishment will equal or exceed the number impacted as determined during pre-construction surveys during at least three years of the ten-year monitoring period; and • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial planting (30-percent).				

[7] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

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MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Contingency Plan In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards: • If the receptor site is observed to be failing significantly to achieve the performance standards during the ten-year monitoring period (e.g., flowering of 100-percent is not achieved after three years with normal or above-normal rainfall), the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be propagated from the contingency seed supply held at the nursery for contingency purposes (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials. The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, the container stock would be propagated from the contingency seed and the plants would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance, would be initiated as set forth above.				
MM 5.2-5b Mitigation for the paniculate tarplant shall consist of transplantation of paniculate tarplant by means of seed broadcasting to a mitigation site with establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*). [8] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from paniculate tarplant that are located within the impact boundaries and stored for introduction to the receptor site depicted on Exhibit 4A of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the paniculate tarplant: • A pre-grading survey shall be conducted for two seasons during the peak flowering period (approximately June through August) by the Project Biologist. The Project Biologist shall clearly identify the extent of the paniculate tarplant location within the impact area with perimeter pin flags and sub-meter GPS for later use during seed collection. The pre-grading survey shall also document the approximate coverage of native and non-native plants at the location of the population to be impacted. • Prior to seed collection, the existing paniculate tarplant locations marked during pre-construction surveys shall be monitored every two weeks by the Project Biologist or a qualified Seed Collector under the direction of the Project Biologist to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities. • One third of the collected seeds will be used to broadcast on the receptor site during an initial year and one third would be retained for the second year at the receptor site. The remaining one-third of the seed would be held for contingency purposes until performance standards are achieved. Once they are achieved, the contingency seed would be distributed into the mitigation site. • The receptor site identified by GLA during 2021 (see Exhibit 4A in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[9]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[8] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

[9] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

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MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP (and CDFW). In developing the performance standards for the paniculate tarplant, it is important to consider the primary goal of the plan as set forth above, which is to establish a self-sustaining population of this plant consisting of the number of individuals/population size determined during the largest population number of the two years of pre-construction surveys. With replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors: • The number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe the translocated populations over a period of years to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track flowering individuals to confirm that the translocation is succeeding. • Various threats to the plants must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of recruited individuals, with seed set, leading to future germination/successful reproduction. • Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory. Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the variability in the number of flowering individuals from year-to-year, the performance standards will have been achieved during at least three years during the ten-year monitoring program. Thus, the annual standards provide specific criteria showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction. **Year One Through Year Ten** • Flowering of a minimum of 100-percent of the total number of flowering plants counted during the larger of the two years during which pre-construction monitoring was conducted. This would be achieved during at least three years of the ten-year monitoring period); and • Habitat subject to translocation must exhibit same or less cover by non-native grasses; and forbs than during the initial planting (30-percent). **Contingency Plan** In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards: • If the receptor site is observed to be failing significantly to achieve the performance standards during the ten-year monitoring period (e.g., flowering of 100-percent is not achieved after three years with normal or above-normal rainfall), the Biological Monitor will identify an alternate site(s) in which to install the contingency seed held at the nursery for contingencies purposes (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials. • The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, contingency seed would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance would be initiated as set forth above.				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.2-5c	Mitigation for the southwestern spiny rush includes two components to ensure long-term persistence of southwestern spiny rush in northern Los Angeles County. Mitigation includes 1) preservation of streambed habitat within Marple Canyon that contains 523 individuals of the spiny rush, and 2) planting of southwestern spiny rush at a mitigation site with establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan)*.[10] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seed will be collected from southwestern spiny rush plants located within the impact boundaries. The collected seed will be stored for propagation of container plants. Once propagated, the container plants would be introduced to the translocation site depicted on Exhibit 4B of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan.* The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the southwestern spiny rush: • A pre-grading survey shall be conducted during a single season during the peak flowering period (approximately March through May) by the Biological Monitor. The Biological Monitor shall identify the extent of the southwestern spiny rush location within the impact area using sub-meter GPS for later seed collection. • Prior to seed collection, the existing southwestern spiny rush locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities. • Collected seeds will be used to grow a minimum of 600 plants to allow for contingency purposes all of which would be planted at the receptor site. Half of the seed collected will be retained by the nursery for additional propagation as a contingency measure. • Receptor site or sites identified by GLA during site assessments in 2021 (see Exhibit 4B in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[11]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP and CDFW. In developing the performance standards for the southwestern spiny rush, it is important to consider the primary goal of the plan as set forth above, which is to provide for a combination of preservation and establishment of a self-sustaining population of this plant consisting of the 300 individuals, which in combination of the preservation in Marple Canyon would mitigate impacts to this species. In order to achieve survival of 200 plants within Grasshopper Creek, 300 individuals will be planted initially to allow for natural attrition. With the combined preservation and replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors: • Southwestern spiny rush is a perennial plant and the number of flowering individuals in any given year does not vary substantially. However, based on environmental conditions, it is not expected that populations change significantly over the period of years needed to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track the existing population within Marple Canyon along with established individuals in Grasshopper Creek to determine progress.	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[10] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

[11] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• Various threats to the plants established within Grasshopper Creek must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of planted and recruited individuals, with seed set, leading to future germination/successful reproduction. • Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory. Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the expected stability in the number of flowering individuals from year-to-year, the performance standards will have been achieved at the end of the ten-year monitoring program. Thus, the annual standards provide a guide showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction. **Marple Canyon Year One Through Year Ten** • Persistence of Marple Canyon population totaling 523 individuals with no more than ten-percent reduction due to such factors such as drought. Thus, there would be a minimum of 471 individuals at the end of the ten-year monitoring period. **Grasshopper Creek Year One** • Survival of 80-percent of the 200 established individuals. • Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year. **Grasshopper Creek Year Two** • Survival of 90-percent of the 200 established individuals. • Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year. **Grasshopper Creek Year Three through Ten** • Survival of 100-percent of the 200 established individuals. • Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year. **Contingency Plan** In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards: • If the Grasshopper Creek receptor site is observed to be failing significantly to achieve the performance standard during the ten-year monitoring period (e.g., survival of 100-percent of 200 established individuals is not achieved by the end of ten years), the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be propagated from the contingency seed supply held at the nursery for the (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials. The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, the container stock would be propagated from the				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	contingency seed and the plants would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance, would be initiated as set forth above.				
MM 5.2-6	The loss of sage scrub habitat within the impact area is considered a significant impact. Sage scrub habitat shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but shall be no less than 2:1 for habitat restoration, enhancement or preservation, or combination thereof. A total of 634.70 acres of sage scrub would be impacted by Project implementation, which includes Purple sage scrub, California sagebrush–California buckwheat scrub, Black sage scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, California sagebrush–California buckwheat scrub/California annual grassland, and the burned sage scrub areas: burned Purple sage scrub, burned California sagebrush–California buckwheat scrub, burned Black sage scrub, and burned California sagebrush–California buckwheat scrub/California annual grassland. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, and preservation shall depend on the initial quality of the habitat area to be restored, enhanced or preserved and would be determined by the Project Applicant and the LACDRP. Sage scrub habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. Where restoration or enhancement is the proposed mitigation, the Project Applicant shall develop a Habitat Mitigation and Monitoring Program (HMMP) and shall submit it to the LACDRP and the California Department of Fish and Wildlife (CDFW) for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to the issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants of suitable sage scrub species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), Peirson's morning-glory will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria, which shall include the following items: **Responsibilities and Qualifications**. The responsibilities and qualifications of the Project Applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures and/or State or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency. b. **Performance Criteria**. Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The HMMP shall state that the use of the mitigation site by special status wildlife species (e.g., coastal California gnatcatcher), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off. c. **Site Selection.** The mitigation sites shall be determined in coordination with the Project Applicant and the LACDRP. The site(s) shall be located in dedicated open space areas (or areas available for dedication), and shall be contiguous with other natural open space areas. Mitigation sites include onsite, NorthLake-owned offsite property, and obtaining acres from a CDFW-approved mitigation bank or through purchase and long-term conservation of suitable habitat, including areas where restoration or enhancement is needed, or a combination of the two options to account for the remainder. The Project Applicant shall demonstrate acquisition of suitable lands for restoration, enhancement, or preservation prior to issuance of the Project grading permit.	Prior to issuance of grading permits, and HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	County of Los Angeles Department of Regional Planning/California Department of Fish and Wildlife	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
d. **Native Plant and Seed Materials Procurement**. For restoration or enhancement, at least three years prior to mitigation implementation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin: i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. All container plants shall be propagated from seed of local origin as defined above. No plant or seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the' following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. e. **Wildlife Surveys and Protection.** The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., coastal California gnatcatcher]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. The HMMP shall also describe potential restrictions on these management tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). f. **Site Preparation and Plant Materials Installation.** For restoration or enhancement, mitigation site preparation shall include, as necessary (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, decompacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photodegradable'] fiber roll); (f) application of salvaged native plant materials (i.e., duff) as available, and supervised by a biological monitor, (g) temporary irrigation installation; (h) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials including specification of approved herbicides); (i) planting of container species; and (j) seed mix application. g. **Schedule.** An implementation schedule shall be developed for restoration or enhancement, that includes planting and seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). h. **Maintenance Program**. The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal-including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) replacement of dead container plants (as needed); (g) application of remedial seed mixes (as needed); (h) herbivory control; and (i) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. The mitigation site shall be maintained for a period of five years to ensure the successful sage scrub habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria. i. **Monitoring Program**. The Monitoring Program for restoration or enhancement shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring (e.g., randomly placed point-intercept transects); (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the Project Applicant has been released from maintenance requirements by the LACDRP. j. **Long-term preservation**. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.2-7	The loss of California annual grassland/wildflower fields within the impact area is considered to be a significant impact. California annual grassland/wildflower fields shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 24.23 acres of Foothill needlegrass grassland and burned Foothill needle grass grassland would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). California annual grassland/wildflower fields habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP and the California Department of Fish and Wildlife (CDFW) for review and approval. The HMMP shall be developed by a qualified restoration ecologist submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for burrowing owls. Habitat restoration/enhancement shall consist of seeding of suitable California annual grassland/wildflower fields plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria, which shall include the following items: • The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration enhancement programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency. • Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program. • The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas or areas available for dedication as open space, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owls and other wildlife species; e.g., opportunities for escape and refuge from stochastic events such as fire, flood, etc.; (3) consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible. soil types and microhabitat conditions suitable for the special status plant species listed above. • At least two years prior to mitigation plant and seed installation associated with restoration of enhancement, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in	Prior to issuance of grading permits, HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	County of Los Angeles Department of Regional Planning/California Department of Fish and Wildlife	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. • The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owls, to determine the species' occupation of the mitigation site(s). The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). • For restoration or enhancement, mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) temporary irrigation installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)--including specification of approved herbicides; and (g) seed mix application. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. • An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). • The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal-including specification of approved herbicides; (d) maintenance of erosion control measures; (e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria for restoration or enhancement. • The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo documentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.				
MM 5.2-8	The loss of foothill needlegrass grassland within the impact area is considered to be a significant impact. Foothill needlegrass grassland shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 342.85 acres of California annual grassland/Wildflower fields would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the	Prior to issuance of grading permits, HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	County of Los Angeles Department of Regional Planning/California Department of Fish and Wildlife	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). Foothill needlegrass grassland habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP and the California Department of Fish and Wildlife (CDFW) for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for the burrowing owl. Habitat restoration/enhancement shall consist of seeding of suitable foothill needlegrass grassland plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria, which shall include the following items: a. **Responsibilities and Qualifications**. The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency. b. **Performance Criteria**. Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for the burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off. c. **Site Selection**. The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas or areas available for dedication, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owls and other wildlife species; e.g., opportunities for escape and refuge from stochastic events such as fire, flood, etc.; (3) consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible, soil types and microhabitat conditions suitable for the special status plant species listed above. d. **Seed Materials Procurement.** At least two years prior to mitigation plant and seed installation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area. in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. e. **Wildlife Surveys and Protection**. The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation,				

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Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owls, to determine the species' occupation of the mitigation site(s). The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). f. **Site Preparation and Plant Materials Installation**. For restoration or enhancement, mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, decompacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photodegradable'] fiber roll); (f) temporary irrigation installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)--including specification of approved herbicides; and (h) seed mix application. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. g. **Schedule**. An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). h. **Maintenance Program**. The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal- including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shalt reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria. i. **Monitoring Program.** The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP. j. **Long-term preservation**. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.				
MM 5.2-9 A mitigation program for western spadefoot toad (WST) shall be implemented prior to construction, ground disturbance, or vegetation removal that would impact the WST breeding habitat, or areas within 1,000 feet of WST-occupied ponds within the Project Site. The mitigation program would include the components set forth below. A detailed methodology for this effort shall be reviewed by the CDFW and the LACDRP prior to implementation of the mitigation program. Results of the mitigation program shall be provided to the CDFW and the LACDRP. • Prior to implementing the Spadefoot Relocation Plan, two focused surveys during average or above-average rainfall years will be conducted within the prior appropriate seasons. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e.,	Prior to construction activities in the spring during the breeding season	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	California Department of Fish and Wildlife and County of Los Angeles Department of Regional Planning	

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2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied pond as well as those identified in recent surveys. • Suitable sites for seasonal pond creation, within the Project open space, specifically within other NorthLake-owned properties, have been identified and 1.07 acres of seasonal pond habitat will be created. The specific location of the 1.07-acre pool complex is depicted on Exhibit 5 of the *NorthLake Castaic, Los Angeles County, California, Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan July 2022 (Revised March and June 2023)* (HMMP). As described in the WST Mitigation Implementation Plan, three pools would be created based on current grading plans. The combined size of the three pools (1.07 acres) exceeds the maximum combined size of potential WST habitat currently at the Project Site (0.95 acres, as shown in Table 2-4, above). The WST Mitigation Implementation Plan would address the following issues specific to the site or sites: o Soil Characteristics and whether clay liners will be necessary o Pool locations and site access routes for construction o Types of habitat potentially affected by construction and measures to restore damaged habitat subject to temporary impacts o Watershed size and characteristics o Grading plan with cross section for each pool to be created o Specifications for clay liner (if needed) including source of clay and installation methods o Upland habitat characteristics, including soil suitability for burrowing and vegetative buffer, will also be addressed in the plan • Following creation of the 1.07-acre pool complex or complexes and prior to grading of the impacted pools, each pool within each complex will be monitored during the rainy season to ensure that the created pools exhibit at least 60 days of ponding during an average or above-average rainfall year. • Following documentation of adequate ponding for each created pool during an average or above-average rainfall year, and prior to grading of the impacted pools, soil inoculum from the impacted pools will be translocated to the created pools to provide a food source for WST. • Following documentation of adequate ponding for each created pool during an average or above-average rainfall year, and prior to grading of the impacted pools, WST egg masses, larvae and metamorphs will be translocated to the created pools for at least two wet seasons where WST egg masses, larvae and metamorphs are present in the impact pools and suitable conditions to receive the WST egg masses, larvae and metamorphs are present in the created pools. In addition, data regarding successful breeding will be submitted to CDFW for concurrence that sufficient reproduction has occurred to allow impacts to the pools in the development area. • During grading of the pools to be impacted, the Project Biologist will be present to rescue any adult WST that would be relocated to the created pool complex. • Following the two seasons of translocation of WST egg masses, larvae and metamorphs, and successful breeding, the created pools will be monitored for ten years as set forth in HMMP Table 6 (Conceptual Schedule for Pond Creation Milestones) to document the progression of the WST toward the performance standards provided in the WST HMMP prepared for the project: o **Hydrological Monitoring Performance Standard.** Ponding duration of at least 60 days must be documented to occur during average or above average rainfall years prior to translocation of egg masses, larvae, metamorphs, or adults. Ponding duration of at least 60 days must also be documented during the 10-year monitoring period. At the end of the ten-year monitoring period, this performance standard will have been achieved if ponding duration equals or exceeds ponding duration of 60 days during average or above-average rainfall years. It is important to note that during below-average rainfall years, depending on the severity of drought conditions that the created ponds will not pond for sufficient duration to allow WST to reach maturity. Thus, during the ten-year monitoring period, it is to be expected that some years will not pond for 60 days. Nevertheless, the performance standard				

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	for hydrology will be considered achieved as long a ponding for 60 days occurs during average rainfall years. Finally, hydrology may be augmented at the direction of the Project Biologist, especially once breeding is observed and is threatened by declining water levels in the pools due to lower-than average rainfall. In the event that the Project Biologist determines that additional water should be added to any pond occupied by egg masses or larvae, it will be necessary to ensure protection of the egg masses and larvae by discharging water to the pool(s) in a manner that does not disturb the egg masses or larvae and does not result in the erosion of soil into the pool(s). This could be accomplished through temporary placement of large gravel at the discharge site (at the edge of the pool(s)) underlain by plastic that would allow the water to enter the pool(s) slowly and with no sediment. ○ **Performance Standard Prior to Grading**. Prior to Project grading that removes the impacted doner pools, during an average or above-average rainfall year, at least two of the three created ponds within the pond complex exhibits emergence of metamorphs in each pond to ensure breeding in subsequent years. Successful breeding would be determined by the presence of egg masses that are not present due to translocation but which occur due to reproduction. Should this occur during a below-average rainfall year, the condition would be satisfied as it would show that the pools are performing as intended. In any case, data regarding successful breeding will be submitted to CDFW for concurrence that sufficient reproduction has occurred to allow impacts to the pools in the development area. ○ **Performance Standard Post-Grading**. Following Project grading that removes the impacted donor pools, during an average or above-average rainfall year, at least two of the three created ponds within the pond complex will exhibit breeding as indicated by the presence of WST egg masses, tadpoles/larvae/ or metamorphs, to confirm establishment of breeding WST for each pond complex created. Should this occur during a below-average rainfall year, the condition would be satisfied as it would show that the pools are performing as intended.				
MM 5.2-10	A Biological Monitor shall be on site during all vegetation clearing activities and thereafter on an as-needed basis. The Biological Monitor will conduct a clearance sweep prior to clearing activities to minimize potential for special status reptile mortality. If feasible, special status reptiles will be removed from the disturbance area and relocated to suitable habitat in adjacent areas.	Prior to and during all vegetation clearing activities	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	
MM 5.2-11	Riparian vegetation shall be preserved, restored, or enhanced on site or off site at a ratio identified in the USACE and CDFW permits/agreements for the project. The ratio shall be no less than 2:1 for habitat restoration or preservation. Habitat enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. The mitigation ratio for habitat enhancement shall depend on the initial quality of the habitat area to be enhanced, and would be determined by the Project Applicant, the USACE, the CDFW, and the LACDRP. Riparian habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The Project Applicant shall develop a HMMP and shall submit it to the USACE, the CDFW, and the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist and approved by the USACE, the CDFW, and the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants and cuttings of suitable riparian plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), spiny rush will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP and according to its specified materials, methods, and performance criteria, which shall include the following items: a. **Responsibilities and Qualifications.** The responsibilities and qualifications of the Project Applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under USACE and CDFW permit conditions. A successful program shall be defined as one that has been signed off on by the USACE and the CDFW.	Prior to issuance of grading permits, HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and County of Los Angeles Department of Regional Planning	

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b. **Performance Criteria.** Mitigation performance criteria to be specified in the HMMP shall conform to USACE and CDFW permit conditions. The HMMP shall state that the use of the mitigation site by special status wildlife species (e.g., least Bell's vireo), though not a requirement for site success, would be regarded by the USACE, the CDFW, and the LACDRP, as a significant factor in considering eligibility for program sign-off. c. **Site Selection.** The mitigation sites shall be determined in coordination with the Project Applicant, the USACE, the CDFW, and the LACDRP. The site(s) shall be located in dedicated open space areas, and shall be contiguous with other natural open space areas. d. **Seed Materials Procurement.** At least two years prior to mitigation implementation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. e. **Wildlife Surveys and Protection.** The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., least Bell's vireo]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). f. **Site Preparation and Plant Materials Installation.** Mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) application of salvaged native plant materials (i.e., coarse woody debris), as available and supervised by a biological monitor; (g) temporary irrigation installation; (h) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)—including specification of approved herbicides; (i) planting of container plant and cutting species; and (j) seed mix application. g. **Schedule.** An implementation schedule shall be developed that includes planting and seeding to occur in late fall and early winter (i.e., between November 1 and February 15) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). h. **Maintenance Program.** The Maintenance Program shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal—including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) replacement of dead container plant and cuttings (as needed); (g) application of remedial seed mixes (as needed); (h) herbivory control; and (i) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. The mitigation site shall be maintained for a period of five years to ensure the successful sage scrub habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the USACE, the CDFW, and the LACDRP prior to five years if the mitigation program has achieved all performance criteria. i. **Monitoring Program.** The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring (in conformance with the USACE 2015 Guidelines); and (c) annual monitoring reports, which shall be submitted to the USFWS, the CDFW, and the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and				

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	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the Project Applicant has been released from maintenance requirements by the USACE, the CDFW, and the LACDRP. j. **Long-term preservation.** Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.				
MM 5.2-12	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of vegetation associated with project implementation, the limits of disturbance shall be clearly defined and marked in the field using lath and flagging or orange snow fencing. The Biological Monitor shall review the limits of disturbance prior to initiation of construction activities. The Biological Monitor shall be on site during the initial vegetation clearing and thereafter on an as-needed basis to assist the Project Applicant with mitigation measure compliance and to provide guidance in avoiding and/or minimizing impacts to biological resources.	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of vegetation associated with project implementation	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	
	MM 5.2-13 The Project shall be conducted in compliance with the conditions set forth in the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code with methods approved by USFWS and CDFW to protect active bird//raptor nests. The nature of the Project requires that work would be initiated during the breeding season for nesting birds (March 15-September 15) and nesting raptors (February 1-June 30). LACFCO, in consultation with a qualified biologist, may employ bird exclusionary measures (e.g., mylar flagging) prior to the start of bird breeding season to minimize opportunities for birds to nest within established boundaries of the Project. In order to avoid direct impacts on active nests, a pre-construction survey shall be conducted by a qualified Biologist for nesting birds and/or raptors within 3 days prior to clearing of any vegetation or any work near existing structures (i.e., within 50 feet for nesting birds and within 500 feet for nesting raptors). If the Biologist does not find any active nests within or immediately adjacent to the impact area, the vegetation clearing/construction work shall be allowed to proceed. Results of the surveys will be provided to the CDFW and the LACDRP. CDFW will be consulted for their determination of the need for an Incidental Take Permit, in the event that any listed or candidate species are encountered during pre-construction surveys. If the Biologist finds an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted or breeding activities substantially disrupted, the Biologist shall delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the nature of the construction activity. Typical nest buffers may be approximately 200 feet for song birds and 500 feet for raptors. Any nest found during survey efforts shall be mapped on the construction plans. The active nest shall be protected until nesting activity has ended. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by a qualified Biologist: (1) clearing limits shall be established within a buffer around any occupied nest, unless otherwise determined by a qualified Biologist and (2) access and surveying shall be restricted within the buffer of any occupied nest, unless otherwise determined by a qualified Biologist. Encroachment into the buffer area around a known nest shall only be allowed if the Biologist determined that the proposed activity would not disturb the nest occupants. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest or the nest has failed.	Within 3 days prior to vegetation clearing activities or work near existing structures	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	California Department of Fish and Wildlife and County of Los Angeles Department of Regional Planning	
MM 5.2-14	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable wintering burrowing owl habitat, the area shall be assessed during the appropriate time of year (October 15 to March 31). In the event that wintering owls or burrows are detected, CDFW will be consulted. If the habitat assessment concludes that the area lacks potentially suitable burrowing owl burrows, no additional action is required. However, if potentially suitable burrows are located in the assessment area, any burrows that may be impacted by the project will be replaced with artificial burrows	Prior to grading and/or construction related activities involving the disturbance and/or removal of potentially suitable wintering burrowing owl habitat	Project Applicant, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	

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	within on-site or off-site (if applicable) preserved areas with potentially suitable burrowing owl habitat, following consultation with CDFW. If a wintering owl is observed during the non-nesting season, the burrow will be monitored by a qualified Biologist and, when the burrowing owl is away from the burrow, the burrow will be removed (or the burrow closed) so the burrowing owl cannot return to the burrow, following consultation with CDFW. The qualified Biologist will supervise the removal of the burrow.				
MM 5.2-15	Due to the close proximity of occupied habitat of a federally listed coastal California gnatcatcher, the Project shall not commence without consultation with the USFWS due to the potential for take per the FESA. The consultation will occur within the framework of Section 7 through the USACE regulatory permitting process. If required by the USFWS, a Biological Assessment will be provided to support the Service's Biological Opinion.	Prior to the initiation of any grading and/or construction-related activity	Project Applicant and Future Developers	U.S. Fish and Wildlife Service and County of Los Angeles Department of Regional Planning	
MM 5.2-16	To limit the amount of operational noise (i.e., from residents) to surrounding natural open space areas, a 100-foot buffer within the fuel-modification zone shall be planted along the boundary of developed land uses with plant species to be reviewed and approved by the Los Angeles County Fire Department and the LACDRP Biologist. The vegetation within the transition zone buffer will block sound waves and screen noise from the adjacent development so that the amount of indirect noise reaching the wildlife habitat would be reduced. Landscaping in areas adjacent to natural open space shall use species native to the project region that are considered fire-retardant (e.g., toyon [*Heteromeles arbutifolia*]). The Planting Plan shall be submitted to the Los Angeles County Fire Department and LACDRP Biologist for review and approval prior to issuance of a building permit.	Prior to the initiation of any grading and/or construction-related activity	Project Applicant, Future Developers, and Construction Contractor	Los Angeles County Fire Department and County of Los Angeles Department of Regional Planning	
MM 5.2-17	Prior to the issuance of building permits, a Lighting Plan for the subject tract shall be submitted to the LACDRP for review and approval to demonstrate that lighting from the proposed project shall be directed away from natural open space areas and any proposed biological resources mitigation sites. Land uses with high-intensity lighting shall be relocated within the development to areas away from natural open space.	Prior to the issuance of building permits	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.2-18	To limit the amount of human disturbance to surrounding natural open space areas, a Fencing Plan to deter project occupants from entering the natural areas shall be prepared by the project developer and implemented. The Fencing Plan shall include provisions for signs and wildlife-friendly split-rail fencing to direct residents to keep out of sensitive natural open space and revegetation and/or mitigation areas. In areas bordering natural open space and fuel-modification zones, the Landscape Plan shall reflect a transition zone designed to buffer natural habitats from developed areas and proposed fencing. This transition zone should reduce impacts associated with invasion by introduced species and should help buffer human activity adjacent to the wildlife habitat. Landscaping in areas adjacent to natural open space shall use species native to the project region (e.g., toyon) and be consistent with guidelines from the Los Angeles County Fire Department.	Prior to the initiation of any grading and/or construction-related activity and throughout Project operation	Project Applicant, Future Developers and Construction Contractor	Los Angeles County Fire Department and County of Los Angeles Department of Regional Planning	
MM 5.2-19	Landscaping designs shall be submitted to LACDRP for review and approval by a qualified Biologist. The review shall ensure that no invasive, exotic plant species are used in any proposed landscaping and that suitable substitutes are proposed. Excluded plant species shall be consistent with the California Invasive Plant Council current list at the time of installation. Only native species from the Santa Clarita Valley region shall be used in landscaping along the project boundaries adjacent to open space.	Prior to approval of landscape plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.2-20	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable bat roosting habitat, namely rocky outcrops or trees, a qualified Biologist shall conduct a pre-construction bat habitat assessment of the potential habitat marked for removal. Potential for roosting will be categorized by (1) potential for solitary roost sites and (2) potential for colonial roost sites (i.e., ten bats or more). If the potential for colonial roosting is determined, CDFW will be consulted and those rocky outcrops or trees shall not be removed during the bat maternity roost season (March 1 to July 31). Trees potentially supporting colonial roosts outside the maternity roost season and trees potentially supporting solitary roosts may be removed via a two-step removal process whereby, at the direction of the Biologist, some level of disturbance (such as trimming of lower branches of trees) is applied to the habitat on the day prior to removal to allow bats to escape during the darker hours. In the case of a tree, it shall be removed the following day (i.e., there shall be no less or more than one night between initial disturbance and the grading or tree removal). Rock outcrops potentially supporting colonial roosts outside the maternity roost season and rock	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable bat roosting habitat	Project Applicant, Future Developers and Qualified Biologist	California Department of Fish and Wildlife and County of Los Angeles Department of Regional Planning	

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	outcrops potentially supporting solitary roosts may be fitted with a bat exclusionary device, at the entry location, whereby bats are allowed to leave the structure but unable to return. The structure can be demolished the following day. In addition, the habitat replacement requirements of other Mitigation Measures further reduce the impact to bats through the preservation, enhancement, restoration and/or creation of impacted vegetation, which shall be generally suitable for impacted bat species. Prior to disturbance of any roosting habitat, a Bat Relocation Monitoring Plan (BRMP) shall be submitted and approved by the CDFW and the LACDRP. The BRMP shall include, at a minimum, the following items: (1) species of bats present onsite, (2) habitat uses of the site (i.e., roosting, hibernating, etc.) (3) roosting habitat replacement feature guidelines, (4) construction monitoring guidelines, (5) habitat replacement feature monitoring, and (6) reporting requirements. Reporting shall occur annually to LACDRP and CDFW. The BRMP will be submitted annually for five years.				
MM 5.2-21	Prior to the issuance of a grading permit, the project applicant will apply for coverage under the State Water Resources Control Board's General Permit for Storm Water Discharge Associated with Construction Activity (Construction Activities General NPDES Permit) and will comply with all the provisions of the permit, including the development of a Storm Water Pollution Prevention Plan, which includes provisions for the implementation of Best Management Practices and erosion control measures. Best Management Practices will include both structural and non-structural measures. The purpose of this mitigation measure is to ensure that site runoff does not adversely affect downstream biological resources including Castaic Lake, Castaic Creek, and the Santa Clara River.	Prior to the issuance of a grading permit	Project Applicant	State Water Resources Control Board	
MM 5.2-22	The project applicant shall retain a qualified biologist with the appropriate handling permits to conduct focused surveys for Crotch's bumble bee within the proposed habitat restoration/enhancement sites prior to implementation of the HMMP as set forth in MM 5.2-6 through MM 5.2-8. Focused surveys shall follow California Department of Fish and Wildlife's (CDFW) Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023). Focused surveys shall also be conducted throughout the entire proposed mitigation areas and during the appropriate flying season to ensure no missed detection of Crotch's bumble bee occurs. Survey results, including negative findings, shall be submitted to CDFW and LACDRP prior to the start of a monitoring program.	Prior to the implementation of the HMMP and during the appropriate flying season	Project Applicant	County of Los Angeles Department of Regional Planning	
Cultural Resources (Section 5.3 of the Draft SEIR)					
MM 5.3-1	If human remains are encountered during a public or private construction activity, other than at a cemetery, State Health and Safety Code 7050.5 states that no further disturbance shall occur until the Los Angeles County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The Los Angeles County Coroner must be notified within 24 hours. If the coroner determines that the burial is not historic, but prehistoric, the Native American Heritage Commission (NAHC) must be contacted to determine the most likely descendent (MLD) for this area. The MLD may become involved with the disposition of the burial following scientific analysis. (**SCVAP 2012 EIR MM 3.8.7)**	During grading and earth disturbance activities	Project Applicant and Construction Contractor	Los Angeles County Coroner and Native American Heritage Commission	
MM 5.3-2	In the unlikely event that artifacts are found during grading within the County's Planning Area or future roadway extensions, an archaeologist will be notified to stabilize, recover, and evaluate such finds. (**SCVAP 2012 EIR MM 3.8.3)**	During grading and earth disturbance activities	Project Applicant, Construction Contractor, and Qualified Archaeologist	County of Los Angeles Department of Regional Planning	
MM 5.3-3	For archeological sites accidentally discovered during future construction, there shall be an immediate evaluation of the find by a qualified archeologist. If the find is determined to be a historical or unique archeological resource, as defined under CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be provided. Construction work may continue on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i). (**SCVAP 2012 EIR MM 3.8.5)**	During grading and earth disturbance activities	Project Applicant, Construction Contractor, and Qualified Archaeologist	County of Los Angeles Department of Regional Planning	
MM 5.3-4	During grading activities. In the unlikely event that artifacts are found during grading within the Project site, a paleontologist will be notified to stabilize, recover, and evaluate such finds. (**SCVAP 2012 EIR MM 3.8.6, modified)**	During grading and earth disturbance activities	Project Applicant, Construction Contractor, and Qualified Paleontologist	County of Los Angeles Department of Regional Planning	
MM 5.3-5	Avoidance is the preferred treatment for cultural resources. Where feasible, project plans shall be developed to allow avoidance of cultural resources. Where avoidance of construction impacts is possible, covering of the cultural resource site with a layer of chemically stable soil and avoidance planting (e.g., planting of prickly pear	During grading and earth disturbance activities	Project Applicant	County of Los Angeles Department of Regional Planning	

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	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	cactus) shall be employed to ensure that indirect impacts from increased public availability to the site are avoided. Where avoidance is selected, cultural resource sites shall be deeded into permanent conservation easements or dedicated open space. **(SCVAP 2012 EIR MM 3.8.1)**				
MM 5.3-6	If avoidance and/or preservation of in place cultural resources is not possible, the following mitigation measures shall be initiated for each impacted site: a. A participant-observer, as determined by the Native American Heritage Commission (NAHC), shall be used during archaeological testing or excavation in the project site. Prior to the issuance of a grading permit for the project, the project proponent shall develop a test level research design detailing how the cultural resource investigation shall be executed and providing specific research questions that shall be addressed through the excavation program. In particular, the testing program shall characterize the site constituents, horizontal and vertical extent, and, if possible, period of use. The testing program shall also address the California Register and National Register eligibility of the cultural resource and make recommendations as to the suitability of the resource for listing on either Register. The research design shall be submitted to the County of Los Angeles Regional Park and Open-Space District for review and comment. For sites determined, through the Testing Program, to be ineligible for listing on either the California or National Register, execution of the Testing Program will suffice as mitigation of project impacts to this resource. (**SCVAP 2012 EIR MM 3.8.2)**	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant and Construction Contractors	County of Los Angeles Regional Park and Open Space District and Native American Heritage Commission	
MM 5.3-7	All Project-related ground-disturbing activities in archaeologically sensitive sediments shall be monitored by a qualified Archaeologist to reduce any archaeological resources impacts to a level considered less than significant. The construction monitoring program shall be preceded by a pre-grade meeting in the field in which the Project Archaeologist shall explain the procedures necessary to protect and safely remove potentially significant archaeological resources, and shall establish procedures for monitoring based on the sensitivity of the sediments being graded, schedule, and other information received from the applicant. If potential cultural sites are identified during construction-related ground disturbances, all work in that location shall cease or be immediately diverted until the qualified archaeologist has evaluated the nature and significance of the find. The Project Applicant shall then be notified if the materials are believed to be potentially significant, and the archaeologist may recommend further study and mitigation to the satisfaction of LACDRP.	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant, Construction Contractors, and Qualified Archaeologist	County of Los Angeles Department of Regional Planning	
MM 5.3-8	At such time when the Project Archaeologist is on-site for monitoring activities, a qualified Native American Tribal Monitor shall be notified and invited to observe ground-disturbing activities. The Native American Tribal Monitor shall coordinate with the Project Archaeologist and provide input regarding potential resources or cultural sites. Should any resources be discovered, the procedures set forth in MM 5.3-2 shall be followed.	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant, Construction Contractors	County of Los Angeles Department of Regional Planning and Native American Heritage Commission	
MM 5.3-9	All Project-related ground-disturbing activities in paleontologically sensitive sediments shall be monitored by a qualified Paleontologist to reduce any impacts to non-renewable fossil resources to a level considered less than significant. The construction monitoring program shall be preceded by a pre-grade meeting in the field in which the Project Paleontologist shall explain the procedures necessary to protect and safely remove potentially significant fossil materials for study and curation at the Natural History Museum of Los Angeles County, and shall establish procedures for monitoring based on the sensitivity of the sediments being graded, schedule, and other information received from the applicant. If potential paleontological sites are identified during construction-related ground disturbances, all work in that location shall cease or be immediately diverted until the qualified paleontologist has evaluated the nature and significance of the find. The Project Proponent will then be notified if the materials are believed to be potentially significant, and the paleontologist may recommend further study and mitigation to the satisfaction of LACDRP.	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant, Construction Contractors, and Qualified Paleontologist	County of Los Angeles Department of Regional Planning	
Energy (Section 5.4 of the Draft SEIR)					
MM 5.4-1	The County shall review all development plans to guarantee that energy conservation and efficiency standards of Title 24 are met and are incorporated into the design of the proposed project prior to approval. (**SCVAP 2012 EIR MM 3.17-7)**	Prior to approval of development plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.4-2	The County shall review all development proposals to guarantee that sufficient energy resources and facilities are available to supply adequate energy to the proposed project and associated uses prior to approval. (**SCVAP 2012 EIR MM 3.17-6)**	Prior to approval of development plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Greenhouse Gas Emissions (Section 5.7 of the Draft SEIR)					
MM 5.7-1	Prior to the issuance of building permits, the applicant shall provide evidence of green building practices and design elements that reduce GHG emissions, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-1**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-2	Prior to the issuance of building permits, the applicant shall provide evidence of energy- efficient designs, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards, such as those found in the Leadership in Energy and Environmental Design ("LEED") Green Building Ratings and/or comply with Title 24, Part 11, the California Green Building Standards Code. (**SCVAP MM 3.4-2**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-3	Prior to the issuance of building permits, the applicant shall provide evidence of energy efficient lighting, heating and cooling systems, appliances, equipment, and control systems, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-3**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-4	Prior to the issuance of building permits, the applicant shall provide evidence of light colored "cool" roofs and cool pavements, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-4**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-5	Prior to the issuance of building permits, the applicant shall provide evidence of efficient lighting (including LEDs) for traffic, street, and other outdoor lighting purposes, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-5**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-6	Prior to the issuance of building permits, the applicant shall provide evidence of efficient pumps and motors for pools and spas, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-6**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-7	Prior to the issuance of building permits, the applicant shall provide evidence of the ability to install solar, and solar hot water heaters, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-7**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-8	Prior to the issuance of building permits for, the applicant shall provide evidence of water-efficient landscapes, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-8**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-9	Prior to the issuance of building permits, the applicant shall provide evidence of water efficient irrigation systems and devices, such as soil-based irrigation controls and use water-efficient irrigation methods, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-9**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-10	Prior to the issuance of building permits, the applicant or their contractor shall submit a site construction management plan for the reuse and recycle construction and demolition (including soil, vegetation, concrete, lumber, metal, and cardboard) to the Department of Public Works for review and approval in accordance with the requirements of the ordinances developed pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-10**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-11	Prior to the issuance of building permits, the applicant shall provide evidence of reuse and recycling receptacles in residential, industrial, and commercial projects, in accordance with the requirements of the ordinances developed pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-11**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-12	Prior to the issuance of building permits, the applicant shall provide evidence of consistency with "smart growth" principles to reduce GHG emissions (i.e., ensure mixed- use, infill and higher density projects provide alternatives to individual vehicle travel and promote efficient delivery of goods and services). (SCVAP MM 3.4-12)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.7-13	Prior to implementing project approval, the applicant shall preserve existing trees, to the extent feasible and consistent with mitigation measures, encourage the planting of new trees consistent with the final landscape palettes, and create open space where feasible. (**SCVAP MM 3.4-13**)	Prior to implementing project approval	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-14	Prior to the issuance of each residential occupancy permit, the Applicant or successor developer shall submit for approval to the County the plan for the applicable future homeowners association(s) to provide educational information to each homeowner on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; (5) the use of solar heating, automatic covers, and efficient pumps and motors for pools and spas; and (6) recycling to all homeowners prior to individual purchase of property and again annually.	Prior to the issuance of each residential occupancy permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-15	Prior to the issuance of each nonresidential occupancy permit, the Applicant or successor developer shall submit for approval to the County the plan to provide educational information to each owner or tenant on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; and (5) recycling to all homeowners prior to individual purchase of property and again annually.	Prior to the issuance of each nonresidential occupancy permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-16	Prior to the issuance of each grading and building permit, the applicant/developer shall require in contract specifications, that contractors set goals to limit unnecessary construction equipment idling to 3 minutes and include methods to encourage equipment operators to achieve the 3-minute goal.	Prior to the issuance of each grading and building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-17	Prior to the issue of the occupancy permit for the 1,000th residential unit, the master developer shall provide the County with plans for a weekly farmers' market to be sponsored by the homeowners' association or similar entity.	Prior to the issue of the occupancy permit for the 1,000th residential unit,	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
Hydrology and Water Quality (Section 5.8 of the Draft SEIR)					
MM 5.8-1	The Project will develop and implement an Integrated Pest Management Plan as a mitigation measure in accordance with the integrated pest management and pesticide and fertilizer application guidelines established by the University of California Division of Agriculture and Natural Resources Statewide Integrated Pest Management Program (http://www.ipm.ucdavis.edu/). The IPM Plan, which will serve to control nutrients and reduce pesticide use, will include the following components: 1. Roles and responsibilities. The IPM Plan will identify the key decision makers in the program, other key roles (such as the person responsible for recordkeeping), and the program funding mechanisms. 2. Pest identification. The IPM Plan will identify plant species and potential pests for these plant species. The Plan shall provide references to resources (e.g., existing field manuals) and identify tools (e.g., hand lens) that can be used to facilitate identification. 3. Practices to prevent pest incidence and reduce pest buildup. The IPM Plan will include a list of acceptable management strategies for each potential pest. For example, effective practices include modifying landscaping to be less conducive to pest survival, using pest-resistant plant varieties, using mulch to suppress weeds, encouraging naturally occurring biological controls, educating the public to be more tolerant of pests, removing pests mechanically or with barriers and traps, developing a list of pesticides that are less toxic to the environment, and developing formulations that will control the pest if other methods are not successful. 4. Monitoring to examine vegetation and surrounding areas for pests to evaluate trends and to identify when controls are needed. The IPM Plan will establish monitoring guidelines for the potential pests and beneficial insects. Monitoring procedures shall include regular visual inspections or checking with traps and methods to quantify observations. The monitoring program shall be used to evaluate when pests may become intolerable and to evaluate the level of effectiveness of controls. 5. Establishment of action thresholds that trigger control actions. The IPM Plan will establish injury levels and action thresholds for each potential pest that is listed in the plan. The injury level is the number of pests	Prior to issuance of occupancy permits and throughout Project operation	Construction Contractor, Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
associated with intolerable damage. Action thresholds are the set of conditions required to trigger a control action, usually pesticide application. 6. Pest control methods. The IPM Plan will describe cultural, mechanical, environmental, and biological pest control methods and shall list pesticides authorized for use and the Safety Data Sheets for each pesticide. The Plan will include specific criteria for selecting pest management methods, for example, those that are least disruptive to natural controls and least damaging to water quality, and procedures for evaluating the effectiveness of the control method. 7. Fertilizer management. The IPM Plan will describe soil assessment techniques, fertilizer types, application methods, and proper storage and handling of fertilizers. 8. Pesticide management. The IPM Plan will discuss pesticide safety (e.g., Material Safety Data Sheets, precautionary statements, and protective equipment); regulatory requirements; spill mitigation; groundwater and surface water protection measures associated with pesticide use; and pesticide applicator certifications, licenses, and training (i.e., all pesticide applicators must be certified by the California Department of Pesticide Regulation). The IPM Plan will include a pesticide application guidelines/checklist. For example, the application equipment must be calibrated correctly and written records must be kept of any pesticide application. 9. Irrigation management. The IPM Plan will describe the low volume water approaches to landscape irrigation, such as drip type and sprinkler systems with SMART controllers, and shall also describe the training to be provided to landscape crews that will focus on applying water only when needed to enhance plant root growth, managing irrigation to avoid conditions conducive to disease development, and minimizing runoff containing pollutants. 10. Record keeping. The IPM Plan will describe the records that will be maintained for program implementation, including pest identification and monitoring results, when and where various pest suppression techniques were implemented, pesticide application records, observed side effects of the treatment on non-target species, and public complaints and positive feedback received. 11. Training. The IPM Plan will describe continuing education of pest management personnel. 12. Effectiveness evaluation. The IPM Plan will describe the methods to be used to evaluate the overall effectiveness of the program and the schedule for reviewing the Plan to incorporate new IPM technology.					
Noise (Section 5.10 of the Draft SEIR)					
MM 5.10-A	With concurrence from the Castaic Union School District, the Applicant will construction a minimum 3-foot-high sound wall along the eastern edge of the outdoor fields, a 6-foot high wall along the eastern edge of the school parking lot, and a 3-foot high wall along the western edge of Ridge Route Road north of the school parking lot to block noise from project-related traffic to the school playground and school buildings. The location of the proposed sound wall is shown in Figure 1.	Prior to issuance of grading permits and building permits and during construction	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-B	During construction, the Applicant will place a flagman at the campus during school hours to ensure school and construction traffic flow safely in the school vicinity.	Prior to issuance of grading permits and building permits and during construction	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-C	The Applicant will ensure that access to the campus is always preserved during construction.	Prior to issuance of grading permits and building permits and during construction	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-1	Maintain adequate buffer distances from nearby residences to freeways, high traffic volume roads, railroads, airports, manufacturing facilities, industrial facilities, mining centers and other existing processing plants where the public may be affected by noise. **(SCVAP MM 3.18-2)**	Prior to issuance of grading permits and building permits	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-2	Sound barriers should be required of the owners of the proposed sensitive land uses adjacent to high noise sources, to protect the public from significant noise impacts. **(SCVAP MM 3.18-4)**	Prior to issuance of grading permits and building permits	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.10-3	The placement of telecommunication towers and antennas power boxes should comply with noise ordinances. All related equipment should be rated not to exceed 45 dB(A) at any residential property line. **(SCVAP MM 3.18-6)**	Prior to approval of utility plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-4	Prior to the issuance of each permit for clearing, grading, or building within 500 feet of existing residences or the Northlake Elementary School, the Developer shall demonstrate that the construction plans or specifications include the following noise-abatement and control measures. This measure applies to all phases of construction. • All construction equipment, including internal combustion engines and stationary equipment (used for construction purposes) shall be equipped with noise-reducing features such as, but not limited to, improved mufflers, intake silencers, ducts, engine enclosures, and acoustical shields or shrouds. • Stationary sources located within 450 feet of the Northlake elementary School or off-site residences shall have noise abatement, such as engine enclosures or placed behind barriers, to limit the noise level at the sensitive receptor to 60 dBA L_{eq} or less. • Stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers. • On-site and off-site construction haul routes shall be designed to avoid noise-sensitive uses, as feasible. • Equipment and material staging areas and equipment maintenance areas shall be located at least 500 feet from sensitive noise receivers, if feasible.	Prior to the issuance of each permit for clearing, grading, or building within 500 feet of existing residences or the Northlake Elementary School	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-5	To the extent feasible, intensive noise activity (e.g., operation of earth moving equipment) within 750 feet of the Northlake Elementary School shall be scheduled to occur when classroom instruction is not scheduled. If grading or similar construction activity within 150 feet of the school is to occur for longer than one day while school is in session, the Developer shall install a temporary noise barrier between the construction area and the school. The barrier shall be 12 feet high and solid from the ground to the top. The barrier shall be constructed with plywood that is at least ½ inch thick or with another material that creates a noise transmission loss of at least 20 dBA. The barrier shall be located to break the line of sight between the school and the construction area. Where feasible, the barrier shall remain in place until the completion of construction near the school. This measure applies to all phases of construction.	Prior to initiation of any construction activity within 750 feet of Northlake Elementary School	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-6	If grading or similar construction activity within 150 feet of off-site residences is to occur for longer than one day, the Developer shall install a temporary noise barrier between the construction area and the residences. The barrier shall be 12 feet high and solid from the ground to the top. The barrier shall be constructed with plywood that is at least ½ inch thick or with another material that creates a noise transmission loss of at least 20 dBA. The barrier shall be located to break the line of sight between the residences and the construction area. Where feasible, the barrier shall remain in place until the completion of construction near the residences. This measure applies to all phases of construction.	Prior to issuance of a building permit for each industrial and commercial land use	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-7	Prior to issuing of a building permit for each industrial and commercial land use, the Developer shall submit a noise analysis to the County demonstrating that projected noise levels from stationary sources, vehicle activity, loading docks, and similar sources will not exceed the exterior noise standards of Section 12.08.390 of the County Code. For purposes of this MM, school use shall be considered as a residential use (Zone II) in the County Code. The noise analysis shall, to the extent feasible, be cumulative, considering not only the noise generated by the proposed development but also noise generated by adjacent and nearby stationary sources. Where the adjacent properties have not been developed, the analysis should show that the noise level from the proposed development would be far enough below the standard to allow a reasonable increment for future noise sources without exceeding the standard.	Prior to issuance of a building permit for each industrial and commercial land use	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-8	Prior to issuing of a building permit for each multi-family residential use, the Developer shall submit a noise analysis to the County demonstrating that projected air conditioning and refrigeration equipment noise levels would be exceed the standards of Section 12.08.530 of the County Code.	Prior to issuance of a building permit for each multi-family residential use	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-9	Prior to issuing of building permits for single family and duplex residences adjacent to Ridge Route Road, Northlake Boulevard, A Street, B Street, or E Street, and for multi-family residences adjacent to Ridge Route	Prior to issuance of building permits for single family and duplex	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

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Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Road and Northlake Boulevard, the Developer shall submit a noise analysis to the County demonstrating that projected exterior noise levels at areas where residents would reasonably be expected to spend more than one hour, such as back yards, would not exceed 60 dBA CNEL for single family and duplex residences and 65 dBA CNEL for multi-family residences. This standard is based on the California Land Use Compatibility Guidelines. Noise abatement may be achieved by setbacks, berms, and walls. The noise analysis shall also demonstrate that interior noise levels in all habitable rooms would of duplexes and multi-family residences would not exceed 45 dBA CNEL, as required by the California Building Code.	residences adjacent to Ridge Route Road, Northlake Boulevard, A Street, B Street, or E Street, and for multi-family residences adjacent to Ridge Route Road and Northlake Boulevard			
MM 5.10-10 Prior to issuing of building permits for commercial land uses adjacent to Ridge Route Road, the Developer shall submit a noise analysis to the County demonstrating that projected exterior noise levels at areas where patrons would reasonably be expected to spend more than one hour, such as outdoor restaurant seating, would not exceed 70 dBA CNEL.	Prior to issuance of building permits for commercial land uses adjacent to Ridge Route Road	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-11 Prior to the issuance of each grading permit, the Developer shall submit plans and/or specifications to the County demonstrating that site preparation and grading within 265 feet of a residence or the NorthLake Elementary School shall be performed with equipment that will not cause a vibration exceeding 0.01 peak particle velocity (ppv) inch per second (in/sec).	Prior to the issuance of each grading permit	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-12 If blasting is required, the Applicant or its contractor shall hire a certified blasting expert to develop a blasting program to be approved by the County Department of Public Works. The program shall include but not be limited to the following elements: • Design the blast to limit noise and vibration at any residence or the NorthLake Elementary School to the limits recommended by the Office of Surface Mining Reclamation and Enforcement or similarly recognized authority. • Based on the blasting locations, define an impact area where noise and vibration impacts are anticipated to be distinctly perceptible. • Inform all homeowners and tenants in the impact area of the Project, the planned blasting program, and the anticipated noise and vibration impacts. In addition to printed literature, have a public meeting. Provide a contact for homeowners for pre- and post-blast questions. • Use blast signals to notify residents prior to each blast. • Monitor blasts to verify noise and vibration levels at the nearest receptor(s).	Prior to commencement of any blasting activities	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
Public Services				
SCVAP MM 3.15-2 Concurrent with the issuance of building permits, the project applicant shall participate in the Developer Fee Program to the satisfaction of the County of Los Angeles Fire Department.	Concurrent with the issuance of building permits	Applicant	County of Los Angeles Fire Department	
SCVAP MM 3.15-3 Adequate water availability shall be provided to service construction activities of any project to the satisfaction of the County of Los Angeles Fire Department.	Prior to approval of development plans	Applicant	County of Los Angeles Fire Department	
SCVAP MM 3.15-4 Development applicant(s) shall be required to pay the Los Angeles County Sheriff's established law enforcement facility fees for North Los Angeles County prior to issuance of a certificate of occupancy on any structure. The fees are for the acquisition and construction of public facilities to provide adequate service to the residents of the County's Planning Area.	Prior to approval of development application	Applicant	County of Los Angeles Fire Department	
SCVAP MM 3.15-1 Project developers shall pay the current library fee at the time of building permit issuance ($885.00 per residential unit for FY 2016-17) to the County of Los Angeles to offset the demand for library items and building square footage generated by the proposed project. The library mitigation payment shall be made on a building permit by building permit basis by the developer for residential projects.	Prior to issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
Traffic, Access, and Circulation (Section 5.11 of the Draft SEIR)				
MM 5.11-3 Prior to construction activities, the Project Applicant shall prepare and submit a detailed Construction Traffic Control Plan to the County of Los Angeles Department of Public Works for review and approval. The Construction Traffic Control Plan shall describe in detail safe detours and provide temporary traffic control during construction activities for the project. To reduce traffic congestion, the Plan shall include, as necessary,	Prior to the issuance of building permit	Project Applicant and Future Developers	County of Los Angeles Department of Public Works	

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	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	appropriate, and practicable, the following: temporary traffic controls (e.g., a flag person) during all phases of construction to maintain smooth traffic flow; dedicated turn lanes for movement of construction trucks and equipment on and off site; scheduling of construction activities that affect traffic flow on the arterial system to off-peak hours; consolidation of truck deliveries; rerouting of construction trucks away from congested streets or sensitive receptors; and/or signal synchronization to improve traffic flow.				
Utilities (Section 5.12 of the Draft SEIR)					
MM 5.12-1	The project applicant shall provide all onsite water system improvements and shall contribute to required new or upgraded existing offsite improvements to meet all water supply needs for the proposed development. (**1992 SP EIR MM 4.12.1)**	Prior to the issuance of building permits	Project Applicant and Future Developers	County of Los Angeles Department of Public Works and Newhall County Water District	
MM 5.12-2	All water system improvements shall be sized at the water improvement plan check stage of development. **(1992 SP EIR MM 4.12.2)**	Prior to approval of water improvement plan(s)	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Public Works	
MM 5.12-3	Project connection fees would be deposited into a capital improvement fund to help pay for new facilities and expansion required by the Districts; **(1992 SP EIR MM 4.9.3)**	Prior to connection to Los Angeles Sanitation Districts facilities	Project Applicant	County of Los Angeles Department of Regional Planning and Los Angeles Sanitation Districts	
MM 5.12-4	Payment of the connection fees is required for issuance of a permit to connect the project to surrounding Los Angeles County Sanitation District facilities, if necessary**. (1992 SP EIR MM 4.9.4)**	Prior to issuance of permit to connect the project to surrounding Los Angeles County Sanitation District facilities	Project Applicant	County of Los Angeles Department of Regional Planning and Los Angeles County Sanitation District	
MM 5.12-5	Routine testing of pre-discharge treated effluent should be conducted to monitor compliance with established water quality control limits. (**1992 SP EIR MM 4.9.7)**	During construction activities and Project operation	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-6	Prior to issuance of occupancy permits, the Project Applicant shall provide evidence to the County of payment of connection fees in compliance with the requirements of the Newhall County Water District.	Prior to issuance of occupancy permits	Project Applicant	County of Los Angeles Department of Regional Planning and Newhall County Water District	
MM 5.12-7	Prior to connection to the Los Angeles County Sanitation District's wastewater system, the Project Applicant shall provide evidence of payment of the Santa Clarita Valley Sanitation District's Connection Fee Program.	Prior to connection to the Los Angeles County Sanitation District's wastewater system	Project Applicant	Los Angeles County Sanitation District and Santa Clarita Valley Sanitation District	
MM 5.12-8	Prior to issuance of occupancy permits, the Project Applicant shall coordinate with the Los Angeles County Sanitation Districts to upsize the existing 12-inch VCP Castaic Trunk Sewer in Ridge Route Road (south of the intersection with Lake Hughes Road), as determined necessary by the LA County Sanitation Districts to accommodate future flow volumes.	Prior to the issuance of occupancy permits	Project Applicant	County of Los Angeles Department of Regional Planning and Los Angeles County Sanitation District	
MM 5.12-9	Monitor growth, and coordinate with water districts as needed to ensure that long-range needs for potable and reclaimed water will be met. (**SCVAP 2012 EIR MM 3.13.3)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-10	If water supplies are reduced from projected levels due to drought, emergency, or other unanticipated events, take appropriate steps to limit, reduce, or otherwise modify growth permitted by the Area Plan in consultation with water districts to ensure adequate long-term supply for existing businesses and residents. **(SCVAP 2012 EIR MM 3.13.4)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-11	Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval. (**SCVAP 2012 EIR MM 3.13.5)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-12	Require the use of drought tolerant landscaping, native California plant materials, and evapotranspiration (smart) irrigation systems. (**SCVAP 2012 EIR MM 3.13.6)**	Prior to approval of landscape plans	Project Applicant	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.12-13	In making land use decisions, consider the complex, dynamic, and interrelated ways that natural and human systems interact, such as the interactions between energy demand, water demand, air and water quality, and waste management. (**SCVAP 2012 EIR MM 3.13.8)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-14	In coordination with applicable water suppliers, adopt and implement a water conservation strategy for public and private development. (**SCVAP 2012 EIR MM 3.13.9)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-15	Provide examples of water conservation in landscaping through use of low water use landscaping in public spaces such as parks, landscaped medians and parkways, plazas, and around public buildings. (**SCVAP 2012 EIR MM 3.13.10)**	Prior to approval of landscape plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-16	Require low water use landscaping in new residential subdivisions and other private development projects, including a reduction in the amount of turf-grass. (**SCVAP 2012 EIR MM 3.13.11)**	Prior to approval of landscape plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-17	Provide informational materials to applicants and contractors on the Castaic Lake Water Agency's Landscape Education Program, and/or other information on xeriscape, native California plants, and water conserving irrigation techniques as materials become available. (**SCVAP 2012 EIR MM 3.13.12)**	Prior to commencement of grading or construction activities	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-18	Promote the use of low-flow and/or waterless plumbing fixtures and appliances in all new non-residential development and residential development of five or more dwelling units. (**SCVAP 2012 EIR MM 3.13.13)**	Prior to issuance of occupancy permits	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-19	Support amendments to the County Building Code that would promote upgrades to water and energy efficiency when issuing permits for renovations or additions to existing buildings. (**SCVAP 2012 EIR MM 3.13.14)**	Prior to the issuance of permits for renovations or additions to existing buildings	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-20	Apply water conservation policies to all pending development projects, including approved tentative subdivision maps to the extent permitted by law. Where precluded from adding requirements by vested entitlements, encourage water conservation in construction and landscape design. (**SCVAP 2012 EIR MM 3.13.15)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-21	Upon the availability of non-potable water services, discourage and consider restrictions on the use of potable water for washing outdoor surfaces. (**SCVAP 2012 EIR MM 3.13.16)**	At the time when non-potable water services are available	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-22	In cooperation with the Sanitation District and other affected agencies, expand opportunities for use of recycled water for the purposes of landscape maintenance, construction, water recharge, and other uses as appropriate. (**SCVAP 2012 EIR MM 3.13.17)**	Prior to construction and during Project operation	Project Applicant and County of Los Angeles Department of Regional Planning	County of Los Angeles Department of Regional Planning and Los Angeles County Sanitation District	
MM 5.12-23	Require new development to provide the infrastructure needed for delivery of recycled water to the property for use in irrigation, even if the recycled water main delivery lines have not yet reached the site. (**SCVAP 2012 EIR MM 3.13.18)**	Prior to approval of development plan	Project Applicant and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-24	Participate and cooperate with other agencies to complete, adopt, and implement an Integrated Regional Water Management Plan to build a diversified portfolio of water supply, water quality, and resource stewardship priorities for the Santa Clarita Valley. (**SCVAP 2012 EIR MM 3.13.20)**	Prior to and during Project operation	Project Applicant and County of Los Angeles Department of Regional Planning	County of Los Angeles Department of Regional Planning	
MM 5.12-25	Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval. (**SCVAP 2012 EIR MM 3.13.21)**	Prior to project approval	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-26	Promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel or additions. (**SCVAP 2012 EIR MM 3.13.22)**	Prior to approval of applicable permits for remodel or additions	County of Los Angeles Department of Regional Planning	County of Los Angeles Department of Regional Planning	
MM 5.12-27	Landscaping shall emphasize drought-tolerant vegetation (xeriscaping) where not watered with reclaimed water. Plants of similar water use shall be grouped to reduce over-irrigation of low-water-using plants. Those areas not designed in xeriscape shall be gauged to receive irrigation using the minimal requirements. (**1992 SP EIR MM 4.12.6)**	Prior to approval of landscape plans	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-28	Residential occupants shall be informed as to the benefits of low-water-using landscaping and sources of additional assistance in xeriscaping. (**1992 SP EIR MM 4.12.7)**	During operation	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.12-29	The County of Los Angeles shall follow state regulations in implementing the goals, policies, and programs identified in the Los Angeles County Integrated Waste Management Plan in order to achieve and maintain a minimum of 50 percent reduction in solid waste disposal through source reduction, reuse, recycling, and composting. In response to California's 75 Percent Initiative, at least 75 percent of all solid waste will be recycled or reused by 2020. Additionally, the Project Applicant or Construction Manager shall ensure that a minimum of 65 percent of the non-hazardous construction and demolition debris will be recycled and/or salvaged or meet a local construction and demolition waste management ordinance. (**SCVAP 2012 EIR MM 3.17.1)**	During construction activities and Project operation	Project Applicant, Future Developers, and/or Construction Manager	County of Los Angeles Department of Regional Planning	
MM 5.12-30	The County shall require all future commercial, industrial and multifamily residential development to provide adequate areas for the collection and loading of recyclable materials (i.e., paper products, glass, and other recyclables) in compliance with the State Model Ordinance, implemented on September 1, 1994, in accordance with AB 1327, Chapter 18, California Solid Waste Reuse and Recycling Access Act of 1991. (**SCVAP 2012 EIR MM 3.17.2)**	During construction activities and Project operation	Project Applicant and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-31	The County shall require all development projects to coordinate with appropriate County agencies to ensure that there is adequate waste disposal capacity to meet the waste disposal requirements of the County's Planning Area, and the County shall recommend that all development projects incorporate measures to promote waste reduction, reuse, recycling, and composting. (**SCVAP 2012 EIR MM 3.17.3)**	Prior to development plan approval	Project Applicant	County of Los Angeles Department of Regional Planning and Sanitation Districts of Los Angeles County	
MM 5.12-32	All new development in the County's Planning Area will be required to implement existing and future waste reduction programs in conformance with the County's Planning Area SRRE program. (**SCVAP 2012 EIR MM 3.17.4)**	During construction activities and Project operation	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-33	Any hazardous waste that is generated on site, or is found on site during demolition, rehabilitation, or new construction activities shall be remediated, stored, handled, and transported in compliance per appropriate local, state, and federal laws, as well as with the County's SRRE. (**SCVAP 2012 EIR MM 3.17.5)**	During demolition, rehabilitation, or construction activities	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-34	Collection/storage facilities for recyclables shall be incorporated into all building designs and/or a conveniently located recycling area shall be developed on the project site for use by all occupants/users of the commercial/industrial uses. (**1992 SP EIR MM 4.13.1)**	During construction activities and Project operation	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-35	The owner and/or tenants of all onsite commercial and industrial uses shall comply with all applicable federal, state and local requirements for handling hazardous materials. Onsite businesses handling hazardous materials shall submit a Business Plan which will include information or inventories, employee training and emergency response plans and procedures. (**1992 SP EIR MM 4.13.2)**	During Project operation	Applicant, Future Developers, and Onsite commercial and industrial owners and/or tenants	County of Los Angeles Department of Regional Planning	
MM 5.12-36	Removal of hazardous materials, waste from the project site shall be conducted by registered waste hauler in accordance with all applicable rules and regulations. (**1992 SP EIR MM 4.13.3)**	During construction activities and Project operation	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-37	All hazardous materials used in association with future onsite businesses shall be stored in specific locations and clearly marked as to contents. (**1992 SP EIR MM 4.13.4)**	During Project operation	Applicant, Future Developers, and Onsite commercial and industrial owners and/or tenants	County of Los Angeles Department of Regional Planning	

LA COUNTY PLANNING

AMY J. BODEK, AICP
Director,
Regional Planning

DENNIS SLAVIN
Chief Deputy Director,
Regional Planning

REPORT TO THE REGIONAL PLANNING COMMISSION

DATE ISSUED:	January 15, 2026
HEARING DATE:	January 28, 2026 AGENDA ITEM: 7
PROJECT NUMBER:	R2015-00408
PERMIT NUMBERS:	Vesting Tentative Tract Map ("VTTM") No. 073336 (RPPL2023004336), Vesting Tentative Parcel Map ("VTPM") No. 073335 (RPPL2023004448), Conditional Use Permit ("CUP") No. RPPL2023004316, and Environmental Assessment No. 201500030 (RPPL2023004887), collectively referred to as "Northlake Phase 1"
SUPERVISORIAL DISTRICT:	5
PROJECT LOCATION:	North of Lake Hughes Road, east of Ridge Route Road and Interstate 5 Freeway ("I-5"), and west of Castaic Lake and Lagoon in the unincorporated community of Castaic
OWNER/APPLICANT:	Northlake Associates LLC ("Applicant")
PUBLIC MEETINGS HELD:	4 (including this public hearing)
INCLUSIONARY HOUSING ORDINANCE ("IHO"):	Northlake Phase 1 is not subject to the IHO because it is subject to an affordable housing requirement pursuant to an adopted specific plan (see County Code Section 22.121.030.A.3 – Applicability).
CASE PLANNER:	Jodie Sackett, Senior Planner jsackett@planning.lacounty.gov

RECOMMENDATION

The following recommendation is made prior to the public hearing and is subject to change based upon testimony and/or documentary evidence presented at the public hearing:

LA County Planning staff ("Staff") recommends the Regional Planning Commission ("Commission") **APPROVE** Project No. R2015-00408, VTTM No. 073336, VTPM No. 073335, and CUP No. RPPL2023004316, based on the Draft Findings (Exhibit C –

Findings) contained within this report and subject to the Draft Conditions of Approval (Exhibit D – Conditions of Approval).

Staff recommends the following motion:

CEQA:

I MOVE THAT THE COMMISSION CLOSE THE PUBLIC HEARING AND:

CERTIFY THE RECIRCULATED PARTIAL FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT, BY FINDING, PURSUANT TO STATE AND LOCAL CEQA GUIDELINES, THAT IT HAS BEEN COMPLETED IN COMPLIANCE WITH CEQA, PRESENTED, REVIEWED AND CONSIDERED BY THE COMMISSION PRIOR TO APPROVING THE PROJECT, AND REFLECTS THE COMMISSION'S INDEPENDENT JUDGMENT AND ANALYSIS;

ADOPT THE PROPOSED SUPPLEMENTAL FINDINGS OF FACT PREPARED PURSUANT TO PUBLIC RESOURCES CODE SECTIONS 21081 AND 21081.5 AND STATE CEQA GUIDELINES SECTION 15091, AND ATTACHED HERETO;

ADOPT THE MITIGATION MONITORING AND REPORTING PROGRAM FOR THE PROJECT; AND

DETERMINE THE PROJECT'S SIGNIFICANT AND UNAVOIDABLE IMPACTS ARE OUTWEIGHED BY SPECIFIC SOCIAL, ECONOMIC, LEGAL, TECHNOLOGICAL, OR OTHER CONSIDERATIONS THROUGH ADOPTING THE PROPOSED STATEMENT OF OVERRIDING CONSIDERATIONS PREPARED PURSUANT TO PUBLIC RESOURCES CODE SECTION 21081(b) AND STATE CEQA GUIDELINES SECTION 15093, AND ATTACHED HERETO.

ENTITLEMENTS:

I MOVE THAT THE COMMISSION APPROVE VESTING TENTATIVE TRACT MAP NO. 073336, VESTING TENTATIVE PARCEL MAP NO. 073335, AND CONDITIONAL USE PERMIT NO. RPPL2023004316, AS MODIFIED BY THE PARTIAL CREEK AVOIDANCE ALTERNATIVE DESCRIBED IN THE RECIRCULATED PARTIAL DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT, AND SUBJECT TO THE ATTACHED FINDINGS AND CONDITIONS.

PROJECT DESCRIPTION

The Applicant requests the following:

A. Entitlements Requested

- Vesting Tentative Tract Map ("VTTM") No. 073336 depicts a total of 386 lots and 2,295 dwelling units on 720 gross acres. This includes 288 single-family residential lots; 17

multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); one highway commercial lot (2.5 acres), 39 open space lots, 11 park lots, 13 debris basin lots, two water tank lots, one water quality basin lot, one pump station lot, and one fire station lot (1.4 acre building pad). Of the total 2,295 dwelling units in Northlake Phase 1, 1,777 units are proposed to be for-sale and 518 units expected for rental. This is pursuant to County Code Chapters 21.38 (Vesting Tentative Map) and 21.40 (Tentative Maps).

- Vesting Tentative Parcel Map ("VTPM") No. 073335 to create 21 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only, pursuant to County Code Chapters 21.38 (Vesting Tentative Map) and 21.40 (Tentative Maps).
- Conditional Use Permit ("CUP") No. RPPL2023004316 to authorize a Specific Plan ("SP") site plan review procedure for the development of 2,295 residential dwelling units; affordable set-aside housing and affordable senior set-aside housing; mixed-use and live-work development; onsite and offsite grading in excess of 100,000 cubic yards ("cy") with a total of 34.32 million cy (17.16 million cy of cut and 15.84 million cy of fill with 1.32 million cy of shrinkage) to be balanced onsite; and also offsite grading requiring an additional 2.15 million cy of cut and 1.07 million cy of fill for an offsite total of 3.22 million cy of combined cut and fill. The overall onsite and offsite grading amounts would be 37.54 million cy of combined cut and fill; walls exceeding six feet in height; and construction of two water tanks with associated grading and infrastructure pursuant to County Code Section 22.140.240 (Grading Projects).

B. Project Background

The Northlake Specific Plan ("SP") is a proposed mixed-use development with an overall total of 3,150 dwelling units on 1,330 acres located north of Lake Hughes Road, east of Ridge Route Road and I-5, and west of Castaic Lake and Lagoon, in the unincorporated community of Castaic. In 1987, Northlake applied for a SP, Zone Change ("ZC"), CUP, and Development Agreement ("DA"). The SP, ZC, CUP, and DA were approved and adopted in 1992 (the DA went unused and expired in 2003). The SP approval included a full range of land uses, to include single and multi-family residential, commercial, preserved open space, recreational, school facilities, and fire station.

In 1998, the Applicant filed for additional entitlements (SP Amendment, CUP, DA, VTTM) but all were withdrawn in 2007. In 2015, new tentative maps and a CUP were processed with a Supplemental EIR ("SEIR") for Northlake Phase 1, originally approved by the

Commission in 2018 along with a Final Supplemental Environmental Impact Report ("FSEIR") but was then appealed to the County Board of Supervisors ("Board"). After the Board denied the appeal and approved Northlake Phase 1 in 2019, litigation occurred and was ultimately resolved in 2023. As a result of the court decision, the entitlements were set aside, and certain elements of the FSEIR required further clarification, requiring a Recirculated Partial Final SEIR ("RPFSEIR") as detailed below (see "Environmental Analysis"). In 2023, a Partial Creek Avoidance Alternative ("PCAA") was developed to implement the changes to Northlake Phase 1, which primarily encompassed a reduction of the Northlake Phase 1 project footprint in the northerly portion of the site.

C. Project

Northlake Phase 1 is now under consideration and includes a total of 2,295 dwelling units and 386 lots on 720 gross acres. It includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); and one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership). Other uses include highway commercial, open space, and public facilities, to include parks, fire station, potential school site, debris basins, water tanks, water quality basin, and a pump station. A shuttle service is also proposed to transport residents and guests within the site as well as offsite destinations (such as shopping and employment centers) in and around Santa Clarita Valley. Offsite improvements would include connection to existing utilities, relocation of existing utility lines, new drainage facilities, and other related infrastructure outside the boundaries of the Project site. The Northlake Parcel Map (VTPM 073335) will establish 21 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only. Note that the map covers the entire SP site (1330 acres) with the exception of 22.6 acres removed from the project area for the existing Northlake Hills elementary school site.

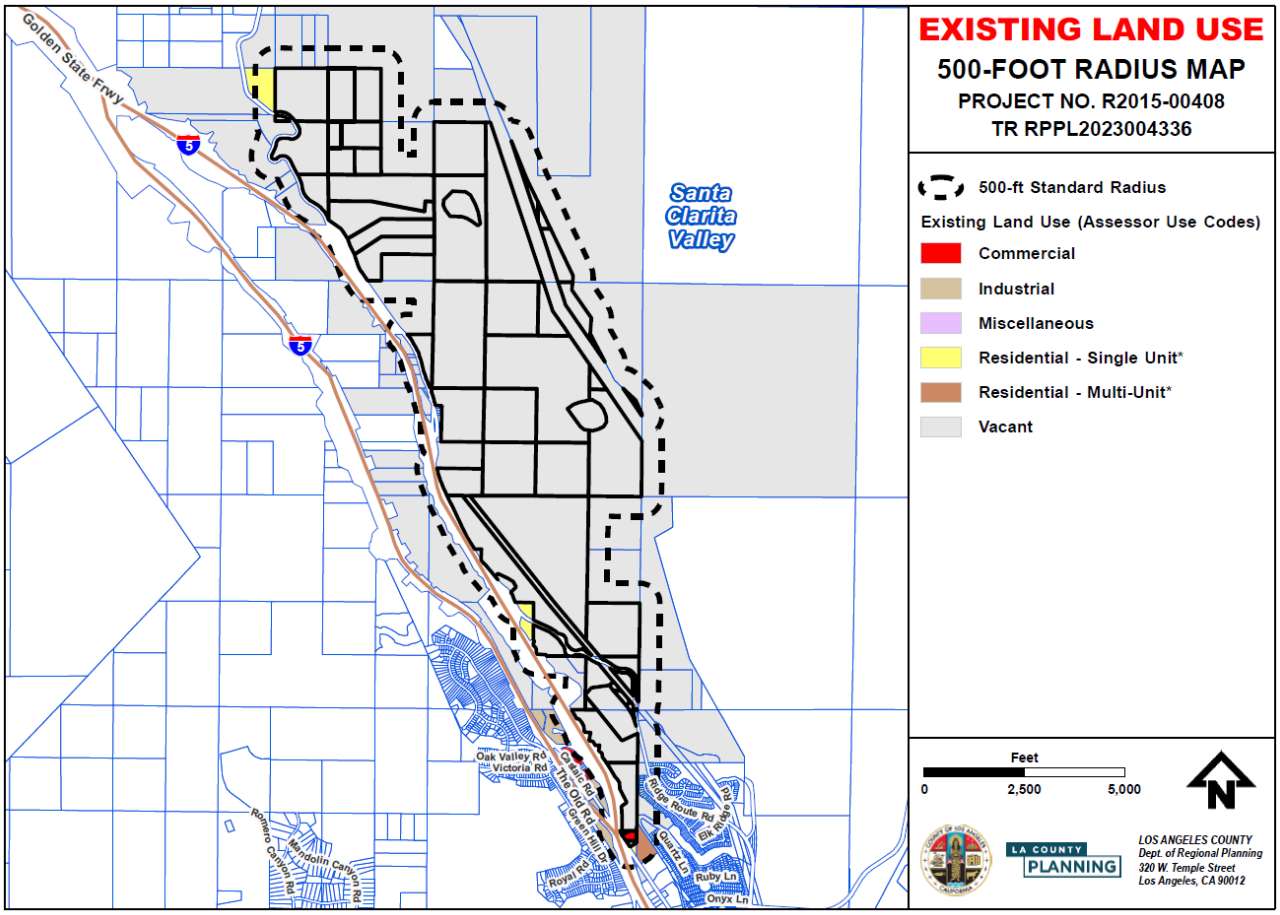
Per the SP, the development of Northlake Phase 1 shall be implemented through a method of site plan review. The site plan review shall be a CUP and required for all development within the SP areas requiring a building permit. Tentative parcel and tract maps may be processed independent of the site plan review procedures in accordance with the Los Angeles County Subdivision Code, Title 21. Site plan review will not be required for interior alterations where there is no square footage increase or use

intensification (see SP Introduction, Section B "Summary", Number 4 "Permit Filings", Page I-5).

NORTHLAKE PROJECT: SUBJECT PROPERTY AND SURROUNDINGS

The following chart and maps provide property data within a 500-foot radius:

LOCATION	SANTA CLARITA VALLEY AREA PLAN LAND USE POLICY	ZONING	EXISTING USES
SUBJECT PROPERTY	SP	SP	Vacant Land
NORTH	RL5 (Rural Land 5 – One Dwelling Per 5 Acres), BLM (Bureau of Land Management)	A-2-2 (Heavy Agricultural – Two Acre Minimum Required Lot Area)	Vacant Land
EAST	BLM, RL10 (Rural Land 10 – One Dwelling Per 10 Acres), OS-PR (Open Space – Parks and Recreation), RL5, IL (Light Industrial)	A-2-2, M-1-DP (Light Manufacturing – Development Program), M-2-DP (Heavy Manufacturing – Development Program), RPD-5,000-2.9DU (Residential Planned Development – 5,000 Square Feet Minimum Required Lot Area – 2.9 Dwellings Per Acre), OS (Open Space)	Vacant Land, Elementary School, Single-Family Residences, Shopping Center
SOUTH	H2 (Large Lot Residential – 0 to 2 Dwellings Per Acre), IL, H18 (Medium Density Residential – 9 to 18 Dwellings Per Acre), CM (Major Commercial)	R-1 (Single-Family Residence), C-3 (Major Commercial), M-1 (Light Manufacturing)	Vacant Land, Shopping Center, Single-Family Residences, Senior Residences
WEST	RL5, RL1 (Rural Land 1 – One Dwelling Per Acre), IL, OS-C (Open Space Conservation)	A-2-2, A-2-1 (Light Agricultural – One-Acre Minimum Lot Size), M-1, M-1-DP, OS	Vacant Land, Single-Family Residences, Water Tank, Warehousing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5
Santa Clarita Valley
Oak Valley Rd
Victoria Rd
Calgrove Rd
The Old Rd
Green Hill Dr
Ridge Route Rd
Elk Ridge Ln
Quartz Ln
Ruby Ln
Onyx Ln
Royal Rd
Rosario Canyon Rd
Meridolin Canyon Rd
EXISTING LAND USE
500-FOOT RADIUS MAP
PROJECT NO. R2015-00408
TR RPPL2023004336
500-ft Standard Radius
Existing Land Use (Assessor Use Codes)
Commercial
Industrial
Miscellaneous
Residential - Single Unit*
Residential - Multi-Unit*
Vacant
Feet
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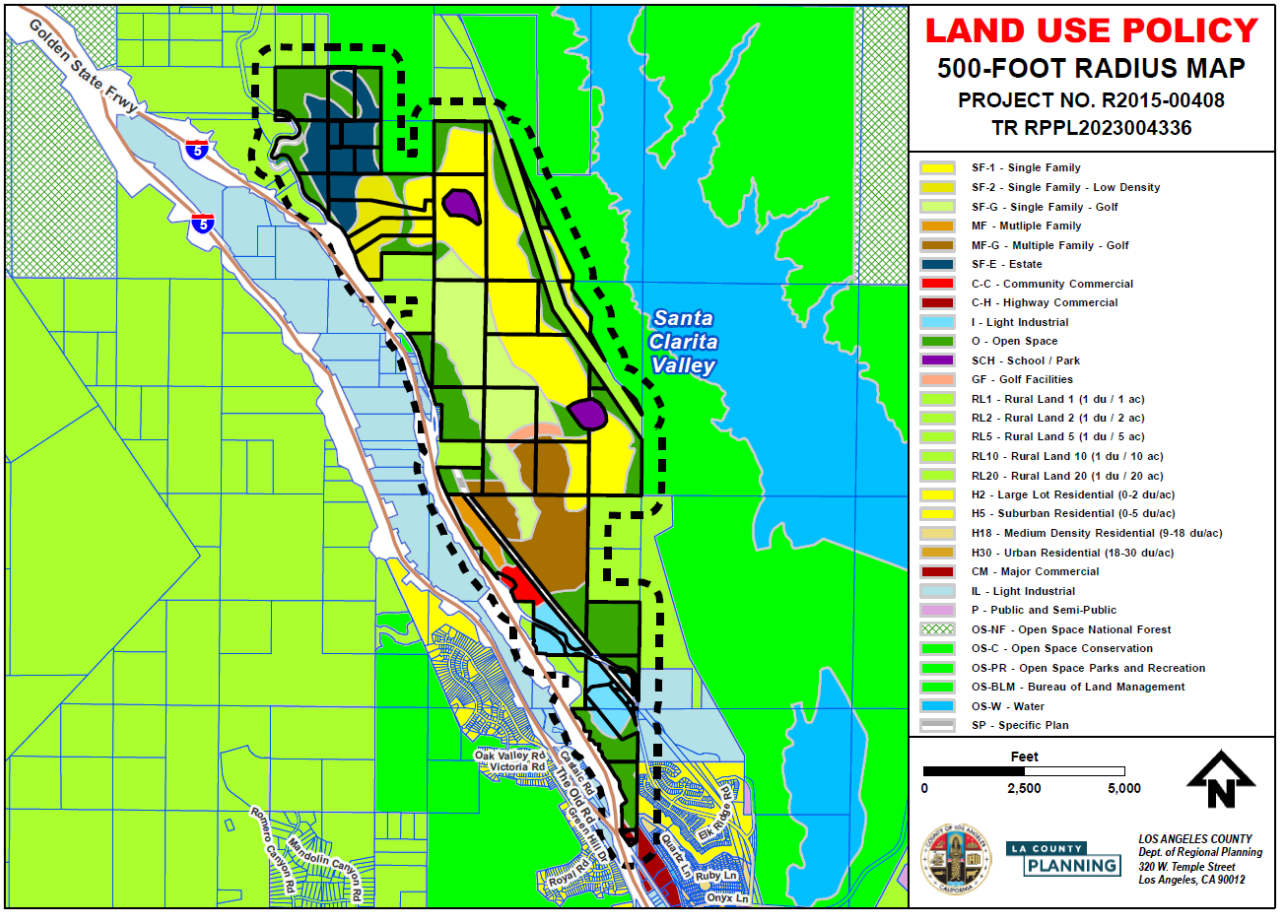
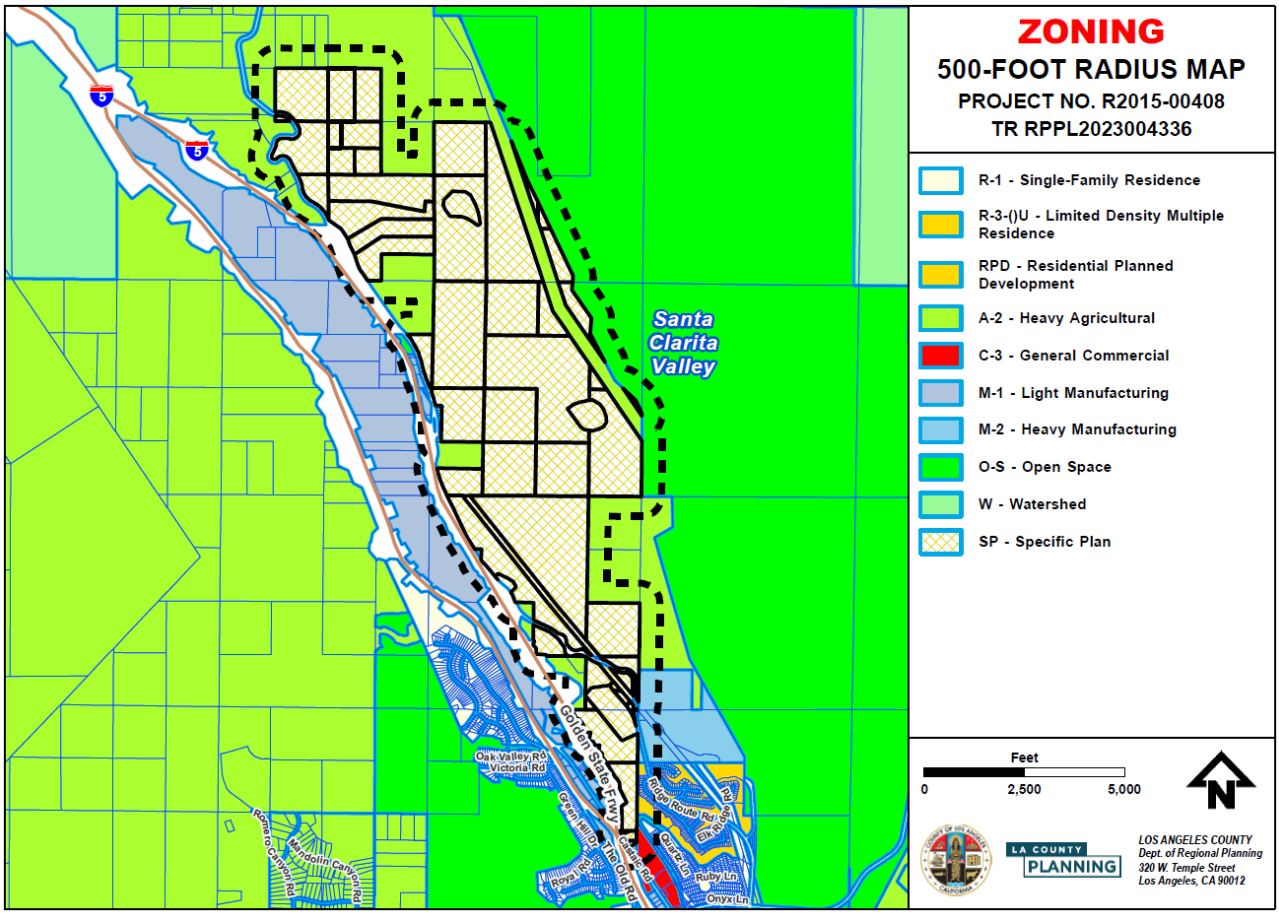
5,000
N
LA COUNTY PLANNING
LOS ANGELES COUNTY
Dept. of Regional Planning
320 W. Temple Street
Los Angeles, CA 90012


LAND USE POLICY
500-FOOT RADIUS MAP
PROJECT NO. R2015-00408
TR RPPL2023004336
SF-1 - Single Family
SF-2 - Single Family - Low Density
SF-G - Single Family - Golf
MF - Mutliple Family
MF-G - Multiple Family - Golf
SF-E - Estate
C-C - Community Commercial
C-H - Highway Commercial
I - Light Industrial
O - Open Space
SCH - School / Park
GF - Golf Facilities
RL1 - Rural Land 1 (1 du / 1 ac)
RL2 - Rural Land 2 (1 du / 2 ac)
RL5 - Rural Land 5 (1 du / 5 ac)
RL10 - Rural Land 10 (1 du / 10 ac)
RL20 - Rural Land 20 (1 du / 20 ac)
H2 - Large Lot Residential (0-2 du/ac)
H5 - Suburban Residential (0-5 du/ac)
H18 - Medium Density Residential (9-18 du/ac)
H30 - Urban Residential (18-30 du/ac)
CM - Major Commercial
IL - Light Industrial
P - Public and Semi-Public
OS-NF - Open Space National Forest
OS-C - Open Space Conservation
OS-PR - Open Space Parks and Recreation
OS-BLM - Bureau of Land Management
OS-W - Water
SP - Specific Plan
Feet
0
2,500
5,000
N
LA COUNTY PLANNING
LOS ANGELES COUNTY
Dept. of Regional Planning
320 W. Temple Street
Los Angeles, CA 90012
Golden State Frwy
Santa Clarita Valley
Oak Valley Rd
Victoria Rd
Casalc Rd
The Old Rd
Green Hill Dr
Royal Rd
Quartz Ln
Elk Ridge Rd
Ruby Ln
Onyx Ln
Romero Canyon Rd
Mandolin Canyon Rd



NORTHLAKE PROJECT: PROPERTY HISTORY

A. Zoning History

ORDINANCE NO.	ZONING	DATE OF ADOPTION
93-0014	Specific Plan Zoning	February 9, 1993

B. Previous Cases

CASE NO.	REQUEST	DATE OF ACTION
87172-(5)	Northlake Specific Plan	Filed in 1987; approved and adopted in 1992
87172-(5)	Sub-Plan Amendment, Zone Change, CUP, DA	As above
98047	Specific Plan Amendment, DA, CUP	Filed in 1998; withdrawn in 2007
51582	VTTM	As above

2004-00015	CUP	Filed in 2004; withdrawn in 2007

C. Violations

CASE NO.	VIOLATION	CLOSED/OPEN
None		

ANALYSIS

A. Land Use Compatibility

Northlake Phase 1, which is situated to the east of and along Ridge Route Road, is vacant and undeveloped. The proposed development will add 2,295 new detached and attached residences at urban densities consistent with the adopted SP, with a mixture of residential, recreational, and commercial uses. The development will provide 315 units of affordable housing at the Very Low-, Lower-, and Moderate-income levels. Northlake Phase 1 also includes 46 mixed-use affordable units in the southerly portion of the site. The site is east of Interstate 5 Freeway ("I-5") and accessible from Ridge Route Road, making it convenient for residents, guests, and visitors. The density of the Northlake Phase 1 is 3.2 dwellings per gross acre, while individual development areas within the development will range from six to 33 dwellings per net acre. This is consistent with the SP land use overlay designation which includes single-family, multi-family (attached and detached), mixed-use, live-work, and commercial uses.

B. Neighborhood Impact (Need/Convenience Assessment)

The visual and physical features of Northlake Phase 1 will be compatible with surrounding neighborhoods. Residential building heights will be three stories or less, and mixed-use commercial/residential building heights will be four stories or less and sited in the mixed-use area of the site. Grading of Northlake Phase 1 will be compatible with previously graded developments to the south. There are existing Southern California Edison transmission towers to remain that run through the site as well as an existing water tank located offsite but adjacent to the site. There will be 315 affordable rental housing units to be dispersed throughout the site, supporting community needs for additional affordable housing in the region that is feasible for homeowners compared with the prevailing housing market in the area. The proposed Homeowner's Association ("HOA") will provide a shuttle service through the interior of the site and the adjacent Northlake Hills Elementary School. The shuttle also serves areas outside the development, linking to important workforce employment in the Valencia Commerce Center and other areas in the local region such as the Castaic Town Center, McBean Transit Center and the Santa Clarita Metrolink station. The SP includes a total of 130 acres of parks and recreation space distributed throughout the development, with a 26-acre public "sports park". It also includes 783 acres of non-recreational open space (undisturbed and disturbed areas, including graded slopes), which is 59 percent of the 1,330-gross-acre site.

Northlake Phase 1 will meet the fire prevention requirements such as installing new fire hydrants, providing sufficient fire lanes for ingress/egress, requiring fuel modification plans (for removing dead or fallen plant material), and sprinkler systems within the development, in compliance with requirements for projects located within a Very High Fire Hazard Severity Zone.

C. Design Compatibility

The Northlake Phase 1 design is governed by the Northlake Design Guidebook ("Guidebook"), updated in August 2025, that provides design graphics and standards for all the development areas of the site. Components of the Guidebook include, but are not limited to: Guiding Principles, Community Character, Land Use, Public Transit, Vehicular Circulation, Trails, Open Space, and Monument Signs. The Guidebook provides residential and commercial guidelines for development design and towards the end of the document provides a section on SP consistency. The Guidebook includes many water-colored "vignettes" to help envision how the Project will progress. Lastly, each development type is paired with a form-based code graphic to demonstrate the development standards with respect to different kinds of uses and buildings that will interact with the public realm.

GENERAL PLAN/COMMUNITY PLAN CONSISTENCY

The Project is consistent with applicable goals and policies of the SP, and the Santa Clarita Valley Area Plan ("SCVAP"), which is a component of the General Plan. Consistency findings can be found in the attached Findings (Exhibit C – Draft Findings).

HOUSING ACCOUNTABILITY ("HAA") AND HOUSING CRISIS ("SB330") ACTS

The HAA limits a local government's ability to deny, downsize, or render infeasible housing development projects containing either affordable or market-rate units. For a project to qualify for the protections included in the HAA, it must meet the definition of a "housing development project." Northlake Phase 1 qualifies as a "housing development project" under the HAA because it is a mixed-use development that consists of residential and non-residential units, with at least two-thirds of the new square footage designated for residential use.

The HAA limits a local government's ability to deny, down-size, or render infeasible housing development projects, both affordable and market-rate units. According to the California Department of Housing and Community Development's Housing Accountability Act Technical Assistance Advisory published on September 15, 2020, a local agency shall not deny, down-size, or render a housing development infeasible if it complies with applicable, objective general plan and zoning, and subdivision standards and criteria, including design review standards, in effect at the time the application was deemed complete, unless written findings supported by a preponderance of evidence (evidence for denying the project outweighs the evidence for supporting it) on the record that both of the following conditions have been met:

1) The project will have a specific, adverse impact upon public health or safety (i.e., a significant, quantifiable, direct and unavoidable impact based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete) unless the Project is denied or its approval is conditioned on a density reduction.

2) There is no feasible method to satisfactorily mitigate or avoid the adverse impact. Feasible means capable of being accomplished in a successful manner within a reasonable time period, taking into account economic, environmental, social, and technological factors.

Violation of the HAA will subject the County to paying attorneys' fees and could result in substantial fines against the County in a successful court action. A court must award attorneys' fees to a party successfully challenging the County for violating the HAA. In addition, the court also must issue an order requiring compliance with the HAA. The County then must comply with that order within 60 days or be subject to, at a minimum, a penalty of $10,000 per housing unit proposed by Northlake Phase 1. Therefore, it is imperative that the County comply with State law, specifically the HAA, when approving or disproving housing development projects.

Further, due to the severe lack of housing of both affordable and market-rate units, Governor Newsom signed the Housing Crisis Act (SB 330) into law to preserve the existing housing inventory and accelerate housing production by prohibiting the application of additional regulations once a project application is deemed complete. The law took effect on January 1, 2020, and under SB 8 (effective January 1, 2022), will extend to January 1, 2030. See Government Code sections 65905.5 and 65589.5.

As of the date of this report, to include the present hearing, there have been a total of four meetings which would qualify under SB 330.

SUBDIVISION AND ZONING ORDINANCE CONSISTENCY

Northlake Phase 1 complies with all applicable SP zoning requirements. Consistency findings can be found in the attached Findings (Exhibit C – Draft Findings). Northlake Phase 1 is not subject to the IHO because it is subject to an affordable housing requirement pursuant to an adopted specific plan (see County Code Section 22.121.030.A.3 – Applicability).

BURDENS OF PROOF

The Applicant is required to substantiate all facts identified by California Government Code Sections 66474 (Tentative Maps) and 66474.02 (Tentative Maps within a designated State Responsibility Area or VHFHSZ); County Code Chapter 22.158.050 (CUP - Findings and Decision Requirements); and County Code Chapters 21.38 (Vesting Tentative Map), 21.40 (Tentative Maps), and 21.48 (Minor Land Divisions). Burdens of Proof with Applicant's responses are attached (Exhibit E – Applicant's Burdens of Proof). Staff is of the opinion that the Applicant has met the burdens of proof.

ENVIRONMENTAL ANALYSIS

The Northlake Draft SEIR ("DSEIR") was released on May 2, 2017, and circulated for a 45-day public review and comment period ending on June 15, 2017. Following the close of the public comment period on the DSEIR on June 15, 2017, detailed responses to all public agency comments and comments received from members of the general public received regarding the Project and the analyses of the DSEIR were prepared and are contained in the FSEIR.

An Errata was released in February 2018, prior to the Commission's February 21, 2018 hearing to make minor technical corrections to the SEIR and to provide further information in response to public comments received prior to the Commission meeting. The Errata included only minor technical changes to the FSEIR and additional information to support the FSEIR's conclusions, and the Errata merely clarified or amplified or made insignificant modifications to the adequate FSEIR. At the February 21, 2018, public hearing, the Commission requested that the Applicant include an affordable housing component in the Project. Based on this request, the Applicant made minor revisions to the Project analyzed in the FSEIR to include an affordable housing component. An Errata dated April 4, 2018, was prepared which concluded that the revisions involve only minor changes to the distribution of land uses and an overall reduction in density and intensity or use, and the Errata merely clarified or amplified or made insignificant modifications to the adequate FSEIR. On April 18, 2018, the Commission adopted the required findings, certified the FSEIR, and granted the requested Northlake Phase 1 approvals. On April 23, 2018, appeals were filed by the Center for Biological Diversity, the Santa Monica Mountains Conservancy, and the Golden State Environmental Justice Alliance. A Second Errata dated August 2018 was prepared to make minor technical corrections in the FSEIR and to provide further information in response to public comments made at the Commission meeting.

On September 25, 2018, the Board held a public hearing on the Project and the appeals, and voted to reject the appeals, uphold the Commission approvals, and certify the FSEIR. On April 2, 2019, the Board adopted the Project entitlements, CEQA findings and Mitigation Monitoring and Reporting Program ("MMRP"), and Project conditions.

A Petition for Writ of Mandate was filed in May 2019 challenging the Project. The Los Angeles Superior Court's ruling in the Center for Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al, Case No. 19STCP01610, dated January 11, 2021 ("Court Ruling") granted in part and denied in part the petitioner's Petition for Writ of Mandate. Specifically, the Court Ruling held that the FSEIR for Northlake Phase 1 failed to comply with CEQA because it contained:

1) inadequate alternatives analysis (for failing to fully analyze a creek avoidance alternative);

2) inadequate Western Spadefoot Toad (WST) baseline assessment and, therefore, inadequate mitigation (to recreate baseline conditions; mitigation inadequate in detail and commitment); and
3) improper deferred mitigation as to rare plants (measure lacked sufficient detail).

The Court denied the Petition for Writ of Mandate regarding:

1) impacts to mountain lions/wildlife crossings,
2) aesthetics,
3) air quality/public health,
4) wildfire impacts, and
5) recirculation.

LA County Planning prepared a Recirculated Partial Draft SEIR ("RPDSEIR"). The RPDSEIR did not revise the SEIR in any respect other than as directed by the Court, and its revisions were limited to a few portions of the SEIR. Pursuant to CEQA Guidelines Section 15088.5(c), the County only needed to recirculate the portions of the SEIR that were modified by the RPDSEIR. The County did not recirculate the other portions of the SEIR for public review and comment because those portions were not modified.

The RPDSEIR was made available for public review and comment pursuant to State CEQA Guidelines Section 15087. Copies of the RPDSEIR and appendices were available for a review period of 45 calendar days from April 14, 2025 to May 29, 2025. As CEQA Guidelines Section 15088.5, subdivision (f)(2) permits, the County requested that the scope of public comment be limited to the material that was addressed within the text of the revised portions and the appendices included in the RPDSEIR.

The RPFSEIR was completed in June 2025 and can be found attached in Exhibit F – Environmental Determination. As stated in the Supplemental Findings of Fact and Statement of Overriding Considerations regarding the RPFSEIR, which are attached hereto as Exhibit F, the PCAA is the environmental superior alternative among the project alternatives summarized in the RPDSEIR.

COMMENTS RECEIVED

1. **County Department Comments and Recommendations**
   The County Subdivision Committee consists of representatives from LA County Planning, Public Works, and County Departments of Fire, Parks and Recreation, and Public Health. Based on tentative maps dated March 5, 2024 (VTPM) and August 20, 2025 (VTTM), the Subdivision Committee cleared Northlake Phase 1 for the public hearing.
2. **Other Agency Comments and Recommendations**
   a. In a letter received on May 28, 2025, the California Department of Fish and Wildlife provided additional information and recommendations regarding Northlake Phase 1.

b. In a letter received on May 29,2025, the California Department of Transportation expressed support for the County's recognition of impacts on State transportation facilities in the RPFSEIR traffic analysis regarding Northlake Phase 1.

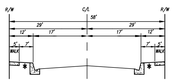
3. Public Comments

Staff has received public comments which may be found in the RPFSEIR (see Exhibit F).

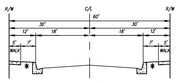
Report Reviewed By: _____
Joshua Huntington, AICP, Supervising Regional Planner

Report Approved By: _____
Susan Tae, AICP, Assistant Deputy Director

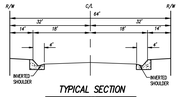
LIST OF ATTACHED EXHIBITS	
EXHIBIT A	Plans (VTTM, VTPM, and Exhibit "A")
EXHIBIT B	Project Summary Sheet
EXHIBIT C	Draft Findings
EXHIBIT D	Draft Conditions of Approval
EXHIBIT E	Applicant's Burdens of Proof
EXHIBIT F	Environmental Determination (RPFSEIR, RPDSEIR, Appendices, and MMRP) LINK
EXHIBIT G	Partial Creek Avoidance Alternative (PCAA)
EXHIBIT H	Design Guidebook
EXHIBIT I	Public Correspondence



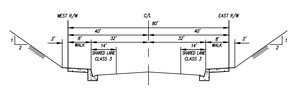
TYPICAL SECTION
NTS
58' STREET
"I" ST" & "O" ST.



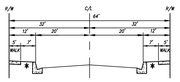
TYPICAL SECTION
NTS
60' STREET
"A" ST., "F" ST., "G" ST., "I" ST.,"J" ST.,
"N" ST., "P" ST. & NORTHLAKE BLVD.



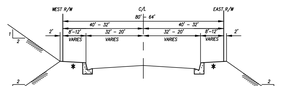
TYPICAL SECTION
NTS
64' LIMITED SECONDARY HWY
THE RIDGE ROUTE ROAD
(FROM 900' N'LY NORTHLAKE BLVD. TO 3200' N'LY OF NORTHLAKE BLVD.)



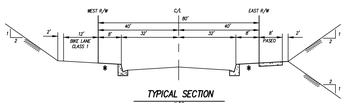
TYPICAL SECTION
NTS
80' SECONDARY HIGHWAY
THE RIDGE ROUTE ROAD
(FROM TR. 44429 TO 1200' N'LY TR. 44429)



TYPICAL SECTION
NTS
64' STREET
"B" ST., "D" ST., "E" ST.,"F" ST., "H" ST.,
"L" ST., "O" ST. & NORTHLAKE BLVD.

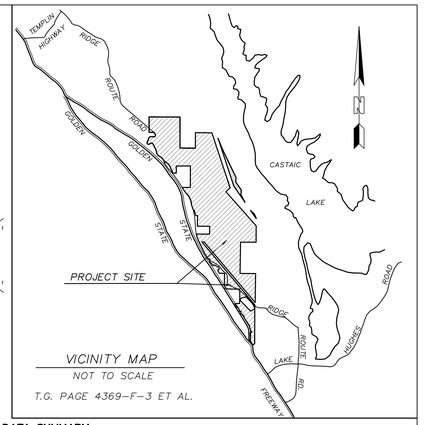


TYPICAL SECTION
NTS
80' – 64' LIMITED SECONDARY HWY
THE RIDGE ROUTE ROAD
(FROM NORTHLAKE BLVD. TO 900' N'LY NORTHLAKE BLVD.)



TYPICAL SECTION
NTS
80' SECONDARY HIGHWAY
THE RIDGE ROUTE ROAD
(FROM 1200' N'LY TR. 44429 TO NORTHLAKE BLVD.)

✱ LANDSCAPE AREA – SEE LANDSCAPE PLAN FOR DETAILS (TO BE MAINTAINED BY A LMD OR HOA)



VICINITY MAP
NOT TO SCALE
T.G. PAGE 4369-F-3 ET AL.

PARCEL NUMBERS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 6, 2023.

P.T.R. PARCEL NO	A.P.N.
1*	3247-010-049 and 3247-010-050
2*	3244-003-018
3	3247-040-008 (PORTION)
4	3247-040-008 (PORTION)
5	3247-040-008 (PORTION)
6	3247-040-008 (PORTION)
7	3247-040-013 (PORTION)
8	3247-040-009 (PORTION)
9	3247-040-009 (PORTION)
10	3247-040-009 (PORTION)
11	3247-040-009 (PORTION)
12	3247-040-013 (PORTION)
13	3247-040-013 (PORTION)
14	3247-040-013 (PORTION)
15	3244-012-054 & 059
16	3244-012-057
17	3244-012-013
18	3247-041-008
19	3247-041-020
20	3247-041-021
21	3247-041-023
22	3247-041-022
23	2865-036-003
24	2865-036-002
25	2865-036-001 AND 2865-003-013
26	2865-003-035
27	3244-004-051
28	3244-004-053
29	3244-012-049
30	3244-012-048
31	3244-012-046
32	3244-012-058
33	3244-004-052
34	3244-004-024
35	3244-013-001
36	3244-012-045
37	3247-017-019
38	3244-012-050
39	3244-014-015
40	3244-014-067 & 068
41	3247-041-018
42	3247-041-015
43	3244-014-053
44*	3244-014-044
45*	3244-014-038
46*	3247-041-012
47*	3244-013-004
48*	3244-013-002
49*	3244-013-005
50*	3244-013-009
51*	3244-013-010
52	3244-014-050
53*	3244-015-018
54*	3244-014-022
55*	3244-014-021
56	3244-014-062
57*	3244-014-063
60	3247-041-007
61	3247-041-009
66	3247-041-010
68*	3244-012-056
69*	3244-014-045
70**	3244-012-904
71**	3244-004-906
72*	3244-014-902
73*	3247-017-900

*ASTERISK INDICATES PARCEL IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP OR OFFSITE IMPROVEMENT

**ASTERISK INDICATES PARCEL TO BE AQUIRED

NOTE: NORTHEASTERLY PORTION OF PARCEL 32 IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP

GROSS ACREAGE (INCLUDING STREET RIGHT-OF WAYS AND EXISTING RIDGE ROUTE ROAD RIGHT OF WAY)

ACREAGE APPROXIMATED TO THE NEAREST TENTH OF AN ACRE.

LARGE LOT TABLE (40 AC. MIN. NET AREA)			
LOT NO.	GROSS AC.+/-	NET AC.+/-	SPECIFIC PLAN LAND USE TYPE
1	58.4	54.5	OPEN SPACE/INDUSTRIAL
2	63.4	53.8	OPEN SPACE/COMMERCIAL
3	54.2	48.8	OPEN SPACE
4	93.0	87.5	MULTI FAMILY/OPEN SPACE
5	43.8	40.1	OPEN SPACE
6	69.6	61.4	MULTI FAMILY/OPEN SPACE
7	69.6	63.4	MULTI FAMILY/OPEN SPACE
8	45.3	40.0	MULTI FAMILY/OPEN SPACE
9	42.4	41.0	MULTI FAMILY/OPEN SPACE
10	71.5	63.2	MULTI FAMILY/SINGLE FAMILY
11	61.9	55.8	MULTI FAMILY/OPEN SPACE
12	46.0	40.7	MULTI FAMILY/SINGLE FAMILY/OPEN SPACE
13	68.6	62.3	SINGLE FAMILY
14	40.9	40.1	SINGLE FAMILY
15	47.7	45.8	SINGLE FAMILY
16	203.1	198.9	MULTI FAMILY/SINGLE FAMILY/OPEN SPACE
17	228.0	228.0	OPEN SPACE
TOTAL	1307.4	1225.2	

NET ACREAGE (EXCLUDING STREET RIGHT-OF WAYS AND EXISTING RIDGE ROUTE ROAD RIGHT OF WAY)

ACREAGE APPROXIMATED TO THE NEAREST TENTH OF AN ACRE.

DATA SUMMARY:

ACRES(GROSS)	1307.4 ± AC
ACRES(NET)	1225.2 ± AC
EXISTING ZONING	NORTHLAKE SPECIFIC PLAN
EXISTING GENERAL PLAN	NORTHLAKE SPECIFIC PLAN
EXISTING LAND USE	VACANT
PROPOSED LAND USE	NONE
NUMBER OF LOTS	21

NOTES:

1. NO GRADING, DEVELOPMENT OR IMPROVEMENTS ARE PROPOSED
2. AERIAL TOPOGRAPHY BY HORIZON SURVEYS, 2 FOOT CONTOUR INTERVAL DATED 7-08-2002 (CONTOURS SHOWN HEREON AT 25 FOOT INTERVALS FOR CLARITY)
3. REQUEST PERMISSION TO ADJUST LOT LINES TO THE SATISFACTION OF DEPARTMENT OF REGIONAL PLANNING/DEPARTMENT OF PUBLIC WORKS.
4. ALL LOTS ARE A MINIMUM NET AREA OF 20 ACRES.
5. TENTATIVE TRACT NO. 73336 HAS BEEN FILED CONCURRENTLY OVER A PORTION OF THE SITE
6. STREETS ARE BASED ON TENTATIVE TRACT NO. 73336 AND ARE CONCEPTUAL ONLY AND SHOULD BE CONSIDERED AS PRIVATE AND FUTURE STREETS FOR THE PURPOSE OF THIS TENTATIVE MAP.
7. EASEMENTS PER FIDELITY NATIONAL TITLE COMPANY PRELIMINARY TITLE REPORT NO. 996-23064296-C-TR7 DATED JUNE 06, 2023. ALL EASEMENTS ARE TO REMAIN. NO EASEMENTS ARE PROPOSED TO BE REMOVED, RELOCATED OR ABANDONED.
8. THIS MAP IS BEING PROCESSED FOR LEASE AND FINANCING PURPOSES ONLY.
9. THIS MAP DEDICATES CONSTRUCTION RIGHTS OVER OPEN SPACE LOTS TO LOS ANGELES COUNTY.
10. MAP CEQA REVIEW WILL BE COVERED UNDER THE NORTHLAKE SPECIFIC PLAN EIR.
11. STREET RADII (R290') ARE APPROXIMATE.
12. FINAL ALIGNMENT SUBJECT TO CHANGE TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
13. OTHER THAN PAVED RIDGE ROUTE ROAD, THERE ARE NO OTHER EXISTING IMPROVEMENTS.
14. APPROXIMATE STREET GRADES SHOWN ARE FROM VESTING TENTATIVE PARCEL MAP TRACT NO. 073336. NO STREET GRADES HAVE BEEN ESTABLISHED FOR VESTING TENTATIVE PARCEL MAP TRACT NO. 073335.
15. TOPOGRAPHY SHOWN HEREON BASED ON L.A.C.P.W. BENCH MARK L 4622 (SEE BENCH MARK DESCRIPTION AT BOTTOM OF THIS SHEET).
16. TENTATIVE TRACT NO. 073336 CONSISTS OF LOTS 1 THROUGH 12.
17. ALL LOTS ARE 40 ACRE MINIMUM LOT AREA.

(A) INDICATES A NON-EXCLUSIVE EASEMENT FOR INGRESS AND EGRESS PURPOSES

BENCH MARK: LACPW L 4622
SMALL BOAT SPK & TAG @ D-525 @ SW END OF BRIDGE @ B-1552 14 FT S/O C/L LAKE HUGHES RD
NEWHALL QUAD. (1993) ELEV. 1147.577

0 500 1000 2000 Feet
1"= 500'

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
100 WILSHIRE BOULEVARD, SUITE 1755
SANTA MONICA, CA 90401
THOMAS C DIPRIMA
(310) 824-7093

REGISTERED PROFESSIONAL ENGINEER MARK R. SIKAND No.35453 Exp. 09-30-27 CIVIL STATE OF CALIFORNIA

LEGAL DESCRIPTION:
A PORTION OF SECTIONS 2, 3, 10, 11, 14, AND 23 T 5 N, R 17 W, S.B.M.

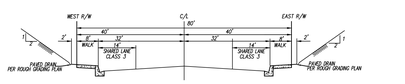
DATE	REVISION	BY	APP
7-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	T.H.	
6-01-2017	REVISED TO SHOW 40 ACRE MINIMUM LOT AREAS	W.R.B.	
8-31-2016	REVISIONS PER SUB COMMITTEE COMMENTS	W.R.B.	
7-26-2016	REVISIONS PER SUB COMMITTEE COMMENTS	W.R.B.	
6-09-2016	REVISIONS PER SUB COMMITTEE COMMENTS	W.R.B.	

SCALE: 1"=500' | CHK'D BY: | APPROVED BY: | DATE: 11/05/2025 | W.O. NO. 5090-033-35 | SHEET 1 OF 1

SIKAND Engineering | Planning | Surveying
15230 Burbank Blvd, Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

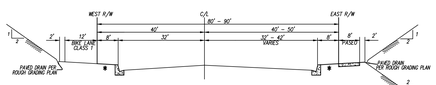
MAJOR LAND DIVISION
VESTING TENTATIVE PARCEL MAP NO. 073335
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

X:\Civil\5090\5090-033\Tentative Maps\Dwg\TM 73335 Large Parcel Map Compilation 40 AC Min.dwg



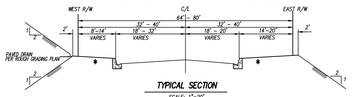
TYPICAL SECTION
SCALE: 1"=20'

80' SECONDARY HIGHWAY
THE RIDGE ROUTE ROAD
(FROM TR. 44429 TO 1200' N'LY TR. 44429)



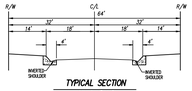
TYPICAL SECTION
SCALE: 1"=20'

80' – 90' SECONDARY HIGHWAY
THE RIDGE ROUTE ROAD
(FROM 1200' N'LY TR. 44429 TO NORTHLAKE BLVD.)



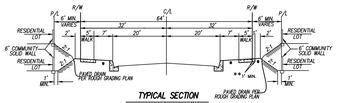
TYPICAL SECTION
SCALE: 1"=20'

64' – 80' LIMITED SECONDARY HWY
THE RIDGE ROUTE ROAD
(FROM NORTHLAKE BLVD. TO 900' N'LY NORTHLAKE BLVD.)



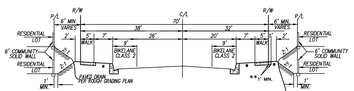
TYPICAL SECTION
SCALE: 1"=20'

64' LIMITED SECONDARY HWY
THE RIDGE ROUTE ROAD
(FROM 900' N'LY NORTHLAKE BLVD. TO 3200' N'LY OF NORTHLAKE BLVD.)



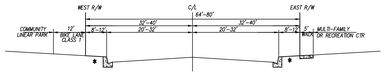
TYPICAL SECTION
SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)
"D" ST.,"E" ST.,"F" ST. (FROM "A" ST. TO "I" ST.)
& "H" ST.



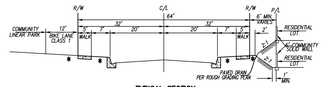
TYPICAL SECTION
SCALE: 1"=20'

70' STREET (LOCAL COLLECTOR)
"A" ST. (FROM NORTHLAKE BLVD TO "B" ST.)



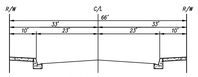
TYPICAL SECTION
SCALE: 1"=20'

80' STREET (MOD. INDUSTRIAL COLLECTOR)
NORTHLAKE BLVD.
(FROM "A" ST. TO 600' NE'LY "A" ST.)



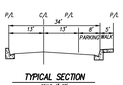
TYPICAL SECTION
SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)
NORTHLAKE BLVD.
(FROM 600 NE'LY "A" ST. TO "E" ST.)



TYPICAL SECTION
SCALE: 1"=20'

66' STREET
"S" ST.



TYPICAL SECTION
SCALE: 1"=20'

PRIVATE DRIVEWAY & FIRE LANE W/ PARKING ONE SIDE FOR MULTI-FAMILY PLANNING AREA



TYPICAL SECTION
SCALE: 1"=20'

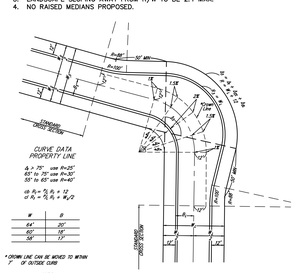
PRIVATE DRIVEWAY & FIRE LANE, NO PARKING FOR MULTI-FAMILY PLANNING AREA

✱ LANDSCAPE AREA – SEE LANDSCAPE PLAN FOR DETAILS (TO BE MAINTAINED BY A LMD OR HOA)

✱✱ HARDSCAPE – DELINEATION FOR TRAIL PURPOSES WHERE AVAILABLE.

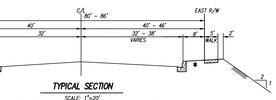
NOTES FOR STREET SECTIONS:

1. SLOUGH WALL REQUIRED AT TOE OF ADJACENT SLOPE IF TOE OF SLOPE IS CLOSER THAN 3' TO THE BACK OF WALK, AND SLOPE IS OVER 5' HIGH.
2. PUBLICLY MAINTAINED SIDEWALKS SHALL BE PLACED 6" FROM RIGHT OF WAY UNLESS SIDEWALK ABUTS A PROPOSED WALL IN WHICH CASE IT SHOULD BE PLACED AGAINST THE WALL.
3. LANDSCAPE SLOPING AWAY FROM R/W TO BE 2:1 MAX.
4. NO RAISED MEDIANS PROPOSED.



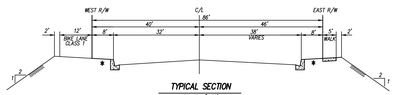
NOTES:
1. SUBSCRIPTS "S" AND "L" DENOTE SMALLER AND LARGER WIDTHS RESPECTIVELY.
2. ELEVATIONS ARE REQUIRED WHERE CIRCLED.
3. TRANSVERSE SLOPES SHOWN ABOVE ARE TYPICAL FOR FLAT APPROACH GRADES AND CAN BE INCREASED TO A MAXIMUM OF 4% AT CENTER OF CURVE FOR STEEP APPROACH GRADES.
4. LIMITS OF SLOPE, CROWN LINE TO OUTSIDE GUTTER, MAXIMUM = 2.2% FOR 8" C.F. AND 3.8% FOR 6" C.F.; MINIMUM = 1%

KNUCKLE
NOT TO SCALE



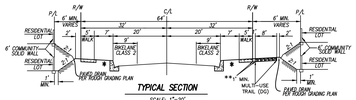
TYPICAL SECTION
SCALE: 1"=20'

80' – 86' STREET (MOD. INDUSTRIAL COLLECTOR)
NORTHLAKE BLVD.
(FROM 1000' SE'LY "A" ST TO "A" ST)



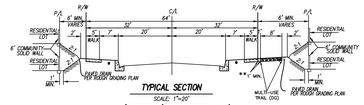
TYPICAL SECTION
SCALE: 1"=20'

86' STREET (MOD. INDUSTRIAL COLLECTOR)
NORTHLAKE BLVD.
(FROM RIDGE ROUTE ROAD TO 1000' SE'LY "A" ST)



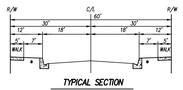
TYPICAL SECTION
SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)
"A" ST. & "B" ST.



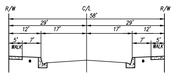
TYPICAL SECTION
SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)
"F" ST. & "O" ST. (FROM "I" ST. TO "O" ST.)



TYPICAL SECTION
SCALE: 1"=20'

60' STREET
"C" ST., "AA" ST., "DD" ST.,"EE" ST., "GG" ST.,
"HH" ST., & "PP" ST., & "QQ" ST.

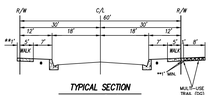


TYPICAL SECTION
SCALE: 1"=20'

58' STREET
"BB" ST., "CC" ST., "FF" ST., "II" ST., "JJ" ST., "KK" ST., "LL" ST.,
"MM" ST., "NN" ST., "OO" ST. & "PP" ST., "QQ" ST", RR" ST.,
& "SS" ST.,

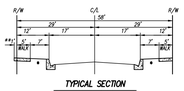
TYPICAL SECTION
SCALE: 1"=20'

60' STREET
"G" ST., "J" ST.& "P" ST.



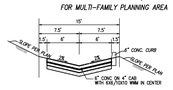
TYPICAL SECTION
SCALE: 1"=20'

60' STREET
"I" ST.

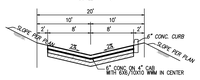


TYPICAL SECTION
SCALE: 1"=20'

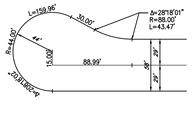
58' STREET
"O" ST.
(FROM "P" ST. TO CUL-DE-SAC)



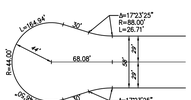
TYPICAL ACCESS ROAD DETAIL FOR BASINS
SCALE: 1"=10'



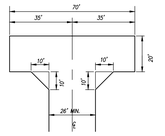
TYPICAL ACCESS ROAD DETAIL FOR WATER TANK
SCALE: 1"=10'

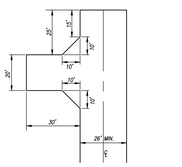


TYPICAL OFFSET CUL-DE-SAC
SCALE: 1"=60'

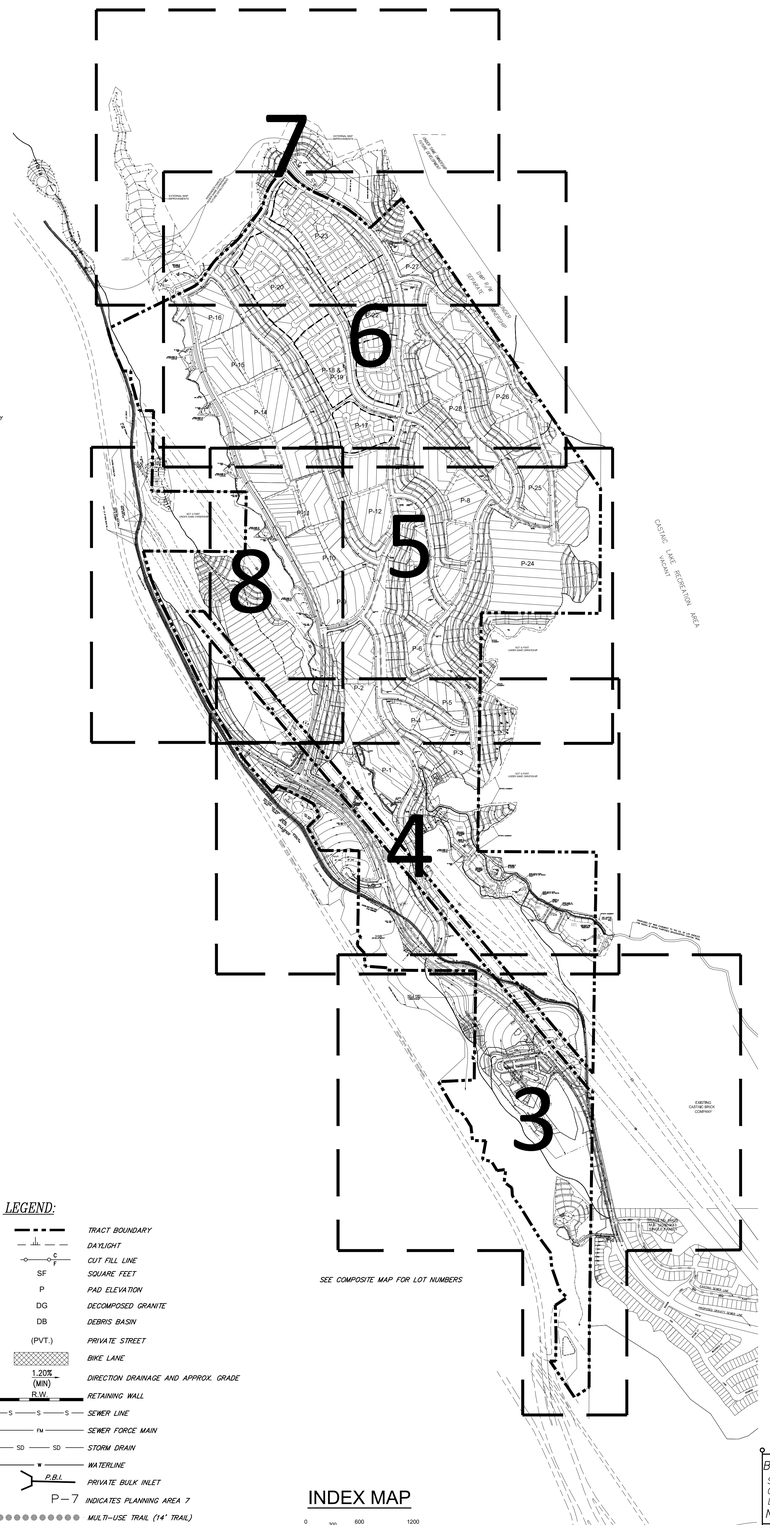


TYPICAL STANDARD CUL-DE-SAC
SCALE: 1"=40'





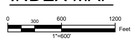
FIRE DEPT. TURNAROUND DETAILS
SCALE: 1"=30'



LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF — SQUARE FEET
- P — PAD ELEVATION
- DG — DECOMPOSED GRANITE
- DB — DEBRIS BASIN
- (PVT.) — PRIVATE STREET
- BIKE LANE
- 1.20% (MIN) R.W. — DIRECTION DRAINAGE AND APPROX. GRADE
- RETAINING WALL
- S — S — S — SEWER LINE
- FM — SEWER FORCE MAIN
- SD — SD — STORM DRAIN
- W — WATERLINE
- P.B.I. — PRIVATE BULK INLET
- P–7 — INDICATES PLANNING AREA 7
- MULTI-USE TRAIL (14' TRAIL)
- 6' EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL (5' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- 1 — IRREVOCABLE OFFER TO DEDICATE. SEE TABLE ON SHT. 3
- DISTURBED SIGNIFICANT RIDGELINE
- UNDISTURBED SIGNIFICANT RIDGELINE

INDEX MAP



Lot Numbers	No. of Lots	Sheet No.	Type (Use)	Dwelling Units	Total Acres
Area P-1					
289	1	4	Multi-family	189	7.0
372-373	2	4	Debris Basin		1.1
Area P-2					
290	1	4	Multi-family	91	5.0
		5	Multi-family	40	5.3
Area P-3					
291	1	4	Multi-family	49	3.3
Area P-4					
292	1	4	Multi-family	48	3.1
Area P-5					
293	1	5	Multi-family	38	3.0
Area P-6					
294	1	5	Multi-family	21	2.2
Area P-7					
295, 296	2	5	Multi-family	88	6.8
Area P-8					
297	1	5	Multi-family	111	9.9
Area P-9					
298	1	5	Multi-family	112	6.1
Area P-10					
299	1	5	Multi-family	100	7.4
Area P-11					
300	1	5	Multi-family	81	6.9
Area P-12					
301	1	5	Multi-family	117	8.6
Area P-13					
302	1	5	Multi-family	71	8.9
Area P-14					
303	1	6	Multi-family	44	5.1
		4	Multi-family	36	5.1
Area P-15					
304	1	6	Multi-family	32	4.3
		4	Multi-family	31	4.2
Area P-16					
305	1	6	Multi-family	42	5.1
Area P-17					
1-33	33	6	50'X80' SF (4000 sf) min.	33	4.5
Area P-18 & P-19					
34-68	35	6	55'X90' SF (4950 sf) min.	35	5.8
Area P-20					
69-129	61	6	60'X100' SF (6000 sf) min.	61	11.2
Area P-21					
130-165	36	6	50'X80' SF (4000 sf) min.	36	4.2
Area P-22					
166-178	13		50'X80' SF (4000 sf) min.	13	1.3
179-205	30	6	55'X90' SF (4950 sf) min.	30	4.3
Area P-23					
209-288	80	6	50'X80' SF (4000 sf) min.	80	9.4
Area P-24					
306	1	5	Senior	138	17.7
Area P-25					
307, 308	2	5	Senior	61	10.6
Area P-26					
309	1	6	Senior	61	10.2
Area P-27					
310	1	6	Senior	10	1.3
Area P-28					
311	1	6	Senior	75	9.3
Miscellaneous					
312-313,315-318	6	4	General Commercial***	321	20.4
314	1	1	Highway Commercial		2.5
319	1	6	Public Park		16.3
320-329	10	5 & 6	Private Park		8.0
330-333, 335-357, 367-368	29		Open Space		192.9
334, 358-366	10		Open Space (Natural)		163.9
369-370	2	3 & 8	Water Tank		6.5
371, 374-383	11	4, 5 & 6, 8	Debris Basin *		10.4
384	1	4	Water Quality Basin Lot **		15.0
385	1	4	Pump station		0.2
386	1	4	Fire station		1.4
			Public R/W		84.3

* DEBRIS BASINS TO BE MAINTAINED BY LA COUNTY PUBLIC WORK FLOOD CONTROL DISTRICT (LACFCD).

** WATER QUALITY BASIN TO BE MAINTAINED BY LA COUNTY THROUGH DRAINAGE BENEFIT ASSESSMENT AREA (DBAA).

*** AFFORDABLE HOUSING AND LIVE WORK (LOT 313).

LOT SUMMARY TABLE	
Type (Use)	Quantity
Multi-family	23
50'X80' SF (4,000 sf) min.	162
55'X90' SF (4,950 sf) min.	65
60'X100' SF (6,000 sf) min.	61
Open Space (Manufactured Slopes)	29
Open Space (natural)	10
General Commercial	6
Highway Commercial	1
Public Park	1
Private Park	10
Debris Basin	13
Water Quality Basin Lot	1
Water Tank	2
Pump Station	1
Fire Station	1
Total	**386**

SHEET INDEX	
SHEET NO.	SHEET TITLE
1	TITLE SHEET
2	COMPOSITE MAP
3	TENTATIVE MAP - SOUTHERLY IMPROVEMENTS
4	TENTATIVE MAP - PA 1, 3 AND 4
5	TENTATIVE MAP - PA 2, 5 -13 AND 24 - 25
6	TENTATIVE MAP - PA 14 - 23 AND 26 - 28
7	TENTATIVE MAP - EXTERNAL IMPROVEMENTS
8	TENTATIVE MAP - PA 10, 11 AND SPORT PARK
9	UNIT PHASING MAP
10	LARGE LOT MAP
11	TRAIL MAP
12	EASEMENT MAP TITLE SHEET
13	EASEMENT MAP
14	EASEMENT MAP
15	EASEMENT MAP
16	EASEMENT MAP

BENCH MARK: LACPW L 4622
SMALL BOAT SPK & TAG @ D-S25 @ SW END OF BRIDGE @ B-1552 14 FT S/O C/L LAKE HUGHES RD
NEWHALL QUAD. (1993) ELEV. 1147.577

UTILITIES AND SERVICES:

WATER:	SANTA CLARITA VALLEY WATER AGENCY
SEWER:	SEWAGE OFFSITE TREATMENT PLANT
GAS:	SOUTHERN CALIFORNIA GAS COMPANY
ELECTRICITY:	SOUTHERN CALIFORNIA EDISON COMPANY
SCHOOL:	WM. S. HART HIGH SCHOOL & CASTAIC UNION SCHOOL DISTRICTS.
SHERIFF	LOS ANGELES COUNTY SHERIFF
TELEPHONE	SBC TELEPHONE CO.

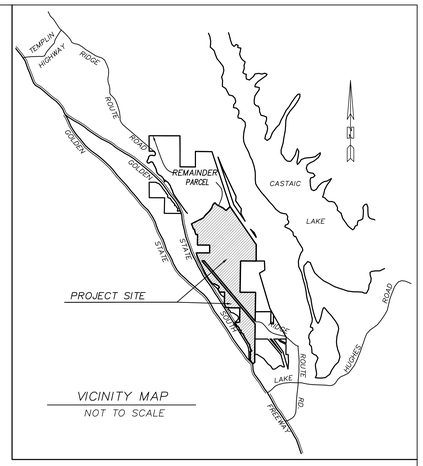
PARCEL NUMBERS BASED ON FIDELITY NATIONAL TITLE COMPNAY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 6, 2023.

P.T.R. PARCEL NO	A.P.N.
1*	3247-010-049 and 3247-010-050
2*	3244-003-018
3	3247-040-008 (PORTION)
4	3247-040-008 (PORTION)
5	3247-040-008 (PORTION)
6	3247-040-008 (PORTION)
7	3247-040-013 (PORTION)
8	3247-040-009 (PORTION)
9	3247-040-009 (PORTION)
10	3247-040-009 (PORTION)
11	3247-040-009 (PORTION)
12	3247-040-013 (PORTION)
13	3247-040-013 (PORTION)
14	3247-040-013 (PORTION)
15	3244-012-054 & 059
16	3244-012-057
17	3244-012-013
18	3247-041-008
19	3247-041-020
20	3247-041-021
21	3247-041-023
22	3247-041-022
23	2865-036-003
24	2865-036-002
25	2865-036-001 AND 2865-003-013
26	2865-003-035
27	3244-004-051
28	3244-004-053
29	3244-012-049
30	3244-012-048
31	3244-012-046
32	3244-012-058
33	3244-004-052
34	3244-004-024
35	3244-013-001
36	3244-012-045
37	3247-017-019
38	3244-012-050
39	3244-014-015
40	3244-014-067 & 068
41	3247-041-018
42	3247-041-015
43	3244-014-053
44*	3244-014-044
45*	3244-014-038
46*	3247-041-012
47*	3244-013-004
48*	3244-013-002
49*	3244-013-005
50*	3244-013-009
51*	3244-013-010
52	3244-014-050
53*	3244-015-018
54*	3244-014-022
55*	3244-014-021
56	3244-014-062
57*	3244-014-063
60	3247-041-007
61	3247-041-009
66	3247-041-010
68*	3244-012-056
69*	3244-014-045
70**	3244-012-904
71**	3244-004-906
72*	3244-014-902
73*	3247-017-900

*ASTERISK INDICATES PARCEL IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP OR OFFSITE IMPROVEMENT

**ASTERISK INDICATES PARCEL TO BE AQUIRED

NOTE: NORTHEASTERLY PORTION OF PARCEL 32 IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP



DATA SUMMARY:

ACRES(GROSS)	719.8 ± AC
ACRES(NET)	635.5 ± AC
EXISTING & PROPOSED ZONING	NORTHLAKE S.P
EXISTING & PROPOSED GENERAL PLAN (2012 SCVGP)	NORTHLAKE S.P
EXISTING LAND USE	VACANT
PROPOSED LAND USE	SINGLE & MULTIFAMILY RESIDENTIAL COMMERCIAL AND OPEN SPACE

LOT SUMMARY:

SINGLE FAMILY LOTS	(40.6 Ac.) – 288 DU'S	1 TO 288	(288)
MULTI–FAMILY LOTS	(107.2 Ac.) – 1341 DU'S	289 TO 305	(17)
SENIOR M.F. LOTS	(49.1 Ac.) – 345 DU'S	306 TO 311	(6)
GENERAL COMMERCIAL	(20.4 Ac.) – 321 DU'S	312 TO 313	(2)
		315 TO 318	(4)
HIGHWAY COMMERCIAL	(2.5 Ac.)	314	(1)
PUBLIC PARK LOT	(16.3 Ac.)	319	(1)
PRIVATE PARK LOTS	(8.0 Ac.)	320 TO 329	(10)
OPEN SPACE (MFD)	(192.9 Ac.)	330 TO 368	(39)
OPEN SPACE (NATURAL)	(163.9 Ac.)		
TANK SITE	(6.5 Ac.)	369 TO 370	(2)
DEBRIS BASIN LOTS	(11.5 Ac.)	371 TO 383	(13)
WATER QUALITY BASIN	(15.0 Ac.)	384	(1)
PUMP STATION	(0.2 Ac.)	385	(1)
FIRE STATION	(1.4 Ac.)	386	(1)
PUBLIC R/W	(84.3 Ac.)		
TOTAL LOTS	(719.8 Ac.) – TOTAL 2295 DU'S	386	

NOTES

1. TOTAL EARTHWORK APPROXIMATELY CUT 17,160,000 C.Y. ± FILL 15,840,000 C.Y. ± EARTHWORK WILL BE BALANCED ON–SITE DUE TO SHRINKAGE.
2. TOPOGRAPHIC MAPPING BY HORIZON SURVEYS, 2 FT CONTOUR INTERVAL. (JULY 8, 2002)
3. REQUEST PERMISSION TO ADJUST LOT LINES TO THE SATISFACTION OF DRP.
4. REQUEST PERMISSION TO RECORD UNIT TRACT MAPS TO THE SATISFACTION OF DRP.
5. REQUEST PERMISSION TO CREATE ADDITIONAL OPEN SPACE LOTS.
6. BOUNDARY LINE DIMENSIONS ARE TAKEN FROM RECORD DATA.
7. THE APPLICANT IS REQUESTING THE RIGHT TO ADJUST STREET AND BUILDING PAD ELEVATIONS UP TO 10 FEET ON THE FINAL GRADING PLAN TO THE SATISFACTION OF DRP AND DPW.
8. TOPS AND TOES OF SLOPES ARE SUBJECT TO CHANGE IN FINAL ENGINEERING TO SATISFACTION OF DRP AND DPW.
9. MAXIMUM SLOPE GRADE IS 2:1 FOR ALL SLOPES.
10. A LANDSCAPE MAINTENANCE DISTRICT OR HOMEOWNER'S ASSOCIATION WILL BE ESTABLISHED FOR MAINTENANCE OF OPEN SPACE AREAS AND ALL COMMON SLOPE AREAS.
11. ALL SLOPES WITHIN HOMEOWNER'S ASSOCIATION COMMON AREAS OR LANDSCAPE MAINTENANCE DISTRICTS ARE TO BE PLANTED AND IRRIGATED WITH COUNTY APPROVED MATERIAL.
12. PORTIONS OF THE OLD RIDGE ROUTE ROAD TO BE ABANDONED AND REPLACED WITH A ROAD PER CURRENT COUNTY STANDARDS.
13. MULTI–FAMILY LOTS ARE FOR CONDO PURPOSES.
14. REQUEST PERMISSION TO CREATE A LARGE LOT PARCEL MAP FOR SALES AND LEASING PURPOSES AND WHERE EACH LOT IS GREATER THAN 40 ACRES.
15. SITE CONTAINS NO OAK TREES.
16. ALL STREET LANDINGS ARE 3% OR LESS EXCEPT WHERE NOTED.
17. ALL GRADING ELEVATIONS ARE ± 10 FEET.
18. ALL ITEMS REQUESTED WITH CUP NO. RPPL2023004316 (i.e. GRADING, WATER TANKS, SP SITE PLAN/SCR REVIEW, AND WALLS EXCEEDING 6 FEET IN HEIGHT), AS WELL AS THAT IN PHASE 2 WILL REQUIRE A NEW CUP. ENVIRONMENTAL ASSESSMENT NO. RPPL2023004887.
19. PRIVATE DRIVES SHALL BE DESIGNED ACCORDING TO THE WESTSIDE COMMUNITIES PRIVATE DRIVE AND TRAFFIC CALMING DESIGN GUIDELINES CONSISTENT WITH HEALTHY DESIGN REQUIREMENTS.
20. ALL STREET CURB RETURNS ARE 25' RADII UNLESS SPECIFIED ON THE PLAN.
21. LANDSCAPING IN THE COMMON AREAS AND DRIVES INCLUDING COMMON AREAS FENCING AND WALL WILL BE DROUGHT TOLERANT IN NATURE. DETAILED LANDSCAPING WILL BE PROVIDED ONCE THE PLOT PLANS ARE FINALIZED AND SUBMITTED TO THE COUNTY FOR APPROVAL.
22. BICYCLE SHOWER AND CHANGING FACILITIES (BSF) WILL BE PROVIDED FOR ALL BUILDINGS ≥ 75,000 S.F. AND WILL BE DEPICTED IN DETAIL ON FUTURE PLOT PLANS.
23. ALL SINGLE FAMILY LOTS WILL BE SERVED BY SEPARATE SEWER LATERAL FOR EACH INDIVIDUAL LOT. ALL MULTI–FAMILY, COMMERCIAL, AND INDUSTRIAL BUILDINGS WILL BE SERVED BY SEPARATE SEWER LATERAL FOR EACH INDIVIDUAL BUILDING.
24. THE CLIENT PROPOSED A TRANSIT SYSTEM WITHIN THE PROJECT BOUNDARY, FOR MORE DETAILS SEE PLANNING NOTEBOOK.
25. ALL PARKS AREA PRIVATE EXCEPT WHERE NOTED.
26. PRIOR TO THE ISSUANCE OF 1750th BUILDING PERMIT, FIRE STATION TO BE CONVEYED TO THE CONSOLIDATED PROTECTION DISTRICT OF LOS ANGELES COUNTY.
27. A NEW TENTATIVE MAP NUMBER & CUP WILL BE ISSUED IF AND WHEN A NEW MAP IS FILED OVER THE N'LY PORTION OF NORTHLAKE SPECIFIC PLAN BOUNDARY.
28. NO PROPOSED GATES WITHIN PROJECT SITE.

LOS ANGELES DEPARTMENT OF REGIONAL PLANNING
8/20/25
TENTATIVE MAP TR 73336

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2	9–9–2015	PER SCM COMMENTS DATED 7–16–2015		YL	–
1	6–1–2015	PER SCM COMMENTS DATED 2–17–2015		YL	–
	DATE	REVISION		BY	APP
SCALE: AS SHOWN	CHK'D BY:	APPROVED BY:	DATE: 08/12/2025	W.O. NO. 5090–033–35	SHEET 1 OF 16

PREPARED FOR:

NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER MARK R. SIKAND No.35453 Exp. 09–30–25 CIVIL STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA



FOR SPECIFIC PLAN DETAILS, SEE THE REV. EXHIBHIT "A" MAP

COMPOSITE MAP

PREPARED FOR:

NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
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REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No.35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

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AS SHOWN			08/12/2025	5090-033-35	2	16

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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

MATCH LINE SEE SHEET 4

MATCH LINE SEE LEFT

359
33.0 AC
OS

330
3.4 AC
OS

340
0.2 AC
OS

318
2.9 AC
GENERAL
COMMERCIAL

317
5.3 AC
GENERAL
COMMERCIAL

358
39.6 AC
OS

314
2.5 AC
HWY. COMMERICAL
DEVELOPMENT

369
4.9 AC
WATER TANK

358
39.6 AC
OS

NOT A PART UNDER SAME OWNERSHIP

GOLDEN STATE FREEWAY I-5 (SOUTHBOUND)

EXISTING CALTRANS R/W

SO. CALIF. EDISON R/W

TRACT BOUNDARY

EXISTING NORTHLAKE HILLS ELEMENTARY SCHOOL
SCHOOL SITE
AREA = 20.6± Acres (GROSS)
AREA = 13.0± Acres NET PAD

NOT A PART

RIDGE ROUTE ROAD

EXISTING RIDGE ROUTE ROAD

CASTAIC ROAD

80' RIDGE ROUTE

100' RIDGE ROUTE

REALIGNED C/L 80' WIDE RIDGE ROUTE
PER TR. 44429 M.B. 1233-19-43
(NOT REFLECTED IN TITLE REPORT)

JOIN EXISTING RIDGE ROUTE RD. BEGIN REC RE-ALIGNMENT PER P-273(FW)

EXISTING SEWER PER PC 11670

PROP. 15" VCP SEWER WILL EXTEND AND CONNECT TO EXISTING SEWER LINE LOCATED AT RIDGE ROUTE ROAD AND CASTAIC LAKE ROAD

PROPOSED TANK

20' ACCESS ROAD

EXIST. GAS LINE TO REMAIN

EXIST. 12" WATER LINE

EXIST. 30" WATER LINE

EXIST. 30" WATER LINE

NW'LY LINE 10' (83)

SE'LY LINE 10' (84)

MATCH LINE SEE SHEET 8 INSET "A"

KEY MAP
SCALE: 1" = 1500'

LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF — SQUARE FEET
- D.B. — DEBRIS BASIN
- I/S — INTERSECTION SIGHT
- P — PAD ELEVATION
- (PVT.) — PRIVATE STREET
- BIKE LANE
- 1.20% (MIN) — DIRECTION DRAINAGE AND APPROX. GRADE
- R.W — TYPICAL RETAINING WALL
- DISTURBED SIGNIFICANT RIDGELINE
- UNDISTURBED SIGNIFICANT RIDGELINE
- RIDGELINE
- SEWER LINE
- SEWER FORCE MAIN
- STORM DRAIN
- WATERLINE
- P.B.I. — PRIVATE BULK INLET
- P-7 — INDICATES PLANNING AREA 7
- MULTI-USE TRAIL (10' TRAIL)
- NEIGHBORHOOD PEDESTRAIN TRAIL (6' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- (1) — IRREVOCABLE OFFER TO DEDICATE. SEE TABLE ON SHT. 3

0 50 100 200 Feet
1"=100'

OFFER OF DEDICATION TO THE PUBLIC AN EASEMENT FOR OFFSITE GRADING PURPOSES TO BE RECORDED BY SEPARATE INSTRUMENT

ITEM NO.	APN
(1)	3244-014-038
(2)	3244-014-045
(3)	3244-012-045 3244-012-046 3244-012-049 3244-004-051
(4)	3244-014-044 3244-014-063
(5)	3244-014-021 3244-014-022
(10)	3244-013-005 3244-013-010 3244-012-056

IRREVOCABLE OFFER TO DEDICATE TO THE COUNTY OF LOS ANGELES AN EASEMENT FOR PERMANENT ROAD PURPOSES TO BE RECORDED BY SEPARATE INSTRUMENT

ITEM NO.	APN
(6)	3244-014-038
(7)	3244-014-045
(8)	3244-014-063

IRREVOCABLE OFFER TO DEDICATE TO THE COUNTY OF LOS ANGELES AN EASEMENT FOR PERMANENT WATER QUALITY BASIN, DEBRIS BASIN OR PERMANENT ACCESS ROAD PURPOSES TO BE RECORDED BY SEPARATE INSTRUMENT

ITEM NO.	APN
(9)	3244-015-018
(11)	3244-014-022
(12)	3244-012-046
(13)	3244-012-045, 3247-041-012

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
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ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER
MARK R. SIKAND
No.35453
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

LEGAL DESCRIPTION:

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1"=100'			08/12/2025	5090-033-35	3	16

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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

MATCH LINE SEE SHEET 8

MATCH LINE SEE SHEET 5

MATCH LINE SEE SHEET 3

336
14.2 AC
OS

338
6.8 AC
OS

371
2.5 AC
D.B.

374
0.4 AC
D.B.

P-1
289
7.2 AC

P-2
290
3.1 AC

P-3
291
3.3 AC

P-4
292
3.1 AC

P-5
293
3.0 AC

329
1.3 AC
PARK

331
8.4 AC
OS

380
1.1 AC
D.B

342
0.7 AC
OS

335
3.6 AC
OS

333
1.7 AC
OS

362
4.8 AC
OS

372
0.6 AC
D.B.

339
4.4 AC
OS

385
0.2 AC
PUMP STATION

312
5.1 AC
GENERAL
COMMERICAL

313
1.6 AC
GENERAL
COMMERCIAL

315
1.2 AC
GENERAL
COMMERCIAL

316
4.3 AC
GENERAL
COMMERCIAL

361
9.3 AC
OS

FUTURE
DEVELOPMENT

332
2.8 AC
OS

334
2.5 AC
OS

359
33.0 AC
OS

381
0.7 AC
D.B.

382
0.7 AC
D.B.

384
15.0 AC
WATER QUALITY BASIN

360
12.4 AC
OS

383
0.8 AC
D.B.

NOT A PART
UNDER SAME OWNERSHIP

NOT A PART

NOT A PART

UNDER SAME OWNERSHIP

NORTHLAKE BLVD

P ST

O ST

ROUTE 90 ROAD

RIDGE ROUTE ROAD TO BE ABANDONED

EXISTING RIDGE ROUTE ROAD TO BE ABANDONED

GOLDEN STATE FREEWAY I-5 (SOUTHBOUND)

EXISTING CALTRANS R/W

SO. CALIF. EDISON R/W

PROPOSED 150' EDISON EASEMENT

EX. EDISON R/W TO BE RELOCATED

TRACT BOUNDARY

± 1326'

TRACT BOUNDARY

± 1610'

± 2669'

± 672'

OFFSITE EASEMENT

OFFSITE EASEMENT

OFFSITE EASEMENT

OFFSITE EASEMENT

JOIN ADOPTED CASTAIC LAKE TRAIL

TOWER TO BE RELOCATED

LOWER TOWER

RANGE TOWER

DEBRIS BASIN TO BE MAINTAINED BY L.A.C.F.C.D

WATER QUALITY BASIN MAINTAINED BY LOS ANGELES COUNTY

INGRESS & EGRESS OF SD ESMT.

15' ACCESS ROAD

20' SEWER EASEMENT

GRADE TO DRAIN

PROPOSED POWER POLE TO BE REMOVED

PROPOSED WATER R/W PER THIS MAP

POINT OF CONNECTION TO PROPOSED WATER LINE

EXISTING DWY. TO WATER TANK

OFFSITE GRADING TO BE ACQUIRED

SANTA CLARITA VALLEY WATER AGENCY

WATER LINE POINT OF CONNECTION

JOIN EXIST. 30" WATER MAIN

EXIST. 30" WATER LINE

RELOCATED 30" WATER MAIN

PROP. FORCE MAIN SEWER LINE

EXIST. 24" CMP DRAIN PIPE TO BE REPLACED BY 36" RCP

CLASS 1 BIKE LANE TRAIL

14' MULTI-USE TRAIL

8' NATURAL TRAIL

SCALE: 1" = 100'

KEY MAP
SCALE: 1" = 1500'

LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF SQUARE FEET
- D.B. DEBRIS BASIN
- I/S INTERSECTION SIGHT
- P PAD ELEVATION
- (PVT.) PRIVATE STREET
- BIKE LANE
- 1.20% (MIN) DIRECTION DRAINAGE AND APPROX. GRADE
- R.W. TYPICAL RETAINING WALL
- DISTURBED SIGNIFICANT RIDGELINE
- UNDISTURBED SIGNIFICANT RIDGELINE
- R R R RIDGELINE
- S S SEWER LINE
- FM SEWER FORCE MAIN
- SD SD STORM DRAIN
- W WATERLINE
- P.B.I. PRIVATE BULK INLET
- P–7 INDICATES PLANNING AREA 7
- MULTI–USE TRAIL (10' TRAIL)
- NEIGHBORHOOD PEDESTRAIN TRAIL (6' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- 1 IRREVOCABLE OFFER TO DEDICATE. SEE TABLE ON SHT. 3

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DATE		REVISION	BY	APP

SCALE: 1"=100' | CHK'D BY: | APPROVED BY: | DATE: 08/12/2025 | W.O. NO. 5090-033-35 | SHEET 4 OF 16

PREPARED FOR:

NORTHLAKE ASSOCIATES, LLC
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LOS ANGELES, CA 90067
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REGISTERED PROFESSIONAL ENGINEER — WAYNE R. SIKAND — No.35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:

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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

MATCH LINE SEE SHEET 6

MATCH LINE SEE SHEET 4

NOT A PART UNDER SAME OWNERSHIP

NOT A PART UNDER SAME OWNERSHIP

OFFSITE EASEMENT

OFFSITE EASEMENT

TRACT BOUNDARY

GRADE TO DRAIN

GRADE TO DRAIN

EDISON EASEMENT

SO. CALIF. EDISON R/W

NORTHLAKE BLVD

A ST

B ST

C ST

D ST

E ST

F ST

G ST

H ST

P-1 302 8.9 AC

P-2 290 10.3 AC

P-5 293 3.0 AC

P-6 294 2.2 AC

P-7 295 5.0 AC

P-8 297 9.9 AC

P-9 298 6.1 AC

P-10 299 7.4 AC

P-11 300 6.9 AC

P-12 301 8.6 AC

P-13 302 8.9 AC

P-24 306 17.7 AC

P-25 308 4.2 AC

296 1.8 AC

307 6.4 AC

319 16.3 AC PUBLIC PARK

320 2.2 AC PARK

321 1.1 AC PARK

322 1.1 AC PARK

336 11.3 AC

337 9.4 AC OS

341 14.3 AC OS

343 18.9 AC OS

344 10.1 AC OS

345 7.8 AC OS

354 3.8 AC OS

364 10.9 AC OS

365 34.6 AC OS

366 6.6 AC OS

374 1.0 AC D.B.

375 0.7 AC D.B.

376 0.4 AC D.B.

380 1.1 AC D.B

386 1.4 AC FIRE STATION

DEBRIS BASIN TO BE MAINTAINED BY L.A.C.F.C.D

TO BE ABANDONED (SEE SHEET 12 OF 16)

POST DEVELOPMENT 100 YEAR DISCHARGE 415 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 395 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 387 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 380 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 365 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 361 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 345 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 335 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 326 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 315 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 305 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 301 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 298 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 295 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 290 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 287 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 285 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 282 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 280 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 278 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 275 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 273 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 270 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 268 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 265 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 263 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 260 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 258 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 255 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 253 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 250 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 248 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 245 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 243 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 240 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 238 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 235 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 233 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 230 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 228 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 225 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 223 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 220 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 218 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 215 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 213 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 210 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 208 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 205 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 203 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 200 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 198 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 195 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 193 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 190 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 188 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 185 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 183 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 180 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 178 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 175 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 173 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 170 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 168 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 165 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 163 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 160 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 158 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 155 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 153 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 150 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 148 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 145 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 143 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 140 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 138 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 135 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 133 (CUBIC FEET PER SECOND)

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POST DEVELOPMENT 100 YEAR DISCHARGE 103 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 100 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 98 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 95 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 93 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 90 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 88 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 85 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 83 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 80 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 78 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 75 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 73 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 70 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 68 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 65 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 63 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 60 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 58 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 55 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 53 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 50 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 48 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 45 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 43 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 40 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 38 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 35 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 33 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 30 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 28 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 25 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 23 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 20 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 18 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 15 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 13 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 10 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 8 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 5 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 3 (CUBIC FEET PER SECOND)

POST DEVELOPMENT 100 YEAR DISCHARGE 0 (CUBIC FEET PER SECOND)

LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF SQUARE FEET
- D.B. DEBRIS BASIN
- I/S INTERSECTION SIGHT
- P PAD ELEVATION
- (PVT.) PRIVATE STREET
- BIKE LANE
- 1.20% (MIN) DIRECTION DRAINAGE AND APPROX. GRADE
- R.W. TYPICAL RETAINING WALL
- DISTURBED SIGNIFICANT RIDGELINE
- UNDISTURBED SIGNIFICANT RIDGELINE
- RIDGELINE
- SEWER LINE
- SEWER FORCE MAIN
- STORM DRAIN
- WATERLINE
- P.B.I. PRIVATE BULK INLET
- P-7 INDICATES PLANNING AREA 7
- MULTI-USE TRAIL (10' TRAIL)
- NEIGHBORHOOD PEDESTRAIN TRAIL (6' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- (7) IRREVOCABLE OFFER TO DEDICATE. SEE TABLE ON SHT. 3

KEY MAP
SCALE: 1" = 1500'

0 50 100 200 Feet
1"=100'

N

7	08-12-2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP	TH	–
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	TH	–
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016	YL	–
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016	YL	–
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	–
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	–
	DATE	REVISION	BY	APP

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=100'			08/12/2025	5090-033-35	5	16

PREPARED FOR:

NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No.35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

SIKAND Engineering | Planning | Surveying
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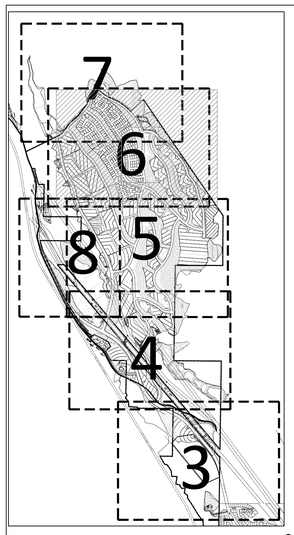
MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA



KEY MAP
SCALE: 1" = 1500'

MATCH LINE SEE SHEET 7

SEE SHEET 7

MATCH LINE SEE SHEET 5

TRACT BOUNDARY

OFFSITE EASEMENT UNDER SAME OWNERSHIP

DWP R/W SEPARATE OWNERSHIP UNDER TRACT BOUNDARY

NORTHLAKE BLVD

FUTURE EXTENSION PER NORTHLAKE SPECIFIC PLAN

GRADE TO DRAIN

DEBRIS BASIN TO BE MAINTAINED BY L.A.C.F.C.D

CLASS 1 BIKE TRAIL

CLASS 1 BIKE LANE TRAIL

15' ACCESS ROAD

6' EXPANDED SW TRAIL

14' MULTI USE TRAIL

5' PCC TRAIL

DISTANCE 310' (SUMP)

LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF SQUARE FEET
- D.B. DEBRIS BASIN
- I/S INTERSECTION SIGHT
- P PAD ELEVATION
- (PVT.) PRIVATE STREET
- BIKE LANE
- 1.20% (MIN) DIRECTION DRAINAGE AND APPROX. GRADE
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- DISTURBED SIGNIFICANT RIDGELINE
- UNDISTURBED SIGNIFICANT RIDGELINE
- R R R RIDGELINE
- S S SEWER LINE
- FM SEWER FORCE MAIN
- SD SD STORM DRAIN
- W WATERLINE
- P.B.I. PRIVATE BULK INLET
- P-7 INDICATES PLANNING AREA 7
- MULTI-USE TRAIL (10' TRAIL)
- NEIGHBORHOOD PEDESTRAIN TRAIL (6' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- 1 IRREVOCABLE OFFER TO DEDICATE, SEE TABLE ON SHT. 3

0 50 100 200 Feet
1"=100'

N

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	DATE	REVISION	BY	APP

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1"=100'			08/12/2025	5090-033-35	6	16

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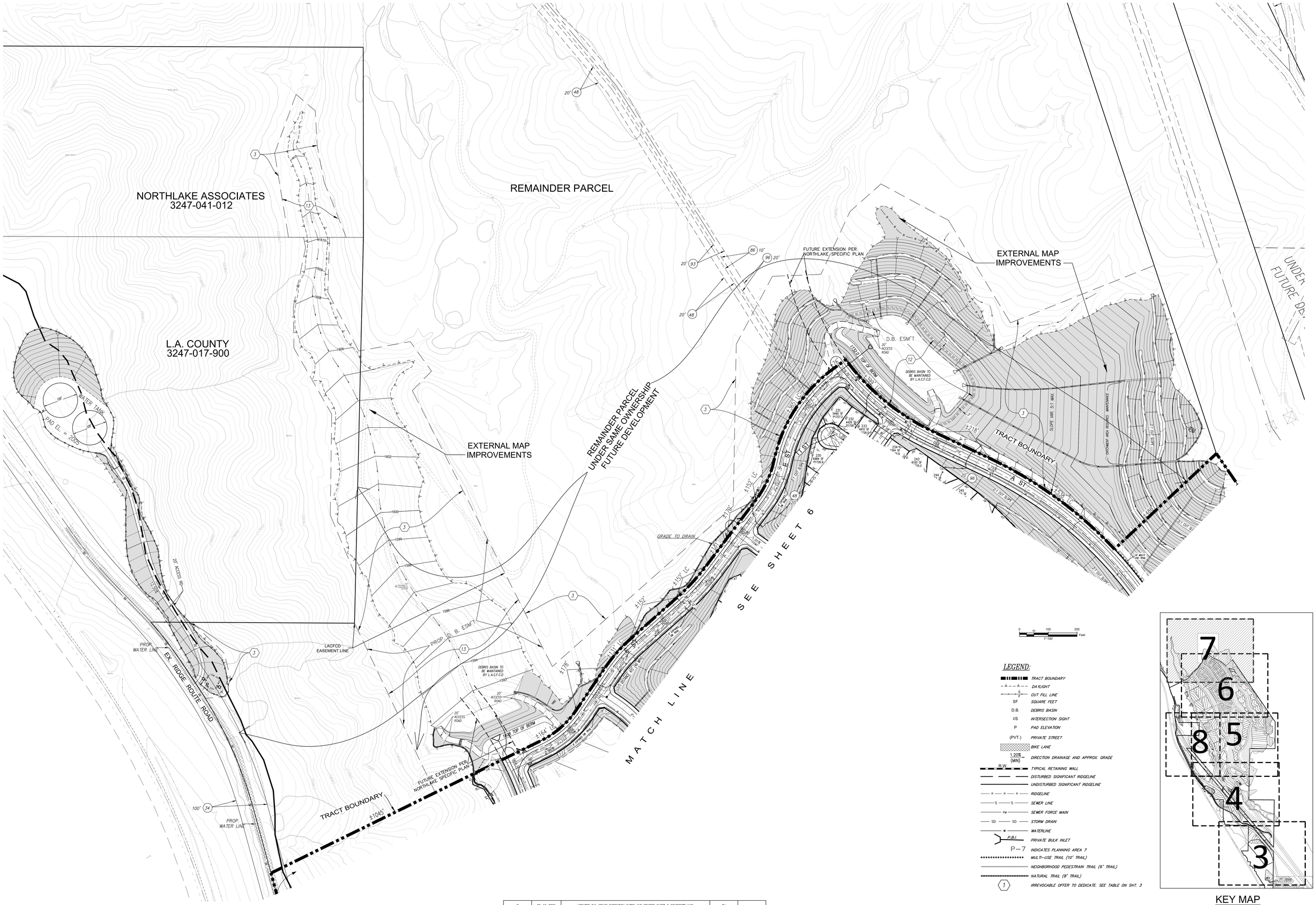
MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA



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1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	-
	DATE	REVISION	BY	APP

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=100'			08/12/2025	5090-033-35	7	16

PREPARED FOR:

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REGISTERED PROFESSIONAL ENGINEER
MARK R. SIKAND
No. 35453
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

LEGAL DESCRIPTION:

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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

GOLDEN STATE FREEWAY I-5 (SOUTHBOUND)

EXISTING CALTRANS R/W

EXISTING RIDGE ROUTE ROAD EDGE OF PAVEMENT

EXISTING RIDGE ROUTE ROAD R/W

EXIST. C/L OF RIDGE ROUTE RD

RIDGE ROUTE RD

PROP. WATER LINE

PROPOSED WATER TANK 1850 ELEV. 1820

370
1.6 AC
WATER TANK

NE'LY LINE 50' WIDE

NOT A PART
UNDER SAME OWNERSHIP

±1056'

±1139'

±699'

365
34.6 AC
OS

386
1.4 AC
FIRE STATION

376
0.4 AC
D.B.

DEBRIS BASIN TO BE MAINTAINED BY L.A.C.F.C.D

15' ACCESS ROAD

P-13
302
8.9 AC

322
1.1 AC
PARK

CLASS 1 BIKE LANE TRAIL

P-11
300
6.9 AC

P-10
299
7.4 AC

375
0.7 AC
D.B.

EXIST. C/L OF RIDGE ROUTE ROAD

EXIST. GAS LINE

C/A WIDTH NOT SPECIFIED

C/A 10'

C/A 50'

LIMIT OF RE-ALIGNMENT JOIN EXISTING

364
10.9 AC
OS

321
1.1 AC
PARK

NORTHLAKE BLVD

337
9.4 AC
OS

DRAINAGE

EXISTING CALTRANS R/W

PROP. WATER LINE

ROAD

363
10.2 AC
OS

SO. CALIF. EDISON R/W

8' TO BE ABANDONED (SEE SHEET 12 OF 16)

EXIST. 24" RCP TO BE REMOVED

374
1.0 AC
D.B.

319
16.3 AC
PUBLIC PARK

320
2.2 AC
PARK

336
14.2 AC
OS

CAL PER EC ALIGNMENT P-21(PW)

EXIST. WATER LINE

EXIST. TOWER

NOT A PART

EXISTING C

MATCH LINE SEE SHEET 5

MATCH LINE SEE SHEET 4

EDISON EASEMENT TO BE RELOCATED

PROPOSED EDISON EASEMENT

KEY MAP
SCALE: 1" = 1500'

0 50 100 200 Feet
1:1200.0024

MATCH LINE SEE SHEET 3

AREA

TRACT No. 44429
M.B. 1233-19-43
SINGLE FAMILY

SO. CALIF. EDISON R/W

EXISTING SEWER LINE

PROPOSED GRAVITY SEWER LINE

EXIST. 15" VCP @ 0.80% PER PC 11383
UP SIZE TO 18" VCP @ 0.80%

EXIST. 15" VCP @ 1.28% PER PC 11383
UP SIZE TO 18" VCP @ 1.28%

EXIST. 15" VCP @ 8.80% PER PC 11383

EXIST. 15" VCP @ 1.88% PER PC 11383
UP SIZE TO 18" VCP @ 1.88%

EXIST. 15" VCP @ 2.56% PER PC 11383

EXIST. 18" VCP @ 0.56% PER PC 11383
UP SIZE TO 21" @ 0.56%

EXIST. 18" VCP @ 0.56% PER PC 11383
UP SIZE TO 21" @ 0.56%

EXIST. 12" VCP PER PC 10264
UP SIZE TO 21" @ 0.52%

LAKE HUGHES RD

CONNECT TO SANITARY DISTRICT TRUNK LINE DISTRICT #32
CASTAIC TRUNK SEWER-SEC. 4 (32-P-7)

12" VCP @ 0.52%
TO BE UPSIZED BY CO. OF SANITARY DISTRICT

EXIST. 12" VCP PER CC8730

EXIST. 12" VCP PER PC 9117

EXIST. 15" VCP TRUCK SEWER

INSET "A"

LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF — SQUARE FEET
- D.B. — DEBRIS BASIN
- I/S — INTERSECTION SIGHT
- P — PAD ELEVATION
- (PVT.) — PRIVATE STREET
- BIKE LANE
- 1.20% (MIN) — DIRECTION DRAINAGE AND APPROX. GRADE
- R.W. — TYPICAL RETAINING WALL
- DISTURBED SIGNIFICANT RIDGELINE
- UNDISTURBED SIGNIFICANT RIDGELINE
- RIDGELINE
- SEWER LINE
- SEWER FORCE MAIN
- STORM DRAIN
- WATERLINE
- P.B.I. — PRIVATE BULK INLET
- P-7 — INDICATES PLANNING AREA 7
- MULTI-USE TRAIL (10' TRAIL)
- NEIGHBORHOOD PEDESTRAIN TRAIL (6' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- 1 — IRREVOCABLE OFFER TO DEDICATE. SEE TABLE ON SHT. 3

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1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	–
	DATE	REVISION	BY	APP

SCALE: 1"=100' | CHK'D BY: | APPROVED BY: | DATE: 08/12/2025 | W.O. NO. 5090-033-35 | SHEET 8 OF 16

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

REMAINDER PARCEL

73336-27
73336-26
73336-25
73336-07
73336-06
73336
73336-01
73336-05
73336-04
73336-03
73336-02
73336-15
73336-24
73336-23
73336-22
73336-21
73336-18
73336-14
73336-20
FIRE STATION
73336-19
73336-17
73336-16
73336-13
73336-12
73336-01
73336-11
73336-10
73336-01
73336-09
73336-08
73336-01
73336-01
NOT A PART
RIDGE ROUTE ROAD
73336-01

Unit Phasing Breakdown								
Unit Phasing	LAND USE	DWELLING UNITS	GROSS Ac.	NET Ac.	URBAN		OVERALL (Ac.)	%
					REQ'D @ 25% OS (Ac.)**	PROVIDED		
73336-01*		325	481.6	397.3	99.3	318.8	± 219.5	146.6
73336-02		33	5.3	4.5	1.1	0.8	± 219.2	146.4
73336-03		35	6.1	6.1	1.5	0.0	± 217.7	145.4
73336-04	SINGLE FAMILY	49	11.4	11.2	2.8	0.2	± 215.0	143.7
73336-05		36	5.3	4.5	1.1	0.8	± 214.7	143.5
73336-06		43	8.7	5.6	1.4	3.1	± 216.4	144.6
73336-07		88	12.9	9.6	2.4	3.3	± 217.4	145.2
73336-08		189	7.3	7.0	1.8	0.3	± 215.9	144.3
73336-09		131	11.6	10.3	2.6	1.3	± 214.6	143.4
73336-10		49	3.5	3.2	0.8	0.3	± 214.1	143.0
73336-11		48	3.7	3.1	0.8	0.6	± 213.9	142.9
73336-12		38	3.3	3.0	0.8	0.3	± 213.5	142.6
73336-13		21	2.4	2.2	0.6	0.2	± 213.1	142.4
73336-14		88	7.6	6.8	1.7	0.8	± 212.2	141.8
73336-15		111	11.0	9.9	2.5	1.1	± 210.8	140.9
73336-16		112	7.2	6.2	1.6	1.0	± 210.3	140.5
73336-17		100	8.5	7.4	1.9	1.1	± 209.5	140.0
73336-18	MULTI-FAMILY	117	10.3	10.3	2.6	0.0	± 206.9	138.3
73336-19		81	8.4	6.9	1.7	1.5	± 206.7	138.1
73336-20		71	11.7	10.3	2.6	1.4	± 205.5	137.3
73336-21		80	11.7	10.2	2.6	1.5	± 204.5	136.6
73336-22		63	9.8	8.5	2.1	1.3	± 203.7	136.1
73336-23		42	5.9	5.1	1.3	0.8	± 203.2	135.7
73336-24***		138	25.1	17.6	4.4	7.5	± 206.3	137.8
73336-25		61	16.4	10.6	2.7	5.8	± 209.5	140.0
73336-26		61	11.7	10.3	2.6	1.4	± 208.3	139.1
73336-27		10	1.5	1.3	0.3	0.2	± 208.1	139.0
73336		75	10.0	9.7	2.4	0.3	± 206.0	137.6
Total		2295	719.8	598.7	149.7	355.6	206.0	

*GREY COLOR IS PHASE-01.
**25% OS REQUIRED PER SPECIFIC PLAN.
***PRIOR TO THE ISSUANCE OF THE 1750th BUILDING PERMIT FOR VTTM 73336, CONVEY OWNERSHIP OF LOT 386 TO THE CONSOLIDATED PROTECTION DISTRICT OF LOS ANGELES COUNTY (FIRE STATION). RECORDATION OF TR.73336-24 WILL BE HELD UNTIL FIRE STATION SITE IS CONVEYED IF TENTATIVE TRACTS ARE BUILT IN SEQUENTIAL ORDER.

0 300 600 1200 Feet
1" = 300'

UNIT PHASING MAP

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
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LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER MARK R. SIKAND No.35453 Exp. 09-30-25 CIVIL STATE OF CALIFORNIA

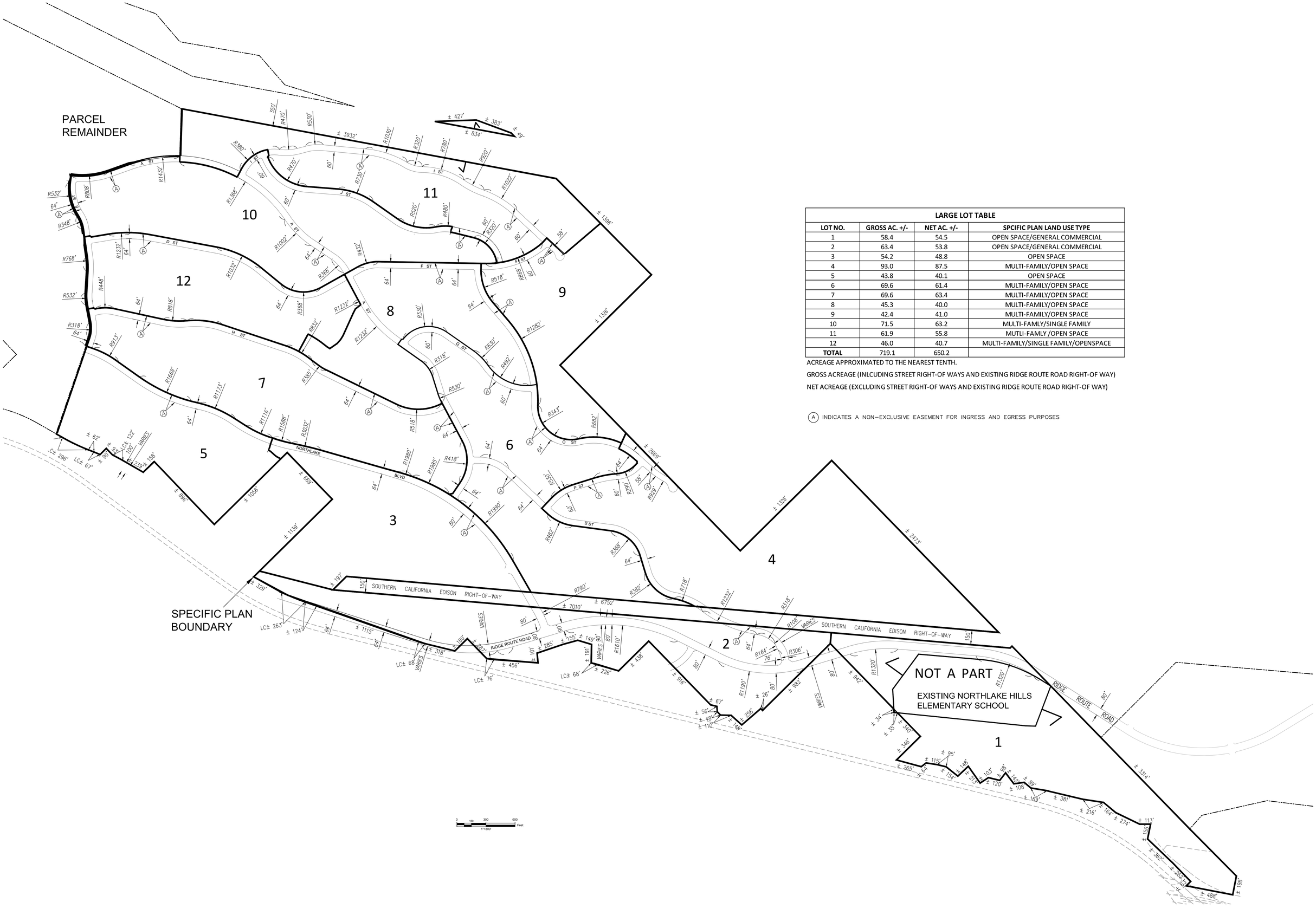
LEGAL DESCRIPTION:
A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

7	08-12-2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP			TH	–
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S			TH	–
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016			YL	–
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016			YL	–
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015			YL	–
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015			YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015			YL	–
	DATE	REVISION			BY	APP
SCALE: 1"=300'	CHK'D BY:	APPROVED BY:	DATE: 08/12/2025	W.O. NO. 5090-033-35	SHEET 9	OF 16

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA



LARGE LOT TABLE			
LOT NO.	**GROSS AC. +/-**	**NET AC. +/-**	**SPCIFIC PLAN LAND USE TYPE**
1	58.4	54.5	OPEN SPACE/GENERAL COMMERCIAL
2	63.4	53.8	OPEN SPACE/GENERAL COMMERCIAL
3	54.2	48.8	OPEN SPACE
4	93.0	87.5	MULTI-FAMILY/OPEN SPACE
5	43.8	40.1	OPEN SPACE
6	69.6	61.4	MULTI-FAMILY/OPEN SPACE
7	69.6	63.4	MULTI-FAMILY/OPEN SPACE
8	45.3	40.0	MULTI-FAMILY/OPEN SPACE
9	42.4	41.0	MULTI-FAMILY/OPEN SPACE
10	71.5	63.2	MULTI-FAMLY/SINGLE FAMILY
11	61.9	55.8	MUTLI-FAMLY /OPEN SPACE
12	46.0	40.7	MULTI-FAMILY/SINGLE FAMILY/OPENSPACE
TOTAL	719.1	650.2	

ACREAGE APPROXIMATED TO THE NEAREST TENTH.

GROSS ACREAGE (INLCUDING STREET RIGHT-OF WAYS AND EXISTING RIDGE ROUTE ROAD RIGHT-OF WAY)

NET ACREAGE (EXCLUDING STREET RIGHT-OF WAYS AND EXISTING RIDGE ROUTE ROAD RIGHT-OF WAY)

(A) INDICATES A NON–EXCLUSIVE EASEMENT FOR INGRESS AND EGRESS PURPOSES

7	08-12-2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP		TH	–
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S		TH	–
5	8-27-2017	PER SCM COMMENTS DATED 11-3-2016		YL	–
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016		YL	–
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015		YL	–
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015		YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015		YL	–
	DATE	REVISION		BY	APP
SCALE: 1"=300'	CHK'D BY:	APPROVED BY:	DATE: 08/12/2025	W.O. NO. 5090-033-35	SHEET 10 OF 16

PREPARED FOR:

NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No. 35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

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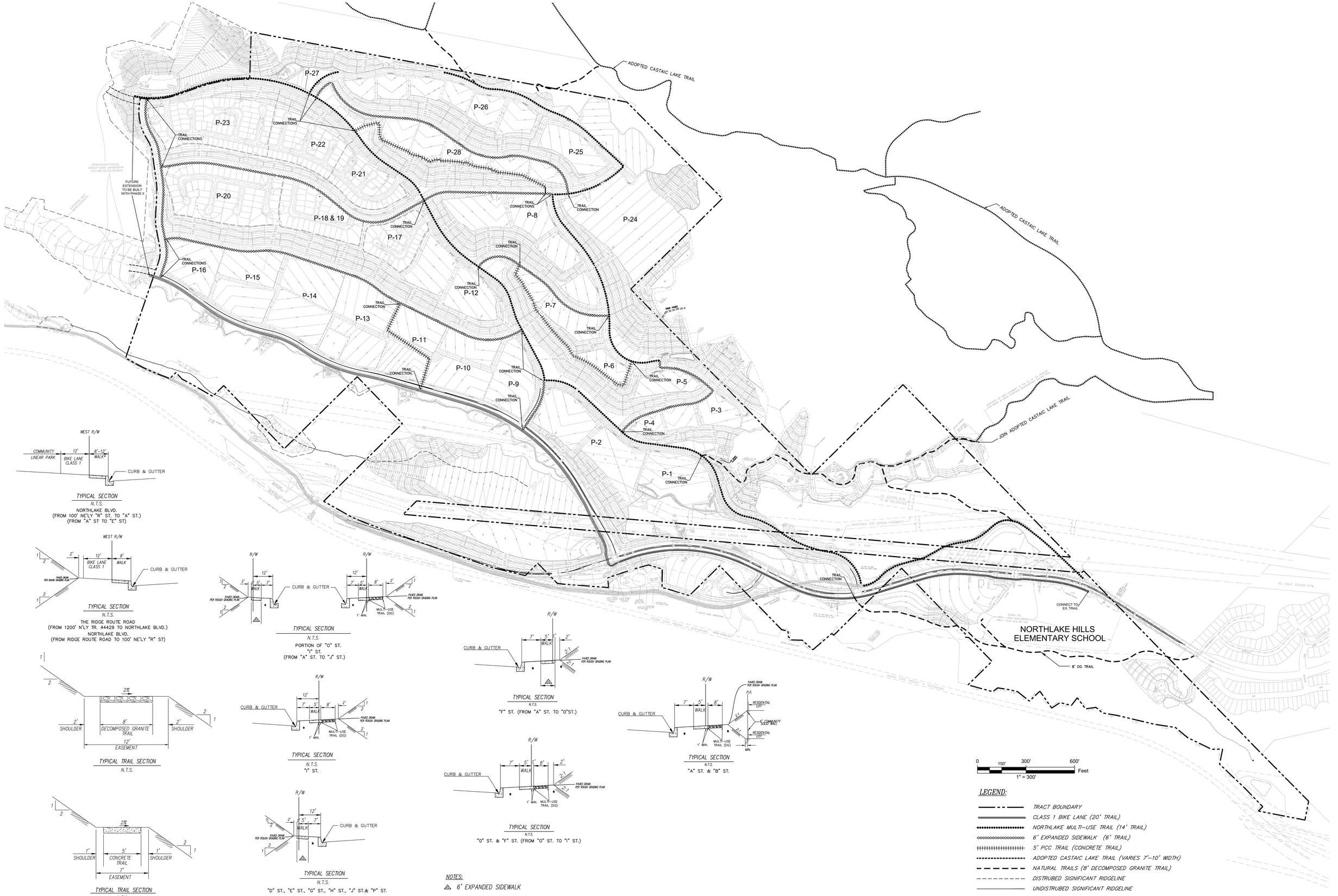
MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA


ADOPTED CASTAIC LAKE TRAIL
ADOPTED CASTAIC LAKE TRAIL
JOIN ADOPTED CASTAIC LAKE TRAIL
TRAIL CONNECTION
CONNECT TO EX. TRAIL
NORTHLAKE HILLS ELEMENTARY SCHOOL
8' DG TRAIL
P-1
P-2
P-3
P-4
P-5
P-6
P-7
P-8
P-9
P-10
P-11
P-12
P-13
P-14
P-15
P-16
P-17
P-18 & 19
P-20
P-21
P-22
P-23
P-24
P-25
P-26
P-27
P-28
TRAIL CONNECTIONS
TRAIL CONNECTION
FUTURE EXTENSION TO BE BUILT WITH PHASE II
REMAINDER PARCEL UNDER SAME OWNERSHIP FUTURE DEVELOPMENT
EXISTING DIRT ROAD
SO. CALIF. EDISON R/W
PROPOSED 150' EDISON EASEMENT
EX. EDISON R/W TO BE RELOCATED
SOLEDAD CANYON ROAD
SOLEDAD MOUNTAIN ROAD

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
6 *OO	PACIFIC LIGHT AND POWER CORPORATION	TRANSMISSION LINE	SERIAL REGISTER NO. L.A. 020100	TO REMAIN
9	THE EDISON ELECTRIC COMPANY	POLE LINES	JANUARY 29, 1906 BOOK 2580 PAGE 13 Dds.	TO REMAIN
10 *T	EDISON ELECTRIC COMPANY	ROAD	FEBRUARY 2, 1906 BOOK 2554 PAGE 237 Dds.	TO REMAIN
11	C. W. WALLER	PIPE AND POLE LINES	2/17/12 BOOK 4855-311 Dds. 10/10/23 BOOK 2985-371 O.R.	TO REMAIN
12	GENERAL PIPE LINE COMPANY OF CALIFORNIA	PIPE AND POLE LINES	6/01/12 BOOK 5010-253 Dds. 6/20/12 BOOK 5087-38 Dds.	TO REMAIN
13	PACIFIC LIGHT AND POWER CORPORATION	STEEL TOWERS	DECEMBER 19, 1912 BOOK 5320 PAGE 84 Dds.	TO REMAIN
14	PACIFIC LIGHT & POWER CORPORATION	POLE LINES	NOVEMBER 4, 1913 BOOK 5640 PAGE 81 Dds.	TO BE ABANDONED
15 *D	STATE OF CALIFORNIA	STATE HIGHWAY	10/30/14 BK 5893 PG 250 Dds.	TO BE ABANDONED
16 *PP	STATE OF CALIFORNIA	SLOPE	OCTOBER 30, 1914 BOOK 5893 PAGE 250 Dds.	TO REMAIN
18 *Y	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND ANCHORS	DECEMBER 9, 1914 BOOK 5951 PAGE 73 Dds.	TO REMAIN
19	PACIFIC LIGHT & POWER CORPORATION	POLES	JUNE 16, 1915 BOOK 6035 PAGE 337 Dds.	TO BE ABANDONED
20 *D	STATE OF CALIFORNIA	STATE HIGHWAY	05/16/16 INST.#107 BOOK 6255 PAGE 297 Dds.	TO BE ABANDONED
21 *LL	STATE OF CALIFORNIA	DRAINAGE AND SLOPES	BOOK 6255 PAGE 297 Dds. BOOK 7494 PAGE 334 O.R.	TO REMAIN
23	SOUTHERN CALIFORNIA EDISON COMPANY	TOWERS, POLES AND CONDUITS	10/05/18 INST. NO. 842 BOOK 6736 PAGE 88 Dds.	TO REMAIN
24 *D	STATE OF CALIFORNIA	STATE HIGHWAY	MAY 3, 1929 BOOK 8140 PAGE 116 O.R.	TO BE ABANDONED
26 *I	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND CONDUITS	OCTOBER 2, 1929 BOOK 9300 PAGE 280 O.R.	TO REMAIN
27 *OO	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND CONDUITS	OCTOBER 2, 1929 BOOK 9314 PAGE 322 O.R.	TO REMAIN
28	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND CONDUITS	OCTOBER 2, 1929 BOOK 9329 PGS 364, 365 O.R.	TO BE ABANDONED
29 *W	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLES, PIPES, AND CONDUITS	OCTOBER 2, 1929 BOOK 9360 PAGE 305 O.R.	TO REMAIN
30 *A	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLES	OCTOBER 2, 1929 BOOK 9428 PAGE 117 O.R.	TO REMAIN
31	SOUTHERN CALIFORNIA EDISON COMPANY	PUBLIC UTILITIES	FEBRUARY 1, 1930 BOOK 9697 PAGE 210 O.R.	TO BE ABANDONED
32 *MM	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	WIRES, POLES	02/19/30 INST.#1122 BOOK 9767 PAGE 105 O.R.	TO REMAIN
33 *OO	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES	FEBRUARY 19, 1930 BOOK 9771 PAGE 117 O.R.	TO REMAIN
34	STATE OF CALIFORNIA	STATE HIGHWAY	OCTOBER 8, 1930 BOOK 10273 PAGE 360 O.R.	TO REMAIN
35 *E	STATE OF CALIFORNIA	SLOPES	OCTOBER 8, 1930 BOOK 10273 PAGE 360 O.R.	TO REMAIN
37	UNITED STATES OF AMERICA	POLES AND WIRES	01/05/31 INST.#939 BOOK 10612 PAGE 31 O.R.	TO REMAIN
38	SOUTHERN FUEL COMPANY	PIPE LINES	7/08/31 BK 10883-388 O.R. 10/11/39 BK 16940-144 O.R.	TO REMAIN
39	GENERAL PIPE LINE COMPANY OF CALIFORNIA	PIPE LINES	JUNE 17, 1935 BOOK 13447 PAGE 257 O.R.	TO REMAIN
40	SOUTHERN CALIFORNIA GAS COMPANY	PIPE LINES	MAY 19, 1937 BOOK 14942 PAGE 296 O.R.	TO REMAIN
41	SOUTHERN CALIFORNIA GAS COMPANY	PIPE LINES	NOVEMBER 26, 1937 BOOK 15491 PAGE 16 O.R.	TO REMAIN
42 *M	SOUTHERN CALIFORNIA EDISON COMPANY, LTD.	POLE LINES	AUGUST 26, 1942 BOOK 19516 PAGE 195 O.R.	TO REMAIN
43	SOUTHERN CALIFORNIA EDISON COMPANY, LTD.	POLES	NOVEMBER 1, 1945 BOOK 22495 PAGE 27 O.R.	TO REMAIN
45 *C	RICHFIELD OIL CORPORATION	PIPE LINES	MAY 16, 1950, #3204 BOOK 33139 PAGE 376 O.R.	TO REMAIN
46 *G	RICHFIELD OIL CORPORATION	PIPE LINES	MAY 18, 1950, #3189 BOOK 33167 PAGE 362 O.R.	TO BE RELOCATED
47 *G	RICHFIELD OIL CORPORATION	PIPE LINES	JUNE 2, 1950, #1963 BOOK 33288 PAGE 385 O.R.	TO REMAIN
48 *BB	RICHFIELD OIL CORPORATION	PIPE LINES	JUNE 12, 1950, #3031 BOOK 33364 PAGE 308 O.R.	TO BE RELOCATED
49	SOUTHERN CALIFORNIA EDISON COMPANY	POLES, CABLES GROUND WIRES	07/25/56 INST.#4187 BOOK 51833 PAGE 316 O.R.	TO REMAIN
50	SOUTHERN CALIFORNIA EDISON COMPANY	ELECTRICAL TRANSMISSION	OCTOBER 11, 1957 BOOK 55831 PAGE 430 O.R.	TO REMAIN
51	PACIFIC LIGHTING GAS SUPPLY COMPANY	PIPE LINES	11/25/57 INST.#841 BOOK 56127 PAGE 303 O.R.	TO REMAIN
52	PACIFIC LIGHTING GAS SUPPLY COMPANY	PIPE LINES	11/25/57 INST.#842 BOOK 56127 PAGE 309 O.R.	TO REMAIN
53	SOUTHERN CALIFORNIA EDISON COMPANY	PUBLIC UTILITIES	JANUARY 23, 1958, #280 BOOK 56422 PAGE 93 O.R.	TO REMAIN
54	PACIFIC LIGHTING GAS SUPPLY CO.	PIPE LINES	2/06/58 INST.2564 BK D-5 PG 475 O.R. 2/06/58 INST.2565 BK D-5 PG 479 O.R.	TO REMAIN
55	SOUTHERN CALIFORNIA EDISON COMPANY	PIPE LINES POLE LINES	FEBRUARY 18, 1958 BOOK D-15 PAGE 339 O.R.	TO BE RELOCATED
56	PACIFIC LIGHTING GAS SUPPLY CO.	PIPE LINES	10/08/58 INST.#1114 BOOK D-238 PAGE 799 O.R.	TO REMAIN
57	PACIFIC LIGHTING GAS SUPPLY CO.	PIPE LINES	02/20/59 INST.#327 BOOK D-372 PAGE 114 O.R.	TO BE RELOCATED
58	PACIFIC LIGHTING GAS SUPPLY CO.	ROAD	02/20/59 INST.#328 BOOK D-372 PAGE 120 O.R.	TO REMAIN
59	SOUTHERN CALIFORNIA EDISON COMPANY	ELECTRICAL TRANSMISSION	MARCH 31, 1959, #3995 BOOK D-416 PAGE 584 O.R.	TO BE RELOCATED
60	SOUTHERN CALIFORNIA EDISON COMPANY	ELECTRICAL TRANSMISSION	06/12/59 INST.#3440 BOOK D-500 PAGE 761 O.R.	TO BE RELOCATED
61	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND CONDUITS	12/03/65 INST.#4431 BOOK D-3135 PAGE 598 O.R.	TO REMAIN
62	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	CABLES, AND APPURTENANCES	12/03/65 INST.#4432 BOOK D-3135 PAGE 599 O.R.	TO REMAIN
63	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	PUBLIC UTILITIES	12/27/65 INST.#1854 BOOK D-3157 PAGE 454 O.R.	TO REMAIN
64	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	CONDUITS	12/27/65 INST.#1857 BOOK D-3157 PAGE 457 O.R.	TO REMAIN
65	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	UNDERGROUND CONDUITS	BOOK D.3174 PAGE 371 O.R. BOOK D.3195 PAGE 736 O.R.	TO REMAIN
66 *D	STATE OF CALIFORNIA	PIPE LINES	JUNE 23, 1966 BK D3344-729 INSTRUMENT NO. 561 O.R.	TO REMAIN
67	NEWHALL COUNTY WATER DISTRICT	WATER LINE	08/24/66 INST.#1924 BOOK D-3407 PAGE 943 O.R.	TO REMAIN
68 *E	STATE OF CALIFORNIA	PIPE LINES	8/31/66 BK D-3414 PG.381 INSTRUMENT NO. 566 O.R.	TO REMAIN
69 *N *J	STATE OF CALIFORNIA	PIPE, TELEPHONE OR TELEGRAPH	12/20/66 BK D-3511-140 INST.#360 O.R. 3/05/74 BK D6190 PG. 701 O.R	TO REMAIN
70	NEWHALL COUNTY WATER DISTRICT	UTILITY AND PIPE LINES	3/08/67 BK D-3579-144 INSTRUMENT NO. 2567 O.R.	TO REMAIN

* SEE NOTES HEREON

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
71	STATE OF CALIFORNIA	SLOPE	06/21/67 INST.#422 BOOK D-3678 PAGE 472 O.R.	TO REMAIN
73	STATE OF CALIFORNIA	SLOPE	10/06/67 INST.#994 BOOK D-3790 PAGE 908 O.R.	TO REMAIN
76	NEWHALL COUNTY WATER DISTRICT	ROAD, PIPE LINE, DRAINAGE	11/06/67 BK 3822-117 INSTRUMENT NO. 3575 O.R.	TO REMAIN
77	NEWHALL COUNTY WATER DISTRICT	ROAD, WATER & PIPE LINES	12/20/67 INST.#3096 BOOK D-3864 PAGE 411 O.R.	TO REMAIN
78	PACIFIC LIGHTING SERVICE AND SUPPLY COMPANY	PIPE LINES	12/27/67 INST.#483 BOOK D-3867 PAGE 971 O.R.	TO REMAIN
80	STATE OF CALIFORNIA	SLOPE	12/27/67 INST.#484 BOOK D-3867 PAGE 977 O.R.	TO REMAIN
81 *H	STATE OF CALIFORNIA	PIPE LINE	03/28/68 INST.#404 BOOK D-3952 PAGE 972 O.R.	TO BE RELOCATED
82 *Q	STATE OF CALIFORNIA	PIPE LINE	9/11/68, INST. #610 BOOK D-4127 PAGE 640 O.R.	TO REMAIN
83	MOBIL OIL CORPORATION	PIPE AND POLE LINE	OCTOBER 18, 1968 INSTRUMENT NO. 907 O.R.	TO REMAIN
84	SOUTHERN CALIFORNIA GAS COMPANY	PIPE LINES	10/18/68 BK D-4167 PG. 816 INSTRUMENT NO. 908 O.R.	TO REMAIN
85	SOUTHERN CALIFORNIA EDISON COMPANY	POLE LINES AND TOWERS	10/18/68 BK D-4167 PG. 847 INSTRUMENT NO. 909 O.R.	TO REMAIN
86 *JJ *J	STATE OF CALIFORNIA	PIPELINE	01/23/69 INST.#320 BOOK D4258 PAGE 977 O.R.	TO REMAIN
87 *AA	STATE OF CALIFORNIA	AQUEDUCT AND PIPELINE	01/27/69 INST.#358 BOOK D-4261 PAGE 520 O.R.	TO REMAIN
88	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	COMMUNICATION FACILITIES	3/21/69 BK D-4315 PG. 347 INSTRUMENT NO. 3135 O.R.	TO REMAIN
89	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	COMMUNICATION FACILITIES	3/21/69 BK D-4315 PG. 352 INSTRUMENT NO. 3136 O.R.	TO REMAIN
90	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	CABLES, WIRES AND CONDUITS	03/25/69 INST.#2523 BOOK D-4317 PAGE 902 O.R.	TO REMAIN
91 *GG	STATE OF CALIFORNIA	PIPELINES, CONDUITS	3/27/69 BK D-4319 PG. 805 INSTRUMENT NO. 302 O.R.	TO BE RELOCATED
92 *HH *J	STATE OF CALIFORNIA	PIPE LINE	3/27/69 BK D-4319 PG. 812 INSTRUMENT NO. 303 O.R.	TO REMAIN
93	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	CABLES, WIRES AND CONDUITS	06/03/69 INST.#3060 BOOK D4389 PAGE 996 O.R.	TO REMAIN
94	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	CABLES, WIRES AND CONDUITS	06/09/69 INST.#3041 BOOK D-4395 PAGE 823 O.R.	TO REMAIN
95	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	PUBLIC UTILITIES	07/14/69 INST.#2929 BOOK D-4434 PAGE 33 O.R.	TO REMAIN
96	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND CONDUITS	7/14/69 BK D-4434 PG. 39 INSTRUMENT NO. 2930 O.R.	TO BE RELOCATED
97	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	COMMUNICATION FACILITIES	5/14/70 BK M-3465 PG. 765 INSTRUMENT NO. 1734 O.R.	TO REMAIN
98	CITY OF LOS ANGELES	ROADWAY	01/11/72 INST.#2792 BOOK D-5316 PAGE 295 O.R.	TO REMAIN
99	CITY OF LOS ANGELES	ROADWAY	01/11/72 INST.#2793 BOOK D-5316 PAGE 301 O.R.	TO BE RELOCATED
100	CITY OF LOS ANGELES	ROADWAY	01/11/72 INST.#2794 BOOK D-5316 PAGE 314 O.R.	TO REMAIN
101	CITY OF LOS ANGELES	ROADWAY	01/11/72 INST.#2795 BOOK D-5316 PAGE 308 O.R.	TO REMAIN
102	CITY OF LOS ANGELES	ROADWAY	2/09/72 BK D-5348 PG. 40 INSTRUMENT NO. 2359 O.R.	TO REMAIN
103	THE CITY OF LOS ANGELES	ROAD FOR INGRESS, EGRESS	6/01/72 BK D5480 PG. 183 INSTRUMENT NO. 4488 O.R.	TO REMAIN
104	STATE OF CALIFORNIA	POLE LINES	12/24/73 BK D6119 PG. 946 INSTRUMENT NO. 273 O.R.	TO REMAIN
106	STATE OF CALIFORNIA	DRAINAGE	2/15/74 INST.#3091 BK. D-6171 PG. 742 O.R.	TO REMAIN
108	STATE OF CALIFORNIA	SLOPE	05/29/74 INST.#384 BOOK D-6287 PAGE 495 O.R.	TO REMAIN
109	STATE OF CALIFORNIA	HIGHWAY SLOPE	07/05/74 INST.#434 BOOK D6333 PAGE 930 O.R.	TO REMAIN
110	PACIFIC LIGHTING SERVICE COMPANY	GAS PIPE LINES	07/05/74 INST.#435 BOOK D6333 PAGE 933 O.R.	TO REMAIN
112	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	COMMUNICATION FACILITIES	3/11/83 INST. #83-272545 O.R. 4/23/83 INST. #83-442645 O.R.	TO REMAIN
113 *L	GEORGIA GEORGE	INGRESS AND EGRESS	APRIL 11, 1983 INST. NO.83-394248 O.R.	TO REMAIN
117	PACIFIC LIGHTING GAS SUPPLY CO.	PIPE LINES	02/07/58 INST.#2964 BOOK D-6 PAGE 787 O.R.	TO REMAIN
118	SOUTHERN CALIFORNIA EDISON COMPANY	UTILITY	07/23/59 INST.#4563 BOOK D547 PAGE 50 O.R.	TO BE RELOCATED
119	SOUTHERN CALIFORNIA EDISON COMPANY	UTILITIES	10/31/67 INST.#594 O.R.	TO REMAIN
120 *RR	SUTTER INVESTMENT CORPORATION	SLOPE PURPOSES INGRESS, EGRESS	01/08/74 INST.#1770 O.R.	TO REMAIN
121	PACIFIC LIGHTING SERVICE COMPANY	PIPE LINES	07/30/75 INST.#508 O.R.	TO REMAIN
122	STATE OF CALIFORNIA	HIGHWAY SLOPES	07/30/75 INST.#509 O.R.	TO REMAIN
124 *SS	STATE OF CALIFORNIA	SLOPE	08/21/75 INST.#2444 O.R.	TO REMAIN
125	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES	BOOK 9344 PAGE 4, O.R. 6/03/74 INST. #3880 O.R.	TO BE RELOCATED
127	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	BURIED COMMUNICATION LINE EASEMENT	06/08/72 INST.#3758 O.R. 06/03/74 INST.#3880 O.R.	TO REMAIN
128 *EE	RICHFIELD OIL CORPORATION	PIPE LINE	06/07/50 INST. #2764 BK. 33323 PG. 54 DEEDS.	TO REMAIN
129	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES, ANCHORS, CONDUITS, PIPES	10/02/29 BK. 9314 PG. 321 O.R.	TO BE RELOCATED
130	RICHFIELD OIL CORPORATION	PIPE LINES	06/29/50 BK. 33543 PG. 228 O.R.	TO BE RELOCATED
131 *J	STATE OF CALIFORNIA	PIPE LINE	11/09/66 BK. D-3476 PG. 326 O.R.	TO BE RELOCATED
132	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	COMMUNICATION FACILITIES	01/17/69 INST.#3276 O.R.	TO REMAIN
133	CASTAIC UNIFIED SCHOOL DISTRICT	ROAD, INGRESS, EGRESS STORM DRAINS, GRADING SLOPES, UTILITIES	03/18/03 INST.#03-753979 OFFICIAL RECORDS.	TO REMAIN
194	THE COUNTY OF LOS ANGELES	PERMANENT DEBRIS BASIN	OCTOBER 05, 2017 INSTRUMENT NO. 20171143994	TO REMAIN
195	THE COUNTY OF LOS ANGELES	PERMANENT ROAD ACCESS AND WATER QUALITY BASIN	OCTOBER 05, 2017 INSTRUMENT NO. 20171143995	TO REMAIN
196	THE COUNTY OF LOS ANGELES	WATER QUALITY BASIN	OCTOBER 05, 2017 INSTRUMENT NO. 20171143996	TO REMAIN
197	THE COUNTY OF LOS ANGELES	OFFSITE GRADING	OCTOBER 05, 2017 INSTRUMENT NO. 20171143997	TO REMAIN
198	THE COUNTY OF LOS ANGELES	OFFSITE GRADING	OCTOBER 05, 2017 INSTRUMENT NO. 20171143998	TO REMAIN
199	THE COUNTY OF LOS ANGELES	OFFSITE GRADING	OCTOBER 05, 2017 INSTRUMENT NO. 20171143999	TO REMAIN
200	THE COUNTY OF LOS ANGELES	OFFSITE GRADING	OCTOBER 05, 2017 INSTRUMENT NO. 20171144001	TO REMAIN

* SEE NOTES HEREON

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
201	THE COUNTY OF LOS ANGELES	PERMANENT ROADWAY	OCTOBER 05, 2017 INSTRUMENT NO. 20171144002	TO REMAIN
202	THE COUNTY OF LOS ANGELES	PERMANENT ROADWAY	OCTOBER 05, 2017 INSTRUMENT NO. 20171144003	TO REMAIN
203	THE COUNTY OF LOS ANGELES	OFFSITE GRADING	OCTOBER 05, 2017 INSTRUMENT NO. 20171144004	TO REMAIN
204	THE COUNTY OF LOS ANGELES	PERMANENT ROADWAY	OCTOBER 05, 2017 INSTRUMENT NO. 20171144005	TO REMAIN
205	THE COUNTY OF LOS ANGELES	PERMANENT DEBRIS BASIN	OCTOBER 05, 2017 INSTRUMENT NO. 20171144006	TO REMAIN

* SEE NOTES HEREON

THE FOLLOWING ITEMS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023, AFFECT THE SUBJECT PROPERTY: (NOT PLOTTED)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
17	STATE OF CALIFORNIA	WAIVER OF CLAIMS	OCTOBER 30, 1914 BOOK 5893 PAGE 250 Dds.	TO REMAIN
22	STATE OF CALIFORNIA	WAIVER OF CLAIMS	5/16/16 BK 6255-297 Dds. 6/04/29 BK 7494-334 O.R.	TO REMAIN
25	STATE OF CALIFORNIA	WAIVER OF CLAIMS	MAY 3, 1929 BOOK 8140 PAGE 116 O.R.	TO REMAIN
36	STATE OF CALIFORNIA	WAIVER OF CLAIMS	OCTOBER 8, 1930 BOOK 10273 PAGE 360 O.R.	TO REMAIN
44	STATE OF CALIFORNIA	WAIVER OF CLAIMS	OCTOBER 31, 1947 BOOK 25630 PAGE 260 O.R.	TO REMAIN
72 *P	STATE OF CALIFORNIA	RELINQUISHED FREEWAY ACCESS	9/21/67 INST.422 BK D3678 PG 473 O.R. 5/29/74 INST.384 BK D6287 PG 495 O.R.	TO REMAIN
74	STATE OF CALIFORNIA	RELINQUISHED FREEWAY ACCESS	10/06/67 INST.#994 BOOK D-3790 PAGE 908 O.R.	TO REMAIN
75	STATE OF CALIFORNIA	WAIVER OF CLAIMS	10/06/67 INST.#994 BOOK D-3790 PAGE 908 O.R.	TO REMAIN
79	STATE OF CALIFORNIA	RELINQUISHED FREEWAY ACCESS	12/27/67 INST.#484 BOOK D-3867 PAGE 977 O.R.	TO REMAIN
105 *S	STATE OF CALIFORNIA	RELINQUISHED FREEWAY ACCESS	12/24/73 BK D6119 PG. 946 INSTRUMENT NO. 273 O.R.	TO REMAIN
107 *K	STATE OF CALIFORNIA	NO RIGHT OF ACCESS	2/15/74 INST. #3091 BK. D-6171 PG. 742 O.R.	TO REMAIN
111	COUNTY OF LOS ANGELES DEPT. OF REGIONAL PLANNING	CERTIFICATE OF COMPLIANCE	JULY 28, 1982 INST. NO.82-757295 O.R.	TO REMAIN
114	COUNTY OF LOS ANGELES DEPT. OF REGIONAL PLANNING	BRIDGE AND THOROUGHFARE	APRIL 1, 1992 INST. NO.92-560916 O.R.	TO REMAIN
115	COOK RANCH ASSOCIATES & CASTAIC UNION SCHOOL DISTRICT	MEMORANDUM OF AGREEMENT	9/14/92 INST. #92-1701972 O.R.	TO REMAIN
116	COUNTY OF LOS ANGELES & COOK RANCH ASSOCIATES	DEVELOPMENT AGREEMENT	5/28/93 INST. #93-1023682 O.R.	TO REMAIN
123	STATE OF CALIFORNIA	SEVERED HIGHWAY ACCESS	08/21/75 INST.#2444 O.R.	TO REMAIN
126 *TT	SOUTHERN CALIFORNIA TELEPHONE COMPANY	BRUSH REMOVAL	BOOK 18631 PAGE 2, O.R. 06/03/74 INST#3880 O.R.	TO REMAIN
134	NORTHLAKE LLC, CASTAIC CLAY MANUFACTURING CO. & MIKE MALOW	PROHIBIT RESIDENTIAL CONSTRUCTION WITHIN LOT 293	6/24/03 INST. #03-1160727 O.R.	TO REMAIN

* SEE NOTES HEREON

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 (SAID EASEMENT AFFECTS PARCEL 54)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
153	NADINE B. JOST ADELE TRUITT	INGRESS, EGRESS & INCIDENTAL	8/27/65 INST. NO. 5414 O.R.	TO REMAIN

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 (SAID EASEMENTS PER REPORT AFFECT PARCELS 7, 18-A, 60, 61 & 66.)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
156	MILTON B. EPSTEIN LILLIAN EPSTEIN	INGRESS, EGRESS & INCIDENTAL	3/25/66 INST. NO. 2321 O.R.	TO REMAIN
158	WILLIAM P. SCHIMMEL & NANCI SCHIMMEL	INGRESS, EGRESS & INCIDENTAL	3/9/67 INST. NO. 1253 O.R.	TO REMAIN
159	PACIFIC TELEPHONE & TELEGRAPH COMPANY	PUBLIC UTILITIES & INCIDENTAL	6/26/73 INST. NO. 2736 O.R.	TO REMAIN
163	MARK C. CRAVENS	INGRESS, EGRESS & INCIDENTAL	3/27/64 INST. NO. 1898 O.R.	TO REMAIN
164	PACIFIC TELEPHONE & TELEGRAPH COMPANY	PUBLIC UTILITIES & INCIDENTAL	4/23/69 INST. NO. 2941 O.R.	TO REMAIN

THE FOLLOWING ITEM BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 AFFECTS PARCELS 60, 61 AND 66 (NOT PLOTTABLE)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
161	PACIFIC LIGHT AND POWER	TELEPHONE LINES	9/13/34 BK. 12982 PG. 174 O.R.	TO REMAIN

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 (SAID EASEMENTS PER REPORT AFFECT PARCELS 16, 35, 49 AND 68.)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
165	SOUTHERN CALIFORNIA EDISON	POLES, CONDUITS & INCIDENTAL	10/05/18 INST. NO. 842 O.R.	TO REMAIN
174	JOHN & TERRY SCHNEIDER	INGRESS, EGRESS & INCIDENTAL	4/11/83 INST. NO. 83-394249 O.R.	TO REMAIN

THE FOLLOWING EASEMENT ITEM BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 AFFECTS PARCEL 68 (NOT PLOTTABLE) (INDETERMINATE IN NATURE)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
171 *OOO	PACIFIC LIGHTING SERVICE COMPANY	PIPE LINES	1/21/75 INST. NO. 2685 O.R.	TO REMAIN

* SEE NOTES HEREON

THE FOLLOWING ITEMS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 AFFECTS PARCEL 68 (NOT PLOTTED)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
171	PACIFIC LIGHTING SERVICE COMPANY	NO ABUTTERS RIGHTS	1/21/75 INST. NO. 2685 O.R.	TO REMAIN
172	GEORGIA GEORGE	CERTIFICATE OF COMPLIANCE	7/28/82 INST. NO. 82-757296 O.R.	TO REMAIN

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 (SAID EASEMENTS PER REPORT AFFECT PARCEL 69.)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
182 *MMM	MIDWAY GAS COMPANY	PIPE LINE & INCIDENTAL	BK. 7444 PG. 247 Dds.	TO REMAIN
186 *UUU	INDUSTRIAL FUEL SUPPLY A CORPORATION	PIPE LINE & INCIDENTAL	BK. 11010 PG. 138 O.R. BK. 16970 PG. 39 O.R.	TO REMAIN
187 *PPP	GENERAL PIPELINE COMPANY OF CALIFORNIA	PIPE LINE & INCIDENTAL	BK. 13454 PG. 235 O.R.	TO REMAIN
188 *QQQ	GENERAL PIPELINE COMPANY OF CALIFORNIA	PRIVATE ROAD	BK. 13492 PG. 142 O.R.	TO REMAIN
190 *RRR	GENERAL PETROLEUM CORPORATION OF CALIFORNIA	TELEPHONE, TELEGRAPH POLES & INCIDENTAL	5/08/41 BK. 18368 PG. 348 O.R.	TO REMAIN

* SEE NOTES HEREON

THE FOLLOWING ITEM BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 AFFECTS PARCEL 69 (NOT PLOTTABLE)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
191	CARLOS MARTINEZ	DISCHARGE OF CLAIMS	6/28/43 BK. 20055 PG. 333 O.R.	TO REMAIN

THE FOLLOWING ITEM BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 AFFECT THE SUBJECT PROPERTY AND IS NOT PLOTTED FOR THE THE REASON LISTED BELOW THE ITEM:

ITEM 7.) RESERVATIONS, EXCEPTIONS AND PROVISIONS INCLUDING THE RIGHT OF THE UNITED STATES OF AMERICA, ITS PERMITTEE OR LICENSEE, TO ENTER UPON, OCCUPY AND USE ANY PART OR ALL THAT PORTION OF SAID LAND DESCRIBED THEREIN, LYING WITHIN A STRIP OF LAND 264 FEET IN WIDTH BEING THE TRANSMISSION LINE RIGHT OF WAY OF THE PACIFIC LIGHT AND POWER COMPANY FOR THE PURPOSES PROVIDED IN THE ACT OF JUNE 10, 1920 (41 STAT., 1063) AND SUBJECT TO THE CONDITIONS AND LIMITATIONS OF SECTION 24 OF SAID ACT, AS SET FORTH IN PATENT NO. 910117, ISSUED JUNE 26, 1923, TO FRANK POWELL, AND IN OTHER PATENTS AS DISCLOSED BY THE RECORDS OF THE BUREAU OF LAND MANAGEMENT IN SACRAMENTO, CALIFORNIA.

SAID PATENTS ALSO RECITE THE FOLLOWING:

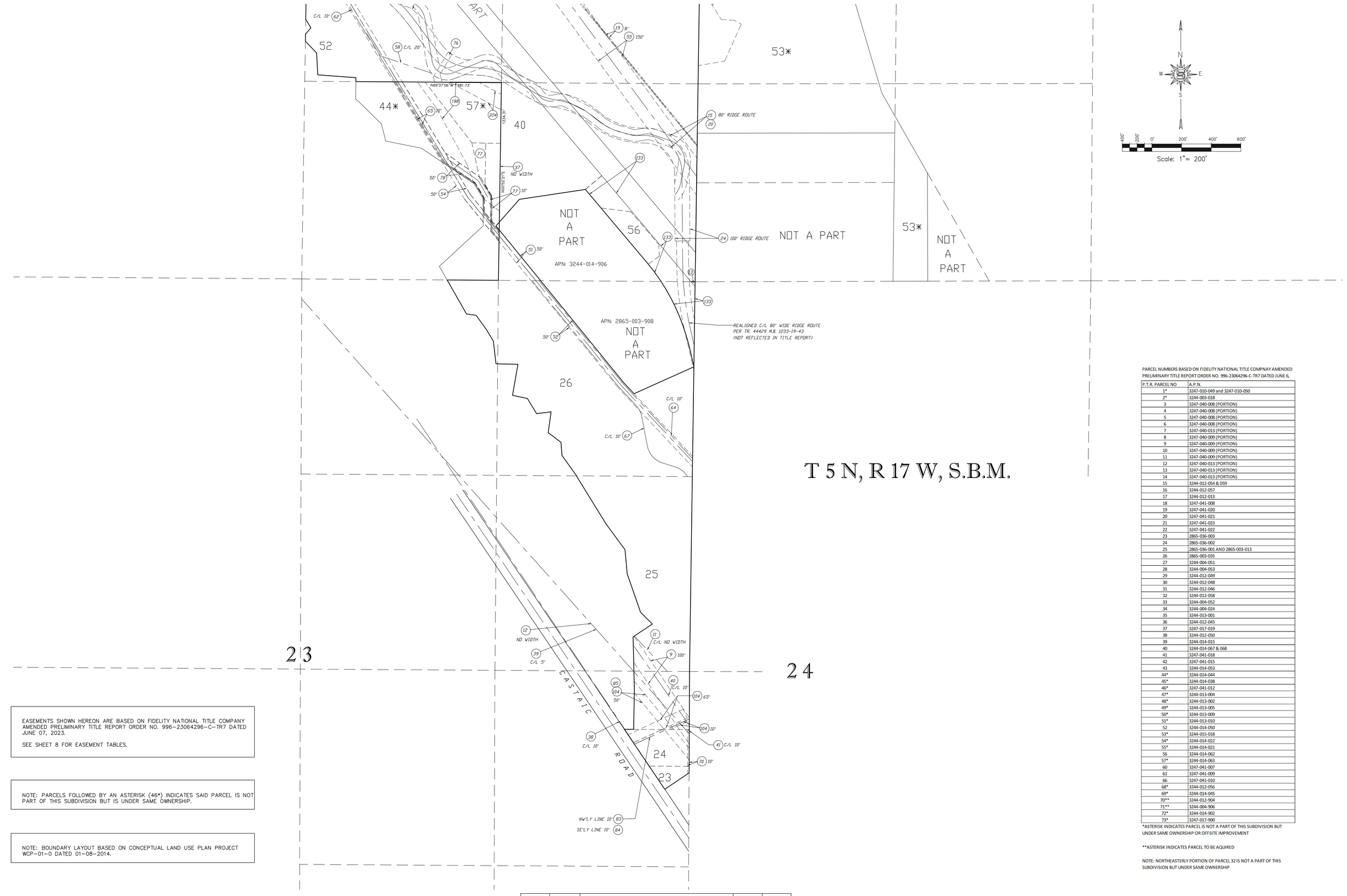
SUBJECT TO ANY VESTED AND ACCRUED WATER RIGHTS FOR MINING, AGRICULTURAL, MANUFACTURING, OR OTHER PURPOSES AND RIGHTS TO DITCHES AND RESERVOIRS USED IN CONNECTION WITH SUCH WATER RIGHTS, AS MAY BE RECOGNIZED AND ACKNOWLEDGED BY THE LOCAL CUSTOMS, LAWS AND DECISIONS OF THE COURTS, AND THE RESERVATION FROM THE LANDS HEREBY GRANTED, A RIGHT OF WAY HEREON FOR DITCHES OR CANALS CONSTRUCTED BY THE AUTHORITY OF THE UNITED STATES.

SAID LAND WAS WITHDRAWN FOR POWER SITE RESERVE NO. 489 FOR THE PURPOSES PROVIDED IN THE FEDERAL POWER ACT OF JUNE 10, 1920 (41 STAT. 1063) AS AMENDED, SUBJECT TO THE CONDITIONS AND LIMITATION OF SECTION 24, OF SAID ACT, AS AMENDED, AS DISCLOSED BY THE RECORDS OF THE BUREAU OF LAND MANAGEMENT IN SACRAMENTO, CALIFORNIA.

AFFECTS: PARCELS 17, 19, 20, 31, 37, 39, 40, 43 AND 56

(LOCATION OF SAID 264 FOOT WIDE STRIP IS INDETERM

SEE SHEET 14



T 5 N, R 17 W, S.B.M.

EASEMENTS SHOWN HEREON ARE BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023.

SEE SHEET 8 FOR EASEMENT TABLES.

NOTE: PARCELS FOLLOWED BY AN ASTERISK (46*) INDICATES SAID PARCEL IS NOT PART OF THIS SUBDIVISION BUT IS UNDER SAME OWNERSHIP.

NOTE: BOUNDARY LAYOUT BASED ON CONCEPTUAL LAND USE PLAN PROJECT WCP-01-0 DATED 01-08-2014.

PARCEL NUMBERS BASED ON FIDELITY NATIONAL TITLE COMPNAY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-2306429 6-C-TR7 DATED JUNE 6,

P.T.R. PARCEL NO	A.P.N.
1*	3247-010-049 and 3247-010-050
2*	3244-003-018
3	3247-040-008 (PORTION)
4	3247-040-008 (PORTION)
5	3247-040-008 (PORTION)
6	3247-040-008 (PORTION)
7	3247-040-013 (PORTION)
8	3247-040-009 (PORTION)
9	3247-040-009 (PORTION)
10	3247-040-009 (PORTION)
11	3247-040-009 (PORTION)
12	3247-040-013 (PORTION)
13	3247-040-013 (PORTION)
14	3247-040-013 (PORTION)
15	3244-012-054 & 059
16	3244-012-057
17	3244-012-013
18	3247-041-008
19	3247-041-020
20	3247-041-021
21	3247-041-023
22	3247-041-022
23	2865-036-003
24	2865-036-002
25	2865-036-001 AND 2865-003-013
26	2865-003-035
27	3244-004-051
28	3244-004-053
29	3244-012-049
30	3244-012-048
31	3244-012-046
32	3244-012-058
33	3244-004-052
34	3244-004-024
35	3244-013-001
36	3244-012-045
37	3247-017-019
38	3244-012-050
39	3244-014-015
40	3244-014-067 & 068
41	3247-041-018
42	3247-041-015
43	3244-014-053
44*	3244-014-044
45*	3244-014-038
46*	3247-041-012
47*	3244-013-004
48*	3244-013-002
49*	3244-013-005
50*	3244-013-009
51*	3244-013-010
52	3244-014-050
53*	3244-015-018
54*	3244-014-022
55*	3244-014-021
56	3244-014-062
57*	3244-014-063
60	3247-041-007
61	3247-041-009
66	3247-041-010
68*	3244-012-056
69*	3244-014-045
70**	3244-012-904
71**	3244-004-906
72*	3244-014-902
73*	3247-017-900

*ASTERISK INDICATES PARCEL IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP OR OFFSITE IMPROVEMENT

**ASTERISK INDICATES PARCEL TO BE AQUIRED

NOTE: NORTHEASTERLY PORTION OF PARCEL 32 IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP

7	08-12-2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP	TH	--
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	TH	--
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016	YL	--
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016	YL	--
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	--
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	--
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	--
	DATE	REVISION	BY	APP

SCALE: 1"=200' | CHK'D BY: | APPROVED BY: | DATE: 08/12/2025 | W.O. NO. 5090-033-35 | SHEET 13 OF 16

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER MARK R. SIKAND No. 35453 Exp. 09-30-25 CIVIL STATE OF CALIFORNIA

LEGAL DESCRIPTION:

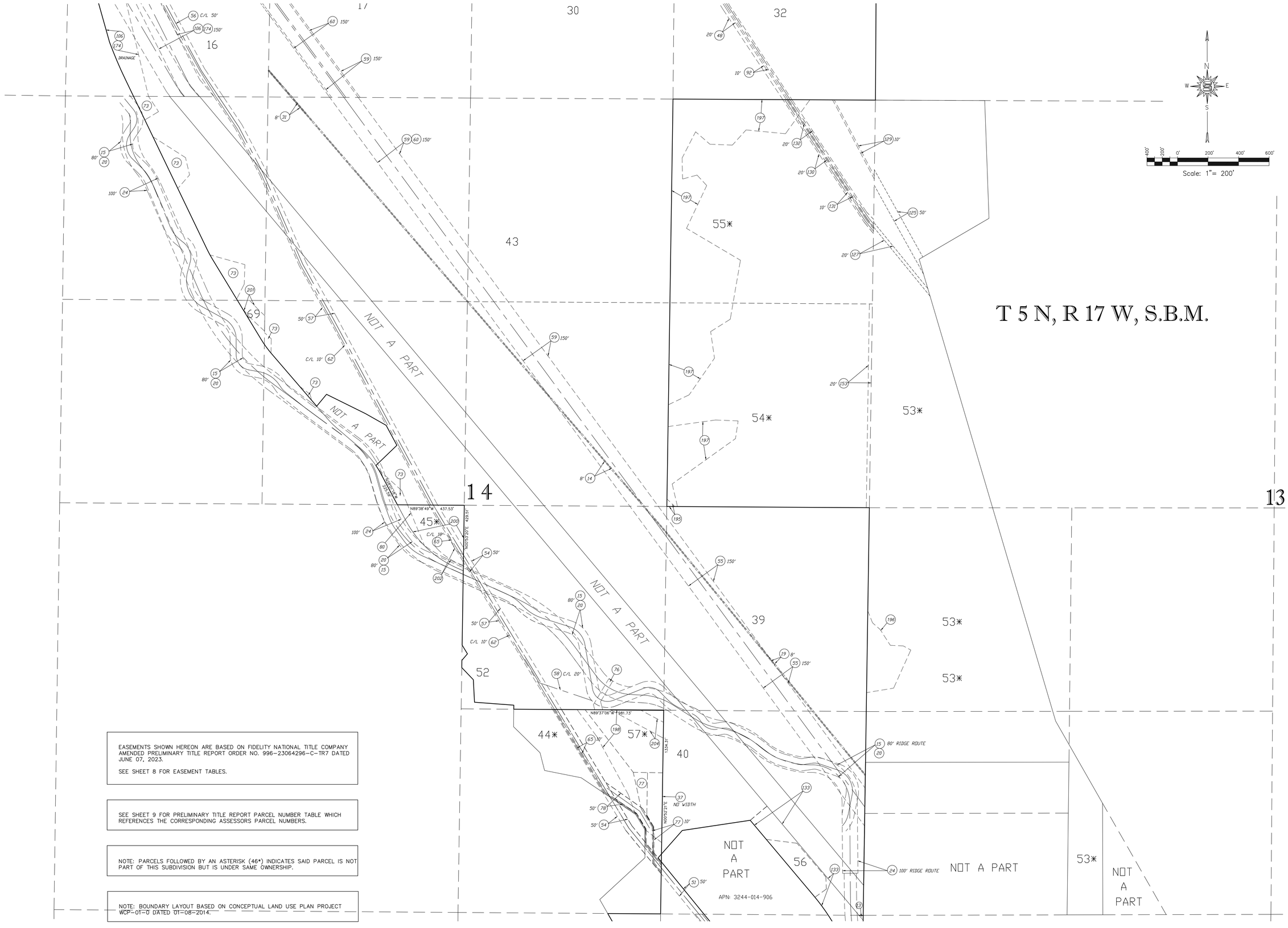
A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

SIKAND Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

EASEMENT MAP

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

SEE SHEET 15



EASEMENTS SHOWN HEREON ARE BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023.

SEE SHEET 8 FOR EASEMENT TABLES.

SEE SHEET 9 FOR PRELIMINARY TITLE REPORT PARCEL NUMBER TABLE WHICH REFERENCES THE CORRESPONDING ASSESSORS PARCEL NUMBERS.

NOTE: PARCELS FOLLOWED BY AN ASTERISK (46*) INDICATES SAID PARCEL IS NOT PART OF THIS SUBDIVISION BUT IS UNDER SAME OWNERSHIP.

NOTE: BOUNDARY LAYOUT BASED ON CONCEPTUAL LAND USE PLAN PROJECT WCP-01-0 DATED 01-08-2014.

SEE SHEET 13

EASEMENT MAP

7	08-12-2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP		TH	–
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S.		TH	–
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016		YL	–
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016		YL	–
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015		YL	–
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015		YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015		YL	–
	DATE	REVISION		BY	APP

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=200'			08/12/2025	5090-033-35	14	16

PREPARED FOR:

NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER
MARK R. SIKAND
No.35453
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

LEGAL DESCRIPTION:

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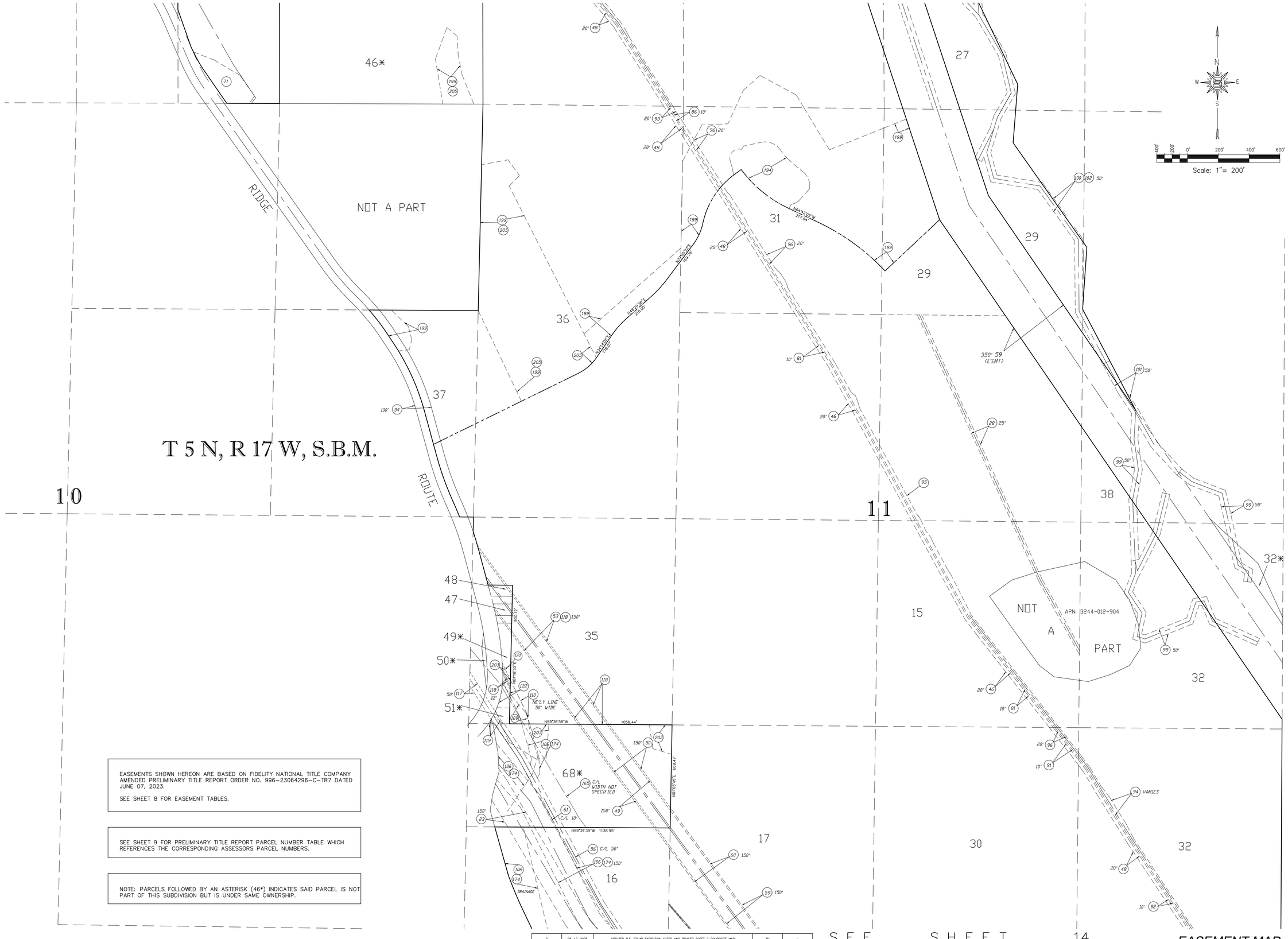
MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

SEE SHEET 16



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SEE SHEET 14

EASEMENT MAP

7	08-12-2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP	TH	–
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SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=200'			08/12/2025	5090-033-35	15	16

PREPARED FOR:
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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
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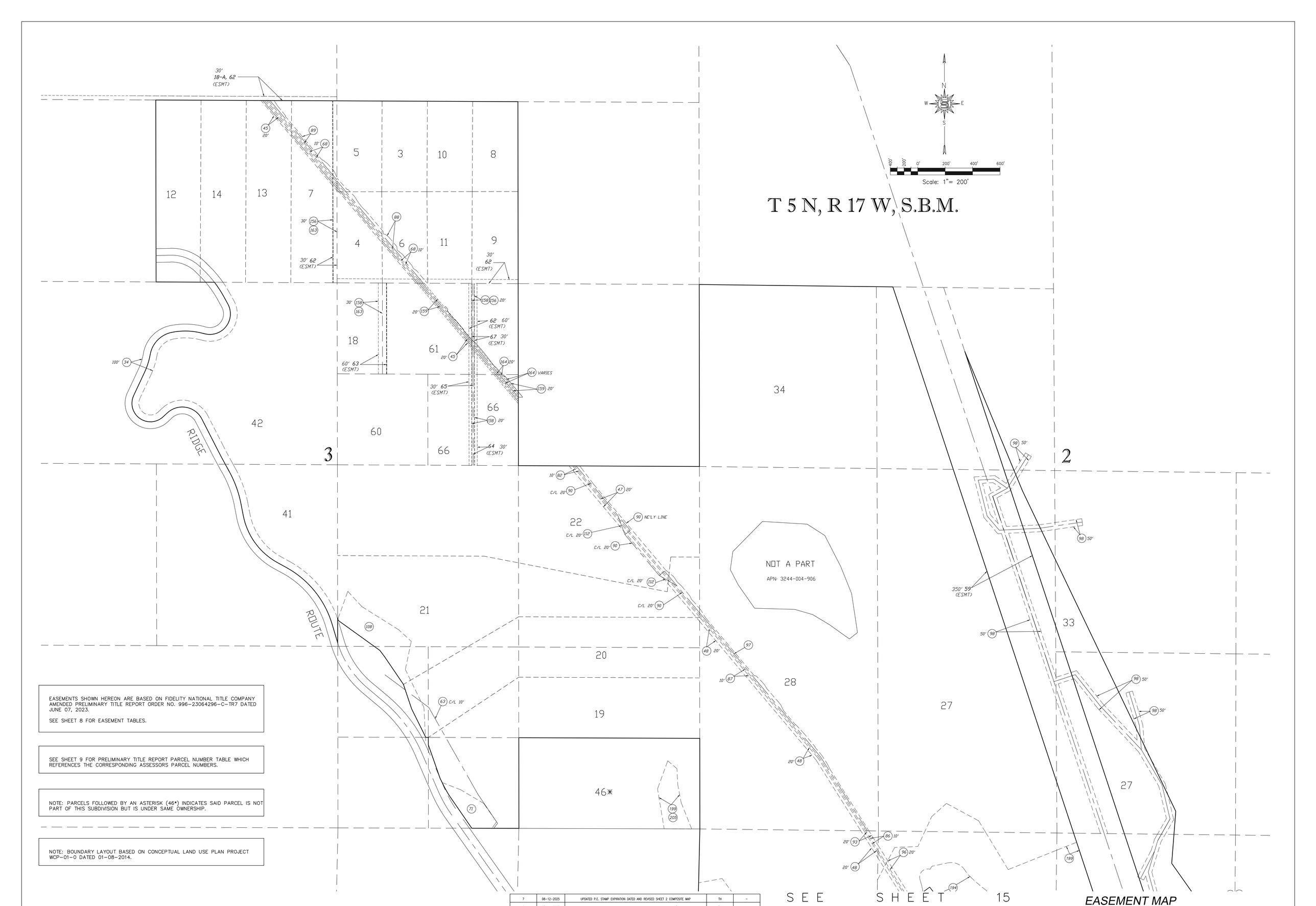

T 5 N, R 17 W, S.B.M.

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NOTE: BOUNDARY LAYOUT BASED ON CONCEPTUAL LAND USE PLAN PROJECT WCP-01-0 DATED 01-08-2014.

SEE SHEET 15

EASEMENT MAP

7	08-12-2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP	TH	–
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	DATE	REVISION	BY	APP

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET OF
1"=200'			08/12/2025	5090-033-35	16 16

PREPARED FOR:

NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER MARK R. SIKAND No.35453 Exp. 09-30-25 STATE OF CALIFORNIA

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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
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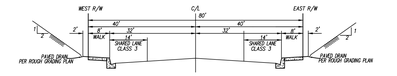


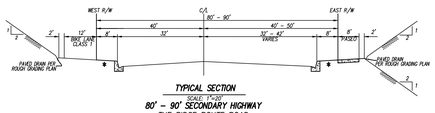
TYPICAL SECTION

SCALE: 1"=20'

80' SECONDARY HIGHWAY

THE RIDGE ROUTE ROAD

(FROM TR. 44429 TO 1200' N'LY TR. 44429)



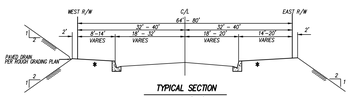
TYPICAL SECTION

SCALE: 1"=20'

80' - 90' SECONDARY HIGHWAY

THE RIDGE ROUTE ROAD

(FROM 1200' N'LY TR. 44429 TO NORTHLAKE BLVD.)



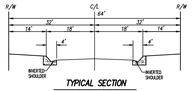
TYPICAL SECTION

SCALE: 1"=20'

64' - 80' LIMITED SECONDARY HWY

THE RIDGE ROUTE ROAD

(FROM NORTHLAKE BLVD. TO 900' N'LY NORTHLAKE BLVD.)



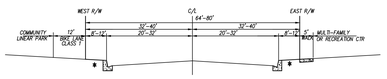
TYPICAL SECTION

SCALE: 1"=20'

64' LIMITED SECONDARY HWY

THE RIDGE ROUTE ROAD

(FROM 900' N'LY NORTHLAKE BLVD. TO 3200' N'LY OF NORTHLAKE BLVD.)



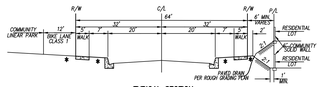
TYPICAL SECTION

SCALE: 1"=20'

80' STREET (MOD. INDUSTRIAL COLLECTOR)

NORTHLAKE BLVD.

(FROM "A" ST. TO 600' NE'LY "A" ST.)



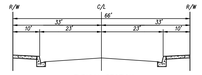
TYPICAL SECTION

SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)

NORTHLAKE BLVD.

(FROM 600 NE'LY "A" ST. TO "E" ST.)



TYPICAL SECTION

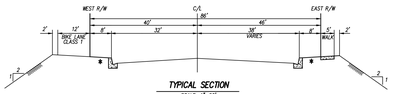
SCALE: 1"=20'

66' STREET

"S" ST.

NOTES FOR STREET SECTIONS:

1. SLOUGH WALL REQUIRED AT TOE OF ADJACENT SLOPE IF TOE OF SLOPE IS CLOSER THAN 3' TO THE BACK OF WALK, AND SLOPE IS OVER 5' HIGH.
2. PUBLICLY MAINTAINED SIDEWALKS SHALL BE PLACED 6" FROM RIGHT OF WAY UNLESS SIDEWALK ABUTS A PROPOSED WALL IN WHICH CASE IT SHOULD BE PLACED AGAINST THE WALL.
3. LANDSCAPE SLOPING AWAY FROM R/W TO BE 2:1 MAX.
4. NO RAISED MEDIAN PROPOSED.



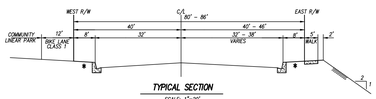
TYPICAL SECTION

SCALE: 1"=20'

86' STREET (MOD. INDUSTRIAL COLLECTOR)

NORTHLAKE BLVD.

(FROM RIDGE ROUTE ROAD TO 1000' SE'LY "A" ST)



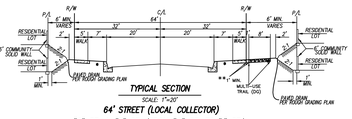
TYPICAL SECTION

SCALE: 1"=20'

80' - 86' STREET (MOD. INDUSTRIAL COLLECTOR)

NORTHLAKE BLVD.

(FROM 1000' SE'LY "A" ST TO "A" ST)

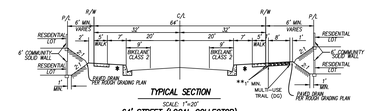


TYPICAL SECTION

SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)

"O" ST. & "F" ST. (FROM "O" ST. TO "I" ST.)

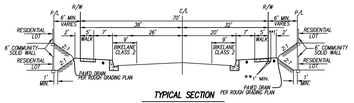


TYPICAL SECTION

SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)

"A" ST. & "B" ST.

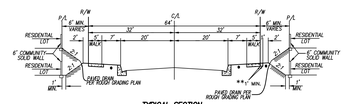


TYPICAL SECTION

SCALE: 1"=20'

70' STREET (LOCAL COLLECTOR)

"A" ST. (FROM NORTHLAKE BLVD TO "B" ST.)

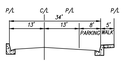


TYPICAL SECTION

SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)

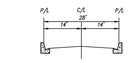
"D" ST.,"E" ST., "F" ST. (FROM "A" ST. TO "I" ST.) & "H" ST.,



TYPICAL SECTION

SCALE: 1"=20'

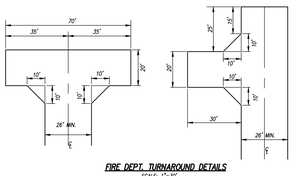
PRIVATE DRIVEWAY & FIRE LANE W/ PARKING ONE SIDE FOR MULTI-FAMILY PLANNING AREA



TYPICAL SECTION

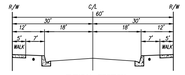
SCALE: 1"=20'

PRIVATE DRIVEWAY & FIRE LANE, NO PARKING FOR MULTI-FAMILY PLANNING AREA



FIRE DEPT. TURNAROUND DETAILS

SCALE: 1"=30'

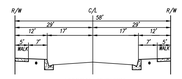


TYPICAL SECTION

SCALE: 1"=20'

60' STREET

"C" ST., "AA" ST., "DD" ST.,"EE" ST., "GG" ST., "HH" ST., & "PP" ST., & "QQ" ST.

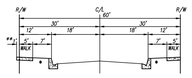


TYPICAL SECTION

SCALE: 1"=20'

58' STREET

"BB" ST., "CC" ST., "FF" ST., "II" ST., "JJ" ST., "KK" ST., "LL" ST., "MM" ST., "NN" ST., "OO" ST. & "PP" ST., "QQ" ST., "RR" ST., & "SS" ST.

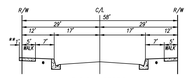


TYPICAL SECTION

SCALE: 1"=20'

60' STREET

"G" ST., "J" ST.& "P" ST.



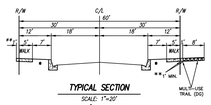
TYPICAL SECTION

SCALE: 1"=20'

58' STREET

"O" ST.

(FROM "P" ST. TO CUL-DE-SAC)



TYPICAL SECTION

SCALE: 1"=20'

60' STREET

"I" ST.

* LANDSCAPE AREA – SEE LANDSCAPE PLAN FOR DETAILS (TO BE MAINTAINED BY A LMD OR HOA)

** HARDSCAPE: DELINEATION FOR TRAIL PURPOSES WHERE AVAILABLE.

SHEET INDEX	
SHEET NO.	SHEET TITLE
1	TITLE SHEET
2	P-1 AND P-2
3	P-9 , P-10 AND P-12
4	P-11 AND P-13
5	P-4, P-15 AND P-16 / MIDDLE SCHOOL ALT
6	P-3, P-4, P-5 AND P-6
7	P-7 AND P-8
8	P-24 AND P-25
9	P-28
10	P-26 AND P-27
11	SPORT PARK LOT
12	GENERAL COMMERCIAL LOTS

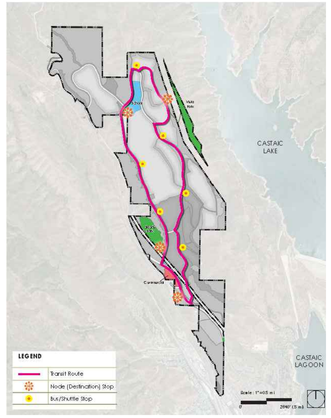
PARKING SPACE SUMMARY TABLE

P.A	Product	DU	Res. Parking Req.	Res. Parking Provided	Guest Parking Req.	Guest Parking Provided	Handicap Req.	Handicap Provided
1	Valmont	189	334	334	48	48	2	3
2	Santa Rosa	91	156	156	23	24	1	1
	Magnolia	40	80	80	10	12	1	1
3	Santa Rosa	49	98	98	13	14	1	1
4	Caserta	48	96	96	12	13	2	2
5	Brookland	38	76	76	10	11	1	1
6	Brookland	21	42	42	6	8	1	1
7	Caserta	88	176	176	22	28	2	2
8	Meriwether	111	222	222	28	33	2	3
9	Santa Rosa	112	192	192	28	31	2	2
10	Caserta	100	200	200	25	25	1	2
11	Meriwether	81	162	162	21	29	2	2
12	Brookland	117	234	234	30	32	2	2
13	Knolls	71	142	142	18	29	1	2
14	Magnolia	36	72	72	9	12	1	1
	Knolls	44	88	88	11	17	1	1
15	Magnolia	31	62	62	8	10	1	1
	Knolls	32	64	64	8	13	1	1
16	Knolls	42	84	84	11	18	1	1
24	Bungalows	138	276	276	35	44	2	2
25	Casitas	61	122	122	16	18	2	2
26	Casitas	61	122	116	16	19	1	1
27	Bungalows	10	20	20	1	1	1	1
28	Bungalows	75	150	150	19	27	1	1
Total		1686	3270	3264	428	516	33	37

MANUFACTURED OS	
Lot	Area (Ac.)
330	3.4
331	8.4
332	2.8
333	1.7
335	3.6
336	14.2
337	9.4
338	6.8
339	4.4
340	0.2
341	14.3
342	0.7
343	18.9
344	10.1
345	7.8
346	5.5
347	4.8
348	1.7
349	2.7
350	3.1
351	0.7
352	12.3
353	10.5
354	3.8
355	5.1
356	9.5
357	0.2
367	1.6
368	3.1
MISC.*	21.6
	192.9

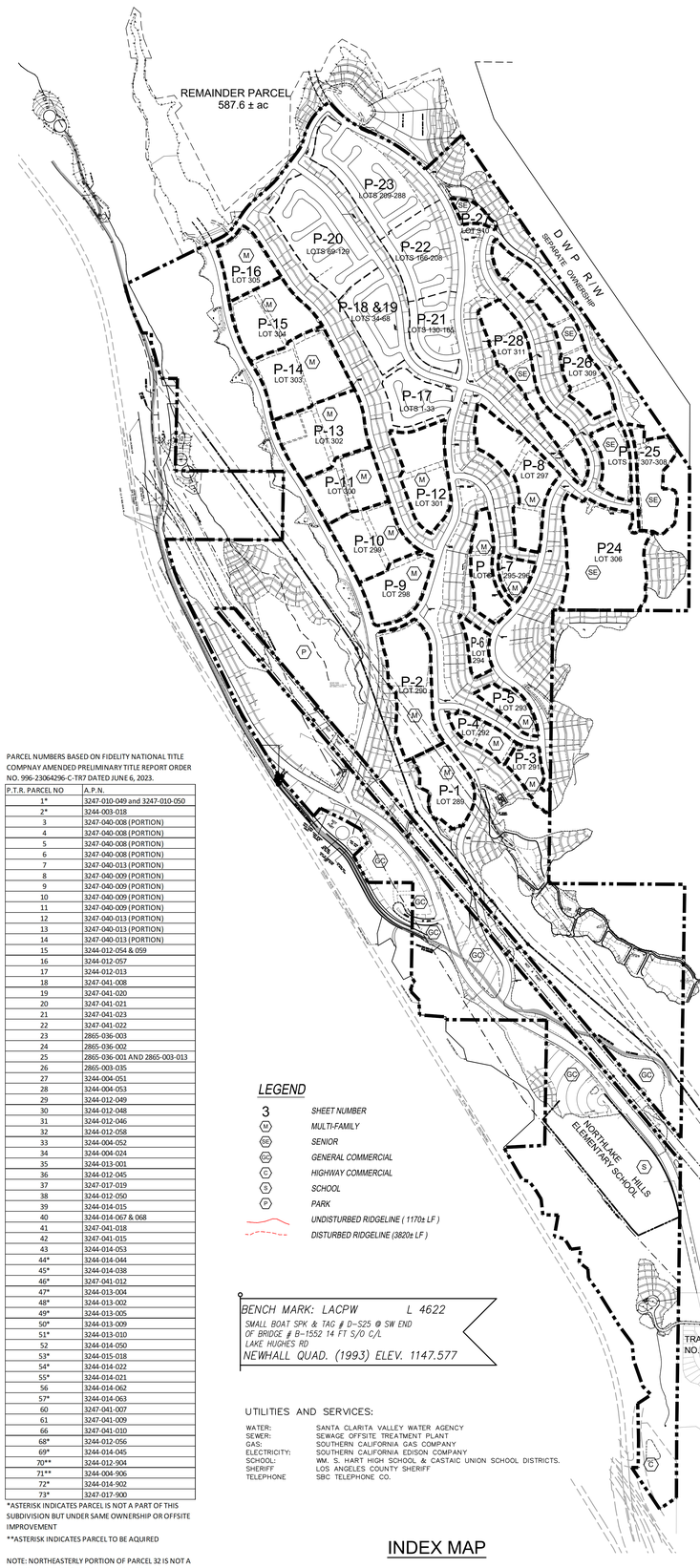
*Manufactured slope within multi-family lot.

NATURAL OS	
Lot	Area (Ac.)
334	2.5
358	39.6
359	33.0
360	12.4
361	9.3
362	4.8
363	10.2
364	10.9
365	34.6
366	6.6
	163.9



COMMUNITY TRANSIT SYSTEM

NOT TO SCALE



PARCEL NUMBERS BASED ON FIDELITY NATIONAL TITLE COMPNAY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 6, 2023.

P.T.R. PARCEL NO	A. P. N.
1*	3247-010-049 and 3247-010-050
2*	3244-003-018
3	3247-040-008 (PORTION)
4	3247-040-008 (PORTION)
5	3247-040-008 (PORTION)
6	3247-040-008 (PORTION)
7	3247-040-013 (PORTION)
8	3247-040-009 (PORTION)
9	3247-040-009 (PORTION)
10	3247-040-009 (PORTION)
11	3247-040-009 (PORTION)
12	3247-040-013 (PORTION)
13	3247-040-013 (PORTION)
14	3247-040-013 (PORTION)
15	3244-012-054 & 059
16	3244-012-057
17	3244-012-013
18	3247-041-008
19	3247-041-020
20	3247-041-021
21	3247-041-023
22	3247-041-022
23	2865-036-003
24	2865-036-002
25	2865-036-001 AND 2865-003-013
26	2865-003-035
27	3244-004-051
28	3244-004-053
29	3244-012-049
30	3244-012-048
31	3244-012-046
32	3244-012-058
33	3244-004-052
34	3244-004-024
35	3244-013-001
36	3244-012-045
37	3247-017-019
38	3244-012-050
39	3244-014-015
40	3244-014-067 & 068
41	3247-041-018
42	3247-041-015
43	3244-014-053
44*	3244-014-044
45*	3244-014-038
46*	3247-041-012
47*	3244-013-004
48*	3244-013-002
49*	3244-013-005
50*	3244-013-009
51*	3244-013-010
52	3244-014-050
53*	3244-015-018
54*	3244-014-022
55*	3244-014-021
56	3244-014-062
57*	3244-014-063
60	3247-041-007
61	3247-041-009
66	3247-041-010
68*	3244-012-056
69*	3244-014-045
70**	3244-012-904
71**	3244-004-906
72*	3244-014-902
73*	3247-017-900

*ASTERISK INDICATES PARCEL IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP OR OFFSITE IMPROVEMENT

**ASTERISK INDICATES PARCEL TO BE AQUIRED

NOTE: NORTHEASTERLY PORTION OF PARCEL 32 IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP

LEGEND

3	SHEET NUMBER
(M)	MULTI-FAMILY
(SE)	SENIOR
(GC)	GENERAL COMMERCIAL
(C)	HIGHWAY COMMERCIAL
(S)	SCHOOL
(P)	PARK
	UNDISTURBED RIDGELINE (1170± LF)
	DISTURBED RIDGELINE (3820± LF)

BENCH MARK: LACPW L 4622

SMALL BOAT SPK & TAG # D-525 @ SW END OF BRIDGE @ 8-1552 14 FT S/O C/L LAKE HUGHES RD

NEWHALL QUAD. (1993) ELEV. 1147.577

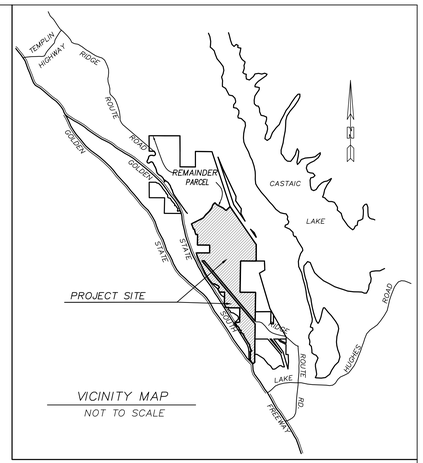
UTILITIES AND SERVICES:

WATER:	SANTA CLARITA VALLEY WATER AGENCY
SEWER:	SEWAGE OFFSITE TREATMENT PLANT
GAS:	SOUTHERN CALIFORNIA GAS COMPANY
ELECTRICITY:	SOUTHERN CALIFORNIA EDISON COMPANY
SCHOOL:	WM. S. HART HIGH SCHOOL & CASTAIC UNION SCHOOL DISTRICTS.
SHERIFF	LOS ANGELES COUNTY SHERIFF
TELEPHONE	SBC TELEPHONE CO.

INDEX MAP

0 500 1000 2000 Feet

1"=500'



DATA SUMMARY:

ACRES(GROSS)	719.8 ± AC
ACRES(NET)	635.5 ± AC
EXISTING & PROPOSED ZONING	NORTHLAKE S.P
EXISTING & PROPOSED GENERAL PLAN (2012 SCVAP)	NORTHLAKE S.P
EXISTING LAND USE	VACANT
PROPOSED LAND USE	SINGLE & MULTIFAMILY RESIDENTIAL COMMERCIAL AND OPEN SPACE

LOT SUMMARY:

SINGLE FAMILY LOTS	(40.6 Ac.) – 288 DU'S	1 TO 288	(288)
MULTI-FAMILY LOTS	(107.2 Ac.) – 1341 DU'S	289 TO 305	(17)
SENIOR M.F. LOTS	(49.1 Ac.) – 345 DU'S	306 TO 311	(6)
GENERAL COMMERCIAL	(20.4 Ac.) – 321 DU'S	312 TO 313	(2)
		315 TO 318	(4)
HIGHWAY COMMERCIAL	(2.5 Ac.)	314	(1)
PUBLIC PARK LOT	(16.3 Ac.)	319	(1)
PRIVATE PARK LOTS	(8.0 Ac.)	320 TO 329	(10)
OPEN SPACE (MFD)	(192.9 Ac.)	330 TO 368	(39)
OPEN SPACE (NATURAL)	(163.9 Ac.)		
TANK SITE	(6.5 Ac.)	369 TO 370	(2)
DEBRIS BASIN LOTS	(11.5 Ac.)	371 TO 383	(13)
WATER QUALITY BASIN	(15.0 Ac.)	384	(1)
PUMP STATION	(0.2 Ac.)	385	(1)
FIRE STATION	(1.4 Ac.)	386	(1)
PUBLIC R/W	(84.3 Ac.)		
TOTAL LOTS	(719.8 Ac.) – TOTAL 2295 DU'S	386	

NOTES

1. TOTAL EARTHWORK APPROXIMATELY CUT 17,160,000 C.Y. ± FILL 15,840,000 C.Y. ± EARTHWORK WILL BE BALANCED ON-SITE DUE TO SHRINKAGE.
2. TOPOGRAPHIC MAPPING BY HORIZON SURVEYS, 2 FT CONTOUR INTERVAL. (JULY 8, 2002)
3. REQUEST PERMISSION TO ADJUST LOT LINES TO THE SATISFACTION OF DRP.
4. REQUEST PERMISSION TO RECORD UNIT TRACT MAPS TO THE SATISFACTION OF DRP.
5. REQUEST PERMISSION TO CREATE ADDITIONAL OPEN SPACE LOTS.
6. BOUNDARY LINE DIMENSIONS ARE TAKEN FROM RECORD DATA.
7. THE APPLICANT IS REQUESTING THE RIGHT TO ADJUST STREET AND BUILDING PAD ELEVATIONS UP TO 10 FEET ON THE FINAL GRADING PLAN TO THE SATISFACTION OF DRP AND DPW.
8. TOPS AND TOES OF SLOPES ARE SUBJECT TO CHANGE IN FINAL ENGINEERING TO SATISFACTION OF DRP AND DPW.
9. MAXIMUM SLOPE GRADE IS 2:1 FOR ALL SLOPES.
10. A LANDSCAPE MAINTENANCE DISTRICT OR HOMEOWNER'S ASSOCIATION WILL BE ESTABLISHED FOR MAINTENANCE OF OPEN SPACE AREAS AND ALL COMMON SLOPE AREAS.
11. ALL SLOPES WITHIN HOMEOWNER'S ASSOCIATION COMMON AREAS OR LANDSCAPE MAINTENANCE DISTRICTS ARE TO BE PLANTED AND IRRIGATED WITH COUNTY APPROVED MATERIAL.
12. PORTIONS OF THE OLD RIDGE ROUTE ROAD TO BE ABANDONED AND REPLACED WITH A ROAD PER CURRENT COUNTY STANDARDS.
13. MULTI-FAMILY LOTS ARE FOR CONDO PURPOSES.
14. REQUEST PERMISSION TO CREATE A LARGE LOT PARCEL MAP FOR SALES PURPOSES AND WHERE EACH LOT IS GREATER THAN 40 ACRES.
15. SITE CONTAINS NO OAK TREES.
16. ALL STREET LANDINGS ARE 3% OR LESS EXCEPT WHERE NOTED.
17. ALL GRADING ELEVATIONS ARE ± 10 FEET.
18. ALL ITEMS REQUESTED WITH CUP NO. RPPL2023004316 (i.e. GRADING, WATER TANKS, SP SITE PLAN/SCR REVIEW, AND WALLS EXCEEDING 6 FEET IN HEIGHTS), AS WELL AS THAT IN PHASE 2 WILL REQUIRE A NEW CUP. ENVIRONMENTAL ASSESSMENT NO. RPPL2023004887.
19. PRIVATE DRIVES SHALL BE DESIGNED ACCORDING TO THE WESTSIDE COMMUNITIES PRIVATE DRIVE AND TRAFFIC CALMING DESIGN GUIDELINES CONSISTENT WITH HEALTHY DESIGN REQUIREMENTS.
20. ALL STREET CURB RETURNS ARE 25' RADII UNLESS SPECIFIED ON THE PLAN.
21. LANDSCAPING IN THE COMMON AREAS AND DRIVES INCLUDING COMMON AREAS FENCING AND WALL WILL BE DROUGHT TOLERANT IN NATURE. DETAILED LANDSCAPING WILL BE PROVIDED ONCE THE PLOT PLANS ARE FINALIZED AND SUBMITTED TO THE COUNTY FOR APPROVAL.
22. BICYCLE SHOWER AND CHANGING FACILITIES (BSF) WILL BE PROVIDED FOR ALL BUILDINGS ≥ 75,000 S.F. AND WILL BE DEPICTED IN DETAIL ON FUTURE PLOT PLANS
23. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 6 22.52.1225.
24. PER THE APPROVED NORTHLAKE SPECIFIC PLAN THE MAXIMUM ALLOWED COMMERCIAL SQUARE FOOTAGE IS 67,000± AND THE MAXIMUM ALLOWED INDUSTRIAL SQUARE FOOTAGE IS 305,000±.
25. ALL SINGLE FAMILY LOTS WILL BE SERVED BY SEPARATE SEWER LATERAL FOR EACH INDIVIDUAL LOT. ALL MULTI-FAMILY, COMMERCIAL, AND INDUSTRIAL BUILDINGS WILL BE SERVED BY SEPARATE SEWER LATERAL FOR EACH INDIVIDUAL BUILDING.
26. THE CLIENT PROPOSED A POSSIBLE TRANSIT SYSTEM WITHIN THE PROJECT BOUNDARY. FOR MORE DETAILS SEE THE PLANNING NOTEBOOK.
27. ALL PARKS ARE PRIVATE EXCEPT WHERE NOTED.
28. PRIOR TO THE ISSUANCE OF 1750TH BUILDING PERMIT, FIRE STATION TO BE CONVEYED TO THE CONSOLIDATED PROTECTION DISTRICT OF LOS ANGELES COUNTY.
29. A NEW TENTATIVE MAP NUMBER & CUP WILL BE ISSUED IF AND WHEN A NEW MAP IS FILED OVER THE N'LY PORTION OF NORTHLAKE SPECIFIC PLAN BOUNDARY.
30. NO PROPOSED GATES WITHIN PROJECT SITE.

LOS ANGELES DEPARTMENT OF REGIONAL PLANNING
8/20/25
EXHIBIT MAP TR 73336

EXHIBIT "A"
2015-0408

7	8-13-2025	REVISED PRODUCT TYPE FROM AFFORDABLE HOUSING TO MULTI-FAMILY ON SHEET 12		TH	–
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S		TH	–
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016		YL	–
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016		YL	–
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015		YL	–
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015		YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015		YL	–
	DATE	REVISION		BY	APP

SCALE: AS SHOWN | CHK'D BY: | APPROVED BY: | DATE: 08/13/2025 | W.O. NO. 5090-033-35 | SHEET 1 OF 12

PREPARED FOR:

NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER WILLIAM R. SIKAND No.35453 Exp. 09-30-25 CIVIL STATE OF CALIFORNIA

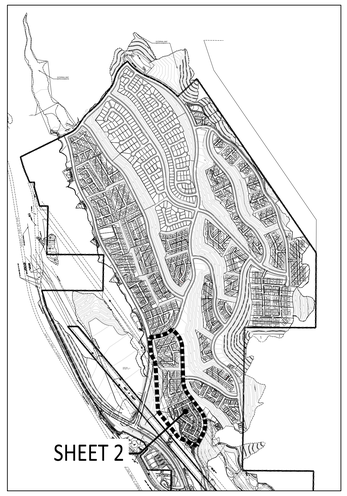
LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA



KEY MAP
SCALE: 1"=1000'

PLANNING AREA 2A
SUMMARY:

PRODUCT	MAGNOLIA	
GROSS AREA	NOT APPLICABLE	
NET AREA	5.3	ACRES
TOTAL UNITS	40	UNITS
DENSITY	7.5	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	80	SPACES
GUEST PARKING REQUIRED	10	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	90	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	80	SPACES
GUEST PARKING PROVIDED	12	SPACES
(GUEST PARKING INCLUDED HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	92	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 2B
SUMMARY:

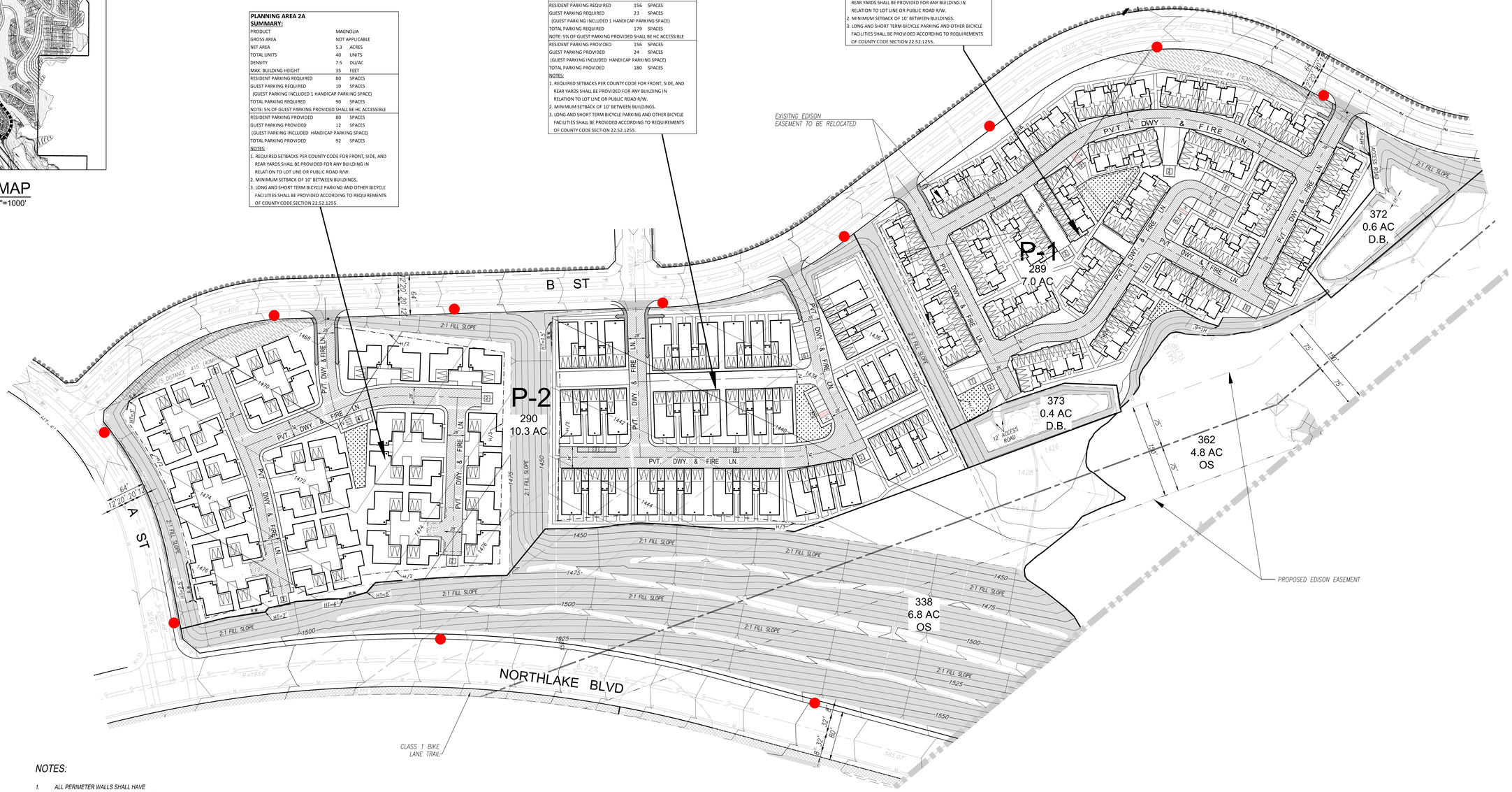
PRODUCT	SANTA ROSA	
GROSS AREA	11.6	ACRES
NET AREA	5.0	ACRES
TOTAL UNITS	91	UNITS
DENSITY	18.2	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	156	SPACES
GUEST PARKING REQUIRED	23	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	179	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	156	SPACES
GUEST PARKING PROVIDED	24	SPACES
(GUEST PARKING INCLUDED HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	180	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 1
SUMMARY:

PRODUCT	VALMONT	
GROSS AREA	7.3	ACRES
NET AREA	7.0	ACRES
TOTAL UNITS	189	UNITS
DENSITY	27.0	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	334	SPACES
GUEST PARKING REQUIRED	48	SPACES
(GUEST PARKING INCLUDED 3 HANDICAP PARKING SPACES)		
TOTAL PARKING REQUIRED	382	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	334	SPACES
GUEST PARKING PROVIDED	48	SPACES
(GUEST PARKING INCLUDED 3 HANDICAP PARKING SPACES)		
TOTAL PARKING PROVIDED	382	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.



LEGEND

- LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 PROPOSED CONTOUR
- 415' LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (8' TRAIL)
- 5' CONCRETE TRAIL
- FDT FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

NOTES:

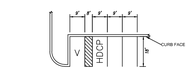
1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

PROPOSED WALKWAY'S TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.

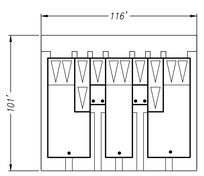
0 30 60 120 Feet
SCALE: 1" = 60'



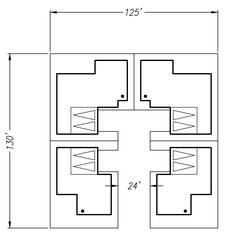
TYPICAL PARALLEL PARKING
NOT TO SCALE



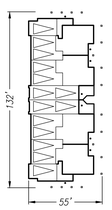
TYPICAL STANDARD PARKING WITH HANDICAPPED
NOT TO SCALE



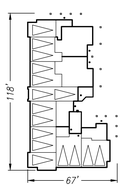
SANTA ROSA
SCALE: 1" = 40'
7 PLEX



MAGNOLIA
SCALE: 1" = 40'
4 MOTORCOURT



VALMONT I
SCALE: 1" = 40'
8 PLEX



VALMONT L
SCALE: 1" = 40'
9 PLEX

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No.35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:
A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S		TH	–
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016		YL	–
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	DATE	REVISION		BY	APP
SCALE: 1"=60'	CHK'D BY:	APPROVED BY:	DATE: 08/13/2025	W.O. NO. 5090-033-35	SHEET 2 OF 12

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Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
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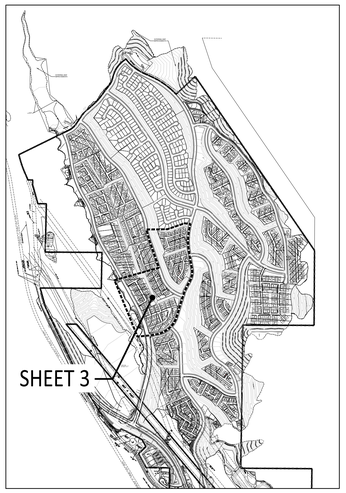
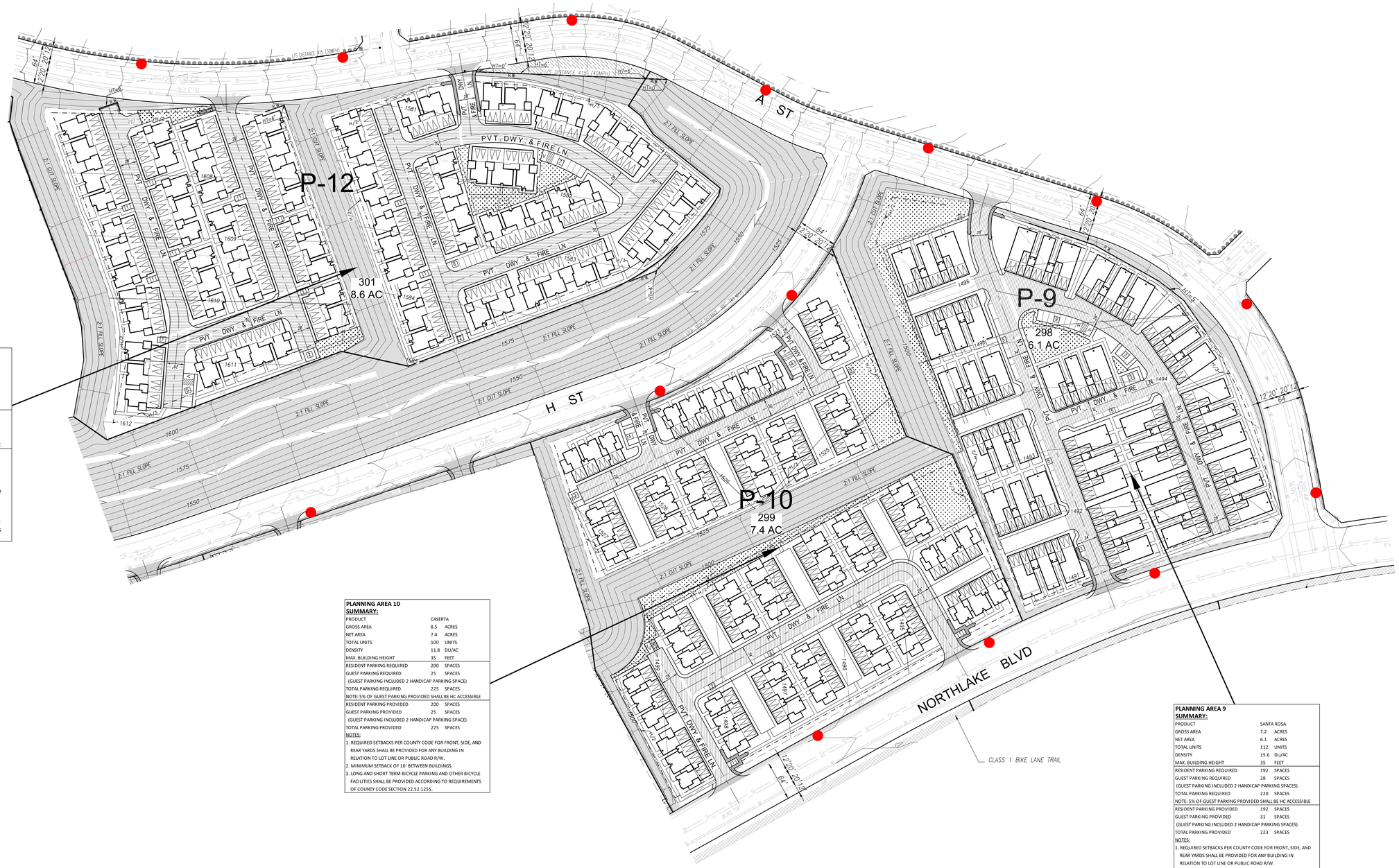


KEY MAP
SCALE: 1"=1000'



PLANNING AREA 12
SUMMARY:

PRODUCT	BROOKLAND	
GROSS AREA	10.3	ACRES
NET AREA	8.6	ACRES
TOTAL UNITS	117	UNITS
DENSITY	11.4	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	234	SPACES
GUEST PARKING REQUIRED	30	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING REQUIRED	264	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	234	SPACES
GUEST PARKING PROVIDED	32	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING PROVIDED	266	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 10
SUMMARY:

PRODUCT	CASERTA	
GROSS AREA	8.5	ACRES
NET AREA	7.4	ACRES
TOTAL UNITS	100	UNITS
DENSITY	11.8	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	200	SPACES
GUEST PARKING REQUIRED	25	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	225	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	200	SPACES
GUEST PARKING PROVIDED	25	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	225	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 9
SUMMARY:

PRODUCT	SANTA ROSA	
GROSS AREA	7.2	ACRES
NET AREA	6.1	ACRES
TOTAL UNITS	112	UNITS
DENSITY	15.6	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	192	SPACES
GUEST PARKING REQUIRED	28	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING REQUIRED	220	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	192	SPACES
GUEST PARKING PROVIDED	31	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING PROVIDED	223	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

LEGEND

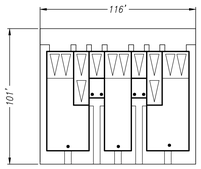
- 336 — LOT NO.
- P-1 — PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

NOTES:

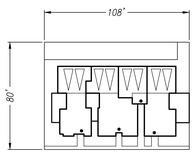
1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.

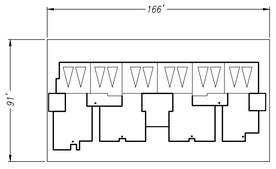
0 30 60 120 Feet
SCALE: 1" = 60'



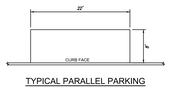
SANTA ROSA
SCALE : 1" = 40'
7 PLEX



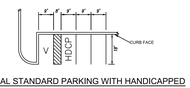
CASERTA
SCALE : 1" = 40'
4 PLEX



BROOKLAND
SCALE : 1" = 40'
6 PLEX



TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAPPED
NOT TO SCALE

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
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REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No.35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

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5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016	YL	--
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016	YL	--
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	--
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1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	--

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=60'			08/13/2025	5090-033-35	3	12

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
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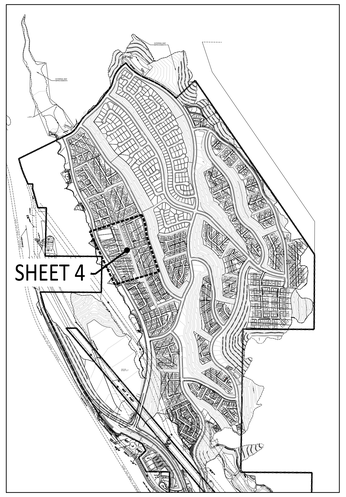


KEY MAP
SCALE: 1"=1000'



PLANNING AREA 11
SUMMARY:

PRODUCT	MERIWETHER	
GROSS AREA	8.4	ACRES
NET AREA	6.9	ACRES
TOTAL UNITS	81	UNITS
DENSITY	11.7	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	162	SPACES
GUEST PARKING REQUIRED	21	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	183	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	162	SPACES
GUEST PARKING PROVIDED	29	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	191	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 13
SUMMARY:

PRODUCT	KNOLLS	
GROSS ACRES	10.3	ACRES
NET AREA	8.9	ACRES
TOTAL UNITS	71	UNITS
DENSITY	8.0	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	142	SPACES
GUEST PARKING REQUIRED	18	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	160	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	142	SPACES
GUEST PARKING PROVIDED	29	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	171	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

LEGEND

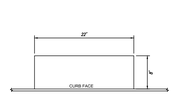
- (336) LOT NO.
- P-1 PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 PROPOSED CONTOUR
- 415' LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

NOTES:

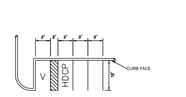
1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.

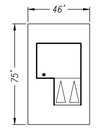
0 30 60 120 Feet
SCALE: 1" = 60'



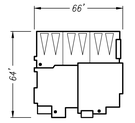
TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAPPED
NOT TO SCALE



KNOLLS
SCALE : 1" = 40'



MERIWETHER
SCALE : 1" = 40'
TRIPLEX

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER MARK R. SIKAND No.35453 Exp. 09-30-25 CIVIL STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S		TH	--
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016		YL	--
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	DATE	REVISION		BY	APP
SCALE: 1"=60'	CHK'D BY:	APPROVED BY:	DATE: 08/13/2025	W.O. NO. 5090-033-35	SHEET 4 OF 12

SIKAND
Engineering | Planning | Surveying
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Van Nuys, CA 91411
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info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
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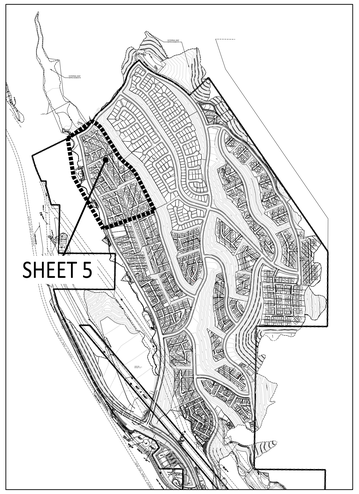
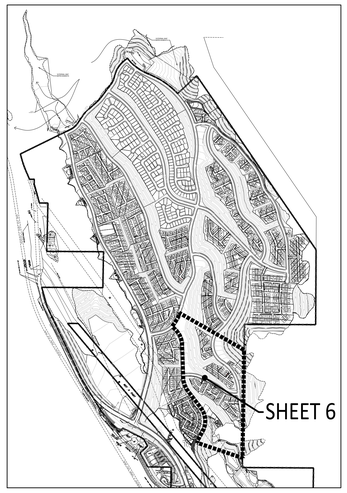


KEY MAP
SCALE: 1"=1000'



KEY MAP
SCALE: 1"=1000'

PLANNING AREA 5
SUMMARY:

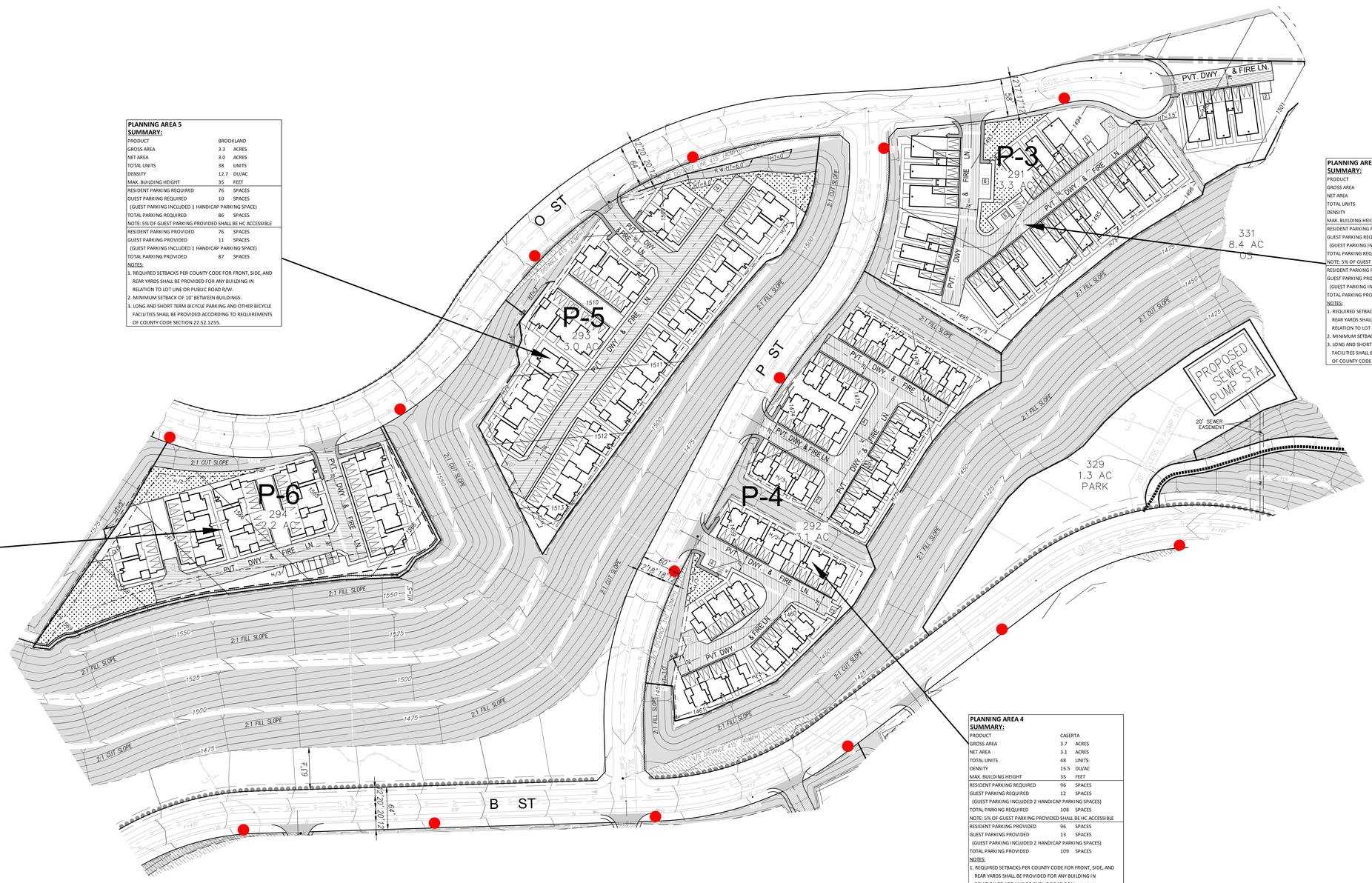
PRODUCT	BROOKLAND	
GROSS AREA	3.3	ACRES
NET AREA	3.0	ACRES
TOTAL UNITS	38	UNITS
DENSITY	12.7	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	76	SPACES
GUEST PARKING REQUIRED	10	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	86	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	76	SPACES
GUEST PARKING PROVIDED	11	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	87	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 6
SUMMARY:

PRODUCT	BROOKLAND	
GROSS REA	2.4	ACRES
NET AREA	2.2	ACRES
TOTAL UNITS	21	UNITS
DENSITY	9.5	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	42	SPACES
GUEST PARKING REQUIRED	6	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	48	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	42	SPACES
GUEST PARKING PROVIDED	8	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	50	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.



PLANNING AREA 3
SUMMARY:

PRODUCT	SANTA ROSA	
GROSS AREA	3.5	ACRES
NET AREA	3.2	ACRES
TOTAL UNITS	49	UNITS
DENSITY	15.3	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	84	SPACES
GUEST PARKING REQUIRED	13	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	97	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	84	SPACES
GUEST PARKING PROVIDED	14	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	98	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 4
SUMMARY:

PRODUCT	CASERTA	
GROSS AREA	3.7	ACRES
NET AREA	3.1	ACRES
TOTAL UNITS	48	UNITS
DENSITY	15.5	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	96	SPACES
GUEST PARKING REQUIRED	12	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING REQUIRED	108	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	96	SPACES
GUEST PARKING PROVIDED	13	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING PROVIDED	109	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

LEGEND

- (336) / P-1 — LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

NOTES:

1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

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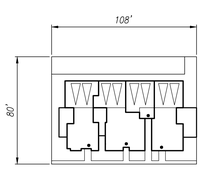
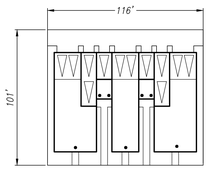
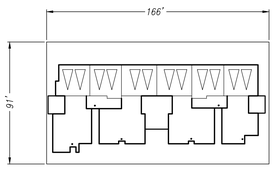


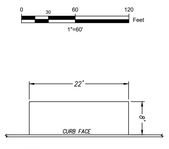
CASERTA
SCALE : 1" = 40'
4 PLEX



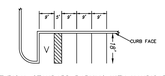
SANTA ROSA
SCALE : 1" = 40'
7 PLEX



BROOKLAND
SCALE : 1" = 40'
6 PLEX
SFA



TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAP
NOT TO SCALE

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER
MARK R. SIKAND
No. 35453
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

LEGAL DESCRIPTION:
A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

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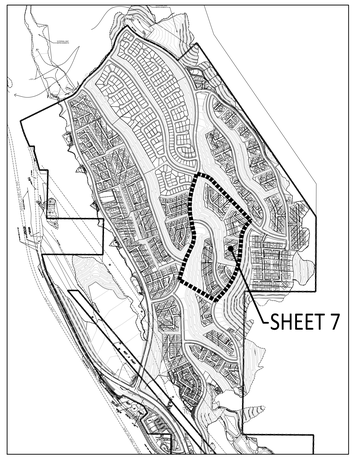
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015		YL	--
	DATE	REVISION		BY	APP
SCALE: 1"=60'	CHK'D BY:	APPROVED BY:	DATE: 08/13/2025	W.O. NO. 5090-033-35	SHEET 6 OF 12

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA



KEY MAP
SCALE: 1"=1000'

PLANNING AREA 8
SUMMARY:

PRODUCT	MERIWETHER	
GROSS AREA	11	ACRES
NET AREA	9.9	ACRES
TOTAL UNITS	111	UNITS
DENSITY	11.2	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	222	SPACES
GUEST PARKING REQUIRED	28	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING REQUIRED	250	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	222	SPACES
GUEST PARKING PROVIDED	33	SPACES
(GUEST PARKING INCLUDED 3 HANDICAP PARKING SPACES)		
TOTAL PARKING PROVIDED	255	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 7
SUMMARY:

PRODUCT	CASERTA	
GROSS AREA	7.6	ACRES
NET AREA	6.8	ACRES
TOTAL UNITS	88	UNITS
DENSITY	12.9	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	176	SPACES
GUEST PARKING REQUIRED	22	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	198	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	176	SPACES
GUEST PARKING PROVIDED	28	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	204	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

P-8
297
9.9 AC

P-7
295
5.0 AC

296
6.8 AC

344
10.1 AC
OS

F ST
G ST
O ST
E Avenue S

LEGEND

- LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- PROPOSED CONTOUR
- LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
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- PROPOSED FIRE HYDRANT

NOTES:

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2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

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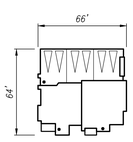
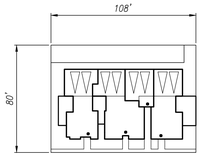


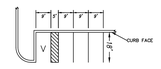
MERIWETHER
SCALE : 1" = 40'
TRIPLEX



CASERTA
SCALE : 1" = 40'
4 PLEX



TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAP
NOT TO SCALE

0 30 60 120 Feet
1"=60'

EXHIBIT "A"
2015-0408

PREPARED FOR:
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1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	--

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=60'			08/13/2025	5090-033-35	7	12

SIKAND
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MAJOR LAND DIVISION
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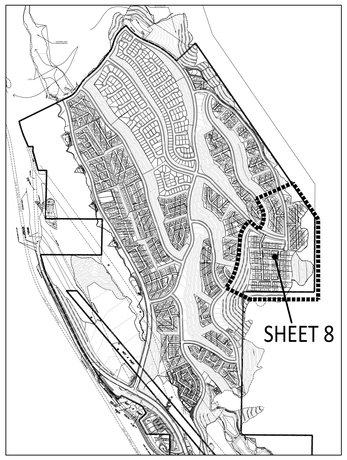


KEY MAP
SCALE: 1"=1000'

PLANNING AREA 25
SUMMARY:

PRODUCT	CASITAS	
GROSS AREA	12.2	ACRES
NET AREA	10.6	ACRES
TOTAL UNITS	61	UNITS
DENSITY	5.8	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	122	SPACES
GUEST PARKING REQUIRED (GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)	16	SPACES
TOTAL PARKING REQUIRED	138	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	122	SPACES
GUEST PARKING PROVIDED (GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)	18	SPACES
TOTAL PARKING PROVIDED	140	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 24
SUMMARY:

PRODUCT	BUNGALOWS	
GROSS AREA	18.4	ACRES
NET AREA	17.7	ACRES
TOTAL UNITS	138	UNITS
DENSITY	7.8	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	276	SPACES
GUEST PARKING REQUIRED (GUEST PARKING INCLUDED 2 HANDICAPS PARKINGS)	35	SPACES
TOTAL PARKING REQUIRED	311	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	276	SPACES
GUEST PARKING PROVIDED (GUEST PARKING INCLUDED 2 HANDICAPS PARKINGS)	44	SPACES
TOTAL PARKING PROVIDED	320	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

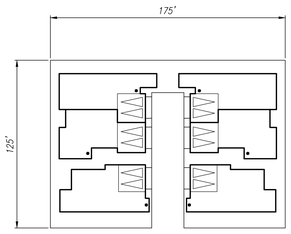
LEGEND

- (336) / P-1 — LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

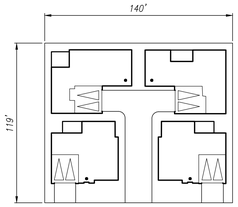
NOTES:

1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.



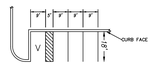
BUNGALOWS
SCALE: 1"=40'
6 HOME MOTORCOURT



CASITAS
SCALE: 1"=40'
4 HOME MOTOR COURT



TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAP
NOT TO SCALE

0 30 60 120 Feet
1"=60'

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — M.M.K. R. SIKAND — No.35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

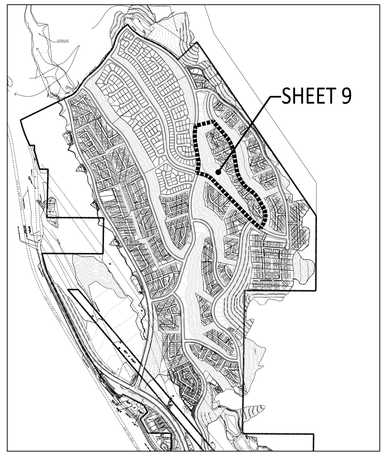
NO.	DATE	REVISION	BY	APP
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	TH	--
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016	YL	--
4	9-23-2016	PER SCM COMMENTS DATED 7-21-2016	YL	--
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	--
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	--
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	--

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=60'			08/13/2025	5090-033-35	8	12

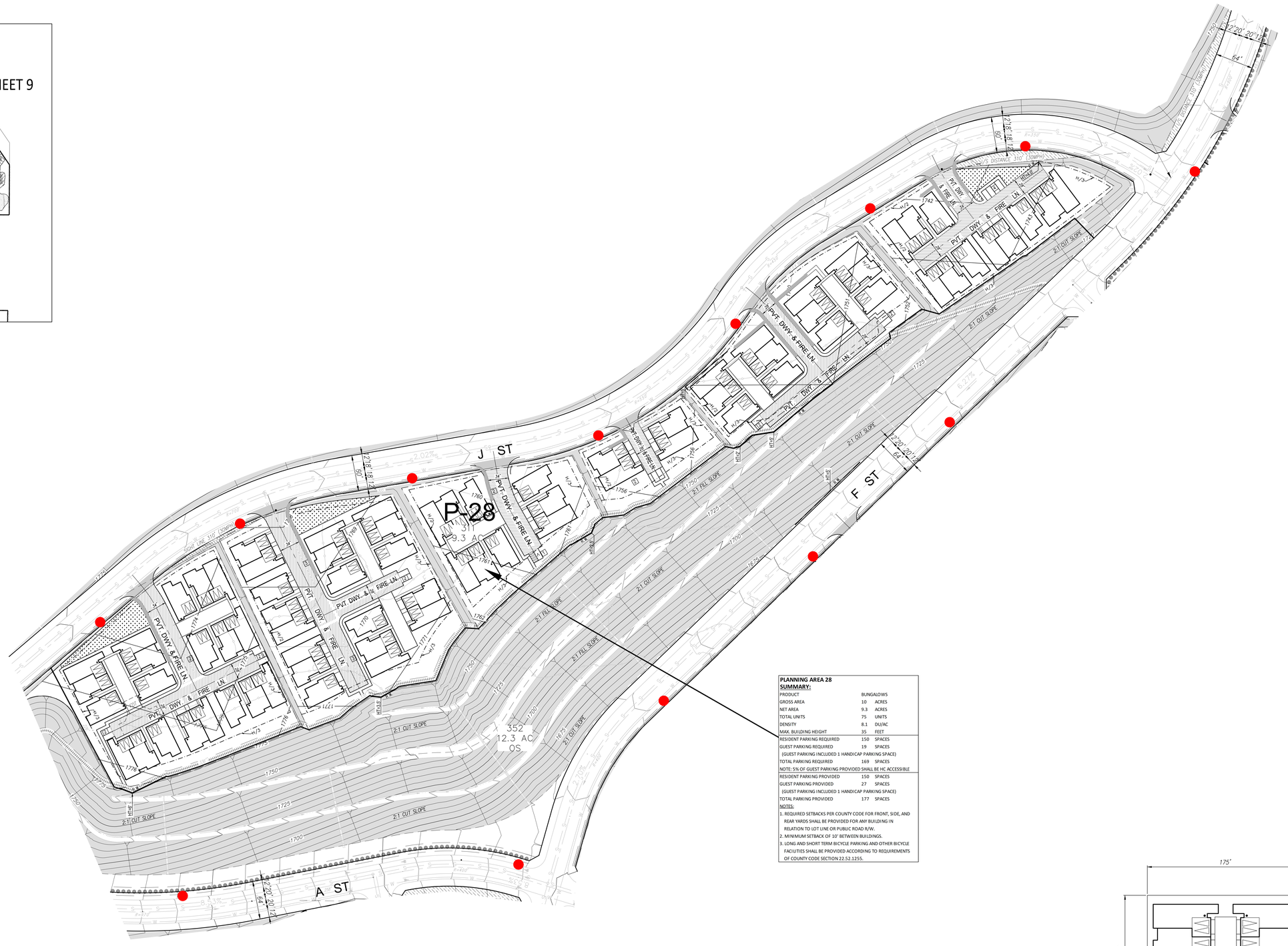
SIKAND
Engineering | Planning | Surveying

15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA



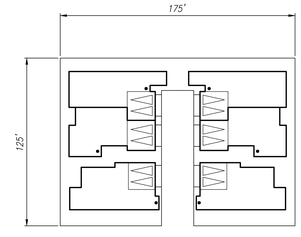
KEY MAP
SCALE: 1"=1000'



PLANNING AREA 28
SUMMARY:

PRODUCT	BUNGALOWS	
GROSS AREA	10	ACRES
NET AREA	9.3	ACRES
TOTAL UNITS	75	UNITS
DENSITY	8.1	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	150	SPACES
GUEST PARKING REQUIRED	19	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	169	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	150	SPACES
GUEST PARKING PROVIDED	27	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	177	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.



BUNGALOWS
SCALE: 1" = 40'
6 HOME MOTORCOURT

LEGEND

- 536 / P-1 — LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

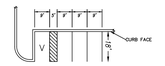
NOTES:

1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.



TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAP
NOT TO SCALE

0 30 60 120 Feet
1"=60'

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No.35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:
A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

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	DATE	REVISION		BY	APP

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=60'			08/13/2025	5090-033-35	9	12

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Tel: (818) 787-8550
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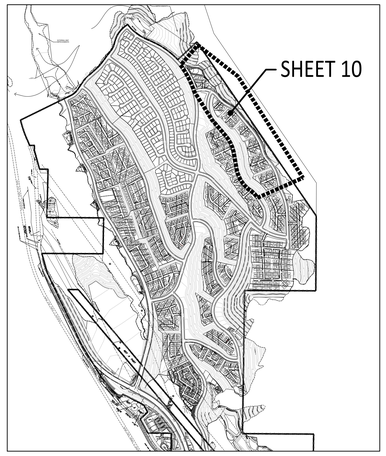
MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA



KEY MAP
SCALE: 1"=1000'

PLANNING AREA 26
SUMMARY:

PRODUCT	CASITAS	
GROSS AREA	11.7	ACRES
NET AREA	10.2	ACRES
TOTAL UNITS	61	UNITS
DENSITY	6.0	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	122	SPACES
GUEST PARKING REQUIRED	16	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	138	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	122	SPACES
GUEST PARKING PROVIDED	19	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	141	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 27
SUMMARY:

PRODUCT	BUNGALOWS	
GROSS AREA	1.5	ACRES
NET AREA	1.3	ACRES
TOTAL UNITS	10	UNITS
DENSITY	7.7	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	20	SPACES
GUEST PARKING REQUIRED	3	SPACES
(GUEST PARK INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	23	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	20	SPACES
GUEST PARKING PROVIDED	3	SPACES
(GUEST PARK INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	23	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

CASITAS
SCALE: 1"=40'
4 HOME MOTOR COURT

BUNGALOWS
SCALE: 1" = 40'
6 HOME MOTORCOURT

0 30 60 120 Feet
1"=60'

TYPICAL PARALLEL PARKING
NOT TO SCALE

TYPICAL STANDARD PARKING WITH HANDICAP
NOT TO SCALE

LEGEND

- 336 / P-1 — LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.

NOTES:

1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No. 35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:

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SCALE: 1"=60' | CHK'D BY: | APPROVED BY: | DATE: 08/13/2025 | W.O. NO. 5090-033-35 | SHEET 10 OF 12

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

LEGEND

- 336 — LOT NO.
- PA1 — PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
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- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
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- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- PROPOSED FIRE HYDRANT

NOTES:

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2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
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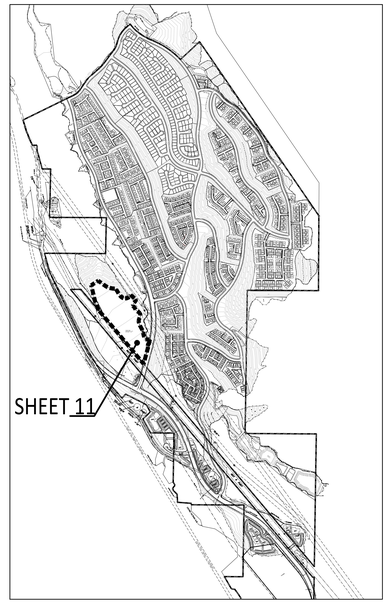
5. NO PROPOSED GATE WITHIN PROJECT SITE.



KEY MAP
SCALE: 1"=1000'



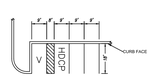
Program Summary

Item	Quantities	Size
Multi-Use Grass Areas	2	310,000 Sq.Ft.
Basketball Court	1	
Restroom and Storage	1	250 Sq.Ft. Storage
Individual Picnic Areas	5	
Family Picnic Pavilions	2	
Community / Park Monumnent	1	
Parking	160	90,000 Sq.Ft.
10' Walking Path		4,600 LFT
Maintenance Yard	1	3,500 Sq.Ft
Benches	4	

PARK SITE: SUBJECT TO MINOR MODIFICATION PRIOR TO FINAL DESIGN



TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAPPED
NOT TO SCALE

0 30 60 120 Feet
1"=60'

EXHIBIT "A"
2015-0408

PREPARED FOR:
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MAJOR LAND DIVISION
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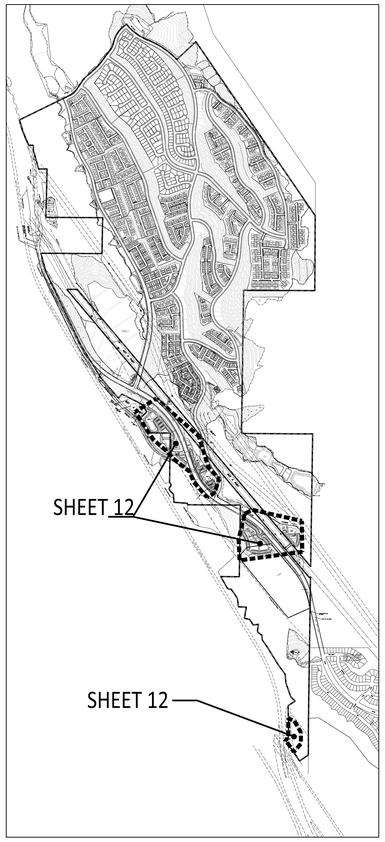

KEY MAP
SCALE: 1"=1000'

LEGEND

- LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- PROPOSED CONTOUR
- LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
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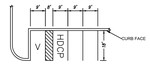
1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.



TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAPPED
NOT TO SCALE

LOT NO. 317
SUMMARY:

PRODUCT	MULTI-FAMILY	
GROSS AREA	5.3	ACRES
NET AREA	4.1	ACRES
TOTAL UNITS	102	UNITS
DENSITY	24.9	DU/AC
MAX. BUILDING HEIGHT	4 STORIES, 3 STORIES ALONG THE STREET	
RESIDENT PARKING REQUIRED	102	SPACES
GUEST PARKING REQUIRED	26	SPACES
(GUEST PARKING INCLUDED 7 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	128	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	102	SPACES
GUEST PARKING PROVIDED	76	SPACES
(GUEST PARKING INCLUDED 7 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	178	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

LOT NO. 312 & 313
SUMMARY:

PRODUCT	MULTI-FAMILY & LIVE-WORK	
GROSS AREA	6.7	ACRES
NET AREA	5.1	ACRES
TOTAL UNITS	78	UNITS
BUILDING AREA	7,500	SQ.FT.
DENSITY	15.3	DU/AC
MAX. BUILDING HEIGHT	4 STORIES, 3 STORIES ALONG THE STREET	
RESIDENT PARKING REQUIRED	78	SPACES
GUEST PARKING REQUIRED	39	SPACES
(GUEST PARKING INCLUDED 6 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	117	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	78	SPACES
GUEST PARKING PROVIDED	147	SPACES
(GUEST PARKING INCLUDED 6 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	225	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

LOT NO. 316
SUMMARY:

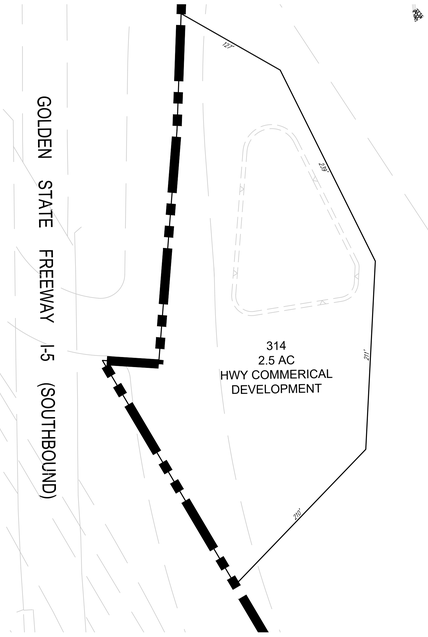
PRODUCT	MIXED USE	
GROSS AREA	4.3	ACRES
NET AREA	4.3	ACRES
TOTAL UNITS	46	UNITS
BUILDING AREA	31,200	SQ.FT.
DENSITY	10.7	DU/AC
MAX. BUILDING HEIGHT	4 STORIES, 3 STORIES ALONG THE STREET	
RESIDENT PARKING REQUIRED	46	SPACES
GUEST PARKING REQUIRED	90	SPACES
(GUEST PARKING INCLUDED 7 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	136	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	46	SPACES
GUEST PARKING PROVIDED	92	SPACES
(GUEST PARKING INCLUDED 7 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	138	SPACES

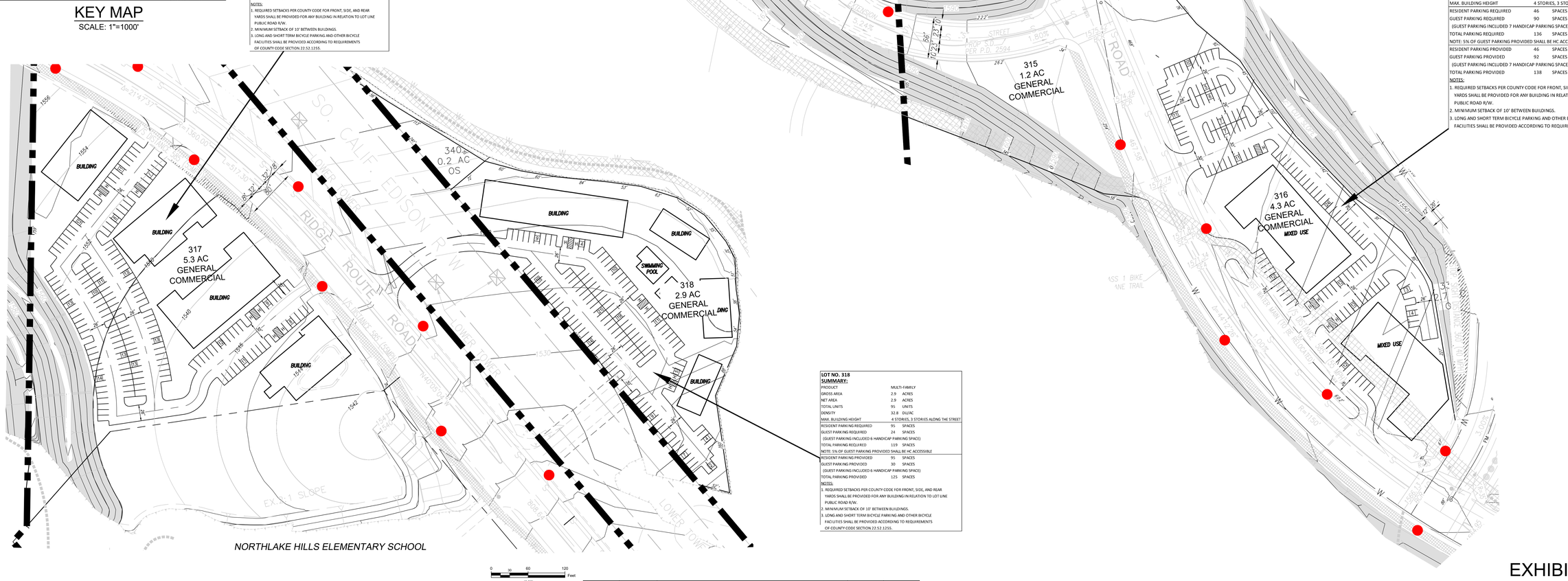
NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS

LOT NO. 318
SUMMARY:

PRODUCT	MULTI-FAMILY	
GROSS AREA	2.9	ACRES
NET AREA	2.9	ACRES
TOTAL UNITS	95	UNITS
DENSITY	32.8	DU/AC
MAX. BUILDING HEIGHT	4 STORIES, 3 STORIES ALONG THE STREET	
RESIDENT PARKING REQUIRED	95	SPACES
GUEST PARKING REQUIRED	24	SPACES
(GUEST PARKING INCLUDED 6 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	119	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	95	SPACES
GUEST PARKING PROVIDED	30	SPACES
(GUEST PARKING INCLUDED 6 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	125	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.





0 30 60 120 Feet
1"=60'

N

7	8-13-2025	REVISED PRODUCT TYPE FROM AFFORDABLE HOUSING TO MULTI-FAMILY ON SHEET 12		TH	–
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S.		TH	–
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016		YL	–
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016		YL	–
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015		YL	–
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015		YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015		YL	–
	DATE	REVISION		BY	APP

SCALE: 1"=60' | CHK'D BY: | APPROVED BY: | DATE: 08/13/2025 | W.O. NO. 5090-033-35 | SHEET 12 OF 12

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — WAYNE R. SIKAND — No. 35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

EXHIBIT "A"
2015-0408

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

LA COUNTY PLANNING

PROJECT SUMMARY

PROJECT NUMBER
R2015-00408

HEARING DATE
January 28, 2026

REQUESTED ENTITLEMENT
Vesting Tentative Tract Map ("VTTM") No. 073336 (RPPL2023004336)
Vesting Tentative Parcel Map ("VTPM") No. 073335 (RPPL2023004448)
Conditional Use Permit ("CUP") (RPPL2023004316)
Environmental Assessment No. 201500030 (RPPL2023004887)
State Clearinghouse No. 2015031080

OWNER / APPLICANT
Northlake Associates LLC

MAP/EXHIBIT DATE
August 20, 2025

PROJECT OVERVIEW

The Northlake Specific Plan ("SP"), originally adopted in 1992, is a proposed mixed-use development located north of Lake Hughes Road, east of Ridge Route Road and Interstate 5 Freeway ("I-5"), and west of Castaic Lake and Lagoon in the unincorporated community of Castaic. The SP was approved for a total of 3,150 dwelling units on 1,330 acres of land. The first phase of the SP development ("Northlake Phase 1") proposes the buildout of 2,295 dwellings on 720 acres of land. The site is currently vacant.

- Vesting Tentative Tract Map ("VTTM") No. 073336 depicts a total of 386 lots and 2,295 dwelling units on 720 gross acres. This includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); one highway commercial lot (2.5 acres), 39 open space lots, 11 park lots, 13 debris basin lots, two water tank lots, one water quality basin lot, one pump station lot, and one fire station lot (1.4 acre building pad). Of the total 2,295 dwelling units in Northlake Phase 1, 1,777 units are proposed to be for-sale and 518 units expected for rental. This is pursuant to County Code Chapters 21.38 (Vesting Tentative Map) and 21.40 (Tentative Maps).
- Vesting Tentative Parcel Map ("VTPM") No. 073335 to create 21 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only, pursuant to County Code Chapters 21.38 (Vesting Tentative Map) and 21.40 (Tentative Maps).
- Conditional Use Permit ("CUP") No. RPPL2023004316 to authorize a Specific Plan ("SP") site plan review procedure for the development of 2,295 residential dwelling units; affordable set-aside housing and affordable senior set-aside housing; mixed-use and live-work development; onsite and offsite grading in excess of 100,000 cubic yards ("cy") with a total of 34.32 million cy (17.16 million cy of cut and 15.84 million cy of fill with 1.32 million cy of shrinkage) to be balanced onsite; and also offsite grading requiring an additional 2.15 million cy of cut and 1.07 million cy of fill for an offsite total of 3.22 million cy of combined cut and fill. The overall onsite and offsite grading amounts would be 37.54 million cy of combined cut and fill; walls exceeding six feet in height; and construction of two water tanks with associated grading and infrastructure pursuant to County Code Section 22.140.240 (Grading Projects).

Northlake Phase 1 will be accessible from Ridge Route Road, and includes connection to existing utilities, relocation of existing utility lines, new drainage facilities, and other related infrastructure outside the boundaries of the Project Site. The Project Site is currently undeveloped.

LOCATION	ACCESS	VERY HIGH FIRE HAZARD
North of Lake Hughes Road, east of Ridge Route Road and I-5, and west of Castaic Lake and Lagoon, Castaic	Ridge Route Road	Yes

ASSESSORS PARCEL NUMBERS	SITE AREA
See Exhibit A: APN Summary	(Phase 1 only) 720 gross acres, 635.5 net acres

LOCAL PLAN	PLANNING AREA	SUP DISTRICT
SP	Santa Clarita Valley	5
LAND USE DESIGNATION	**ZONE**	**ZONED DISTRICT**
Northlake Specific Plan (SP)	SP	Castaic Canyon

PROPOSED UNITS	MAX DENSITY	APPLICABLE STANDARDS DISTRICTS
2,295	2,295	N/A

ENVIRONMENTAL DETERMINATION (CEQA)

A Supplemental Environmental Impact Report ("SEIR") was prepared for Phase 1 of the Northlake project in 2017. Phase 1 was originally approved by the Commission in 2018 but was then appealed to the Board. After the Board denied the appeal and approved the Project in 2019, litigation of the Project occurred and was ultimately resolved in 2023. As a result of the court decision, certain elements of the SEIR required further clarifications which resulted in the Recirculated Partial Draft SEIR ("RPDSEIR"). The Partial Creek Avoidance Alternative ("PCAA") was provided to implement the changes required by the court order. After the public release and public comments provided, a Recirculated Partial Final SEIR ("RPFSEIR") was prepared. Except for the court-ordered clarifications and related minor modifications resulting in the RPDSEIR and RPFSEIR and implemented by the PCAA, the Project adopted by the Board in 2019 remains the same.

KEY ISSUES

- Consistency with the Northlake SP and minor clarifications to the 2019 Project
- Consistency with the revised 2025 Northlake Design Guidebook
- PCAA further reduces impacts in the northerly portion of the site, and does not create new impacts
- An RPFSEIR pursuant to CEQA, and prepared in response to the Court Decision and Order
- Satisfaction with the following portions of Title 21 and Title 22 of the Los Angeles County Code:
  - Chapter 21.38 (Vesting Tentative Map) and Chapter 21.40 (Tentative Maps)
  - Section 22.158.050 (CUP - Findings and Decision Requirements)

CASE PLANNER:	PHONE NUMBER:	E-MAIL ADDRESS:
Jodie Sackett	(213) 893 - 7409	jsackett@planning.lacounty.gov

LOS ANGELES COUNTY
DEPARTMENT OF REGIONAL PLANNING
DRAFT FINDINGS OF THE REGIONAL PLANNING COMMISSION
AND ORDER
PROJECT NO. R2015-00408

CONDITIONAL USE PERMIT ("CONDITIONAL USE PERMIT") NO. RPPL2023004316

RECITALS

1. **HEARING DATE.** The Los Angeles County ("County") Regional Planning Commission ("Commission") conducted a duly-noticed public hearing on January 28, 2026, in the matter of Project No. R2015-00408 ("Northlake"), consisting of CUP No. RPPL2023004316 and related entitlements Vesting Tentative Tract Map ("VTTM") No. 073336, Vesting Tentative Parcel Map ("VTPM") No. PM073335 (RPPL2023004448), and Environmental Assessment No. 201500030 [(RPPL2023004887) (State Clearinghouse No. 2015031080)]. These are collectively referred to as the "Northlake Phase 1".

2. **HEARING PROCEEDINGS.** *Reserved.*

3. **ENTITLEMENTS REQUESTED.** Northlake Associates LLC ("Permittee") requests CUP No. RPPL2023004316, a request to authorize a SP site plan review procedure for development of 2,295 residential dwelling units; affordable set-aside housing and affordable senior set-aside housing; mixed-use and live-work development; onsite and offsite grading in excess of 100,000 cubic yards ("cy") with an overall onsite and offsite total of 37.54 million cy of cut and fill material; onsite quantities include 34.32 million cy (17.16 million cy of cut, 15.84 million cy of fill, and 1.32 cy of shrinkage) to be balanced onsite; offsite grading includes an additional 2.15 million cy of cut and 1.07 million cy of fill for an offsite total of 3.22 million cy of combined cut and fill; pursuant to County Code Section 22.140.240 (Grading Projects); walls exceeding six feet in height; and construction of two water tanks with associated grading and infrastructure. As part of the proposed Project, offsite improvements would include connection to existing utilities, relocation of existing utility lines, new drainage facilities, and other related infrastructure outside the boundaries of Northlake Phase 1.

4. **RELATED ENTITLEMENT.** VTTM No. 073336 to create a total of 386 lots and 2,295 dwelling units on 720 gross acres. This includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); one highway commercial lot (2.5 acres), 39 open space lots, 11 park lots, 13 debris basin lots, two

water tank lots, one water quality basin lot, one pump station lot, and one fire station lot (1.4 acre building pad). Of the total 2,295 dwelling units in Northlake Phase 1, 1,777 units are proposed to be for-sale and 518 units expected for rental. This is pursuant to County Code Chapters 21.38 (Vesting Tentative Map) and 21.40 (Tentative Maps).

5. **RELATED ENTITLEMENT.** VTPM No. 073335 is a related request to create 21 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only.

6. **PREVIOUS ENTITLEMENTS.** Northlake Specific Plan No. 87172-(5), Sub-Plan Amendment No. 87172-(5), Zone Change No. 87172-(5), CUP No. 87172-(5), and Development Agreement ("DA") No. 87172-(5) authorized the SP and was approved in 1992. It authorized a maximum of 3,150 dwelling units on 1,330 acres of land, to include single-family and multi-family residences, schools, parks, and fire station. The DA was not used and expired in 2003. Specific Plan Amendment No. 98047, DA No. 98047, CUP No. 98047, VTTM No. 51582, and CUP No. 2004-00015 were filed in 1998 and were withdrawn in 2007. The CUP included grading and the SP site plan review procedure. Also included in prior entitlements are the 2015 requests for the VTTM, VTPM, and CUP, which were approved in 2019 and subsequently litigated.

7. **ENTITLEMENTS REQUESTOR**. Unless otherwise apparent from the context, "Permittee" shall include the Permittee, successor in interest, owner of the property, and any other person, corporation, or other entity making use of this grant.

8. **COMMISSION APPROVAL.** The approval of CUP No. RPPL2023004316 and related entitlements VTTM and VTPM will not become effective unless and until the Commission certifies the SEIR and approves Northlake Phase 1, and both have become effective.

9. **VESTING DATE.** Pursuant to Government Code Section 65866, the County and Permittee agreed to a vesting date of March 17, 2015. Accordingly, Northlake is generally subject to the applicable rules, regulations, and official policies that were in effect as of March 17, 2015.

10. **LOCATION.** The Northlake site is located north of Lake Hughes Road, east of Ridge Route Road and of Interstate 5 Freeway, and west of Castaic Lake and Lagoon in the unincorporated community of Castaic. Northlake Phase 1 Site is also located within a designated Very High Fire Hazard Severity Zone ("VHFHSZ") and State Responsibility Area ("SRA").

11. **LAND USE DESIGNATION.** Northlake Phase 1 is located within various designations within the SP, a component of the General Plan. It includes Single-Family, Multi-Family, General Commercial, Public Facilities, Recreation, and Open Space uses.

12. **ZONING.** Northlake Phase 1 is located in the Castaic Canyon Zoned District within the Santa Clarita Valley Planning Area and is currently zoned SP (Specific Plan).

LOCATION	SANTA CLARITA VALLEY AREA	ZONING	EXISTING USES

	PLAN ("AREA PLAN") LAND USE POLICY		
SUBJECT PROPERTY	SP (Specific Plan)	SP	Vacant Land
NORTH	RL5 (Rural Land 5 – One Dwelling Per 5 Acres), BLM (Bureau of Land Management)	A-2-2 (Light Agricultural – Two-Acre Minimum Lot Size)	Vacant Land
EAST	BLM, RL10 (Rural Land 10 – One Dwelling Per 10 Acres), OS-PR (Open Space – Parks and Recreation), RL5, IL (Light Industrial)	A-2-2, M-1-DP (Light Manufacturing – Development Program), M-2-DP (Heavy Manufacturing – Development Program), RPD-5000-2.9DU (Residential Planned Development – 5000 Square Foot Lot Size – 2.9 Dwellings Per Acre), OS (Open Space)	Vacant Land, Elementary School, Single-Family Residences, Shopping Center
SOUTH	H2 (Large Lot Residential – 0-2 Dwellings Per Acre), IL, H18 (Medium Density Residential – 9-18 Dwellings Per Acre), CM (Major Commercial)	R-1 (Single-Family Residence), C-3 (Major Commercial), M-1 (Light Manufacturing)	Vacant Land, Shopping Center, Single-Family Residences, Senior Residences
WEST	RL5, RL1 (Rural Land 1 – One Dwelling Per Acre), IL, OS-C (Open Space Conservation)	A-2-2, A-2-1 (Light Agricultural – One-Acre Minimum Lot Size), M-1, M-1-DP, OS	Vacant Land, Single-Family Residences, Water Tank, Warehousing

13. **PROJECT AND SITE PLAN DESCRIPTION.**

A. Existing Site Conditions

The SP site consists of approximately 1,330 acres located north of Lake Hughes Road and Ridge Route Road, east of I-5 Freeway and west of Castaic Lake and Lagoon in the unincorporated community of Castaic. The site is comprised of vacant land, with adjacent infrastructure such as transmission towers (via utility easement through the property) and a water tank to the west, just outside of the Northlake boundary. Northlake Phase 1 consists of 720 acres.

The property exhibits a wide range of topographic relief, with gently-rolling hills, extremely steep slopes, and a major drainage course (Grasshopper Creek) running north-south down the middle of Northlake Phase 1. The property is not located within and does not contain any portion of a Significant Ecological Area ("SEA").

B. Site Access

Northlake Phase 1 is accessible via Ridge Route Road, a Limited Secondary Highway on the County Master Plan of Highways with 64 to 80 feet of width that transitions into an 80 to 90 foot-wide Secondary Highway on the County Master Plan of Highways. Primary access to the site will be via an entrance/exit on Ridge Route Road. Secondary access to the property will be via Northlake Boulevard, a Local Collector with 64 to 80 feet of width that transitions into an 80 to 86-foot-wide Modified Industrial Collector. Northlake Phase 1 provides a five-foot wide or greater walkway along private and future streets throughout the property, with publicly-accessible walkways of similar widths along private drives/fire lanes providing direct access to all units.

C. Tentative Map and Exhibit Map

The VTTM No. 073336 tentative map and Exhibit Map dated August 20, 2025, consists of Northlake Phase 1. It depicts a total of 386 lots and 2,295 dwelling units on 720 gross acres. This includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet (“sf”) of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); one highway commercial lot (2.5 acres), 39 open space lots, 11 park lots, 13 debris basin lots, two water tank lots, one water quality basin lot, one pump station lot, and one fire station lot (1.4 acre building pad). Of the total 2,295 dwelling units in Northlake Phase 1, 1,777 units are proposed to be for-sale and 518 units expected for rental. This is pursuant to County Code Chapters 21.38 (Vesting Tentative Map) and 21.40 (Tentative Maps).

D. Affordable and Senior Housing

Northlake Phase 1 proposes a total of 315 affordable attached rental units for Very Low, Lower, and Moderate Income households, of which 269 shall be affordable rental and 46 shall be senior affordable rental units. Though not subject to the IHO due to the adopted SP, the Subdivider has offered the affordable units through the CUP. The affordable units shall be dispersed throughout Northlake Phase 1. In addition, Northlake Phase 1 proposes 345 market-rate attached senior units (209 ownership, 136 rental) within the site.

E. Parking

Northlake Phase 1 requires an overall total of 5,284 parking spaces. It will provide a total of 5,670 parking spaces, to include 4,167 residential parking spaces required and provided; 639 guest parking spaces required and 1,021 provided; 65 accessible spaces required and 69 provided; and 413 commercial spaces required

and provided. Lastly, there are four Type A loading spaces distributed throughout the office, commercial, and mixed-use development areas.

F. Internal Circulation
Northlake Phase 1 would incorporate various internal roadway improvements, including arterials, residential collectors, and private drives. A series of public collector streets and private drives within Northlake Phase 1 and would provide access to the various areas and land uses on-site, to include the Community Sports Park, Grasshopper Creek Park, fire station, mixed-use development, senior housing development, and potential school site. All of these internal destinations would be accessible via a shuttle system managed by the Northlake Homeowner's Association ("HOA") as detailed in the original 2019 LA County Board of Supervisors ("Board") approval and included in the Northlake Phase 1 conditions. Within Northlake Phase 1, the proposed trail system would include community trails, bike lanes, and recreational trails linked to the above-mentioned destinations. In addition to the various trail types that would serve as bicycle routes, Northlake Phase 1 would expand bicycle facilities in the area.

G. Condominium Project
Pursuant to the Subdivision Map Act, condominium units may be leased or sold. Renters of condominium units may not receive sufficient notification when an owner decides to sell the units. In order to provide renters with proper notification, notification is required 180 days prior to termination of tenancy in the event the condominium units are first leased and then later sold.

H. Grading
The grading amounts include 17.16 million cy of cut and 15.84 million cy of fill with 1.32 million cy of shrinkage to be balanced onsite, as well as 3.22 million cy of offsite grading, for a combined grading amount of 37.54 million cy.

I. Oak Trees
There are no Oak trees on the subject property.

14. **CEQA DETERMINATION.**

Supplemental Environmental Impact Report ("SEIR")
The Northlake Phase 1 Draft Supplemental EIR ("DSEIR") was released on May 2, 2017, and circulated for a 45-day public review and comment period ending on June 15, 2017. Following the close of the public comment period on the DSEIR on June 15, 2017, detailed responses to all public agency comments and comments received from members of the general public received regarding Northlake Phase 1 and the analyses of the DSEIR were prepared and were contained in the Final SEIR ("FSEIR").

An Errata was released in February 2018, prior to the Commission hearing to make minor technical corrections to the SEIR and to provide further information in response to public comments received prior to the Planning Commission meeting. The Errata included only minor technical changes to the SEIR and additional information to

support the SEIR's conclusions, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. At the February 21, 2018, public hearing, the Planning Commission requested that the Subdivider include an affordable housing component in the Project. Based on this request, the Subdivider made minor revisions to the Project analyzed in the SEIR to include an affordable component. An Errata dated April 4, 2018 was prepared which concluded that the revisions involve only minor changes to the distribution of land uses and an overall reduction in density and intensity or use, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. On April 18, 2018, the Planning Commission adopted the required findings, certified the SEIR, and granted the requested Project approvals. On April 23, 2018, appeals were filed by the Center for Biological Diversity, the Santa Monica Mountains Conservancy, and the Golden State Environmental Justice Alliance. A Second Errata dated August 2018 was prepared to make minor technical corrections in the SEIR and to provide further information in response to public comments at the Planning Commission meeting.

On September 25, 2018, the Board held a public hearing on Northlake Phase 1 and the appeals and voted to reject the appeals, uphold the Planning Commission approvals, and certify the SEIR. On April 2, 2019, the Board adopted the Northlake Phase 1 entitlements, CEQA findings and Mitigation Monitoring and Reporting Program ("MMRP"), and Northlake Phase 1 conditions.

A Petition for Writ of Mandate was filed in May 2019, challenging Northlake Phase 1. The Los Angeles Superior Court's ruling in Center For Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al, Case No. 19STCP01610, dated January 11, 2021 ("Court Ruling"), granted in part and denied in part the Petition for Writ of Mandate. Specifically, the Court Ruling held that the SEIR for Northlake Phase 1 failed to comply with CEQA because it contained: (1) inadequate alternatives analysis (for failing to fully analyze a creek avoidance alternative); (2) inadequate Western Spadefoot Toad (WST) baseline assessment and, therefore, inadequate mitigation (to recreate baseline conditions; mitigation inadequate in detail and commitment); and (3) improper deferred mitigation as to rare plants (measure lacked sufficient detail).

The Court denied the Petition for Writ of Mandate regarding: (1) impacts to mountain lions/wildlife crossings, (2) aesthetics, (3) air quality/public health, (4) wildfire impacts, and (5) recirculation.

These findings incorporate by reference, as if fully set forth herein, the CEQA Supplemental Findings of Fact ("FOF") and Statement of Overriding Considerations ("SOC") regarding the RPFSEIR for Northlake Phase 1, which are attached hereto as Exhibit F. As stated in the FOF, the Partial Creek Avoidance Alternative ("PCAA") is the environmental superior alternative among the project alternatives summarized in the RPDSEIR. As identified in the RPDSEIR, after implementation of the MMRP, Northlake Phase 1 would not result in any new or substantially more severe significant impacts.

<u>Recirculated Partial Draft SEIR ("RPDSEIR")</u>

The LA County Department of Regional Planning ("LA County Planning") prepared a RPDSEIR. The document did not revise the original SEIR in any respect other than as directed by the Court (above) and was limited to a few portions of the SEIR. Pursuant to CEQA Guidelines Section 15088.5(c), the County only needed to recirculate the portions of the SEIR that were modified by the RPDSEIR. The County did not recirculate the other portions of the SEIR for public review and comment because those portions were not modified.

The RPDSEIR was made available for public review and comment pursuant to State CEQA Guidelines Section 15087. Copies of the RPDSEIR and appendices were available for a review period of 45 calendar days from April 14, 2025, to May 29, 2025. As CEQA Guidelines Section 15088.5, subdivision (f)(2) permits, the County requested that the scope of public comment be limited to the material that was addressed within the text of the revised portions and the appendices included in the RPDSEIR. The RPFSEIR was completed in June 2025.

The Recirculated Partial Final SEIR ("RPFSEIR") was completed in June 2025.

15. **AGENCY RECOMMENDATIONS.**

The Los Angeles County Subdivision Committee, consisting of LA County Planning and County Departments of Public Works ("Public Works"), Fire ("Fire"), Parks and Recreation ("Parks and Recreation"), and Public Health ("Public Health"): Recommended clearance to public hearing with conditions of the VTTM No. 073336 map dated August 20, 2025.

A. In a letter dated September 18, 2025, Public Works recommended that the Project proceed to public hearing with required conditions of approval.

B. In a letter dated September 23, 2025, Fire recommended that the Project proceed to public hearing with required conditions of approval.

C. In a letter dated September 24, 2025, Parks and Recreation recommended that the Project proceed to public hearing with required conditions of approval.

D. In a letter dated October 1, 2025, Public Health recommended that the Project proceed to public hearing with required conditions of approval.

16. **LEGAL NOTIFICATION.** Pursuant to Section 22.222.120 (Public Hearing Procedure) of the County Code, Staff properly notified the community of the public hearing. This included mailings, The Signal newspaper publication, and property posting. On December 11, 2025, Staff mailed a total of 362 Notices of Public Hearing out to all property owners as identified on the County Assessor's record within a 1,000-foot radius from the Project Site. This mailing also included 46 notices to those on the courtesy mailing list for the Castaic Canyon Zoned District and to any additional interested parties. Additionally, Staff posted the Northlake case materials and hearing notice on LA County Planning's website.

GENERAL PLAN CONSISTENCY FINDINGS

17. **LAND USE POLICY.** The Commission finds that Northlake Phase 1 is consistent with the goals and policies of the SP because the Single-Family, Multi-Family, General Commercial, Public Facilities, Recreation, and Open Space land use designations of the SP are being appropriately implemented as part of Northlake Phase 1. It complies with the maximum density of 2,295 dwelling units established by the SP. In addition, Northlake Phase 1 realizes a substantial amount of new housing units which are needed to address the State's housing crisis. Furthermore, Northlake Phase 1 will implement substantial open space in the forms of recreation (public parks) and preserves (undisturbed and disturbed open space).

18. **GOALS AND POLICIES. The Commission finds that Northlake Phase 1 is consistent with the following policies of the General Plan:**

- ***General Plan – Housing Element, Policy 3.1:*** *"Promote mixed-income neighborhoods and a diversity of housing types throughout the unincorporated Los Angeles County to increase housing choices for all economic segments of the population."*

  Northlake Phase 1 will include 2,295 new residential units with multiple housing types that will increase housing choices for varying economic segments of the population within the unincorporated County. There will be a total of 315 affordable units with a mix of rental and for-sale units.

- ***General Plan – Parks & Recreation, Policy P/R 4.3:*** *"Develop a network of feeder trails into regional trails."*

  A community trail system would connect Northlake Phase 1 to existing and planned trails in the vicinity and into regional trails. Within Northlake Phase 1, the proposed trail system would include community trails and recreational trails that would be linked to the overall SP trail system and the existing communities to the south. Bicycle facilities and bicycle route improvements in and around Northlake Phase 1 would connect to an extensive system of continuous bike paths within Northlake Phase 1 and to other communities outside Northlake Phase 1, consistent with the County's Bicycle Master Plan.

- ***General Plan – Economic Development, Policy ED 2.5:*** *"Encourage employment opportunities to be located in proximity to housing."*

  Northlake Phase 1 includes 70,875 sf of non-residential (commercial/office/retail) space in the southerly portion of the site, in close proximity to the proposed 2,295 new residential units as well as existing destinations further south, such as the aforementioned elementary school and senior retirement community. This

supports and encourages employment opportunities and more accessible proximity to these destinations.

- ***General Plan – Land Use, Policy LU 5.2:*** *"Encourage a diversity of commercial and retail services, and public facilities at various scales to meet regional and local needs."*

  Northlake Phase 1 will result in 70,875 sf of onsite commercial, retail, and office development that will provide local residents with increased access to commercial and retail services, as well as public facilities such as parks, schools, and a fire station within and proximate to Northlake Phase 1. Therefore, it supports a diversity of commercial and retail services, and public facilities, that help meet regional and local needs.

- ***General Plan – Land Use, Policy LU 5.3:*** *"Support a mix of land uses that promote bicycling and walking, and reduce VMT."*

  Northlake Phase 1 provides ample and convenient opportunities for bicycling and walking, due to an extensive trail and sidewalk/walkway system that connects to many destinations within and outside of Northlake Phase 1. This encourages more bicycling and walking, not only reducing VMT but also improving health.

The Commission also finds that the Project is consistent with the following policies of the Area Plan:

- ***Area Plan - Land Use, Policy LU-1.1.3:*** *Discourage urban sprawl into rural areas by limiting non-contiguous, "leap-frog" development outside of areas designated for urban use.*

The Northlake SP, adopted in 1992, has long been planned for residential and commercial development under the SP and is designated for residential and commercial uses. Northlake Phase 1 will be developed adjacent to existing communities, avoiding leapfrog development and unnecessary extension of infrastructure. The development proposed is consistent with the Area Plan, which accounts for the long-term planned development of the area in an orderly manner.

- ***Area Plan – Land Use, Policy LU-1.1.4:*** *Preserve community character by maintaining natural features that act as natural boundaries between developed areas, including significant ridgelines, canyons, rivers and drainage courses, riparian areas, topographical features, habitat preserves, or other similar features, where appropriate.*

The area of natural open space within the SP has been significantly increased from 476 acres to 783 acres compared to the original SP natural open space allotment. Much of

the open space is natural and covers extensive steep slope areas that would be impractical to develop. This benefits wildlife and encourages enhancement of ecological, scenic, and cultural open space resources. Of the open space, the amount of undisturbed open space would be increased from 328 to 572 acres. Furthermore, the PCAA reduces the development footprint in the northerly portion of the site, increasing the amount of natural open space.

- ***Area Plan – Conservation and Open Space Element, Policy CO-10.1.5:*** *"Maintain open space corridors along canyons and ridgelines as a way of delineating and defining communities and neighborhoods, providing residents with access to natural areas, and preserving scenic beauty."*

The SP and part of Northlake Phase 1 utilizes the existing Grasshopper Creek area to define communities and neighborhoods by providing a linear park and multi-use trail along the creek. The park and trail link the northerly and southerly portions of the Northlake Phase 1, connecting northerly residences to the mixed-use areas in the south of the site. An equestrian staging area would also be provided in the south of the development for convenient access to the trails.

SUBDIVISION AND ZONING CODE CONSISTENCY FINDINGS

19. **PERMITTED USE IN ZONE.** The Commission finds that Northlake Phase 1 is consistent with the adopted SP land use designations, as attached and detached single-family units, apartment-style units, live-work units, commercial, recreation, and mixed residential-commercial uses are permitted in the SP in County Code Section 22.404.020 (Northlake Specific Plan). In particular, the mixed-use and senior affordable and senior market-rate units integrate a wide range of housing densities with community-serving commercial uses to serve local residents, employees, guests, and visitors. A total of 315 affordable housing units (95 senior affordable) would be provided as well as 345 market-rate senior-restricted units for a combined total of 660 affordable and senior units (209 ownership, 451 rental). The Commission finds that the development of Northlake Phase 1 is consistent with the SP that provides the appropriate land use designations mentioned above that are consistent with the adopted SP and the revised Guidebook implementing changes to Northlake Phase 1 pursuant to County Code Section 22.404.020 (Northlake Specific Plan).

20. **LOT AREA AND WIDTH.** The Commission finds that Northlake Phase 1 is consistent with the lot area and width standards identified in the Northlake SP and as modified in the revised Guidebook pursuant to County Code Section 22.404.020 (Northlake Specific Plan). Northlake Phase 1 consists only of multi-family, mixed-use, commercial, and live-work development. These uses do not have any required lot widths or sizes per the 2025 updated Land Use Plan of the revised Guidebook.

21. **MINIMUM FRONTAGE.** The Commission finds that Northlake Phase 1 is consistent with the standards identified in County Code Section 21.24.300 (Minimum Frontage), except where locations require a waiver of frontage and have provided a justification for the waiver pursuant to Section 21.24.040 (Modifications to Access and Frontage Requirements). A waiver of public street frontage is necessary to access to some lots by private drives instead of public streets, due to topographic conditions, drainage and biological constraints, and title limitations. Lots that require a waiver of frontage are Lots 131 through 140 (10 total).

22. **REQUIRED YARDS.** The Commission finds that Northlake Phase 1 is consistent with the required yard standards identified in the SP and as modified in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan).

23. **HEIGHT.** The Commission finds that Northlake Phase 1 is consistent with the building height standards identified in the SP and as modified in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan). Northlake Phase 1 consists only of multi-family, mixed-use, commercial, and live-work development. These uses have a maximum height of four stories (three when adjacent to streets) per the 2025 updated Land Use Plan in the revised Guidebook.

24. **DISTANCE BETWEEN BUILDINGS**. The Commission finds that Northlake Phase 1 is consistent with the required distance between buildings identified in the SP and as modified in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan).

25. **FENCES AND WALLS.** The Commission finds that Northlake Phase 1 is consistent with the fence and wall standards identified in the SP and as modified, if applicable, in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan).

26. **PARKING.** The Commission finds that Northlake Phase 1 is consistent with the standard identified in County Code Section 22.112.070 (Required Parking Spaces). It requires an overall total of 5,284 parking spaces. Northlake Phase 1 will provide a total of 5,670 parking spaces, including 4,167 residential parking spaces required and provided; 639 guest parking spaces required and 1,021 provided; 65 accessible spaces required and 69 provided; and 413 commercial spaces required and provided. Lastly, there are four Type A loading spaces distributed throughout the office, commercial, and mixed-use development areas.

27. **SIGNS.** No signs are currently proposed or included as part of Northlake Phase 1. Any signage on the property will require separate approvals from LA County Planning in accordance with the SP or modified standards, if applicable, of the revised Guidebook.

28. **GRADING.** The Commission finds that Northlake Phase 1 is consistent with the standard identified in County Code Section 22.140.240 (Grading Projects). The

Subdivider shall follow all applicable standards for On-Site grading to include a grading permit required for any grading project and a haul route for offsite grading, as provided in Title 26 (Building Code) of the County Code.

29. **CONDOMINIUM DEVELOPMENTS.** The Commission finds that Northlake Phase 1 is consistent with the standard identified in County Code Sections 21.16.015 (Building Location and Access Restrictions—Exhibit Map), 22.20.040 (Development Standards for Commercial Zones), and 22.22.060 (Development Standards for Industrial Zones). The Project meets the Exhibit Map requirements for the location and dimensions of all structures, buildings, yards, walls, fences, vehicle and bicycle parking and loading facilities; the vehicular, bicycle, and pedestrian access to the proposed structures, buildings, and parking and loading facilities; and the location and design of pedestrian roadway crossings (i.e., crosswalks).

30. **PLANNING AREA STANDARDS DISTRICT**. The Commission finds that Northlake Phase 1 is not subject to or located within any existing planning area standards district.

31. **COMMUNITY STANDARDS DISTRICT.** The Commission finds that Northlake Phase 1 is not subject to or located within any existing community standards district.

32. **RURAL OUTDOOR LIGHTING DISTRICT.** The Commission finds that Northlake Phase 1 is not located within a rural outdoor lighting district nor subject to the standards identified in County Code Chapter 22.80 (Rural Outdoor Lighting District).

33. **RESIDENTIAL DESIGN.** The Commission finds that Northlake Phase 1 is not subject to the standards identified in County Code Section 22.140.520 (Residential Design Standards, "RDSO"). The SP was adopted in 1992, prior to the effective date of the RDSO. The revised Guidebook provides the current residential design standards.

34. **TREE PLANTING.** The Commission finds that the Northlake Phase 1 is not subject to the tree planting standards identified in County Code Section 21.32.195 (On-Site Trees) and Chapter 22.126 (Tree Planting Requirements). The SP was adopted in 1992, prior to the effective date of the above requirements. However, Northlake Phase 1 is proposing a substantial amount of trees, a total of 6,876, to include 2,333 street trees, 2,593 residential (single and multi-family) development lot trees, and 1,950 trees to be provided in dedicated parks and recreation spaces.

35. **IMPROVEMENTS.** The Commission finds that Northlake Phase 1 is consistent with the standards identified in County Code Section 21.32.010 (Requirements Generally). The Subdivider shall improve, or agree to improve, all land dedicated or to be dedicated on a final map, or by separate instrument, for roads and easements, and all private roads and private easements laid out on a final map, with those improvements, including sanitary sewers, needed for the general use of the lot owners in the division of land and for neighborhood traffic and drainage.

36. **INCLUSIONARY HOUSING.** The Commission finds that Northlake Phase 1 is not subject to the IHO. The Northlake SP was adopted in 1992, prior to the effective date of the IHO. The related CUP filed provides a total of 315 rental affordable housing units (269 affordable and 46 senior-affordable) at the Very Low, Lower, and Moderate household income levels and which are required per the original 2019 Board approval. Accordingly, Northlake Phase 1 is not subject to the IHO because it is subject to an affordable housing requirement pursuant to an adopted specific plan (see County Code Section 22.121.030.A.3 – Applicability).

37. **AFFORDABLE HOUSING REPLACEMENT.** The Commission finds that Northlake Phase 1 is not subject to rental replacement units because there are no existing rental units on the subject property (nor are there any units proposed for demolition). Furthermore, the Project is exempt due to the existing VHFHSZ located on the Project Site pursuant to County Code Section 22.119.040.F (Exemptions).

CUP FINDINGS

38. **The Commission finds that the proposed use at the Northlake Property will not adversely affect the health, peace, comfort, or welfare of persons residing or working in the surrounding area; will not be materially detrimental to the use, enjoyment, or valuation of property of other persons located in the vicinity of the Northlake Property; and will not jeopardize, endanger, or otherwise constitute a menace to the public health, safety, or general welfare.**

A. Northlake Phase 1 is consistent with the adopted General Plan/Area Plan for the area as well as the adopted SP. Specifically, the proposed Northlake Phase 1 is consistent with the land use designations and development standards of the SP, and may be revised or modified through the Design Guidebook. Northlake Phase 1 is adequate in size and shape to accommodate the yards, walls, fences, parking, and other development features prescribed in the Northlake SP or as otherwise required in the Design Guidebook.

The SP goals, objectives, and policies supersede those outlined both in the General Plan and in the Area Plan. The SP establishes the type, location, intensity, and character of development within the planning area as well as the required infrastructure to support the development for which the proposed Project is consistent.

Northlake Phase 1 is consistent with the goals and policies of the General Plan, Area Plan and the adopted SP. Specifically, the Area Plan was adopted in 2012 and serves as an extension of the General Plan to reflect local needs. The Area Plan guides the regulation of development within the unincorporated portions of the Santa Clarita Valley by providing focused goals, policies, and maps for the area. The SP is incorporated into the Area Plan as an adopted Specific Plan; therefore, the Area Plan accounts for development of the SP as part of its Land Use Plan. As noted in the Land

Use Element of the Area Plan, Northlake Phase 1 is to be developed according to the SP and the related Design Guidebook.

The SP, adopted in June 1992, establishes comprehensive guidance and regulations for development of the 1,330 acres of the SP area. The SP provides for a total of 3,150 dwelling units, including single-family, multi-family, mixed-use, and live-work dwelling units. The SP also provides for a total of 13.2 acres of commercial use, 50.1 acres of industrial use, 643.3 acres of recreation/open space as well as schools, parks, and other facilities.

Proposed Project features and measures, such as affordable housing set aside, senior affordable housing, mixed-use and live-work development, enhanced wildlife linkages, and enhanced community transit systems are consistent with the Specific Plan as well as consistent with the goals, objectives and policies of the General Plan and Area Plan.

B. A CUP is being requested for proposed grading of approximately 19.3 million cy of cut and 17.8 mcy of fill for a clustered development. Due to shrinkage, it will be balanced on site. Included in this grading is approximately 50,000 cy of dirt for construction of the northerly off-site tanks and access road. The conceptual grading footprint was previously reviewed and approved as part of the SP.

Clustered development allowed by the SP will promote reduced-size lots in close proximity to each other to reduce grading footprints, with landscaped buffer areas set between each of the clustered development areas.

The requested uses on Northlake Phase 1 including residential, commercial, parks and open space, will not adversely affect the health, peace, comfort, or welfare of the persons residing or working in the surrounding area nor will the requested uses be materially detrimental to the use, enjoyment, or valuation of other persons located in the vicinity of Northlake Phase 1 or jeopardize, endanger, or otherwise constitute a menace to the public health, safety and general welfare as the surrounding land uses within a 500-foot radius are primarily comprised of vacant land, some single family residences and the I-5.

39. **The Commission finds that the Northlake Property is adequate in size and shape to accommodate the yards, walls, fences, parking and loading facilities, landscaping and other development features prescribed in Title 22, or as is otherwise required under the Northlake SP, in order to integrate said use with the uses in the surrounding area.** The development proposes up to 2,295 units with 719.8 acres. The development as proposed with this application, including the clustered development design, will meet all current planning and zoning requirements upon approval of this CUP request. The Northlake Phase 1 Site is adequate in size and shape to accommodate the yards, walls, fences, parking, and other development features prescribed in the Northlake SP or as otherwise required in Title 22 (Planning and Zoning) of the County Code.

40. **The Commission finds that the Northlake Property is adequately served by highways or streets of sufficient width and improved as necessary to carry the kind and quantity of traffic such use would generate, and by other public or private service facilities as are required.** Northlake Phase 1 will be served by Ridge Route Road, a Major Highway on the County Master Plan of Highways. The infrastructure proposed with the clustered development will include grading, street, and traffic improvements to serve the development and the related increase in traffic. Mitigation requirements to offset project related grading, street, and traffic impacts will be determined during the phase-specific traffic analysis. Thus, Northlake Phase 1 is adequately served by highways and streets of sufficient width and will be improved as necessary to carry the kind and quantity of traffic such use would generate, and by other public and private service facilities as required.

SUPPLEMENTAL CUP FINDINGS (GRADING, WALLS AND FENCES)

41. **The Commission finds that the proposed use at the Northlake Property will not adversely affect the health, peace, comfort, or welfare of persons residing or working in the surrounding area; will not be materially detrimental to the use, enjoyment, or valuation of property of other persons located in the vicinity of the Northlake Property; and will not jeopardize, endanger, or otherwise constitute a menace to the public health, safety, or general welfare.** A CUP is being requested for proposed grading of approximately 17.2 million cubic yards of cut and 15.8 million cubic yards of fill. Due to shrinkage, it will balance on site. Included in this grading is approximately 80,000 cubic yards of dirt for construction of the northerly off-site tanks and access road. The grading footprint was previously reviewed and approved as part of the SP. All grading will balance on-site; no import or export is proposed.

42. **That the proposed site is adequate in size and shape to accommodate the yards, walls, fences, parking and loading facilities, landscaping and other development features prescribed in this Title 22, or as is otherwise required in order to integrate said use with the uses in the surrounding area.** Northlake Phase 1 proposes up to 2,295 units on 719.8 acres. Northlake Phase 1 as proposed with this application will meet all current planning and zoning requirements upon approval of this CUP request. All walls in excess of six feet are shown on the tentative map. These walls, six feet and above are proposed due to topographic constraints needed to achieve pad and street grades. In addition, there are two tank site locations. The water tanks proposed are at higher elevations to serve the community and maintain the fire protection zone.

SUPPLEMENTAL FINDINGS (VHFHSZ)

43. **The Commission finds that the design, location of, and access to each lot of the subdivision, and the subdivision as a whole, subject to the Northlake Project Permit conditions, are consistent with applicable regulations adopted by the State Board of Forestry and Fire Protection, pursuant to sections 4290 and 4291 of the Public Resources Code.** The Commission further finds that Northlake Phase 1 is located within a VHFHSZ and SRA. As such, the Permittee is required to comply with applicable fire and building codes meant to create a wildfire-resistant development,

including the implementation of defensible space, fire-ignition construction and building materials, and home/structure hardening. Furthermore, the Commission finds that a conceptual fuel modification plan was reviewed and approved by Fire's Fuel Modification Division prior to approval of the related VTTM. The Commission also finds that final fuel modification plans will require approval from Fire prior to the issuance of building permits. The Commission further finds that upon occupancy, the Fire Forestry Division will conduct random annual inspections for compliance with brush clearance regulations per the County's Fire Code. In addition, the Commission finds that Northlake Phase 1 would provide emergency vehicle access in addition to the private driveway and fire lanes within the development. As such, it would ensure that land uses have adequate setbacks, fuel modification areas, and emergency access routes. Finally, the Commission finds that this is supported by the SEIR, including evacuation plans and a fuel modification plan, in the Administrative Record for the Northlake Project.

44. **The Commission finds that structural fire protection and suppression services will be available for the subdivision through Fire.** The Commission finds that the related VTTM No. 073336 and Exhibit Map dated August 20, 2025, and RPSEIR were reviewed and approved by Fire. The Commission further finds that the Permittee would pay the Fire Facility Fee, which constitutes full mitigation for development impacts associated with the need for additional fire protection services or facilities.

ENVIRONMENTAL FINDINGS

45. As stated above, these findings incorporate by reference, as if fully set forth herein, the FOF and SOC regarding the RPFSEIR for Northlake Phase 1, which are attached hereto as Exhibit F. As stated in the FOF, the PCAA is the environmental superior alternative among the project alternatives summarized in the RPDSEIR. As identified in the RPDSEIR, after implementation of the MMRP, Northlake Phase 1 would not result in any new or substantially more severe significant impacts compared to the original 2019 Northlake Phase 1.

46. The Commission finds that the Permittee is subject to payment of the California Department of Fish and Wildlife fees related to Northlake Phase 1's effect on wildlife resources pursuant to section 711.4 of the California Fish and Game Code.

ADMINISTRATIVE FINDINGS

47. **HOUSING ACCOUNTABILITY ACT**. The Commission finds that the Northlake Project is considered a housing development that is consistent with the General Plan and would not have a specific adverse impact upon public health or safety as described in the tentative map, and environmental findings.

48. **LOCATION OF DOCUMENTS.** The location of the documents and other materials constituting the record of proceedings upon which the Commission's decision is based in this matter is at LA County Planning, 13th Floor, Hall of Records, 320 West Temple Street, Los Angeles, California 90012. The custodian of such documents and materials shall be the Section Head of the Subdivisions Section, LA County Planning.

BASED ON THE FOREGOING, THE REGIONAL PLANNING COMMISSION FINDS AND CONCLUDES THAT:

A. The proposed use with the attached conditions will be consistent with the adopted General Plan.

B. The proposed use at Northlake Phase 1 will not adversely affect the health, peace, comfort or welfare of persons residing or working in the surrounding area, will not be materially detrimental to the use, enjoyment or valuation of property of other persons located in the vicinity of the site, and will not jeopardize, endanger or otherwise constitute a menace to the public health, safety or general welfare.

C. Northlake Phase 1 is adequate in size and shape to accommodate the yards, walls, fences, parking and loading facilities, landscaping and other development features prescribed in Title 22, or as is otherwise required in order to integrate said use with the uses in the surrounding area.

D. Northlake Phase 1 is adequately served by highways or streets of sufficient width and improved as necessary to carry the kind and quantity of traffic such use would generate, and by other public or private service facilities as are required.

E. Northlake Phase 1 is consistent with providing a broad range of housing, commercial, recreational/open space, and public facility uses as delineated in the SP.

F. Northlake Phase 1 is consistent with providing 315 affordable units out of the 2,295 total units (or 13.7 percent of the overall units) which enhance the SP and represents a reasonable range of affordable, senior affordable, and mixed-use affordable units.

G. Northlake Phase 1 is compatible with or enhances community character and provides open space as required. The Commission finds that the development is compatible with the surrounding community.

H. Northlake Phase 1 is in substantial compliance with the SP and revised Design Guidebook.

THEREFORE, THE REGIONAL PLANNING COMMISSION:

1. Certifies the RPFSEIR for the Northlake Project by finding, pursuant to State and County CEQA Guidelines, that it was completed in compliance with CEQA, presented, reviewed and considered by the Commission prior to approving the Northlake Project, and reflects the independent judgment and analysis of the Commission.

2. Adopts the Supplemental Findings of Fact prepared pursuant to Public Resources Code Sections 21081 and 21081.5 and State CEQA Guidelines Section 15091.

3. Adopts the MMRP for the Northlake Project by finding that it is adequately designed to ensure compliance with the mitigation measures during the Northlake Project implementation.

4. Determines that the Northlake Project's significant and unavoidable impacts are outweighed by specifical social, economic, legal, technological, or other considerations by adopting the Statement of Overriding Considerations prepared pursuant to Public Resources Code Section 21081(b) and State CEQA Guidelines Section 15093.

5. Approves **CONDITIONAL USE PERMIT NO. RPPL2023004316**, subject to the attached conditions.

ACTION DATE: January 28, 2026

DD:SMT:JSH:EGA:JDS
10/30/2025

c: Each Commissioner

6274854.1

LOS ANGELES COUNTY
DEPARTMENT OF REGIONAL PLANNING
DRAFT FINDINGS OF THE REGIONAL PLANNING COMMISSION
AND ORDER
PROJECT NO. R2015-00408 ("Northlake")

VESTING TENTATIVE PARCEL MAP ("VTPM") NO. 073335 (RPPL2023004448)

RECITALS

1. **HEARING DATE.** The Los Angeles County ("County") Regional Planning Commission ("Commission") conducted a duly-noticed public hearing on January 28, 2026, in the matter of Project No. R2015-00408, consisting of VTPM No. 073335 and related entitlements Vesting Tentative Tract Map ("VTTM") No. PM073335 (RPPL2023004448), Conditional Use Permit ("CUP") No. 201500019 (RPPL2023004316), and Environmental Assessment No. 201500030 [(RPPL2023004887) (State Clearinghouse No. 2015031080)], referred to collectively as the "Northlake Parcel Map".

2. **HEARING PROCEEDINGS.** *Reserved.*

3. **ENTITLEMENT REQUESTED.** The subdivider, Northlake Associates LLC ("Subdivider") requests VTPM No. 073335 to create 21 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only.

4. **RELATED ENTITLEMENT.** VTTM No. 073336 is a related request to create a total of 386 lots and 2,295 dwelling units on 720 gross acres. This includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); one highway commercial lot (2.5 acres), 39 open space lots, 11 park lots, 13 debris basin lots, two water tank lots, one water quality basin lot, one pump station lot, and one fire station lot (1.4 acre building pad). Of the total 2,295 dwelling units in Northlake Phase 1, 1,777 units are proposed to be for-sale and 518 units expected for rental. This is pursuant to County Code Chapters 21.38 (Vesting Tentative Map) and 21.40 (Tentative Maps).

5. **RELATED ENTITLEMENT.** CUP No. RPPL2023004316 is a related request to authorize the Northlake Specific Plan ("SP") Site Plan Review procedure for development of 2,295 residential dwelling units; affordable set-aside housing and affordable senior set-aside housing; mixed-use and live-work development; onsite and offsite grading in excess of 100,000 cubic yards ("cy"): 17.16 million cy of cut, 15.84 million cy of fill, and 1.32 million cy of shrinkage balanced onsite, as well as 3.22 million

cy of grading offsite, for an overall total of 37.54 million cy, pursuant to County Code Section 22.140.240 (Grading Projects); walls exceeding six feet in height; and construction of two water tanks with associated grading and infrastructure. As part of the proposed Northlake Phase 1, offsite improvements would include connection to existing utilities, relocation of existing utility lines, new drainage facilities, and other related infrastructure outside the boundaries of Northlake Phase 1.

6. **PREVIOUS ENTITLEMENTS.** Northlake Specific Plan No. 87172-(5), Sub-Plan Amendment No. 87172-(5), Zone Change No. 87172-(5), CUP No. 87172-(5), and Development Agreement ("DA") No. 87172-(5) authorized the SP and was approved in 1992. It authorized a maximum of 3,150 dwelling units on 1,330 acres of land, to include single-family and multi-family residences, schools, parks, and a fire station. The DA was not used and expired in 2003. Specific Plan Amendment No. 98047, DA No. 98047, CUP No. 98047, VTTM No. 51582, and CUP No. 2004-00015 were filed in 1998 and were withdrawn in 2007. The CUP included grading and the SP site plan review procedure. Also included in prior entitlements are the 2015 requests for the VTTM, VTPM, and CUP, which were approved in 2019 and subsequently litigated.

7. **ENTITLEMENTS REQUESTOR**. Unless otherwise apparent from the context, "Subdivider" shall include the Subdivider, successor in interest, owner of the property, and any other person, corporation, or other entity making use of this grant.

8. **COMMISSION APPROVAL.** The approval of VTPM No. 073335 and related entitlements VTTM and CUP will not become effective unless and until the Commission certifies the Recirculated Partial Final Supplemental Environmental Impact Report ("RPFSEIR") and approves the Northlake Parcel Map, and both have become effective.

9. **VESTING DATE.** Pursuant to Government Code Section 65866, the County and Subdivider agreed to a vesting date of March 17, 2015 pursuant to LA County Code Section 21.38 (Vesting Maps). Accordingly, Northlake Phase 1 is generally subject to the applicable rules, regulations, and official policies that were in effect as of March 17, 2015.

10. **LOCATION.** The Northlake Parcel Map site is located north of Lake Hughes Road and Ridge Route Road, east of Interstate 5 Freeway and west of Castaic Lake and Lagoon in the unincorporated community of Castaic. The Project Site is also located within a designated Very High Fire Hazard Severity Zone ("VHFHSZ") and State Responsibility Area ("SRA").

11. **LAND USE DESIGNATION.** The Northlake Parcel Map is located within the adopted SP, a component of the General Plan.

12. **ZONING.** The Northlake Parcel Map is located in the Castaic Canyon Zoned District within the Santa Clarita Valley Planning Area and is currently zoned SP.

LOCATION	SANTA CLARITA VALLEY AREA	ZONING	EXISTING USES

	PLAN LAND USE POLICY		
SUBJECT PROPERTY	SP (Specific Plan)	SP	Vacant Land
NORTH	RL5 (Rural Land 5 – One Dwelling Per 5 Acres), BLM (Bureau of Land Management)	A-2-2 (Light Agricultural – Two-Acre Minimum Lot Size)	Vacant Land
EAST	BLM, RL10 (Rural Land 10 – One Dwelling Per 10 Acres), OS-PR (Open Space – Parks and Recreation), RL5, IL (Light Industrial)	A-2-2, M-1-DP (Light Manufacturing – Development Program), M-2-DP (Heavy Manufacturing – Development Program), RPD-5000-2.9DU (Residential Planned Development – 5000 Square Foot Lot Size – 2.9 Dwellings Per Acre), OS (Open Space)	Vacant Land, Elementary School, Single-Family Residences, Shopping Center
SOUTH	H2 (Large Lot Residential – 0-2 Dwellings Per Acre), IL, H18 (Medium Density Residential – 9-18 Dwellings Per Acre), CM (Major Commercial)	R-1 (Single-Family Residence), C-3 (Major Commercial), M-1 (Light Manufacturing)	Vacant Land, Shopping Center, Single-Family Residences, Senior Residences
WEST	RL5, RL1 (Rural Land 1 – One Dwelling Per Acre), IL, OS-C (Open Space Conservation)	A-2-2, A-2-1 (Light Agricultural – One-Acre Minimum Lot Size), M-1, M-1-DP, OS	Vacant Land, Single-Family Residences, Water Tank, Warehousing

13. **PROJECT AND SITE PLAN DESCRIPTION.**

A. Existing Site Conditions

The SP site consists of approximately 1,330 acres located north of Lake Hughes Road and Ridge Route Road, east of I-5 Freeway and west of Castaic Lake and Lagoon in the unincorporated community of Castaic. The site is comprised of vacant land, with adjacent infrastructure such as transmission towers (via utility easement through the property) and a water tank to the west, just outside of the Northlake boundary. The Northlake Parcel Map convers 1,307.4 acres of the SP area.

The property exhibits a wide range of topographic relief, with gently-rolling hills, extremely steep slopes, and a major drainage course (Grasshopper Creek) running north-south down the middle of the Northlake Parcel Map. The property is not located within and does not contain any portion of a Significant Ecological Area

("SEA").

B. Site Access
The Northlake Parcel Map is accessible via Ridge Route Road, a Limited Secondary Highway with 64 to 80 feet of width that transitions into a 80 to 90 foot-wide Secondary Highway on the County Master Plan of Highways. Primary access to the site will be via an entrance/exit on Ridge Route Road. Secondary access to the property will be via Northlake Boulevard, a Local Collector with 64 to 80 feet of width that transitions into an 80 to 86-foot-wide Modified Industrial Collector. The Project provides a five-foot wide or greater walkway along private and future streets throughout the property, with publicly-accessible walkways of similar widths along private drives/fire lanes providing direct access to all units.

C. Tentative Map and Exhibit Map
The VTPM No. 073335 map dated August 20, 2025, requests to create 21 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only. Parcels range from 40 to 93 acres in size.

D. Grading
The grading amounts include 17.16 million cy of cut and 15.84 million cy of fill with 1.32 million cy of shrinkage to be balanced onsite, as well as 3.22 million cy of grading offsite, for a combined grading amount of 37.54 million cy.

14. **CEQA DETERMINATION.**

Supplemental Environmental Impact Report ("SEIR")
The Northlake SP Draft Supplemental EIR ("DSEIR") was released on May 2, 2017, and circulated for a 45-day public review and comment period ending on June 15, 2017. Following the close of the public comment period on the DSEIR on June 15, 2017, detailed responses to all public agency comments and comments received from members of the general public received regarding the Project and the analyses of the DSEIR were prepared and are contained in the Final SEIR ("FSEIR").

An Errata was released in February 2018, prior to the LA County Regional Planning Commission ("Planning Commission") hearing to make minor technical corrections to the SEIR and to provide further information in response to public comments received prior to the Planning Commission meeting. The Errata included only minor technical changes to the SEIR and additional information to support the SEIR's conclusions, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. At the February 21, 2018, public hearing, the Planning Commission requested that the Applicant include an affordable housing component in the Project. Based on this request, the Applicant made minor revisions to the Project analyzed in the SEIR to include an affordable component. An Errata dated April 4, 2018, was prepared which concluded that the revisions involve only minor changes to the distribution of land uses and an overall reduction in density and intensity or use, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. On April 18, 2018, the Planning Commission adopted the required findings, certified the SEIR, and granted the requested Project approvals. On April 23,

2018, appeals were filed by the Center for Biological Diversity, the Santa Monica Mountains Conservancy, and the Golden State Environmental Justice Alliance. A Second Errata dated August 2018 was prepared to make minor technical corrections in the SEIR and to provide further information in response to public comments at the Planning Commission meeting.

On September 25, 2018, the LA County Board of Supervisors ("Board") held a public hearing on the Project and the appeals and voted to reject the appeals, uphold the Planning Commission's approvals, and certify the SEIR. On April 2, 2019, the Board adopted the Project entitlements, CEQA findings and Mitigation Monitoring and Reporting Program ("MMRP"), and Project conditions.

A Petition for Writ of Mandate was filed in May 2019 challenging the Project. The Los Angeles Superior Court's ruling in Center For Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al, Case No. 19STCP01610, dated January 11, 2021 (Court Ruling), granted in part and denied in part the Petition for Writ of Mandate. Specifically, the Court Ruling held that the SEIR for Northlake failed to comply with CEQA because it contained: (1) inadequate alternatives analysis (for failing to fully analyze a creek avoidance alternative); (2) inadequate Western Spadefoot Toad (WST) baseline assessment and, therefore, inadequate mitigation (to recreate baseline conditions; mitigation inadequate in detail and commitment); and (3) improper deferred mitigation as to rare plants (measure lacked sufficient detail).

The Court denied the Petition for Writ of Mandate regarding: (1) impacts to mountain lions/wildlife crossings, (2) aesthetics, (3) air quality/public health, (4) wildfire impacts, and (5) recirculation.

Recirculated Partial Draft SEIR ("RPDSEIR")
The LA County Department of Regional Planning ("LA County Planning") prepared a RPDSEIR. The document did not revise the original SEIR in any respect other than as directed by the Court (above) and was limited to a few portions of the SEIR. Pursuant to CEQA Guidelines Section 15088.5(c), the County only needed to recirculate the portions of the SEIR that were modified by the RPDSEIR. The County did not recirculate the other portions of the SEIR for public review and comment because those portions were not modified.

The RPDSEIR was made available for public review and comment pursuant to State CEQA Guidelines Section 15087. Copies of the RPDSEIR and appendices were available for a review period of 45 calendar days from April 14, 2025 to May 29, 2025. As CEQA Guidelines Section 15088.5, subdivision (f)(2) permits, the County requested that the scope of public comment be limited to the material that was addressed within the text of the revised portions and the appendices included in the RPDSEIR.

The Recirculated Partial Final SEIR ("RPFSEIR") was completed in June 2025.

These findings incorporate by reference, as if fully set forth herein, the CEQA Supplemental Findings of Fact ("FOF") and Statement of Overriding Considerations

("SOC") regarding the RPFSEIR for the Northlake Parcel Map, which are attached hereto as Exhibit F. As stated in the FOF, the Partial Creek Avoidance Alternative ("PCAA") is the environmental superior alternative among the project alternatives summarized in the RPDSEIR. As identified in the RPDSEIR, after implementation of the MMRP, the Northlake Parcel Map would not result in any new or substantially more severe significant impacts.

15. **AGENCY RECOMMENDATIONS.**

The Los Angeles County Subdivision Committee, consisting of LA County Planning and County Departments of Public Works ("Public Works"), Fire ("Fire"), Parks and Recreation ("Parks and Recreation"), and Public Health ("Public Health"): Recommended clearance to public hearing with conditions of the VTTM No. 073336 map dated August 20, 2025.

A. In a letter dated April 9, 2024, Public Works recommended that the Project proceed to public hearing with required conditions of approval.

B. In a letter dated April 4, 2024, Fire recommended that the Project proceed to public hearing with required conditions of approval.

C. In a letter dated March 22, 2024, Parks and Recreation recommended that the Project proceed to public hearing with required conditions of approval.

D. In a letter dated April 4, 2024, Public Health recommended that the Project proceed to public hearing with required conditions of approval.

16. **LEGAL NOTIFICATION.** Pursuant to Sections 21.16.060 (Public Hearings), 21.16.070 (Notice of Public Hearing) and 21.16.075 (Posting) of the County Code, Staff properly notified the community of the public hearing. This included mailings, The Signal newspaper publication, and property posting. On December 11, 2025, Staff mailed a total of 362 Notices of Public Hearing out to all property owners as identified on the County Assessor's record within a 1,000-foot radius from the Project Site. This mailing also included 46 notices to those on the courtesy mailing list for the Castaic Canyon Zoned District and to any additional interested parties. Additionally, Staff posted the Northlake case materials and hearing notice on LA County Planning's website.

GENERAL PLAN CONSISTENCY FINDINGS

17. **LAND USE POLICY.** The Commission finds that the Project is consistent with the goals and policies of the SP, as the Northlake Parcel Map is for lease and financing only, and no development is proposed.

18. **GOALS AND POLICIES. The Commission finds that the Project is consistent with the following policies of the General Plan:**

- ***General Plan – Housing Element, Policy 3.1:*** *"Promote mixed-income neighborhoods and a diversity of housing types throughout unincorporated Los Angeles County to increase housing choices for all economic segments of the population."*

  Northlake Phase 1 will include 2,295 new residential units with multiple housing types that will increase housing choices for varying economic segments of the population within the unincorporated County. There will be a total of 315 affordable units with a mix of rental and for-sale units.

- ***General Plan – Parks & Recreation, Policy P/R 4.3:*** *"Develop a network of feeder trails into regional trails."*

  A community trail system would connect Northlake Phase 1 to existing and planned trails in the vicinity and into regional trails. Within Northlake Phase 1, the proposed trail system would include community trails and recreational trails that would be linked to the overall SP trail system and the existing communities to the south. Bicycle facilities and bicycle route improvements in and around Northlake Phase 1 would connect to an extensive system of continuous bike paths within Northlake Phase 1 and to other communities outside Northlake Phase 1, consistent with the County's Bicycle Master Plan.

- ***General Plan – Economic Development, Policy ED 2.5:*** *"Encourage employment opportunities to be located in proximity to housing."*

  Northlake Phase 1 includes 70,875 sf of non-residential (commercial/office/retail) space in the southerly portion of the site, in close proximity to the proposed 2,295 new residential units as well as existing destinations further south, such as the aforementioned elementary school and senior retirement community. This supports and encourages employment opportunities and more accessible proximity to these destinations.

- ***General Plan – Land Use, Policy LU 5.2:*** *"Encourage a diversity of commercial and retail services, and public facilities at various scales to meet regional and local needs."*

  Northlake Phase 1 will result in 70,875 sf of onsite commercial, retail, and office development that will provide local residents with increased access to commercial and retail services, as well as public facilities such as parks, schools, and a fire station within and proximate to Northlake Phase 1. Therefore, it supports a diversity of commercial and retail services, and public facilities, that help meet regional and local needs.

- ***General Plan – Land Use, Policy LU 5.3:*** *"Support a mix of land uses that promote bicycling and walking, and reduce VMT."*

  Northlake Phase 1 provides ample and convenient opportunities for bicycling and walking, due to an extensive trail and sidewalk/walkway system that connects to many destinations within and outside of Northlake Phase 1. This encourages more bicycling and walking, not only reducing VMT but also improving health.

The Commission also finds that the Project is consistent with the following policies of the Area Plan:

- ***Area Plan - Land Use, Policy LU-1.1.3:*** *Discourage urban sprawl into rural areas by limiting non-contiguous, "leap-frog" development outside of areas designated for urban use.*

The Northlake SP, adopted in 1992, has long been planned for residential and commercial development under the SP and is designated for residential and commercial uses. Northlake Phase 1 will be developed adjacent to existing communities, avoiding leapfrog development and unnecessary extension of infrastructure. The development proposed is consistent with the Area Plan, which accounts for the long-term planned development of the area in an orderly manner.

- ***Area Plan – Land Use, Policy LU-1.1.4:*** *Preserve community character by maintaining natural features that act as natural boundaries between developed areas, including significant ridgelines, canyons, rivers and drainage courses, riparian areas, topographical features, habitat preserves, or other similar features, where appropriate.*

The area of natural open space within the SP has been significantly increased from 476 acres to 783 acres compared to the original SP natural open space allotment. Much of the open space is natural and covers extensive steep slope areas that would be impractical to develop. This benefits wildlife and encourages enhancement of ecological, scenic, and cultural open space resources. Of the open space, the amount of undisturbed open space would be increased from 328 to 572 acres. Furthermore, the PCAA reduces the development footprint in the northerly portion of the site, increasing the amount of natural open space.

- ***Area Plan – Conservation and Open Space Element, Policy CO-10.1.5:*** *"Maintain open space corridors along canyons and ridgelines as a way of delineating and defining communities and neighborhoods, providing residents with access to natural areas, and preserving scenic beauty."*

The SP and part of Northlake Phase 1 utilizes the existing Grasshopper Creek area to define communities and neighborhoods by providing a linear park and multi-use trail

along the creek. The park and trail link the northerly and southerly portions of the Northlake Phase 1, connecting northerly residences to the mixed-use areas in the south of the site. An equestrian staging area would also be provided in the south of the development for convenient access to the trails.

SUBDIVISION AND ZONING CODE CONSISTENCY FINDINGS

19. **LOT AREA.** The Commission finds that the Northlake Parcel Map requires lot sizes of 20 acres or more, as provided in Section 21.32.040 (Lot sizes in excess of 10 acres—Requirements). Each parcel resulting from a division of land has a minimum gross area of 20 acres or is one-half part of a quarter-quarter section resulting from the normal division of an undersized section of land, and no improvements shall be required.

20. **MINIMUM FRONTAGE.** The Commission finds that the Northlake Parcel Map is consistent with the standards identified in County Code Section 21.24.300 (Minimum Frontage), except where locations require a waiver of frontage and have provided a justification for the waiver pursuant to Section 21.24.040 (Modifications to Access and Frontage Requirements). Lots subject to waiver include the following: Lots 131-140 (10 total).

TENTATIVE PARCEL MAP FINDINGS

21. VTPM No. 073335 has been submitted as a Vesting Tentative Parcel Map. As such, it is subject to the provisions of Chapter 21.38 (Vesting Tentative Map) of the County Code.

22. **The Commission finds that the map is consistent with the goals and policies of the General Plan and has balanced the needs for housing against the public service needs of the residents and available fiscal and environmental resources.** The Northlake Parcel Map requires a minimum lot size of 20 acres and is for lease and financing only with no development proposed. The Northlake Parcel Map will help facilitate the sale and leasing of large-lot parcels for future development.

23. **The Commission finds that the design or improvement of the proposed subdivision is consistent with the goals and policies of the General Plan.** The Northlake Parcel Map requires a minimum lot size of 20 acres and is for lease and financing only with no development proposed. The Northlake Parcel Map will help facilitate the sale and leasing of large-lot parcels for future development.

24. **The Commission finds that the site is physically suitable for this type of development.** The Northlake Parcel Map requires a minimum lot size of 20 acres and is for lease and financing only with no development proposed. The Northlake Parcel Map will help facilitate the sale and leasing of large-lot parcels for future development.

25. **The Commission finds that the site is physically suitable for the proposed density of development.** The Northlake Parcel Map requires a minimum lot size of 20 acres

and is for lease and financing only with no development proposed. The Northlake Parcel Map will help facilitate the sale and leasing of large-lot parcels for future development.

26. **The Commission finds the design of the subdivision, or the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.** The design of the Northlake Parcel Map and/or its improvements are not likely to cause substantial environmental damage because it protects, preserves, and enhances onsite biological resources through large open space areas and does not include an SEA.

27. **The Commission finds that the design of the subdivision or type of improvements is not likely to cause serious public health problems.** The design of the subdivision or type of improvements are not likely to cause serious health problems as the Northlake Parcel Map provides sufficient space to accommodate 2,295 dwelling units and 70,850 sf of commercial area while maintaining ample open spaces that include a 130 acres of public-accessible park space.

28. **The Commission finds that the design or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of the property within the proposed subdivision.** The design of the subdivision or type of improvements will not conflict with any easements, as all applicable easements (existing or future) have been reviewed through the subdivision process and were not found to conflict.

29. **The Commission finds that the design of the subdivision provides, to the extent feasible, for future passive or natural heating or cooling opportunities in that the subdivision complies with California Code of Regulations, Title 24 ("Building Standards Code), County Code Title 26 (Building Code), and guarantees compliance with the Net Zero Greenhouse Gas ("GHG") Program including solar water heating for swimming pools and "cool roofs" specified under the Building Retrofit Program included in the MMRP.** The Project will be consistent with Title 24 and Title 26 standards and will be implemented with GHG best practices and measures throughout the development area.

30. **The Commission finds that the design or the type of improvements comply with County Code Chapter 16.44 (Electrical Transmission and Distribution Systems) by undergrounding utilities (conduits, cables, and other facilities) providing adequate service including telephone and internet services to each parcel.** The Project will construct adequate utilities to serve the additional residents, visitors, employees, and guests within the development area.

SUPPLEMENTAL FINDINGS (VHFHSZ)

31. **The Commission finds that the design, location of, and access to each lot of the subdivision, and the subdivision as a whole, subject to the Northlake Parcel Map Permit conditions, are consistent with applicable regulations adopted by the State Board of Forestry and Fire Protection, pursuant to sections 4290 and 4291**

of the Public Resources Code. The Commission further finds that the Northlake Parcel Map site is located within a VHFHSZ and SRA. As such, the Subdivider is required to comply with applicable fire and building codes meant to create a wildfire-resistant development, including the implementation of defensible space, fire-ignition construction and building materials, and home/structure hardening. Furthermore, the Commission finds that a conceptual fuel modification plan was reviewed and approved by Fire's Fuel Modification Division prior to approval of the VTTM. The Commission also finds that final fuel modification plans will require approval from Fire prior to the issuance of building permits. The Commission further finds that upon occupancy, the Fire Forestry Division will conduct random annual inspections for compliance with brush clearance regulations per the County's Fire Code. In addition, the Commission finds that the Northlake Parcel Map would provide emergency vehicle access in addition to the private driveway and fire lanes within the development. As such, the Northlake Parcel Map would ensure that land uses have adequate setbacks, fuel modification areas, and emergency access routes. Finally, the Commission finds that this is supported by the SEIR, including evacuation plans and a fuel modification plan, in the Administrative Record for the Northlake Parcel Map.

32. **The Commission finds that structural fire protection and suppression services will be available for the subdivision through Fire.** The Commission finds that VTPM No. 073335 dated August 20, 2025 and the RPSEIR were reviewed and approved by Fire. The Commission further finds that the subdivider would pay the Fire Facility Fee, which constitutes full mitigation for development impacts associated with the need for additional fire protection services or facilities.

ENVIRONMENTAL FINDINGS

33. As stated above, these findings incorporate by reference, as if fully set forth herein, the FOF and SOC regarding the RPFSEIR for the Northlake Parcel Map, which are attached hereto as Exhibit F. As stated in the FOF, the PCAA is the environmental superior alternative among the project alternatives summarized in the RPDSEIR. As identified in the RPDSEIR, after implementation of the MMRP, the Northlake Parcel Map would not result in any new or substantially more severe significant impacts.

34. The Commission finds that the Subdivider is subject to payment of the California Department of Fish and Wildlife fees related to the Project's effect on wildlife resources pursuant to section 711.4 of the California Fish and Game Code.

ADMINISTRATIVE FINDINGS

35. **HOUSING ACCOUNTABILITY ACT**. The Commission finds that the Northlake Parcel Map is considered a housing development that is consistent with the General Plan and would not have a specific adverse impact upon public health or safety as described in the tentative map, and environmental findings.

36. **LOCATION OF DOCUMENTS.** The location of the documents and other materials constituting the record of proceedings upon which the Commission's decision is based in this matter is at LA County Planning, 13th Floor, Hall of Records, 320 West Temple

Street, Los Angeles, California 90012. The custodian of such documents and materials shall be the Section Head of the Subdivisions Section, LA County Planning.

BASED ON THE FOREGOING, THE REGIONAL PLANNING COMMISSION FINDS AND CONCLUDES THAT:

37. The map is consistent with the goals and policies of the General Plan.

38. The design or improvement of the proposed subdivision is consistent with the goals and policies of the General Plan.

39. The Northlake Property is physically suitable for this type of development since the Project complies with all development standards of the Northlake SP Overlay which provides the appropriate land use designations for the Project.

40. The Northlake Property is physically suitable for the proposed density of development since the Project is consistent with all development standards of the Northlake SP Overlay which provides the appropriate land use densities for the Project.

41. The design of the subdivision or the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

42. The design of the subdivision or type of improvements is not likely to cause serious public health problems since sewage disposal, storm drainage, fire protection, and geologic and soils factors have been considered in the County's review of the Project.

43. The design or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of property within the proposed subdivision.

44. The design, location of, and access to each lot of the subdivision, and the subdivision as a whole, subject to the Northlake Parcel Map Permit conditions, are consistent with applicable regulations adopted by the State Board of Forestry and Fire Protection, pursuant to sections 4290 and 4291 of the Public Resources Code, and are supported by the 2019 SEIR and the current RPFSEIR, and the Administrative Record for this Project.

45. The structural fire protection and fire suppression services will be available for the subdivision through Fire.

THEREFORE, THE REGIONAL PLANNING COMMISSION:

1. Certifies that the RPFSEIR for the Northlake Parcel Map by finding, pursuant to State and County CEQA Guidelines, that it was completed in compliance with CEQA, presented, reviewed and considered by the Commission prior to approving the

Northlake Parcel Map, and reflects the independent judgment and analysis of the Commission.

2. Adopts the Supplemental Findings of Fact prepared pursuant to Public Resources Code Sections 21081 and 21081.5 and State CEQA Guidelines Section 15091.

3. Adopts the MMRP for the Northlake Parcel Map by finding that it is adequately designed to ensure compliance with the mitigation measures during the Northlake Parcel Map implementation.

4. Determines that the Northlake Parcel Map's significant and unavoidable impacts are outweighed by specifical social, economic, legal, technological, or other considerations by adopting the Statement of Overriding Considerations prepared pursuant to Public Resources Code Section 21081(b) and State CEQA Guidelines Section 15093.

5. Approves **VESTING TENTATIVE PARCEL MAP NO. 073335**, subject to the attached conditions.

ACTION DATE: January 28, 2026

DD:SMT:JSH:EGA:JDS
10/30/2025

c: Each Commissioner

6274854.1

LOS ANGELES COUNTY
DEPARTMENT OF REGIONAL PLANNING
DRAFT FINDINGS OF THE REGIONAL PLANNING COMMISSION
AND ORDER
PROJECT NO. R2015-00408

VESTING TENTATIVE TRACT MAP ("VTTM") NO. 073336 (RPPL2023004336)

RECITALS

1. **HEARING DATE.** The Los Angeles County ("County") Regional Planning Commission ("Commission") conducted a duly-noticed public hearing on January 28, 2026, in the matter of Project No. R2015-00408 ("Northlake"), consisting of VTTM No. 073336. VTTM No. 73336 were considered together with Vesting Tentative Parcel Map ("VTPM") No. 073335 (RPPL2023004448), Conditional Use Permit ("CUP") No. RPPL2023004316, and Environmental Assessment No. 201500030 [(RPPL2023004887) (State Clearinghouse No. 2015031080)]. These are referred to collectively as "Northlake Phase 1".

2. **HEARING PROCEEDINGS.** *Reserved.*

3. **ENTITLEMENTS REQUESTED.** Northlake Associates LLC ("Subdivider") requests VTTM No. 073336 to create a total of 386 lots and 2,295 dwelling units on 720 gross acres. This includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); one highway commercial lot (2.5 acres), 39 open space lots, 11 park lots, 13 debris basin lots, two water tank lots, one water quality basin lot, one pump station lot, and one fire station lot (1.4 acre building pad). Of the total 2,295 dwelling units in Northlake Phase 1, 1,777 units are proposed to be for-sale and 518 units expected for rental. This is pursuant to County Code Chapters 21.38 (Vesting Tentative Map) and 21.40 (Tentative Maps).

4. **RELATED ENTITLEMENT.** VTPM No. 073335 is a related request to create 21 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only.

5. **RELATED ENTITLEMENT.** CUP No. RPPL2023004316 is a related request to authorize the Northlake Specific Plan ("SP") Site Plan Review procedure for development of 2,295 residential dwelling units; affordable set-aside housing and affordable senior set-aside housing; mixed-use and live-work development; onsite and

offsite grading in excess of 100,000 cubic yards ("cy"): 17.16 million cy of cut,15.84 million cy of fill, and 1.32 million cy of shrinkage balanced onsite, as well as 3.22 million cy of grading offsite, for an overall total of 37.54 million cy, pursuant to County Code Section 22.140.240 (Grading Projects); walls exceeding six feet in height; and construction of two water tanks with associated grading and infrastructure. As part of the proposed Northlake Phase 1, offsite improvements would include connection to existing utilities, relocation of existing utility lines, new drainage facilities, and other related infrastructure outside the boundaries of Northlake Phase 1.

6. **PREVIOUS ENTITLEMENTS.** Northlake Specific Plan No. 87172-(5), Sub-Plan Amendment No. 87172-(5), Zone Change No. 87172-(5), CUP No. 87172-(5), and Development Agreement ("DA") No. 87172-(5) authorized the SP and was approved in 1992. It authorized a maximum of 3,150 dwelling units on 1,330 acres of land, to include single-family and multi-family residences, schools, parks, and a fire station. The DA was not used and expired in 2003. Specific Plan Amendment No. 98047, DA No. 98047, CUP No. 98047, VTTM No. 51582, and CUP No. 2004-00015 were filed in 1998 and were withdrawn in 2007. The CUP included grading and the SP site plan review procedure. Also included in prior entitlements are the 2015 requests for the VTTM, VTPM, and CUP, which were approved in 2019 and subsequently litigated.

7. **ENTITLEMENTS REQUESTOR**. Unless otherwise apparent from the context, "Subdivider" shall include the Subdivider, successor in interest, owner of the property, and any other person, corporation, or other entity making use of this grant.

8. **COMMISSION APPROVAL.** The approval of VTTM No. 073336 and related entitlements VTPM and CUP will not become effective unless and until the Commission certifies the Recirculated Partial Final Supplemental Environmental Impact Report ("RPFSEIR") and approves Northlake Phase 1, and both have become effective.

9. **VESTING DATE.** Pursuant to Government Code Section 65866, the County and Subdivider agreed to a vesting date of March 17, 2015 pursuant to LA County Code Section 21.38 (Vesting Maps). Accordingly, Northlake Phase 1 is generally subject to the applicable rules, regulations, and official policies that were in effect as of March 17, 2015.

10. **LOCATION.** Northlake Phase 1 is located north of Lake Hughes Road and Ridge Route Road, east of Interstate 5 ("I-5") Freeway and west of Castaic Lake and Lagoon in the unincorporated community of Castaic. The site is also located within a designated Very High Fire Hazard Severity Zone ("VHFHSZ") and State Responsibility Area ("SRA").

11. **LAND USE DESIGNATION.** Northlake Phase 1 is located within various designations within the SP, a component of the General Plan. It includes Single-Family, Multi-Family, General Commercial, Public Facilities, Recreation, and Open Space uses.

12. **ZONING.** Northlake Phase 1 is located in the Castaic Canyon Zoned District within the Santa Clarita Valley Planning Area and is currently zoned SP.

LOCATION	SANTA CLARITA VALLEY AREA PLAN LAND USE POLICY	ZONING	EXISTING USES
SUBJECT PROPERTY	SP	SP	Vacant Land
NORTH	RL5 (Rural Land 5 – One Dwelling Per 5 Acres), BLM (Bureau of Land Management)	A-2-2 (Light Agricultural – Two-Acre Minimum Lot Size)	Vacant Land
EAST	BLM, RL10 (Rural Land 10 – One Dwelling Per 10 Acres), OS-PR (Open Space – Parks and Recreation), RL5, IL (Light Industrial)	A-2-2, M-1-DP (Light Manufacturing – Development Program), M-2-DP (Heavy Manufacturing – Development Program), RPD-5000-2.9DU (Residential Planned Development – 5000 Square Foot Lot Size – 2.9 Dwellings Per Acre), OS (Open Space)	Vacant Land, Elementary School, Single-Family Residences, Shopping Center
SOUTH	H2 (Large Lot Residential – 0-2 Dwellings Per Acre), IL, H18 (Medium Density Residential – 9-18 Dwellings Per Acre), CM (Major Commercial)	R-1 (Single-Family Residence), C-3 (Major Commercial), M-1 (Light Manufacturing)	Vacant Land, Shopping Center, Single-Family Residences, Senior Residences
WEST	RL5, RL1 (Rural Land 1 – One Dwelling Per Acre), IL, OS-C (Open Space Conservation)	A-2-2, A-2-1 (Light Agricultural – One-Acre Minimum Lot Size), M-1, M-1-DP, OS	Vacant Land, Single-Family Residences, Water Tank, Warehousing

13. **PROJECT AND SITE PLAN DESCRIPTION.**

A. Existing Site Conditions

The SP site consists of approximately 1,330 acres located north of Lake Hughes Road and Ridge Route Road, east of I-5 Freeway and west of Castaic Lake and Lagoon in the unincorporated community of Castaic. The site is comprised of vacant land, with adjacent infrastructure such as transmission towers (via utility easement through the property) and a water tank to the west, just outside of the Northlake boundary. Northlake Phase 1 consists of 720 acres.

The property exhibits a wide range of topographic relief, with gently-rolling hills, extremely steep slopes, and a major drainage course (Grasshopper Creek) running

north-south down the middle of Northlake Phase 1. The property is not located within and does not contain any portion of a Significant Ecological Area ("SEA").

B. Site Access

Northlake Phase 1 is accessible via Ridge Route Road, a Limited Secondary Highway on the County Master Plan of Highways with 64 to 80 feet of width that transitions into an 80 to 90 foot-wide Secondary Highway on the County Master Plan of Highways. Primary access to the site will be via an entrance/exit on Ridge Route Road. Secondary access to the property will be via Northlake Boulevard, a Local Collector with 64 to 80 feet of width that transitions into an 80 to 86-foot-wide Modified Industrial Collector. Northlake Phase 1 provides a five-foot wide or greater walkway along private and future streets throughout the property, with publicly-accessible walkways of similar widths along private drives/fire lanes providing direct access to all units.

C. Tentative Map and Exhibit Map

The VTTM No. 073336 tentative map and Exhibit Map dated August 20, 2025, consists of Northlake Phase 1. It depicts a total of 386 lots and 2,295 dwelling units on 720 gross acres. This includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); one highway commercial lot (2.5 acres), 39 open space lots, 11 park lots, 13 debris basin lots, two water tank lots, one water quality basin lot, one pump station lot, and one fire station lot (1.4 acre building pad). Of the total 2,295 dwelling units in Northlake Phase 1, 1,777 units are proposed to be for-sale and 518 units expected for rental. This is pursuant to County Code Chapters 21.38 (Vesting Tentative Map) and 21.40 (Tentative Maps).

D. Affordable and Senior Housing

Northlake Phase 1 proposes a total of 315 affordable attached rental units for Very Low, Lower, and Moderate Income households, of which 95 shall be senior affordable (all ownership) units. Though not subject to the IHO due to the adopted SP, the Subdivider has offered the affordable units through the CUP. The affordable units shall be dispersed throughout Northlake Phase 1. In addition, Northlake Phase 1 proposes 345 market-rate attached senior units (209 ownership, 136 rental) within the site.

E. Parking

Northlake Phase 1 requires an overall total of 5,284 parking spaces. It will provide a total of 5,670 parking spaces, to include 4,167 residential parking spaces required and provided; 639 guest parking spaces required and 1,021 provided; 65

accessible spaces required and 69 provided; and 413 commercial spaces required and provided. Lastly, there are four Type A loading spaces distributed throughout the office, commercial, and mixed-use development areas.

F. Internal Circulation
Northlake Phase 1 would incorporate various internal roadway improvements, including arterials, residential collectors, and private drives. A series of public collector streets and private drives within Northlake Phase 1 and would provide access to the various areas and land uses on-site, to include the Community Sports Park, Grasshopper Creek Park, fire station, mixed-use development, senior housing development, and potential school site. All of these internal destinations would be accessible via a shuttle system managed by the Northlake Homeowner's Association ("HOA") as detailed in the original 2019 LA County Board of Supervisors ("Board") approval and included in the Northlake Phase 1 conditions. Within Northlake Phase 1, the proposed trail system would include community trails, bike lanes, and recreational trails linked to the above-mentioned destinations. In addition to the various trail types that would serve as bicycle routes, Northlake Phase 1 would expand bicycle facilities in the area.

G. Condominium Project
Pursuant to the Subdivision Map Act, condominium units may be leased or sold. Renters of condominium units may not receive sufficient notification when an owner decides to sell the units. In order to provide renters with proper notification, notification is required 180 days prior to termination of tenancy in the event the condominium units are first leased and then later sold.

H. Grading
The grading amounts include 17.16 million cy of cut and 15.84 million cy of fill with 1.32 million cy of shrinkage to be balanced onsite, as well as 3.22 million cy of offsite grading, for a combined grading amount of 37.54 million cy.

I. Oak Trees
There are no Oak trees on the subject property.

14. **CEQA DETERMINATION.**

Supplemental Environmental Impact Report ("SEIR")
The Northlake Phase 1 Draft Supplemental EIR ("DSEIR") was released on May 2, 2017, and circulated for a 45-day public review and comment period ending on June 15, 2017. Following the close of the public comment period on the DSEIR on June 15, 2017, detailed responses to all public agency comments and comments received from members of the general public received regarding Northlake Phase 1 and the analyses of the DSEIR were prepared and were contained in the Final SEIR ("FSEIR").

An Errata was released in February 2018, prior to the Commission hearing to make minor technical corrections to the SEIR and to provide further information in response to public comments received prior to the Planning Commission meeting. The Errata

included only minor technical changes to the SEIR and additional information to support the SEIR's conclusions, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. At the February 21, 2018, public hearing, the Planning Commission requested that the Subdivider include an affordable housing component in the Project. Based on this request, the Subdivider made minor revisions to the Project analyzed in the SEIR to include an affordable component. An Errata dated April 4, 2018 was prepared which concluded that the revisions involve only minor changes to the distribution of land uses and an overall reduction in density and intensity or use, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. On April 18, 2018, the Planning Commission adopted the required findings, certified the SEIR, and granted the requested Project approvals. On April 23, 2018, appeals were filed by the Center for Biological Diversity, the Santa Monica Mountains Conservancy, and the Golden State Environmental Justice Alliance. A Second Errata dated August 2018 was prepared to make minor technical corrections in the SEIR and to provide further information in response to public comments at the Planning Commission meeting.

On September 25, 2018, the Board held a public hearing on Northlake Phase 1 and the appeals and voted to reject the appeals, uphold the Planning Commission approvals, and certify the SEIR. On April 2, 2019, the Board adopted the Northlake Phase 1 entitlements, CEQA findings and Mitigation Monitoring and Reporting Program ("MMRP"), and Northlake Phase 1 conditions.

A Petition for Writ of Mandate was filed in May 2019, challenging Northlake Phase 1. The Los Angeles Superior Court's ruling in the Center For Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al, Case No. 19STCP01610, dated January 11, 2021 (Court Ruling) granted in part and denied in part the petitioner's Petition for Writ of Mandate. Specifically, the Court Ruling held that the SEIR for Northlake Phase 1 failed to comply with CEQA because it contained: (1) inadequate alternatives analysis (for failing to fully analyze a creek avoidance alternative); (2) inadequate Western Spadefoot Toad (WST) baseline assessment and, therefore, inadequate mitigation (to recreate baseline conditions; mitigation inadequate in detail and commitment); as well as (3) improper deferred mitigation as to rare plants (measure lacked sufficient detail).

The Court denied the Petition for Writ of Mandate regarding: (1) impacts to mountain lions/wildlife crossings, (2) aesthetics, (3) air quality/public health, (4) wildfire impacts, and (5) recirculation.

These findings incorporate by reference, as if fully set forth herein, the CEQA Supplemental Findings of Fact ("FOF") and Statement of Overriding Considerations ("SOC") regarding the RPFSEIR for Northlake Phase 1, which are attached hereto as Exhibit F. As stated in the FOF, the Partial Creek Avoidance Alternative ("PCAA") is the environmental superior alternative among the project alternatives summarized in the RPDSEIR. As identified in the RPDSEIR, after implementation of the MMRP, Northlake Phase 1 would not result in any new or substantially more severe significant impacts.

Recirculated Partial Draft SEIR ("RPDSEIR")
The LA County Department of Regional Planning ("LA County Planning") prepared a RPDSEIR. The document did not revise the original SEIR in any respect other than as directed by the Court (above) and was limited to a few portions of the SEIR. Pursuant to CEQA Guidelines Section 15088.5(c), the County only needed to recirculate the portions of the SEIR that were modified by the RPDSEIR. The County did not recirculate the other portions of the SEIR for public review and comment because those portions were not modified.

The RPDSEIR was made available for public review and comment pursuant to State CEQA Guidelines Section 15087. Copies of the RPDSEIR and appendices were available for a review period of 45 calendar days from April 14, 2025, to May 29, 2025. As CEQA Guidelines Section 15088.5, subdivision (f)(2) permits, the County requested that the scope of public comment be limited to the material that was addressed within the text of the revised portions and the appendices included in the RPDSEIR. The RPFSEIR was completed in June 2025.

15. **AGENCY RECOMMENDATIONS.**

The Los Angeles County Subdivision Committee, consisting of LA County Planning and County Departments of Public Works ("Public Works"), Fire ("Fire"), Parks and Recreation ("Parks and Recreation"), and Public Health ("Public Health"): Recommended clearance to public hearing with conditions of the VTTM No. 073336 map dated August 20, 2025.

A. In a letter dated September 18, 2025, Public Works recommended that the Project proceed to public hearing with required conditions of approval.

B. In a letter dated September 23, 2025, Fire recommended that the Project proceed to public hearing with required conditions of approval.

C. In a letter dated September 24, 2025, Parks and Recreation recommended that the Project proceed to public hearing with required conditions of approval.

D. In a letter dated October 1, 2025, Public Health recommended that the Project proceed to public hearing with required conditions of approval.

16. **LEGAL NOTIFICATION.** Pursuant to Sections 21.16.060 (Public Hearings), 21.16.070 (Notice of Public Hearing) and 21.16.075 (Posting) of the County Code, Staff properly notified the community of the public hearing. This included mailings, The Signal newspaper publication, and property posting. On December 11, 2025, Staff mailed a total of 362 Notices of Public Hearing out to all property owners as identified on the County Assessor's record within a 1,000-foot radius from the Project Site. This mailing also included 46 notices to those on the courtesy mailing list for the Castaic Canyon Zoned District and to any additional interested parties. Additionally, Staff posted the Northlake case materials and hearing notice on LA County Planning's website.

GENERAL PLAN CONSISTENCY FINDINGS

17. **LAND USE POLICY.** The Commission finds that the Northlake Phase 1 is consistent with the goals and policies of the SP because the Single-Family, Multi-Family, General Commercial, Public Facilities, Recreation, and Open Space land use designations of the SP are being appropriately implemented as part of Northlake Phase 1. It complies with the maximum density of 2,295 dwelling units established by the SP. In addition, Northlake Phase 1 realizes a substantial amount of new housing units which are needed to address the State's housing crisis. Furthermore, Northlake Phase 1 will implement substantial open space in the forms of recreation (public parks) and preserves (undisturbed and disturbed open space).

18. **GOALS AND POLICIES. The Commission finds that the Project is consistent with the following policies of the General Plan:**

- ***General Plan – Housing Element, Policy 3.1:*** *"Promote mixed-income neighborhoods and a diversity of housing types throughout unincorporated Los Angeles County to increase housing choices for all economic segments of the population."*

  Northlake Phase 1 will include 2,295 new residential units with multiple housing types that will increase housing choices for varying economic segments of the population within the unincorporated County. There will be a total of 315 affordable units with a mix of rental and for-sale units.

- ***General Plan – Parks & Recreation, Policy P/R 4.3:*** *"Develop a network of feeder trails into regional trails."*

  A community trail system would connect Northlake Phase 1 to existing and planned trails in the vicinity and into regional trails. Within Northlake Phase 1, the proposed trail system would include community trails and recreational trails that would be linked to the overall SP trail system and the existing communities to the south. Bicycle facilities and bicycle route improvements in and around Northlake Phase 1 would connect to an extensive system of continuous bike paths within Northlake Phase 1 and to other communities outside Northlake Phase 1, consistent with the County's Bicycle Master Plan.

- ***General Plan – Economic Development, Policy ED 2.5:*** *"Encourage employment opportunities to be located in proximity to housing."*

  Northlake Phase 1 includes 70,875 sf of non-residential (commercial/office/retail) space in the southerly portion of the site, in close proximity to the proposed 2,295 new residential units as well as existing destinations further south, such as the aforementioned elementary school and senior retirement community. This

supports and encourages employment opportunities and more accessible proximity to these destinations.

- ***General Plan – Land Use, Policy LU 5.2:*** *"Encourage a diversity of commercial and retail services, and public facilities at various scales to meet regional and local needs."*

  Northlake Phase 1 will result in 70,875 sf of onsite commercial, retail, and office development that will provide local residents with increased access to commercial and retail services, as well as public facilities such as parks, schools, and a fire station within and proximate to Northlake Phase 1. Therefore, it supports a diversity of commercial and retail services, and public facilities, that help meet regional and local needs.

- ***General Plan – Land Use, Policy LU 5.3:*** *"Support a mix of land uses that promote bicycling and walking, and reduce VMT."*

  Northlake Phase 1 provides ample and convenient opportunities for bicycling and walking, due to an extensive trail and sidewalk/walkway system that connects to many destinations within and outside of Northlake Phase 1. This encourages more bicycling and walking, not only reducing VMT but also improving health.

The Commission also finds that the Project is consistent with the following policies of the Area Plan:

- ***Area Plan - Land Use, Policy LU-1.1.3:*** *Discourage urban sprawl into rural areas by limiting non-contiguous, "leap-frog" development outside of areas designated for urban use.*

The Northlake SP, adopted in 1992, has long been planned for residential and commercial development under the SP and is designated for residential and commercial uses. Northlake Phase 1 will be developed adjacent to existing communities, avoiding leapfrog development and unnecessary extension of infrastructure. The development proposed is consistent with the Area Plan, which accounts for the long-term planned development of the area in an orderly manner.

- ***Area Plan – Land Use, Policy LU-1.1.4:*** *Preserve community character by maintaining natural features that act as natural boundaries between developed areas, including significant ridgelines, canyons, rivers and drainage courses, riparian areas, topographical features, habitat preserves, or other similar features, where appropriate.*

The area of natural open space within the SP has been significantly increased from 476 acres to 783 acres compared to the original SP natural open space allotment. Much of

the open space is natural and covers extensive steep slope areas that would be impractical to develop. This benefits wildlife and encourages enhancement of ecological, scenic, and cultural open space resources. Of the open space, the amount of undisturbed open space would be increased from 328 to 572 acres. Furthermore, the PCAA reduces the development footprint in the northerly portion of the site, increasing the amount of natural open space.

- ***Area Plan – Conservation and Open Space Element, Policy CO-10.1.5:*** *"Maintain open space corridors along canyons and ridgelines as a way of delineating and defining communities and neighborhoods, providing residents with access to natural areas, and preserving scenic beauty."*

The SP and part of Northlake Phase 1 utilizes the existing Grasshopper Creek area to define communities and neighborhoods by providing a linear park and multi-use trail along the creek. The park and trail link the northerly and southerly portions of the Northlake Phase 1, connecting northerly residences to the mixed-use areas in the south of the site. An equestrian staging area would also be provided in the south of the development for convenient access to the trails.

SUBDIVISION AND ZONING CODE CONSISTENCY FINDINGS

19. **PERMITTED USE IN ZONE.** The Commission finds that the Northlake Phase 1 is consistent with the adopted SP land use designations, as attached and detached single-family units, apartment-style units, live-work units, commercial, recreation, and mixed residential-commercial uses are permitted in the SP in County Code Section 22.404.020 (Northlake Specific Plan). In particular, the mixed-use and senior affordable and senior market-rate units integrate a wide range of housing densities with community-serving commercial uses to serve local residents, employees, guests, and visitors. A total of 315 affordable housing units (269 affordable rental, 46 senior affordable rental) would be provided as well as 345 market-rate senior-restricted units (209 ownership, 136 rental) for a combined total of 660 affordable and senior units (209 ownership, 451 rental). The Commission finds that the development of Northlake Phase 1 is consistent with the SP that provides the appropriate land use designations mentioned above that are consistent with the adopted SP and the revised Guidebook implementing changes to Northlake Phase 1 pursuant to County Code Section 22.404.020 (Northlake Specific Plan).

20. **LOT AREA AND WIDTH.** The Commission finds that Northlake Phase 1 is consistent with the lot area and width standards identified in the Northlake SP and as modified in the revised Guidebook pursuant to County Code Section 22.404.020 (Northlake Specific Plan). Northlake Phase 1 consists only of multi-family, mixed-use, commercial, and live-work development. These uses do not have any required lot widths or sizes per the 2025 updated Land Use Plan of the revised Guidebook.

21. **MINIMUM FRONTAGE.** The Commission finds that the Northlake Phase 1 is consistent with the standards identified in County Code Section 21.24.300 (Minimum Frontage), except where locations require a waiver of frontage and have provided a justification for the waiver pursuant to Section 21.24.040 (Modifications to Access and Frontage Requirements). A waiver of public street frontage is necessary to access to some lots by private drives instead of public streets, due to topographic conditions, drainage and biological constraints, and title limitations. Lots that require a waiver of frontage are Lots 131 through 140 (10 total).

22. **REQUIRED YARDS.** The Commission finds that Northlake Phase 1 is consistent with the required yard standards identified in the SP and as modified in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan).

23. **HEIGHT.** The Commission finds that Northlake Phase 1 is consistent with the building height standards identified in the SP and as modified in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan). Northlake Phase 1 consists only of multi-family, mixed-use, commercial, and live-work development. These uses have a maximum height of four stories (three when adjacent to streets) per the 2025 updated Land Use Plan in the revised Guidebook.

24. **DISTANCE BETWEEN BUILDINGS**. The Commission finds that Northlake Phase 1 is consistent with the required distance between buildings identified in the SP and as modified in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan).

25. **FENCES AND WALLS.** The Commission finds that Northlake Phase 1 is consistent with the fence and wall standards identified in the SP and as modified, if applicable, in the revised Guidebook pursuant to Section 22.404.020 (Northlake Specific Plan).

26. **PARKING.** The Commission finds that Northlake Phase 1 is consistent with the standard identified in County Code Section 22.112.070 (Required Parking Spaces). It requires an overall total of 5,284 parking spaces. Northlake Phase 1 will provide a total of 5,670 parking spaces, including 4,167 residential parking spaces required and provided; 639 guest parking spaces required and 1,021 provided; 65 accessible spaces required and 69 provided; and 413 commercial spaces required and provided. Lastly, there are four Type A loading spaces distributed throughout the office, commercial, and mixed-use development areas.

27. **SIGNS.** No signs are currently proposed or included as part of Northlake Phase 1. Any signage on the property will require separate approvals from LA County Planning in accordance with the SP or modified standards, if applicable, of the revised Guidebook.

28. **GRADING.** The Commission finds that Northlake Phase 1 is consistent with the standard identified in County Code Section 22.140.240 (Grading Projects). The Subdivider shall follow all applicable standards for On-Site grading to include a grading

permit required for any grading project and a haul route for offsite grading, as provided in Title 26 (Building Code) of the County Code.

29. **CONDOMINIUM DEVELOPMENTS.** The Commission finds that Northlake Phase 1 is consistent with the standard identified in County Code Sections 21.16.015 (Building Location and Access Restrictions—Exhibit Map), Sections 22.20.040 (Development Standards for Commercial Zones), and 22.22.060 (Development Standards for Industrial Zones). The Project meets the Exhibit Map requirements for the location and dimensions of all structures, buildings, yards, walls, fences, vehicle and bicycle parking and loading facilities; the vehicular, bicycle, and pedestrian access to the proposed structures, buildings, and parking and loading facilities; and the location and design of pedestrian roadway crossings (i.e., crosswalks).

30. **PLANNING AREA STANDARDS DISTRICT**. The Commission finds that Northlake Phase 1 is not subject to or located within any existing planning area standards district.

31. **COMMUNITY STANDARDS DISTRICT.** The Commission finds that Northlake Phase 1 is not subject to or located within any existing community standards district.

32. **RURAL OUTDOOR LIGHTING DISTRICT.** The Commission finds that Northlake Phase 1 is not located within a rural outdoor lighting district nor subject to the standards identified in County Code Chapter 22.80 (Rural Outdoor Lighting District).

33. **RESIDENTIAL DESIGN.** The Commission finds that Northlake Phase 1 is not subject to the standards identified in County Code Section 22.140.520 (Residential Design Standards, "RDSO"). The SP was adopted in 1992, prior to the effective date of the RDSO. The revised Guidebook provides the current residential design standards.

34. **TREE PLANTING.** The Commission finds that the Northlake Phase 1 is not subject to the tree planting standards identified in County Code Section 21.32.195 (On-Site Trees) and Chapter 22.126 (Tree Planting Requirements). The SP was adopted in 1992, prior to the effective date of the above requirements. However, Northlake Phase 1 is proposing a substantial amount of trees, a total of 6,876, to include 2,333 street trees, 2,593 residential (single and multi-family) development lot trees, and 1,950 trees to be provided in dedicated parks and recreation spaces.

35. **IMPROVEMENTS.** The Commission finds that Northlake Phase 1 is consistent with the standards identified in County Code Section 21.32.010 (Requirements Generally). The Subdivider shall improve, or agree to improve, all land dedicated or to be dedicated on a final map, or by separate instrument, for roads and easements, and all private roads and private easements laid out on a final map, with those improvements, including sanitary sewers, needed for the general use of the lot owners in the division of land and for neighborhood traffic and drainage.

36. **INCLUSIONARY HOUSING.** The Commission finds that Northlake Phase 1 is not subject to the IHO. The Northlake SP was adopted in 1992, prior to the effective date of the IHO. The related CUP filed provides a total of 315 rental affordable housing units (269 affordable and 46 senior-affordable) at the Very Low, Lower, and Moderate household income levels and which are required per the original 2019 Board approval.

37. **AFFORDABLE HOUSING REPLACEMENT.** The Commission finds that Northlake Phase 1 is not subject to rental replacement units because there are no existing rental units on the subject property (nor are there any units proposed for demolition) and furthermore the Project is exempt due to the existing VHFHSZ located on the Project Site pursuant to County Code Section 22.119.040.F (Exemptions).

TENTATIVE TRACT MAP FINDINGS

38. VTTM No. 073336 has been submitted as a Vesting Tentative Tract Map. As such, it is subject to the provisions of Chapter 21.38 (Vesting Tentative Map) of the County Code.

39. **The Commission finds that the map is consistent with the goals and policies of the General Plan and has balanced the needs for housing against the public service needs of the residents and available fiscal and environmental resources.** Northlake Phase 1 would result in the development of 2,295 new housing units to help alleviate the State's housing crisis and includes onsite public parks and natural open space. It locates development adjacent to existing residential and commercial areas to the south, and utilizes existing roadway infrastructure (Ridge Route Road) to maintain continuity among development areas.

40. **The Commission finds that the design or improvement of the proposed subdivision is consistent with the goals and policies of the General Plan.** The design of the proposed subdivision facilitates sufficient access to and through the Northlake Project Site; locates more intensive development near existing commercial areas; and takes advantage of existing roadway improvements which provide continuity among existing development and the proposed Northlake Project.

41. **The Commission finds that the site is physically suitable for this type of development.** The subdivision site is physically suitable for the development because of its size and location near existing development and major roadway improvements. The SP adopted and considered the physical topography and residential densities suitable for the site.

42. **The Commission finds that the site is physically suitable for the proposed density of development.** The subdivision site is physically suitable for the proposed density due to the size of the site and designing sufficient ingress and egress (including emergency access) to accommodate 2,295 dwellings, 130 acres of public-accessible park space, and 70,875 sf of commercial uses. Northlake Phase 1 features and measures (such as affordable housing set-asides for very low, low, and moderate income households, senior-affordable housing, mixed-use and live-work

development, enhanced wildlife linkages, enhanced community transit systems, and noise impact reduction) provided by the Subdivider as a result of the public hearing process show Northlake Phase 1 to be physically suitable for the proposed density of development and are consistent with the Specific Plan, as well as consistent with the goals, objectives, and policies of the General Plan and Area Plan, and adopts these features and measures as conditions of approval for Northlake Phase 1.

43. **The Commission finds the design of the subdivision, or the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.** The design of the Project and/or its improvements are not likely to cause substantial environmental damage because it protects, preserves, and enhances onsite biological resources through large open space areas and does not include an SEA.

44. **The Commission finds that the design of the subdivision or type of improvements is not likely to cause serious public health problems.** The design of the subdivision or type of improvements are not likely to cause serious health problems as thee Project provides sufficient space to accommodate 2,295 dwelling units and 70,850 sf of commercial area while maintaining ample open spaces that include a 130 acres of publicly accessible park space.

45. **The Commission finds that the design or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of the property within the proposed subdivision.** The design of the subdivision or type of improvements will not conflict with any easements, as all applicable easements (existing or future) have been reviewed through the subdivision process and were not found to conflict.

46. **The Commission finds that the design of the subdivision provides, to the extent feasible, for future passive or natural heating or cooling opportunities in that the subdivision complies with California Code of Regulations, County Code Title 24 (Building Standards Code), County Code Title 26 (Building Code), and guarantees compliance with the Net Zero Greenhouse Gas ("GHG") Program including solar water heating for swimming pools and "cool roofs" specified under the Building Retrofit Program included in the MMRP.** Northlake Phase 1 will be consistent with Title 24 and Title 26 standards and will be implemented with GHG best practices and measures throughout the development area.

47. **The Commission finds that the design or the type of improvements comply with County Code Chapter 16.44 (Electrical Transmission and Distribution Systems) by undergrounding utilities (conduits, cables, and other facilities) providing adequate service including telephone and internet services to each parcel.** Northlake Phase 1 will construct adequate utilities to serve the additional residents, visitors, employees, and guests within the development area.

SUPPLEMENTAL FINDINGS (VHFHSZ)

48. **The Commission finds that the design, location of, and access to each lot of the subdivision, and the subdivision as a whole, subject to the Project Permit conditions, are consistent with applicable regulations adopted by the State Board of Forestry and Fire Protection, pursuant to sections 4290 and 4291 of the Public Resources Code.** The Commission further finds that Northlake Phase 1 is located within a VHFHSZ and SRA. As such, the Subdivider is required to comply with applicable fire and building codes meant to create a wildfire-resistant development, including the implementation of defensible space, fire-ignition construction and building materials, and home/structure hardening. Furthermore, the Commission finds that a conceptual fuel modification plan was reviewed and approved by Fire's Fuel Modification Division prior to approval of the VTTM. Final fuel modification plans will require approval from Fire prior to the issuance of building permits. The Commission further finds that upon occupancy, the Fire Forestry Division will conduct random annual inspections for compliance with brush clearance regulations per the County's Fire Code. In addition, the Commission finds that the Project would provide emergency vehicle access (such as by Ridge Route Road) in addition to the private driveway and fire lanes within the development. As such, the Project would ensure that land uses have adequate setbacks, fuel modification areas, and emergency access routes. Finally, the Commission finds that this is supported by the SEIR, including evacuation plans and a fuel modification plan, in the Administrative Record for the Project. In addition, new fire hydrants and sprinklers will be required to be placed throughout the development, as determined by Fire.

49. **The Commission finds that structural fire protection and suppression services will be available for the subdivision through Fire.** The Commission finds that VTTM No. 073336 and Exhibit Map dated August 20, 2025, and RPFSEIR were reviewed and cleared by Fire. The Commission further finds that the Subdivider is providing a Fire station lot onsite.

ENVIRONMENTAL FINDINGS

50. As stated above, these findings incorporate by reference, as if fully set forth herein, the FOF and SOC regarding the RPFSEIR for Northlake Phase 1, which are attached hereto as Exhibit F. As stated in the FOF, the PCAA is the environmental superior alternative among the project alternatives summarized in the RPDSEIR. As identified in the RPDSEIR, after implementation of the MMRP, Northlake Phase 1 would not result in any new or substantially more severe significant impacts compared to the original 2019 Northlake Phase 1.

51. The Commission finds that the Subdivider is subject to payment of the California Department of Fish and Wildlife fees related to the Project's effect on wildlife resources pursuant to section 711.4 of the California Fish and Game Code.

ADMINISTRATIVE FINDINGS

52. **HOUSING ACCOUNTABILITY ACT**. The Commission finds that Northlake Phase 1 is considered a housing development that is consistent with the General Plan and

would not have a specific adverse impact upon public health or safety as described in the tentative map, and environmental findings.

53. **LOCATION OF DOCUMENTS.** The location of the documents and other materials constituting the record of proceedings upon which the Commission's decision is based in this matter is at LA County Planning, 13th Floor, Hall of Records, 320 West Temple Street, Los Angeles, California 90012. The custodian of such documents and materials shall be the Section Head of the Subdivisions Section, LA County Planning.

BASED ON THE FOREGOING, THE REGIONAL PLANNING COMMISSION FINDS AND CONCLUDES THAT:

54. The map is consistent with the goals and policies of the General Plan.

55. The design or improvement of the proposed subdivision is consistent with the goals and policies of the General Plan.

56. Northlake Phase 1 is physically suitable for this type of development since it complies with all development standards of the SP which provides the appropriate land use designations for Northlake Phase 1.

57. Northlake Phase 1 is physically suitable for the proposed density of development since it is consistent with all development standards of the SP which provides the appropriate land use densities for Northlake Phase 1.

58. The design of the subdivision or the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

59. The design of the subdivision or type of improvements is not likely to cause serious public health problems since sewage disposal, storm drainage, fire protection, and geologic and soils factors have been considered in the County's review of Northlake Phase 1.

60. The design or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of property within the proposed subdivision.

61. The design, location of, and access to each lot of the subdivision, and the subdivision as a whole, subject to the Northlake Project Permit conditions, are consistent with applicable regulations adopted by the State Board of Forestry and Fire Protection, pursuant to sections 4290 and 4291 of the Public Resources Code, and are supported by the 2019 SEIR and the current RPFSEIR, and the Administrative Record for this Project.

62. The structural fire protection and fire suppression services will be available for the subdivision through Fire.

63. It is necessary to provide tenant protections where the Subdivider opts to lease all of the units rather than sell the units as is allowed under the Subdivision Map Act.

64. A covenant and agreement are needed to ensure potential tenants are provided with 180 days' written notice of intention to sell units prior to termination of tenancy due to the sale of the condominium unit.

65. A waiver of public street frontage is necessary to access some lots by private drives instead of public streets.

THEREFORE, THE REGIONAL PLANNING COMMISSION:

1. Certifies the RPFSEIR for Northlake Phase 1 by finding, pursuant to State and County CEQA Guidelines, that it was completed in compliance with CEQA, presented, reviewed and considered by the Commission prior to approving Northlake Phase 1, and reflects the independent judgment and analysis of the Commission.

2. Adopts the Supplemental Findings of Fact prepared pursuant to Public Resources Code Sections 21081 and 21081.5 and State CEQA Guidelines Section 15091.

3. Adopts the MMRP for Northlake Phase 1 by finding that it is adequately designed to ensure compliance with the mitigation measures during the implementation of Northlake Phase 1.

4. Determines that Northlake Phase 1's significant and unavoidable impacts are outweighed by specifical social, economic, legal, technological, or other considerations by adopting the Statement of Overriding Considerations prepared pursuant to Public Resources Code Section 21081(b) and State CEQA Guidelines Section 15093.

5. Approves **VESTING TENTATIVE TRACT MAP NO. 073336**, subject to the attached conditions.

ACTION DATE: January 28, 2026

DD:SMT:JSH:EGA:JDS
01/14/2026

c: Each Commissioner

6274854.1

LOS ANGELES COUNTY
DEPARTMENT OF LA COUNTY PLANNING

DRAFT CONDITIONS OF APPROVAL
PROJECT NO. R2015-00408-(5) ("NORTHLAKE")
CONDITIONAL USE PERMIT ("CUP") NO. RPPL2023004316

PROJECT DESCRIPTION

Northlake Phase 1 includes a total of 2,295 dwelling units and 386 lots on 720 gross acres. There are 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); Other uses include highway commercial, open space, and public facilities, to include parks, fire station, potential school site, debris basins, water tanks, water quality basin, and a pump station. A shuttle service is also included to transport residents and guests within the site as well as offsite destinations (such as shopping and employment centers) in and around Santa Clarita Valley. Offsite improvements include connection to existing utilities, relocation of existing utility lines, new drainage facilities, and other related infrastructure outside the boundaries of the site.

This grant, the CUP, is subject to the following conditions and requirements of approval:

GENERAL CONDITIONS

1. **Permittee**. Unless otherwise apparent from the context, the term "Permittee" shall include the applicant, owner of the property, and any other person, corporation, or other entity making use of this grant.

2. **Affidavit of Acceptance.** This grant shall not be effective for any purpose until the Permittee, and the owner of the subject property if other than the Permittee, have filed at the office of the Los Angeles County ("County") Department of Regional Planning ("LA County Planning") their affidavit stating that they are aware of and agree to accept all of the conditions of this grant, and that the conditions of the grant have been recorded as required by Condition No. 6, and until all required monies have been paid pursuant to Condition Nos. 9, and 11. Notwithstanding the foregoing, this Condition No. 2 and Condition Nos. 3, 4, and 7 shall be effective immediately upon the date of final approval of this grant by the County.

3. **Indemnification**. The Permittee shall defend, indemnify, and hold harmless the County, its agents, officers, and employees from any claim, action, or proceeding against the County or its agents, officers, or employees to attack, set aside, void, or annul this permit approval, which action is brought within the applicable time period of Government Code sections 65009, or any other applicable limitations period. The County shall promptly notify the Permittee of any claim, action, or proceeding and the County shall reasonably cooperate in the defense. If the County fails to promptly notify

the Permittee of any claim, action, or proceeding, or if the County fails to cooperate reasonably in the defense, the Permittee shall not thereafter be responsible to defend, indemnify, or hold harmless the County.

4. **Litigation Deposit.** In the event that any claim, action, or proceeding as described above is filed against the County, the Permittee shall within ten days of the filing make an initial minimum deposit with LA County Planning of $5,000.00, from which actual costs and expenses shall be billed and deducted for the purpose of defraying the costs or expenses involved in LA County Planning's cooperation in the defense, including but not limited to, depositions, testimony, and other assistance provided to Permittee or Permittee's counsel. If during the litigation process, actual costs or expenses incurred reach 80 percent of the amount on deposit, the Permittee shall deposit additional funds sufficient to bring the balance up to the amount of $5,000.00. There is no limit to the number of supplemental deposits that may be required prior to completion of the litigation. At the sole discretion of the Permittee, the amount of an initial or any supplemental deposit may exceed the minimum amounts defined herein. Additionally, the cost for collection and duplication of records and other related documents shall be paid by the Permittee according to County Code Section 2.170.010.

5. **Invalidation.** If any material provision of this grant is held or declared to be invalid by a court of competent jurisdiction, the permit shall be void and the privileges granted hereunder shall lapse.

6. **Recordation.** Prior to the use of this grant, the Permittee, or the owner of the subject property if other than the Permittee, shall record the terms and conditions of the grant in the office of the County Registrar-Recorder/County Clerk (i.e., Recorder's Office). In addition, upon any transfer or lease of the property during the term of this grant, the Permittee, or the owner of the subject property if other than the Permittee, shall promptly provide a copy of the grant and its conditions to the transferee or lessee of the subject property.

7. **Grant Termination.** This grant shall terminate when the associated Vesting Tentative Parcel Map ("VTTM") No. 73336 expires (January 28, 2028).

8. **Conditions Compliance**. The subject property shall be maintained and operated in full compliance with the conditions of this grant and any law, statute, ordinance, or other regulation applicable to any development or activity on the subject property. Failure of the Permittee to cease any development or activity not in full compliance shall be a violation of these conditions. No provision of any easement of any other encumbrance on the property shall exempt the Permittee from compliance with these conditions and applicable regulations.

9. **Inspections.** Inspections shall be made to ensure compliance with the conditions of this grant as well as to ensure that any development undertaken on the subject property is in accordance with the approved Exhibit "A" on file. The Permittee shall deposit with the County the sum of **$2,280.00**, which shall be placed in a performance fund and be used exclusively to reimburse LA County Planning for all expenses incurred while

inspecting the premises to determine the Permittee's compliance with the conditions of this grant. The fund provides for five (5) inspections.

Inspections may be unannounced. Inspections may be conducted utilizing any available technologies, including, but not limited to, unmanned aircraft systems ("UAS"). Use of a UAS requires the consent of the Permittee pursuant to LA County Planning's UAS policy, which may be updated from time to time, and which shall be provided to the Permittee upon request.

If additional inspections are required to ensure compliance with the conditions of this grant, or if any inspection discloses that the subject property is being used in violation of any one of the conditions of this grant, the Permittee shall be financially responsible and shall reimburse LA County Planning for all enforcement efforts necessary to bring the subject property into compliance. The amount charged for each inspection shall be $456.00 per inspection, or the current recovery cost established by LA County Planning at the time any inspection(s) is/are required, whichever is greater.

10. **Library Facilities Mitigation Fees**. Prior to the issuance of any building permit(s), the Permittee shall remit all applicable library facilities mitigation fees to the County Librarian and pay the fees in effect at the time of payment, pursuant to Chapter 22.264 of the County Code. Questions regarding fee payment can be directed to the County Librarian at (562) 940-8430. The Permittee shall provide proof of payment upon request from LA County Planning.

11. **Environmental Document Filing Fees.** Within five (5) working days from the day after the appeal period ends on **February 9 , 2026,** (by **February 16, 2026**), the Subdivider shall remit processing fees at the County Registrar-Recorder/County Clerk Office (i.e. County Clerk's Office), payable to the County of Los Angeles, in connection with the filing and posting of a Notice of Determination ("NOD") for this project and its entitlements in compliance with section 21152 of the Public Resources Code. Unless a Certificate of Exemption is issued by the California Department of Fish and Wildlife ("CDFW") pursuant to section 711.4 of the California Fish and Game Code, the Subdivider shall pay the fees in effect at the time of filing the NOD, as provided for in section 711.4 of the Fish and Game Code, currently **$4,227.50** for an Environmental Impact Report ("EIR") plus $75.00 processing fee). No land use project subject to this requirement is final, vested or operative until the fee is paid. Fees are required unless waived by CDFW.

12. **Mitigation Monitoring and Reporting Program ("MMRP")**. The Permittee shall comply with all mitigation measures as identified and revised in the MMRP, attached as Exhibit D-2, which are incorporated by this reference as if set forth fully herein.

13. **Covenant and Agreement**. Within thirty (30) days of the date of final approval of the grant by the County, the Permittee shall record a covenant and agreement, which attaches the MMRP and agrees to comply with the mitigation measures imposed by the Supplemental EIR (including the Final Recirculated Portions of the Supplemental Environmental Impact Report) ("RPFSEIR") for this project, in the Recorder's Office. Prior to recordation of the covenant, the Permittee shall submit a draft copy of the

covenant and agreement to LA County Planning for review and approval. As a means of ensuring the effectiveness of the mitigation measures, the Permittee shall submit annual mitigation monitoring reports to LA County Planning for approval or as required. The reports shall describe the status of the Permittee's compliance with the required mitigation measures.

14. **MMRP Deposit**. The Permittee shall deposit an initial sum of **$6,000.00** with LA County Planning within thirty (30) days of the date of final approval of this grant in order to defray the cost of reviewing and verifying the information contained in the reports required by the MMRP. The Permittee shall replenish the mitigation monitoring account, if necessary, until all mitigation measures have been implemented and completed.

15. **Revocation**. Notice is hereby given that any person violating a provision of this grant is guilty of a misdemeanor. Notice is further given that the LA County Planning Commission ("Commission") or a Hearing Officer may, after conducting a public hearing, revoke or modify this grant, if the Commission or Hearing Officer finds that these conditions have been violated or that this grant has been exercised so as to be detrimental to the public's health or safety or so as to be a nuisance, or as otherwise authorized pursuant to County Code Chapter 22.238 (Modifications and Revocations) of the County Code.

16. **County Fire Code**. All development pursuant to this grant must be kept in full compliance with the County Fire Code to the satisfaction of the County Fire Department ("Fire").

17. **County Public Works Requirements**. All development pursuant to this grant shall conform with the requirements of County Public Works ("Public Works") to the satisfaction of said department.

18. **Compliance with County Code Title 22**. All development pursuant to this grant shall comply with the requirements of Title 22 (Planning and Zoning) of the County Code and of the specific zoning of the subject property, unless specifically modified by this grant, as set forth in these conditions, including the approved Vesting Tentative Map and Exhibit "A" Map, or an approved Amendment Map/Amended Exhibit Map.

19. **Maintenance**. The Permittee shall maintain the subject property in a neat and orderly fashion. The Permittee shall maintain free of litter all areas of the premises over which The Permittee has control. All structures, walls and fences open to public view shall remain free of graffiti or other extraneous markings, drawings, or signage that was not approved by LA County Planning. In the event of graffiti or other extraneous markings occurring, the Permittee shall remove or cover said markings, drawings, or signage within 48 hours of such notification, weather permitting. Paint utilized in covering such markings shall be of a color that matches, as closely as possible, the color of the adjacent surfaces.

20. **Graffiti.** All structures, walls and fences open to public view shall remain free of graffiti or other extraneous markings, drawings, or signage that was not approved by LA

County Planning. These shall include any of the above that do not provide pertinent information about said premises. The only exceptions shall be seasonal decorations or signage provided under the auspices of a civic or non-profit organization.

In the event of graffiti or other extraneous markings occurring, the Permittee shall remove or cover said markings, drawings, or signage within 48 hours of such notification, weather permitting. Paint utilized in covering such markings shall be of a color that matches, as closely as possible, the color of the adjacent surfaces.

PERMIT-SPECIFIC CONDITIONS – CUP

21. **Grant.** This grant authorizes onsite and offsite grading in excess of 100,000 cubic yards ("cy") with a total of 34.32 million cy (17.16 million cy of cut and 15.84 million cy of fill with 1.32 million cy of shrinkage) to be balanced onsite; and also offsite grading for an additional 2.15 million cy of cut and 1.07 million cy of fill for an offsite total of 3.22 million cy of combined cut and fill. The overall onsite and offsite grading amounts are 37.54 million cy of combined cut and fill. A revised Exhibit 'A' ("REA") shall be required for submittal to show the haul route. Bulk grading is also authorized by this grant.

22. **Grant**. This grant shall authorize early grading prior to final map approval at the discretion of the Planning Director. If authorized by the Planning Director, an REA shall be required for submittal to show the early grading.

23. **Grant**. This grant shall allow building pad elevation changes up to 10 feet in height at the discretion of the Planning Director. If authorized by the Planning Director, an REA shall be required for submittal to show the pad height changes.

24. **Grant.** This grant shall authorize walls and fences exceeding six feet in height within the required yard setbacks of the development.

25. **Grant.** This grant shall authorize 46 mixed-use affordable units and six market-rate live-work units.

26. **Grant.** This grant shall authorize a total of 315 affordable housing units, 95 senior-affordable housing units, and 345 age-restricted senior units.

PROJECT SITE-SPECIFIC CONDITIONS

27. **Vehicular Parking.** The Northlake Project requires an overall total of 5,284 parking spaces. The Project will provide a total of 5,670 parking spaces, to include 4,167 residential parking spaces required and provided; 639 guest parking spaces required and 1,021 provided; 65 handicap-accessible spaces required and 69 provided; and 413 commercial spaces required and provided. Lastly, there are four Type A loading spaces distributed throughout the office, commercial, and mixed-use development areas. All required parking spaces shall be included and designed in compliance with applicable County Code requirements. A comprehensive parking plan shall be submitted as an REA for staff review and approval prior to construction and build-out of the Project.

28. **Bicycle Parking.** Bicycle parking spaces shall be maintained within the development. All required parking spaces shall be included and designed in compliance with applicable County Code requirements. The bicycle parking spaces shall be included in the above-mentioned comprehensive parking plan REA.

29. **Internal Circulation.** As part of the final map phasing of Northlake, the Project shall provide multiple means of access to and through the Project, with major connections to Ridge Route Road and Northlake Boulevard, the "backbone" roadways for the Project. Additionally, an extensive community trail system shall connect to existing and planned trails in the vicinity of the Project site. Furthermore, within the Project, a proposed multiple-purpose trail system shall include community trails, bike lanes, paths, and recreational trails that are linked to the Northlake trail system to the west and the existing community of Westridge to the south. In addition to the various trail types serving as bicycle routes, the Project shall expand bicycle facilities in the area. To enhance community mobility within the Project, an HOA-maintained shuttle system shall circulate within the development and its destinations as well as connect to offsite destinations.

30. **Street Circulation.** Internal circulation and access for the Northlake Project shall be provided by several new internal public streets with street widths ranging from 58 to 90 feet. Development areas within the Project not fronting along public streets shall interconnect with a private drive and fire lane system, with typical widths of 26 and 28 feet to meet fire road access requirements.

31. **Open Space.** The Northlake Project shall provide no less than a total of 381.1 acres of open space areas within the Phase 1 property boundary, including 126.8 acres of recreation and park space.

32. **Tree Planting.** The Northlake Project shall provide a total of 6,876 trees throughout the Phase 1 Project area, to include 2,593 trees in the residential development areas; 2,333 street trees, and 1,950 trees in the recreational and parks areas.

OTHER CONDITIONS

33. As agreed to by the Subdivider, Northlake Phase 1 shall substantially conform to the adopted Northlake Specific Plan ("SP") and all revisions and updates to the SP associated and approved with this grant. Northlake Phase 1 and all subsequent development approvals (such as, but not limited to, Amended Exhibit Maps) shall also substantially conform to the document marked "Northlake Design Guidebook" ("Guidebook") dated April 2025, or the latest version of said document as approved by LA County Planning.

34. As agreed to by the Subdivider, the Subdivider is required to comply with the current standards in the CalGreen Code by implementing energy-efficient building designs, pre-wiring residences with electric vehicle charging ports, implementing solar-ready rooftops, reducing indoor and outdoor water demand, and installing energy-efficient appliances and equipment.

35. As agreed to by the Subdivider, the Subdivider shall fund and provide a total of 135 or more electric vehicle ("EV") charging stations within the Project site and in locations within the surrounding Castaic community to the satisfaction of LA County Planning. The specific type, and location of the charging stations shall be approved by LA County Planning in an “EV charging station infrastructure siting concept plan" submitted to LA County Planning by the Subdivider prior to the first phased map approval; and in the same manner, for all subsequent final/phased map approvals, to the satisfaction of LA County Planning. In addition, the location and type of stations shall be noted in an "EV charging station infrastructure siting detail plan" and depicted on all applicable Exhibit Maps/Revised Exhibit "A"s to the satisfaction of LA County Planning.

36. As agreed to by the Subdivider, the Subdivider shall fund and provide a community shuttle and service for the Northlake development residents and guests. The shuttle shall serve destinations within the Project site (such as the school, parks, highway commercial and mixed-use, live-work commercial areas) as well as outside the Project site (such as the Northlake Hills Elementary School, downtown Castaic shopping center, Sports Complex, and Valencia Commerce Center). The shuttle service shall substantially comply with the transit plans/exhibits depicted on the tentative map/Exhibit Map and in the Guidebook. Prior to final map approval, the Subdivider shall submit to LA County Planning a "community shuttle service plan" that describes the precise shuttle routes, stops, stop designs/amenities, destinations, vehicles, and other details to the satisfaction of LA County Planning.

37. As agreed to by the Subdivider, the Subdivider shall finalize, construct, and initiate the community shuttle service no later than the issuance of the 500th residential Certificate of Occupancy (“CofO”) for the Project site. The Subdivider shall be responsible for tracking the progress of the CofO’s and provide quarterly reports to LA County Planning for status. The community shuttle service plan is to be updated or amended every six months, or as needed, to the satisfaction of LA County Planning.

38. As agreed to by the Subdivider, the Subdivider shall construct a new school within the Northlake Phase 1, identified in Figure 5A of the Guidebook as "Alternative School Site", if requested by the local school district. The Subdivider shall notify LA County Planning in this event and shall submit an Amendment Map and Amended Exhibit Map/Revised Exhibit “A” for approval prior to final map approval and shall designate the school site/parcel on the applicable final map, to the satisfaction of LA County Planning.

39. As agreed to by the Subdivider, the Subdivider shall provide no less than 440 senior (age-restricted) housing units. Of the 440 senior units, the Subdivider shall provide no less than 345 senior (age-restricted) (136 rental, 209 for-sale) market-rate housing units and no less than 95 senior (age-restricted) for-sale affordable housing units within the Project site, and shall identify the lots containing such units on the applicable final map, to the satisfaction of LA County Planning.

40. As agreed to by the Subdivider, the Subdivider shall provide no less than 220 market rate (98 rental, 122 for-sale) housing units, no less than six live-work for-sale market

rate units and no less than 38,700 square feet of associated mixed-use commercial space within the Northlake Phase 1 General Commercial area, as presently depicted in the Guidebook, and shall identify the lots containing such units and space on the applicable final map, to the satisfaction of LA County Planning.

41. As agreed to by the Subdivider, prior to final map recordation, the Subdivider shall submit an Amendment Map and Amended Exhibit Map/Revised Exhibit "A" to LA County Planning for review and approval, depicting the General Commercial area and wildlife crossing/connection areas, as presently shown and described in the Guidebook (or in the case of wildlife movement, as presently shown on the relevant Exhibit described herein or in a separate document), as well as any other minor changes related to the two areas described in this condition, if needed and would not go beyond the scope of the Amendment Map.

42. As agreed to by the Subdivider, the Subdivider shall provide no less than 315 affordable set-aside and deed-restricted housing units within the Project site, which equates to no less than 10 percent of the overall SP unit count of 3,150 dwellings. No less than 50 percent (or 158) of the 315 units shall be set-aside for lower and very low Income households, per State and County affordable housing guidelines, with the remaining balance of 157 affordable units set-aside for moderate income households, per State and County guidelines. If the overall SP unit count shall be less than 3,150, then the Subdivider shall provide 10 percent of the reduced final overall unit count.

43. As agreed to by the Subdivider, prior to final map recordation, the Subdivider shall coordinate with the Los Angeles County Development Authority ("LACDA") to enter into an agreement for the purpose of monitoring all affordable set-aside units and ensuring that they are deed-restricted in perpetuity, to the satisfaction of the LACDA.

44. As agreed to by the Subdivider, of the 315 affordable set-aside housing units, the Subdivider shall provide no less than 95 senior affordable set-aside and deed-restricted housing units within the General Commercial area, which equates to no less than three percent of the overall Northlake housing unit count of 3,150 dwellings. The three percent senior affordable set-aside shall be included within the overall 315-unit count of affordable set-aside units within the Northlake development. The 220 non-senior affordable units shall be provided throughout the Project site residential land use planning areas.

45. As agreed to by the Subdivider, the Subdivider shall ensure that all affordable set-aside units are developed on a 10 percent pro-rata basis with the non-affordable housing units built within the Northlake development, as per the following schedule:
    a. Affordable Units 1 through 50 to be constructed before the issuance of the 500th Northlake building permit;
    b. Units 51 through 100 before the 1,000th building permit;
    c. Units 101 through 150 before the 1,500th building permit;
    d. Units 151 through 200 before the 2,000th building permit;
    e. Units 201 through 230 before the 2,295th building permit;
    f. and Units 231 through 315 before the 3,150th building permit.

46. As agreed to by the Subdivider, together with the final map recordation, the Subdivider shall record a covenant (or covenants) for all income-restricted (affordable set-aside) and income-age restricted (senior-affordable set-aside) housing units within the Northlake development, which shall describe the income and age level restrictions of the units per State and County guidelines, and shall indicate that such restrictions are to be established in perpetuity, to the satisfaction of the LACDA.

47. As agreed to by the Subdivider, the Subdivider shall ensure that additional and/or enhanced wildlife crossings and connections are provided within/through the Project and Northlake development, as depicted on the Exhibit marked "wildlife connectivity plan." This connectivity plan shall ensure that all Project and development landscaping and lighting located in applicable areas are compatible with the intended movement of wildlife as per the connectivity plan, to the satisfaction of the County Biologist; and shall ensure that sufficient schematic descriptions and depictions of roadway undercrossings, overcrossings, and culverts that are anticipated to facilitate wildlife movement are provided to LA County Planning prior to the approval of any final maps or grading permits for the Project, to the satisfaction of the County Biologist.

48. As agreed to by the Subdivider, prior to final map recordation, to help address noise impacts of the Project, the Subdivider shall confer with the Castaic Union School District to seek authorization to construct an approximately three-foot-high "noise wall" along the perimeter of the existing Northlake Hills Elementary School playground area. If the school district should authorize the construction of the wall, the Subdivider shall submit a site plan review for the wall to LA County Planning for review and approval and shall construct the wall prior to the issuance of the first residential unit building permit for the Project.

Attachments:

Exhibit D-1 Subdivision Committee Reports (pages 1 to 74)

Exhibit D-2 MMRP (pages 1 to 35)

LOS ANGELES COUNTY
DEPARTMENT OF LA COUNTY PLANNING

DRAFT CONDITIONS OF APPROVAL
PROJECT NO. R2015-00408-(5) ("NORTHLAKE")
VESTING TENTATIVE TRACT MAP ("VTPM") NO. 073335 (RPPL2023004336)

PROJECT DESCRIPTION

Northlake Associates LLC includes the Northlake Parcel Map with 21 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only. It covers the entire Specific Plan ("SP") site with the exception of 22.6 acres removed from the development due to the prior completed construction of the Northlake Hills Elementary School.

This grant, the VTPM, is subject to the following conditions and requirements of approval:

GENERAL CONDITIONS

1. **Subdivider**. Unless otherwise apparent from the context, the term "Subdivider" shall include the applicant, owner of the property, and any other person, corporation, or other entity making use of this grant.

2. **Affidavit of Acceptance**. This grant shall not be effective for any purpose until the Subdivider, and the owner of the subject property if other than the Subdivider, have filed at the office of the Los Angeles County ("County") Department of LA County Planning ("LA County Planning") their affidavit stating that they are aware of and agree to accept all of the conditions of this grant, and until all required monies have been paid pursuant to Condition Nos. 13 and 16. Notwithstanding the foregoing, this Condition No. 2 and Condition Nos. 4, 6, and 7 shall be effective immediately upon the date of final approval of this grant by the County.

3. **Date of Final Approval**. Unless otherwise apparent from the context, the term "date of final approval" shall mean the date the County's action becomes effective pursuant to Section 21.56.010 of the County Code as provided in the Subdivision Map Act Section 66452.5 for Tentative Maps.

4. **Indemnification**. The Subdivider shall defend, indemnify, and hold harmless the County, its agents, officers, and employees from any claim, action, or proceeding against the County or its agents, officers, or employees to attack, set aside, void, or annul this subdivision approval, which action is brought within the applicable time period of Government Code Section 66499.37 or any other applicable limitations period. The County shall promptly notify the Subdivider of any claim, action, or proceeding and the County shall reasonably cooperate in the defense. If the County fails to promptly notify the Subdivider of any claim, action, or proceeding, or if the County fails to cooperate reasonably in the defense, the Subdivider shall not thereafter be responsible to defend, indemnify, or hold harmless the County.

5. **Invalidation.** If any material provision of this grant is held or declared to be invalid by a court of competent jurisdiction, the subdivision shall be void and the privileges granted hereunder shall lapse.

6. **Litigation Deposit**. In the event that any claim, action, or proceeding as described above is filed against the County, the Subdivider shall within 10 days of the filing make an initial deposit with LA County Planning in the minimum amount of $5,000.00, from which actual costs and expenses shall be billed and deducted for the purpose of defraying the costs or expenses involved in LA County Planning's cooperation in the defense, including but not limited to, depositions, testimony, and other assistance provided to the Subdivider or the Subdivider's counsel.

    A. If during the litigation process, actual costs or expenses incurred reach 80 percent of the amount on deposit, the Subdivider shall deposit additional funds sufficient to bring the balance to the minimum required amount of $5,000.00. There is no limit to the number of supplemental deposits that may be required prior to completion of the litigation.

    B. At the sole discretion of the Subdivider, the amount of an initial or any supplemental deposit may exceed the minimum amounts defined herein. Additionally, the cost for collection and duplication of records and other related documents shall be paid by the Subdivider according to County Code Section 2.170.010 (Fees for Providing County Records).

7. **Expiration**. VTPM No. 073335 shall expire on January 28, 2028. The Hearing Officer may grant one (or more) time extensions to the terms of approval of the tentative map. If requested, time extension(s) shall be requested in writing and with the payment of the applicable fee prior to such expiration date. The total number of extensions shall not exceed the maximum number of extensions authorized by the Subdivision Map Act.

8. **Exhibit Map**. The subject property shall be developed and maintained in substantial conformance with the plans marked Exhibit Map. If changes to any of the plans marked Exhibit Map are required as a result of instruction given at the public hearing, a modified Exhibit Map shall be submitted to LA County Planning by **March 29, 2026 (60 calendar days from the date of approval)**.

9. **Revisions to Exhibit Map**. In the event that subsequent revisions to the approved Exhibit Map are submitted the Subdivider shall submit the proposed plans to the Director of LA County Planning ("Planning Director") for review and approval. All revised plans must substantially conform to the originally approved Exhibit Map. All revised plans must be accompanied by the written authorization of the property owner(s) and applicable fee for such revision.

10. **Conditions Compliance**. The subject property shall be maintained and operated in full compliance with the conditions of this grant and any law, statute, ordinance, or other regulation applicable to any development or activity on the subject property. Failure of the Subdivider to cease any development or activity not in full compliance shall be a violation of these conditions. No provision of any easement of any other encumbrance on the property shall exempt the Subdivider from compliance with these conditions and applicable regulations.

11. **Inspection**. If inspections are required to ensure compliance with the conditions of this grant, or if any inspection discloses that the subject property is being used in violation of any one of the conditions of this grant, the Subdivider shall be financially responsible and shall reimburse LA County Planning for all enforcement efforts necessary to bring the subject property into compliance. The amount charged for each inspection shall be $456.00 per inspection, or the current recovery cost established by LA County Planning at the time any inspection(s) is/are required, whichever is greater.

    Inspections may be unannounced. Inspections may be conducted utilizing available technologies, including, but not limited to, unmanned aircraft systems (UAS). Use of an UAS requires the consent of the Subdivider pursuant to LA County Planning's UAS policy, which may be updated from time to time, and which shall be provided to the Subdivider upon request.

12. **Library Facilities Mitigation Fees**. Prior to the issuance of any building permit(s), the Subdivider shall remit all applicable library facilities mitigation fees to the County Librarian and pay the fees in effect at the time of payment, pursuant to Chapter 22.264 of the County Code. Questions regarding fee payment can be directed to the County Librarian at (562) 940-8430. The Subdivider shall provide proof of payment upon request from LA County Planning.

13. **Environmental Document Filing Fees**. Within five (5) working days from the day after the appeal period ends on **February 9, 2026,** (by **February 16, 2026**), the Subdivider shall remit processing fees at the County Registrar-Recorder/County Clerk Office (i.e. County Clerk's Office), payable to the County of Los Angeles, in connection with the filing and posting of a Notice of Determination ("NOD") for this project and its entitlements in compliance with section 21152 of the Public Resources Code. Unless a Certificate of Exemption is issued by the California Department of Fish and Wildlife ("CDFW") pursuant to section 711.4 of the California Fish and Game Code, the Subdivider shall pay the fees in effect at the time of filing the NOD, as provided for in section 711.4 of the Fish and Game Code, currently **$4,198.50** ($4,123.50 for an Environmental Impact Report ("EIR") plus $75.00 processing fee). No land use project subject to this requirement is final, vested or operative until the fee is paid. Fees shall apply unless waived by CDFW.

14. **Mitigation Monitoring and Reporting Program ("MMRP")**. The Subdivider shall comply with all mitigation measures as identified and revised in the MMRP, attached as Exhibit D-2, which are incorporated by this reference as if set forth fully herein.

15. **Covenant and Agreement**. Within thirty (30) days of the date of final approval of the grant by the County, the Subdivider shall record a covenant and agreement, which attaches the MMRP and agrees to comply with the mitigation measures imposed by the Supplemental EIR (including the Final Recirculated Portions of the Supplemental Environmental Impact Report) ("RPFSEIR") for this project, in the County Recorder's Office. Prior to recordation of the covenant, the Subdivider shall submit a draft copy of the covenant and agreement to LA County Planning for review and approval. As a means of ensuring the effectiveness of the mitigation measures, the Subdivider shall submit annual mitigation monitoring reports to LA County Planning for approval or as

required. The reports shall describe the status of the Subdivider's compliance with the required mitigation measures.

16. **MMRP Deposit**. The Subdivider shall deposit an initial sum of **$6,000.00** with LA County Planning within thirty (30) days of the date of final approval of this grant in order to defray the cost of reviewing and verifying the information contained in the reports required by the MMRP. The Subdivider shall replenish the mitigation monitoring account, if necessary, until all mitigation measures have been implemented and completed.

17. **Revocation**. Notice is hereby given that any person violating a provision of this grant is guilty of a misdemeanor. Notice is further given that the LA County Planning Commission ("Commission") or a Hearing Officer may, after conducting a public hearing, revoke or modify this grant, if the Commission or Hearing Officer finds that these conditions have been violated or that this grant has been exercised so as to be detrimental to the public's health or safety or so as to be a nuisance, or as otherwise authorized pursuant to County Code Chapter 22.238 (Modifications and Revocations) of the County Code.

18. **County Fire Code**. All development pursuant to this grant must be kept in full compliance with the County Fire Code to the satisfaction of the County Fire Department ("Fire").

19. **County Public Works Requirements**. All development pursuant to this grant shall conform with the requirements of County Public Works ("Public Works") to the satisfaction of said department.

20. **Compliance with County Code Title 21 and Title 22**. All development pursuant to this grant shall comply with the requirements of Title 21 (Subdivisions) and Title 22 (Planning and Zoning) of the County Code and of the specific zoning of the subject property, unless specifically modified by this grant, as set forth in these conditions, including the approved Vesting Tentative Map and Exhibit Map, or an approved Amendment Map/Amended Exhibit Map.

21. **Maintenance**. The Subdivider shall maintain the subject property in a neat and orderly fashion. The Subdivider shall maintain free of litter all areas of the premises over which The Subdivider has control. All structures, walls and fences open to public view shall remain free of graffiti or other extraneous markings, drawings, or signage that was not approved by LA County Planning. In the event of graffiti or other extraneous markings occurring, the Subdivider shall remove or cover said markings, drawings, or signage within 48 hours of such notification, weather permitting. Paint utilized in covering such markings shall be of a color that matches, as closely as possible, the color of the adjacent surfaces.

TENTATIVE PARCEL MAP SPECIFIC CONDITIONS

22. **Grant**. This grant shall authorize the creation of 21 large-lot parcels on 1,307.4 gross acres for lease and financing purposes only.

23. **Code Compliance**. The Subdivider shall conform to the requirements of Title 21 of the Los Angeles County Code, and the Subdivision Map Act.

24. **Lot Line Adjustments**. Permission is granted to adjust lot lines to the satisfaction of LA County Planning and Public Works.

25. **Subdivision Committee Conditions**. Except as expressly modified herein, this approval is subject to all recommended conditions listed in the attached Subdivision Committee Reports (VTPM dated March 5, 2024), consisting of letters and reports from Public Works, Fire, and County Departments of Parks and Recreation ("Parks and Recreation"), and Public Health.

PRIOR TO RECORDATION OF A FINAL MAP

26. **Final Map Phasing**. A final parcel map is required**.** Permission is granted to record multiple final maps, provided that a phasing exhibit (or updated phasing exhibit) is submitted to LA County Planning for review and approval, prior to final map recordation. The phasing exhibit shall depict the timing of offsite improvements and open space dedication, number of phases, all lots to be phased, dwelling units per phase, gross and net lot area(s), and required homeowner's association ("HOA") and natural open space calculations.

Easements

27. **Easements Depicted on Final Map**. All existing and proposed easements shall be depicted on the final map, as shown on the Existing and Proposed Easements Table on the approved Tentative/Exhibit Map for ingress/egress, reciprocal access, trails, and utilities, etc. to the satisfaction of LA County Planning, Parks and Recreation, and Public Works.

28. **Easements**. The Subdivider shall submit a draft copy of the reciprocal ingress and egress easements for the private driveways to the Director for review and approval.

29. **Draft Covenant Regarding Proposed Easements**. Prior to final map recordation, the Subdivider shall submit a draft covenant to LA County Planning for review and approval, agreeing to record all proposed easements as designated on the approved Tentative/Exhibit Maps. The approved covenant shall be recorded immediately after the recordation of the final map.

Attachments:

Exhibit D-1 Subdivision Committee Reports (pages 1 to 15)

Exhibit D-2 MMRP (pages 1 to 35)

LOS ANGELES COUNTY
DEPARTMENT OF LA COUNTY PLANNING

DRAFT CONDITIONS OF APPROVAL
PROJECT NO. R2015-00408 ("NORTHLAKE")
VESTING TENTATIVE TRACT MAP ("VTTM") NO. 073336 (RPPL2023004336)

PROJECT DESCRIPTION

Northlake Phase 1 includes a total of 2,295 dwelling units and 386 lots on 720 gross acres. There are 288 single-family residential lots; this includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); Other uses include highway commercial, open space, and public facilities, to include parks, fire station, potential school site, debris basins, water tanks, water quality basin, and a pump station. A shuttle service is also included to transport residents and guests within the site as well as offsite destinations (such as shopping and employment centers) in and around Santa Clarita Valley. Offsite improvements include connection to existing utilities, relocation of existing utility lines, new drainage facilities, and other related infrastructure outside the boundaries of the site.

This grant, the VTTM, is subject to the following conditions and requirements of approval:

GENERAL CONDITIONS

1. **Subdivider**. Unless otherwise apparent from the context, the term "Subdivider" shall include the applicant, owner of the property, and any other person, corporation, or other entity making use of this grant.

2. **Affidavit of Acceptance**. This grant shall not be effective for any purpose until the Subdivider, and the owner of the subject property if other than the Subdivider, have filed at the office of the Los Angeles County ("County") Department of LA County Planning ("LA County Planning") their affidavit stating that they are aware of and agree to accept all of the conditions of this grant, and until all required monies have been paid pursuant to Condition Nos. 13 and 16. Notwithstanding the foregoing, this Condition No. 2 and Condition Nos. 4, 6, and 7 shall be effective immediately upon the date of final approval of this grant by the County.

3. **Date of Final Approval**. Unless otherwise apparent from the context, the term "date of final approval" shall mean the date the County's action becomes effective pursuant to Section 21.56.010 of the County Code as provided in the Subdivision Map Act Section 66452.5 for Tentative Maps.

4. **Indemnification**. The Subdivider shall defend, indemnify, and hold harmless the County, its agents, officers, and employees from any claim, action, or proceeding against the County or its agents, officers, or employees to attack, set aside, void, or

annul this subdivision approval, which action is brought within the applicable time period of Government Code Section 66499.37 or any other applicable limitations period. The County shall promptly notify the Subdivider of any claim, action, or proceeding and the County shall reasonably cooperate in the defense. If the County fails to promptly notify the Subdivider of any claim, action, or proceeding, or if the County fails to cooperate reasonably in the defense, the Subdivider shall not thereafter be responsible to defend, indemnify, or hold harmless the County.

5. **Invalidation.** If any material provision of this grant is held or declared to be invalid by a court of competent jurisdiction, the subdivision shall be void and the privileges granted hereunder shall lapse.

6. **Litigation Deposit**. In the event that any claim, action, or proceeding as described above is filed against the County, the Subdivider shall within 10 days of the filing make an initial deposit with LA County Planning in the minimum amount of $5,000.00, from which actual costs and expenses shall be billed and deducted for the purpose of defraying the costs or expenses involved in LA County Planning's cooperation in the defense, including but not limited to, depositions, testimony, and other assistance provided to the Subdivider or the Subdivider's counsel.

    A. If during the litigation process, actual costs or expenses incurred reach 80 percent of the amount on deposit, the Subdivider shall deposit additional funds sufficient to bring the balance to the minimum required amount of $5,000.00. There is no limit to the number of supplemental deposits that may be required prior to completion of the litigation.

    B. At the sole discretion of the Subdivider, the amount of an initial or any supplemental deposit may exceed the minimum amounts defined herein. Additionally, the cost for collection and duplication of records and other related documents shall be paid by the Subdivider according to County Code Section 2.170.010 (Fees for Providing County Records).

7. **Expiration**. VTTM No. 073336 shall expire on January 28, 2028. The Hearing Officer may grant one (or more) time extensions to the terms of approval of the tentative map. If requested, time extension(s) shall be requested in writing and with the payment of the applicable fee prior to such expiration date. The total number of extensions shall not exceed the maximum number of extensions authorized by the Subdivision Map Act.

8. **Exhibit Map**. The subject property shall be developed and maintained in substantial conformance with the plans marked Exhibit Map. If changes to any of the plans marked Exhibit Map are required as a result of instruction given at the public hearing, a modified Exhibit Map shall be submitted to LA County Planning by **March 29, 2026 (60 calendar days from the date of approval)**.

9. **Revisions to Exhibit Map**. In the event that subsequent revisions to the approved Exhibit Map are submitted the Subdivider shall submit the proposed plans to the Director of LA County Planning ("Director") for review and approval. All revised plans

must substantially conform to the originally approved Exhibit Map. All revised plans must be accompanied by the written authorization of the property owner(s) and applicable fee for such revision.

10. **Conditions Compliance**. The subject property shall be maintained and operated in full compliance with the conditions of this grant and any law, statute, ordinance, or other regulation applicable to any development or activity on the subject property. Failure of the Subdivider to cease any development or activity not in full compliance shall be a violation of these conditions. No provision of any easement of any other encumbrance on the property shall exempt the Subdivider from compliance with these conditions and applicable regulations.

11. **Inspection**. If inspections are required to ensure compliance with the conditions of this grant, or if any inspection discloses that the subject property is being used in violation of any one of the conditions of this grant, the Subdivider shall be financially responsible and shall reimburse LA County Planning for all enforcement efforts necessary to bring the subject property into compliance. The amount charged for each inspection shall be $456.00 per inspection, or the current recovery cost established by LA County Planning at the time any inspection(s) is/are required, whichever is greater.

    Inspections may be unannounced. Inspections may be conducted utilizing available technologies, including, but not limited to, unmanned aircraft systems (UAS). Use of an UAS requires the consent of the Subdivider pursuant to LA County Planning's UAS policy, which may be updated from time to time, and which shall be provided to the Subdivider upon request.

12. **Library Facilities Mitigation Fees**. Prior to the issuance of any building permit(s), the Subdivider shall remit all applicable library facilities mitigation fees to the County Librarian and pay the fees in effect at the time of payment, pursuant to Chapter 22.264 of the County Code. Questions regarding fee payment can be directed to the County Librarian at (562) 940-8430. The Subdivider shall provide proof of payment upon request from LA County Planning.

13. **Environmental Document Filing Fees**. Within five (5) working days from the day after the appeal period ends on **February 9 , 2026,** (by **February 16, 2026**), the Subdivider shall remit processing fees at the County Registrar-Recorder/County Clerk Office (i.e. County Clerk's Office), payable to the County of Los Angeles, in connection with the filing and posting of a Notice of Determination ("NOD") for this project and its entitlements in compliance with section 21152 of the Public Resources Code. Unless a Certificate of Exemption is issued by the California Department of Fish and Wildlife ("CDFW") pursuant to section 711.4 of the California Fish and Game Code, the Subdivider shall pay the fees in effect at the time of filing the NOD, as provided for in section 711.4 of the Fish and Game Code, currently **$4,227.50** for an Environmental Impact Report ("EIR") plus $75.00 processing fee). No land use project subject to this requirement is final, vested or operative until the fee is paid. Fees are required unless waived by CDFW.

14. **Mitigation Monitoring and Reporting Program ("MMRP")**. The Subdivider shall comply with all mitigation measures as identified and revised in the MMRP, attached as Exhibit D-2, which are incorporated by this reference as if set forth fully herein.

15. **Covenant and Agreement**. Within thirty (30) days of the date of final approval of the grant by the County, the Subdivider shall record a covenant and agreement, which attaches the MMRP and agrees to comply with the mitigation measures imposed by the Supplemental EIR (including the Final Recirculated Portions of the Supplemental Environmental Impact Report) ("RPFSEIR") for this project, in the County Recorder's Office. Prior to recordation of the covenant, the Subdivider shall submit a draft copy of the covenant and agreement to LA County Planning for review and approval. As a means of ensuring the effectiveness of the mitigation measures, the Subdivider shall submit annual mitigation monitoring reports to LA County Planning for approval or as required. The reports shall describe the status of the Subdivider's compliance with the required mitigation measures.

16. **MMRP Deposit**. The Subdivider shall deposit an initial sum of **$6,000.00** with LA County Planning within thirty (30) days of the date of final approval of this grant in order to defray the cost of reviewing and verifying the information contained in the reports required by the MMRP. The Subdivider shall replenish the mitigation monitoring account, if necessary, until all mitigation measures have been implemented and completed.

17. **Revocation**. Notice is hereby given that any person violating a provision of this grant is guilty of a misdemeanor. Notice is further given that the LA County Planning Commission ("Commission") or a Hearing Officer may, after conducting a public hearing, revoke or modify this grant, if the Commission or Hearing Officer finds that these conditions have been violated or that this grant has been exercised so as to be detrimental to the public's health or safety or so as to be a nuisance, or as otherwise authorized pursuant to County Code Chapter 22.238 (Modifications and Revocations) of the County Code.

18. **County Fire Code**. All development pursuant to this grant must be kept in full compliance with the County Fire Code to the satisfaction of the County Fire Department ("Fire").

19. **County Public Works Requirements**. All development pursuant to this grant shall conform with the requirements of County Public Works ("Public Works") to the satisfaction of said department.

20. **Compliance to County Code Title 21 and Title 22**. All development pursuant to this grant shall comply with the requirements of Title 21 (Subdivisions) and Title 22 (Planning and Zoning) of the County Code and of the specific zoning of the subject property, unless specifically modified by this grant, as set forth in these conditions, including the approved Vesting Tentative Map and Exhibit Map, or an approved Amendment Map/Amended Exhibit Map.

21. **Maintenance**. The Subdivider shall maintain the subject property in a neat and orderly fashion. The Subdivider shall maintain free of litter all areas of the premises over which The Subdivider has control. All structures, walls and fences open to public view shall remain free of graffiti or other extraneous markings, drawings, or signage that was not approved by LA County Planning. In the event of graffiti or other extraneous markings occurring, the Subdivider shall remove or cover said markings, drawings, or signage within 48 hours of such notification, weather permitting. Paint utilized in covering such markings shall be of a color that matches, as closely as possible, the color of the adjacent surfaces.

TENTATIVE TRACT MAP SPECIFIC CONDITIONS

22. **Grant**. This grant shall authorize Northlake Phase 1— total of 2,295 dwelling units and 386 lots on 720 gross acres This includes 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); other uses include highway commercial, open space, and public facilities, to include parks, fire station, potential school site, debris basins, water tanks, water quality basin, and a pump station. A shuttle service is also proposed to transport residents and guests within the site as well as offsite destinations (such as shopping and employment centers) in and around Santa Clarita Valley. Offsite improvements would include connection to existing utilities, relocation of existing utility lines, new drainage facilities, and other related infrastructure outside the boundaries of the Project site.

23. **Lot Line Adjustments**. Permission is granted to adjust lot lines to the satisfaction of LA County Planning and Public Works.

24. **Subdivision Committee Conditions**. Except as expressly modified herein, this approval is subject to all recommended conditions listed in the attached Subdivision Committee Reports (VTTM dated August 20, 2025), consisting of letters and reports from Public Works, Fire, and County Departments of Parks and Recreation ("Parks and Recreation"), and Public Health.

25. **Grading**. This grant shall authorize early grading prior to final map approval at the discretion of the Planning Director. If authorized by the Planning Director, an REA shall be required for submittal to show the early grading.

26. **Bulk Grading in Phases**. Permission is granted to bulk grade, in one or more phases, to the satisfaction of LA County Planning and Public Works.

27. **Street Frontage**. The Subdivider shall provide at least 60 feet of street frontage for each lot, except for those lots granted a street frontage waiver; and at least 40 feet of

street frontage at the property line and approximately radial lot lines for each lot fronting on cul-de-sacs and knuckles, except for flag lots.

28. **Street Frontage Waiver**. Permission is granted to waiver from public street frontage requirements for lots fronting private drives and fire lanes for the following: Lot Nos. 131 through 140 (10 total).

PRIOR TO RECORDATION OF A FINAL MAP

29. **Water Supply.** A "Written Verification" and supporting documents from the water supplier to indicate the availability of a "Sufficient Water Supply" as required per Section 66473.7 of the Subdivision Map Act (SB 221) shall be provided to the satisfaction of LA County Planning and Public Works prior to filing any map for recordation.

30. **Final Map Phasing**. Permission is granted to record multiple final maps, provided that a phasing exhibit (or updated phasing exhibit) is submitted to LA County Planning for review and approval, prior to final map recordation. The phasing exhibit shall depict the timing of offsite improvements and open space dedication, number of phases, all lots to be phased, dwelling units per phase, gross and net lot area(s), and required homeowner's association ("HOA") and natural open space calculations.

Easements

31. **Easements Depicted on Final Map**. All existing and proposed easements shall be depicted on the final map, as shown on the Existing and Proposed Easements Table on the approved Tentative/Exhibit Map for ingress/egress, reciprocal access, trails, and utilities, etc. to the satisfaction of LA County Planning, Parks and Recreation, and Public Works.

32. **Easements**. Prior to final map recordation, the Subdivider shall submit a draft copy of the reciprocal ingress and egress easements for the private driveways to the Director for review and approval. Once the property changes hands, the Subdivider shall then record the easements immediately following the recordation of the final map.

33. **Draft Covenant Regarding Proposed Easements**. Prior to final map recordation, the Subdivider shall submit a draft covenant to LA County Planning for review and approval, agreeing to record all proposed easements as designated on the approved Tentative/Exhibit Maps. The approved covenant shall be recorded immediately after the recordation of the final map.

Condominiums

34. The Subdivider shall place a note or notes on the final map, to the satisfaction of LA County Planning, that this subdivision is approved as a condominium project whereby the owners of the units of air space will hold an undivided interest in the common areas, which common areas will in turn provide the necessary access and utility easements for all of the units.

35. Prior to final map recordation, the Subdivider shall submit a draft covenant and agreement to provide tenants 180 days written notification of the intention to sell units prior to termination of tenancy due to sale of the condominium units. The Subdivider shall record said covenant and agreement concurrently with the recordation of the final map.

Covenants, Conditions, and Restrictions ("CC&Rs")

36. The Subdivider shall submit a copy of the project's Covenants, Conditions and Restrictions ("CC&Rs") to the Director for review and approval. A copy of these conditions of approval shall be attached to the CC&Rs and made a part thereof. Those provisions in the CC&Rs required by these conditions shall be identified in the CC&Rs as such and shall not be modified in any way without prior authorization from the Director.

37. The Subdivider shall provide in the CC&Rs a method for the continuous maintenance of the common areas, including but not limited to, private driveways and fire lanes, walkways, lighting system along all walkways, landscaping (including all front yard trees and street trees), trash collection points and containers, irrigation systems, wall, fence and recreation areas, to the satisfaction of the Director.

38. The Subdivider shall reserve in the CC&Rs the right for all residents and their guests within the condominium project to use the guest parking, and private driveways and fire lanes for access into and out of the subdivision.

Driveway Conditions

39. The private condo, multi-family, commercial, and mixed-use driveways shall be labeled as "Private Driveway and Fire Lane" on the final map.

40. The Subdivider shall construct or bond with Public Works for the private driveways and fire lanes, complying with paving design and widths, as depicted on the approved Exhibit Map dated August 20, 2025, or an Amended Exhibit Map approved by the Director.

41. The external access points and internal private driveways/fire lanes of the development shall not be gated. Except for fire emergency access gates required by Fire and utilities and/or infrastructure that require private access gating, gated vehicular access shall be listed as a prohibition within the CC&Rs and physically delineated in an exhibit or map.

42. Once the final map is recorded, the Subdivider shall post on private driveways: "No Parking-Fire Lane", unless designated parking otherwise permitted. The Subdivider shall provide for continued enforcement in the CC&Rs or maintenance agreement. The Subdivider shall submit a draft copy of the CC&Rs and/or maintenance agreement to LA County Planning for review and approval. This shall include bonding for improvements, and such bonds shall not be released until the signs are posted.

Tree Planting

43. **On-site Tree Planting**. Prior to final map recordation, the Subdivider shall submit a tree planting plan to the Director for review and approval, depicting the planting location, size and species of the tree plantings required by this grant (currently a sum total of 6,876 trees, of which 2,333 comprise street trees; 2,593 trees for single and multi-family areas, and 1,950 for dedicated lot trees within recreation areas). The Subdivider shall post a bond guaranteeing performance of work with Public Works or provide other proof of plantings to the satisfaction of the Director. The number and placement of ornamental trees may be reviewed and modified by the Fire Forestry Division with respect to fuel modification and other requirements. Additionally, also prior to final map recordation, the Subdivider shall post a bond guaranteeing performance of work with Public Works or provide other proof of plantings to the satisfaction of the Director.

Open Space

44. Permission is granted to create additional open space lots to the satisfaction of the Director.

45. The Subdivider shall provide for the ownership and maintenance of the open space and/or lots for parks to the satisfaction of the Director. The ownership and maintenance of the lot(s) shall be provided by a HOA or dedicated to a public agency or land conservancy.

OTHER CONDITIONS

46. As agreed to by the Subdivider, Northlake Phase 1 shall substantially conform to the adopted Northlake Specific Plan ("SP") and all revisions and updates to the SP associated and approved with this grant. Northlake Phase 1 and all subsequent development approvals (such as, but not limited to, Amended Exhibit Maps) shall also substantially conform to the document marked "Northlake Design Guidebook" ("Guidebook") dated April 2025, or the latest version of said document as approved by LA County Planning.

47. As agreed to by the Subdivider, the Subdivider is required to comply with the current standards in the CalGreen Code by implementing energy-efficient building designs, pre-wiring residences with electric vehicle charging ports, implementing solar-ready rooftops, reducing indoor and outdoor water demand, and installing energy-efficient appliances and equipment.

48. As agreed to by the Subdivider, the Subdivider shall fund and provide a total of 135 or more electric vehicle ("EV") charging stations within the Project site and in locations within the surrounding Castaic community to the satisfaction of LA County Planning. The specific type, and location of the charging stations shall be approved by LA County Planning in an "EV charging station infrastructure siting concept plan" submitted to LA County Planning by the Subdivider prior to the first phased map approval; and in the same manner, for all subsequent final/phased map approvals, to the satisfaction of LA County Planning. In addition, the location and type of stations shall be noted in an "EV

charging station infrastructure siting detail plan" and depicted on all applicable Exhibit Maps/Revised Exhibit "A"s to the satisfaction of LA County Planning.

49. As agreed to by the Subdivider, the Subdivider shall fund and provide a community shuttle and service for the Northlake development residents and guests. The shuttle shall serve destinations within the Project site (such as the school, parks, highway commercial and mixed-use, live-work commercial areas) as well as outside the Project site (such as the Northlake Hills Elementary School, downtown Castaic shopping center, Sports Complex, and Valencia Commerce Center). The shuttle service shall substantially comply with the transit plans/exhibits depicted on the tentative map/Exhibit Map and in the Guidebook. Prior to final map approval, the Subdivider shall submit to LA County Planning a "community shuttle service plan" that describes the precise shuttle routes, stops, stop designs/amenities, destinations, vehicles, and other details to the satisfaction of LA County Planning.

50. As agreed to by the Subdivider, the Subdivider shall finalize, construct, and initiate the community shuttle service no later than the issuance of the 500th residential Certificate of Occupancy ("CofO") for the Project site. The Subdivider shall be responsible for tracking the progress of the CofO's and provide quarterly reports to LA County Planning for status. The community shuttle service plan is to be updated or amended every six months, or as needed, to the satisfaction of LA County Planning.

51. As agreed to by the Subdivider, the Subdivider shall construct a new school within the Northlake Phase 1, identified in Figure 5A of the Guidebook as "Alternative School Site", if requested by the local school district. The Subdivider shall notify LA County Planning in this event and shall submit an Amendment Map and Amended Exhibit Map/Revised Exhibit "A" for approval prior to final map approval and shall designate the school site/parcel on the applicable final map, to the satisfaction of LA County Planning.

52. As agreed to by the Subdivider, the Subdivider shall provide no less than 440 senior (age-restricted) housing units. Of the 440 senior units, the Subdivider shall provide no less than 345 senior age-restricted (136 rental, 209 for-sale) market-rate housing units and no less than 95 senior age-restricted for-sale affordable housing units within the Project site, and shall identify the lots containing such units on the applicable final map, to the satisfaction of LA County Planning.

53. As agreed to by the Subdivider, the Subdivider shall provide no less than 220 market rate (98 rental, 122 for-sale) housing units, no less than six live-work for-sale market rate units, and no less than 38,700 square feet of associated mixed-use commercial space within the Northlake Phase 1 General Commercial area, as presently depicted in the Guidebook, and shall identify the lots containing such units and space on the applicable final map, to the satisfaction of LA County Planning.

54. As agreed to by the Subdivider, prior to final map recordation, the Subdivider shall submit an Amendment Map and Amended Exhibit Map/Revised Exhibit "A" to LA County Planning for review and approval, depicting the General Commercial area and wildlife crossing/connection areas, as presently shown and described in the

Guidebook (or in the case of wildlife movement, as presently shown on the relevant Exhibit described herein or in a separate document), as well as any other minor changes related to the two areas described in this condition, if needed and would not go beyond the scope of the Amendment Map.

55. As agreed to by the Subdivider, the Subdivider shall provide no less than 315 affordable set-aside and deed-restricted housing units within the Project site, which equates to no less than 10 percent of the overall SP unit count of 3,150 dwellings. No less than 50 percent (or 158) of the 315 units shall be set-aside for lower and very low Income households, per State and County affordable housing guidelines, with the remaining balance of 157 affordable units set-aside for moderate income households, per State and County guidelines. If the overall SP unit count shall be less than 3,150, then the Subdivider shall provide 10 percent of the reduced final overall unit count.

56. As agreed to by the Subdivider, prior to final map recordation, the Subdivider shall coordinate with the Los Angeles County Development Authority ("LACDA") to enter into an agreement for the purpose of monitoring all affordable set-aside units and ensuring that they are deed-restricted in perpetuity, to the satisfaction of the LACDA.

57. As agreed to by the Subdivider, of the 315 affordable set-aside housing units, the Subdivider shall provide no less than 95 senior affordable set-aside and deed-restricted housing units within the General Commercial area, which equates to no less than three percent of the overall Northlake housing unit count of 3,150 dwellings. The three percent senior affordable set-aside shall be included within the overall 315-unit count of affordable set-aside units within the Northlake development. The 220 non-senior affordable units shall be provided throughout the Project site residential land use planning areas.

58. As agreed to by the Subdivider, the Subdivider shall ensure that all affordable set-aside units are developed on a 10 percent pro-rata basis with the non-affordable housing units built within the Northlake development, as per the following schedule:
    a. Affordable Units 1 through 50 to be constructed before the issuance of the 500th Northlake building permit;
    b. Units 51 through 100 before the 1,000th building permit;
    c. Units 101 through 150 before the 1,500th building permit;
    d. Units 151 through 200 before the 2,000th building permit;
    e. Units 201 through 230 before the 2,295th building permit;
    f. and Units 231 through 315 before the 3,150th building permit.

59. As agreed to by the Subdivider, together with the final map recordation, the Subdivider shall record a covenant (or covenants) for all income-restricted (affordable set-aside) and income-age restricted (senior-affordable set-aside) housing units within the Northlake development, which shall describe the income and age level restrictions of the units per State and County guidelines, and shall indicate that such restrictions are to be established in perpetuity, to the satisfaction of the LACDA.

60. As agreed to by the Subdivider, the Subdivider shall ensure that additional and/or enhanced wildlife crossings and connections are provided within/through the Project

and Northlake development, as depicted on the Exhibit marked "wildlife connectivity plan." This connectivity plan shall ensure that all Project and development landscaping and lighting located in applicable areas are compatible with the intended movement of wildlife as per the connectivity plan, to the satisfaction of the County Biologist; and shall ensure that sufficient schematic descriptions and depictions of roadway undercrossings, overcrossings, and culverts that are anticipated to facilitate wildlife movement are provided to LA County Planning prior to the approval of any final maps or grading permits for the Project, to the satisfaction of the County Biologist.

61. As agreed to by the Subdivider, prior to final map recordation, to help address noise impacts of the Project, the Subdivider shall confer with the Castaic Union School District to seek authorization to construct an approximately three-foot-high "noise wall" along the perimeter of the existing Northlake Hills Elementary School playground area. If the school district should authorize the construction of the wall, the Subdivider shall submit a site plan review for the wall to LA County Planning for review and approval and shall construct the wall prior to the issuance of the first residential unit building permit for the Project.

Attachments:

Exhibit D-1 Subdivision Committee Reports (Pages 1 to 74)

Exhibit D-2 MMRP (Pages 1 to 35)

LAND DEVELOPMENT DIVISION – SUBDIVISION
PARCEL MAP NO. 73335 TENTATIVE MAP DATED 8/24/2023

The following report consisting of 10 pages are the recommendations of Public Works. The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

The following are the recommendations from Public Works.

Comply with the previously approved Public Works conditions dated 09-20-2023, Map Date 08-24-2023.

Prepared by Jose Cruz Phone (626) 458-4921 Date 4/9/2024
PM 73335_ Rev1_RPPL2023004448

The following report consisting of 9 pages are the recommendations of Public Works. The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

1. Details and notes shown on the tentative map are not necessarily approved. Any details or notes which may be inconsistent with requirements of ordinances, general conditions of approval, or Department policies must be specifically approved in other conditions, or ordinance requirements are modified to those shown on the tentative map upon approval by the Advisory agency.

2. Easements are tentatively required, subject to review by the Director of Public Works to determine the final locations and requirements.

3. Easements shall not be granted or recorded within areas proposed to be granted, dedicated, or offered for dedication for public streets, highways, access rights, building restriction rights, or other easements until after the final map is filed with the Registrar-Recorder/County Clerk's Office. If easements are granted after the date of tentative approval, a subordination must be executed by the easement holder prior to the filing of the final map.

4. In lieu of establishing the final specific locations of structures on each lot at this time, the owner, at the time of issuance of a grading or building permit, agrees to develop the property in conformance with the County Code and other appropriate ordinances such as the Building Code, Plumbing Code, Grading Ordinance, Highway Permit Ordinance, Mechanical Code, Zoning Ordinance, Undergrounding of Utilities Ordinance, Water Ordinance, Sanitary Sewer and Industrial Waste Ordinance, Electrical Code, and Fire Code. Improvements and other requirements may be imposed pursuant to such codes and ordinances.

5. Adjust, relocate, and/or eliminate lot lines, lots, streets, easements, grading, geotechnical protective devices, and/or physical improvements to comply with ordinances, policies, and standards in effect at the date the County determined the application to be complete all to the satisfaction of Public Works.

6. All easements existing at the time of final map approval must be accounted for on the approved tentative map. This includes the location, owner, purpose, and recording reference for all existing easements. If an easement is blanket or indeterminate in nature, a statement to that effect must be shown on the tentative map in lieu of its location. If all easements have not been accounted for, submit a corrected tentative map to the Department of Regional Planning for approval.

7. If applicable, quitclaim or relocate easements running through proposed structures.

8. Place standard lease purpose only/division of land for lease purpose only notes on the final map to the satisfaction of Public Works.

9. The following note shall be placed on all tract and parcel maps with lot/parcel sizes of five acres or more: "Further division of this property to lot/parcel sizes below five acres will require standard improvements be completed as a condition of approval. The improvements will include but not limited to providing access, installation of water mains, appurtenances and fire hydrants, and conformance to Los Angeles County development standards."

10. Extend lot lines to the center of private and future streets or provide separate lots for the private and future streets.

11. Grant ingress/egress and utility easements to the public over the private and future or future streets.

12. A final parcel map must be processed through the Director of Public Works priorto being filed with the Registrar-Recorder/County Clerk's Office.

13. Prior to submitting the parcel map to the Director of Public Works for examination pursuant to Section 66450 of the Government Code, obtain clearances from all affected Departments and Divisions, including a clearance from the Subdivision Mapping Section of the Land Development Division of Public Works for the following mapping items; mathematical accuracy; survey analysis; and correctness of certificates, signatures, etc.

14. If signatures of record title interests appear on the final map, a preliminary guarantee is needed. A final guarantee will be required at the time of filing of the final map with the Registrar-Recorder/County Clerk's Office. If said signatures do not appear on the final map, a title report/guarantee is needed showing all fee owners and interest holders and this account must remain open until the final parcel map is filed with the Registrar-Recorder/County Clerk's Office.

15. Permission is granted to record large lots (20-acre or more) parcel/tract map as shown on the insert map provided full street right of way and slope easements are dedicated along the latest IEC approved alignments on Ridge Route Road to the satisfaction of Public Works. In addition, make an offer of private and future right of way and dedicate slope easements along all remaining interior streets on alignments to the satisfaction of Public Works.

16. Within 30 days of the approval date of this land use entitlement or at the time of the first plan check submittal, the applicant shall deposit the sum of $5,000 with Public Works to defray the cost of verifying conditions of approval for the purpose of issuing final map clearances.

Prepared by Jose Cruz Phone (626) 458-4921 Date 9/20/2023
pm73335L-New-RPPL2023004448
N/A

TD

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
WWW.DPW.LACOUNTY.GOV

PARCEL NO.: 073335 - Rev 4

TENTATIVE MAP DATE: 08/24/2023
EXHIBIT MAP DATE: 08/24/2023

HYDROLOGY UNIT CONDITIONS OF APPROVAL, PHONE: (626) 458-4921

Approval to drainage is recommended with no drainage conditions.

Note: This clearance is only for the tentative map. If a Conditional Use Permit is required by the Department of Regional Planning, a drainage concept may be required prior to clearing the Conditional Use Permit.

Name _____ Lonnie Chung ____ Date 09/06/2023 Phone (626) 458-7102

PCA LX001129/A863
EPIC LA RPPL2023004448
Telephone: (626) 458-4925
Email: GMEDSubmittals@dpw.lacounty.gov

Los Angeles County Public Works
Geotechnical and Materials Engineering Division
GEOLOGIC AND SOILS ENGINEERING REVIEW SHEET
900 S. Fremont Avenue, Alhambra, CA 91803

Tentative Tract / Parcel Map	73335	**Tentative Map Dated** 8/24/23	**Parent Tract**
Grading By Subdivider? [N] (Y or N)	xxx yd^3	**Location**	Castaic
Geologist	---	**Subdivider**	Northlake Associates, LLC
Soils Engineer	---	**Engineer/Arch.**	Sikand

Review of:

Geologic Report(s) Dated: ---

Soils Engineering Report(s) Dated: ---

Geotechnical Report(s) Dated: ---

References: Pacific Soils Engineering (for Tract Map 51852): 3/16/06, 11/24/03, 1/31/03, 11/3/00, 7/10/00, 8/11/99, 2/13/98, 7/30/96, 12/1/95, 4/6/95, 6/16/94

BASED ON LA COUNTY SUBDIVISION CODE SECTION 21.44.320(D), TENTATIVE MAP FEASIBILITY IS RECOMMENDED FOR APPROVAL FROM A GEOTECHNICAL STANDPOINT

THE FOLLOWING INFORMATION IS APPLICABLE TO THIS DIVISION OF LAND:

- The Final Map does ***not*** need to be reviewed by the Geotechnical and Materials Engineering Division.
- Geotechnical report(s) may be required prior to approval of grading or building plans. Report(s) must comply with the provisions of the County of Los Angeles Department of Public Works *Manual for Preparation of Geotechnical Reports*. The Manual is available at: ***http://dpw.lacounty.gov/gmed/permits/docs/manual.pdf***.

Prepared by

PROFESSIONAL ENGINEER GEORGE MOLINA C 91931 CIVIL STATE OF CALIFORNIA

George Molina
Geotechnical Engineering Section

PROFESSIONAL GEOLOGIST Geir R. Mathisen No. 2376 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

Geir Mathisen
Geology Section

Date 9/19/23

Please complete a Customer Service Survey at http://dpw.lacounty.gov/go/gmedsurvey

NOTICE: Public safety, relative to geotechnical subsurface exploration, shall be provided in accordance with current codes for excavations, inclusive of the Los Angeles County Code, Chapter 11.48, and the State of California, Title 8, Construction Safety Orders.

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION – GRADING
PARCEL MAP NO. 073335 (REV.2)

TENTATIVE MAP DATED 08-24-2023
EXHIBIT MAP DATED 08-24-2023

1. Approval of this map pertaining to grading is recommended with no conditions since no grading is proposed.



Name David Esfandi Date 09/12/2023 Phone (626) 458-7130

P:\ldpub\SUBPCHECK\Grading\Tentative Map Reviews\Templates\Tentative Map Conditions(08-24-23).doc

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION - ROAD
PARCEL MAP NO. 073335 (Rev.) TENTATIVE PARCEL MAP DATED 08-24-2023

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

Approval of the map is recommended with no conditions since no street improvements are proposed. Any condition of approved will be addressed and stipulated under TR 73336.

SR Prepared by Sam Richards Phone (626) 458-4921 Date: 09-20-23

pm73335r-rev6

LAND DEVELOPMENT DIVISION
SEWER UNIT

PARCEL MAP NO.: 073335(Rev.) **TENTATIVE MAP DATED 08-24-2023**

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

1. All lots are minimum net area of 20 acres.

2. Approved without conditions. There are no existing public sewer facilities within proximity of the project and the applicant may propose to use private sewer systems in the future . The use and installation of a private sewage system (septic system) must be approved by the Department of Public Health (DPH). Please call or email Land Use Program at (626) 430-5380 or dlanduse@ph.lacounty.gov for additional information and requirements.

Prepared by Nikko Pajarillaga Phone (626) 458-3137 Date 09-21-2023

PM48307s-rev4.doc

PARCEL MAP NO. 073335 (Rev.) TENTATIVE PARCEL MAP DATED 08-24-2023

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

1. A water system (including any approved booster pump stations) maintained by the water purveyor, with appurtenant facilities to serve all lots in the land division, must be provided based on the Will Serve letter dated 7/18/23. The system shall include fire hydrants of the type and location (both on-site and off-site) as determined by the Fire Department. The water mains shall be sized to accommodate the total domestic and fire flows.

2. Easements shall be granted to the County, appropriate agency or entity for the purpose of ingress, egress, construction and maintenance of all water-related infrastructures constructed for this land division to the satisfaction of Public Works.

Prior to obtaining the building permit from the Building and Safety Office:

3. Submit landscape and irrigation plans for each open space lot in the land division, with landscape area greater than 500 square feet, in accordance with the Water Efficient Landscape Ordinance.

4. Depict all line of sight easements on the landscaping and grading plans.

5. Install a separate water irrigation systems for recycled water use per landscape plans.

6. If necessary, install off-site recycle water mainline per landscape plans to serve this subdivision to the satisfaction of Public Work.

7. The recycled water irrigation systems shall be designed and operated in accordance with all local and State Codes as required per Section 7105.6.3 Chapter 71 of Title 26 Building Code.

SR Prepared by Sam Richards Phone (626)458-4921 Date 09-20-2023
pm73335w-rev5.doc

COUNTY OF LOS ANGELES FIRE DEPARTMENT
FIRE PREVENTION DIVISION

Land Development Unit
5823 Rickenbacker Road
Commerce, CA 90040
Telephone (323) 890-4293, Fax (323) 890-9783

EPIC-LA NUMBER:	RPPL2023004448	PROJECT NUMBER:	PM073335
CITY/COMMUNITY:	Castaic	STATUS:	Cleared
PROJECT ADDRESS:		DATE:	04/04/2024

CONDITIONS

1. A digital copy of the Final Map shall be submitted to the Fire Department's Land Development Unit for review and approval prior to recordation.
2. The Fire Department did not determine any access and water requirements for this subdivision per Title 21, the County of Los Angeles Subdivision Code, Sections 21.32.040 and 21.32.110. Specific access and water requirements for the future development of this property shall be in compliance with applicable sections of Title 32, the County of Los Angeles Fire Code.

For any questions regarding the report, please contact Wally Collins at (323) 890-4243 or Wally.Collins@fire.lacounty.gov.

Reviewed by:

LOS ANGELES COUNTY
DEPARTMENT OF PARKS AND RECREATION

PARK OBLIGATION REPORT

Tentative Map # **73335** DRP Map Date: **08/24/2023** SCM Date: Report Date: **03/21/2024**
Park Planning Area # **35B** CSD: **CASTAIC AREA CSD** Map Type: **Tentative Map - Tract**

Total Units **0** = Proposed Units **0** + Exempt Units **0**

Park land obligation in acres or in-lieu fees:

ACRES:	**0.00**
IN-LIEU FEES:	**$0**

Sections 21.24.340, 21.24.350, 21.28.120, 21.28.130, and 21.28.140, the County of Los Angeles Code, Title 21, Subdivision Ordinance provide that the County will determine whether the development's park obligation is to be met by:

1) the dedication of land for public or private park purpose or,
2) the payment of in-lieu fees or,
3) the provision of amenities or any combination of the above.

The specific determination of how the park obligation will be satisfied will be based on the conditions of approval by the advisory agency as recommended by the Department of Parks and Recreation.

The Representative Land Value (RLVs) in Los Angeles County Code (LACC) Section 21.28.140 are used to calculate park fees and are adjusted annually, based on changes in the Consumer Price Index. The new RLVs become effective July 1st of each year and may apply to this subdivision map if first advertised for hearing before either a hearing officer or the Regional Planning Commission on or after July 1st pursuant to LACC Section 21.28.140, subsection 3. Accordingly, the park fee in this report is subject to change depending upon when the subdivision is first advertised for public hearing.

This project is exempt from the park obligation requirements because:

Trails:

Comments:

This project is exempt from park obligation requirements because:
Other: Large lot parcel map for sale/conveyance purposes. No development proposed. All lots are a minimum of 20 acres.

For further information or to schedule an appointment to make an in-lieu fee payment:
Please contact Clement Lau at (626) 588-5301 or Loretta Quach at (626) 588-5305
Department of Parks and Recreation, 1000 S. Fremont Avenue, Unit #40. Building A-9 West, 3rd Floor. Alhambra, California 91803.

By: _____
Clement Lau, Departmental Facilites Planner II

LOS ANGELES COUNTY
DEPARTMENT OF PARKS AND RECREATION

PARK OBLIGATION WORKSHEET

Tentative Map # **73335** DRP Map Date: **08/24/2023** SCM Date: Report Date: **03/21/2024**
Park Planning Area # **35B** CSD: **CASTAIC AREA CSD** Map Type: **Tentative Map - Tract**

The formula for calculating the acreage obligation and or in-lieu fee is as follows:

(P)eople x (0.0030) Ratio x (U)nits = (X) acres obligation
(X) acres obligation x RLV/Acre = In-Lieu Base Fee

Where P = Estimate of number of People per dwelling unit according to the type of dwelling unit as determined by the U.S. Census
Ratio = The subdivision ordinance provides a ratio of 3.0 acres of park land for each 1,000 people generated by the development. This ratio is calculated as "0.0030" in the formula.
U = Total approved number of Dwelling Units.
X = Local park space obligation expressed in terms of acres.
RLV/Acre = Representative Land Value per Acre by Park Planning Area.

Total Units **0** = Proposed Units **0** + Exempt Units **0**

Park Planning Area = **35B**

Type of dwelling unit	People *	Ratio 3.0 Acres/ 1000 People	Number of Units	Acre Obligation
Detached S.F. Units	**3.44**	**0.0030**	**0**	**0.00**
M.F. < 5 Units	**3.12**	**0.0030**	**0**	**0.00**
M.F. >= 5 Units	**2.65**	**0.0030**	**0**	**0.00**
Mobile Units	**2.78**	**0.0030**	**0**	**0.00**
Exempt Units			**0**	**0.00**
TOTAL			**0**	**0.00**

Ratio	Acre Obligation	RLV / Acre	In-Lieu Base Fee
@ (0.0030)	0.00	$203,614	**$0**

Lot #	Provided Space	Provided Acres	Credit (%)	Acre Credit
0		0.00	100.00%	0.00
			Total Provided Acre Credit:	**0.00**

Acre Obligation		Net Obligation	RLV / Acre	**In-Lieu Fee Due**
0.00	0.00	0.00	$203,614	**$0**

COUNTY OF LOS ANGELES
Public Health

BARBARA FERRER, Ph.D., M.P.H., M.Ed.
Director

MUNTU DAVIS, M.D., M.P.H.
County Health Officer

MEGAN McCLAIRE, M.S.P.H.
Chief Deputy Director

LIZA FRIAS, REHS
Director of Environmental Health

BRENDA LOPEZ, REHS
Assistant Director of Environmental Health

SCOTT ABBOTT, REHS, M.P.A.
Assistant Director of Environmental Health

5050 Commerce Drive
Baldwin Park, California 91706
TEL (626) 430-5374 • FAX (626) 813-3000

www.publichealth.lacounty.gov/eh/

BOARD OF SUPERVISORS

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Kathryn Barger
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April 04, 2024

TO: Joshua Huntington
Supervising Regional Planner
Department of Regional Planning

Attention: Jodie Sackett

FROM: Charlene Contreras
Director, Community Protection Branch
Department of Public Health

SUBJECT: LAND DIVISION – TENTATIVE MAP - TRACT
CASE: RPPL2023004448
PROJECT: PM073335
APN: 2865-003-013

Thank you for the opportunity to review the application of tentative map tract request for the subject property. The project is a resubmittal of previously approved Northlake Tentative Parcel Map. The applicant provided a tentative map dated August 24, 2023.

Public Health recommends the approval of this subject project. This approval is conditioned by the proposed use of public water and sewer systems. The applicant provided a "Water Availability Letter" from Santa Clarita Valley Water dated July 18, 2023, and a "Sewer Will Serve Letter" from the Los Angeles County Sanitation Districts dated June 05, 2023. Any change of methods for the provision of potable water and sewage disposal shall invalidate this approval.

The applicant shall abide by the requirements contained in Title 12, Section 12.08, Noise Control Ordinance for the County of Los Angeles. During soil excavation and grading activities, the contractor should apply dust control measures to reduce exposure to fungal spores like Coccidioides Immitis, which can cause Valley Fever.

☒ Public Health recommends the approval of this subject project.

☐ Public Health does not recommend the approval of this subject project.

If you have any other questions or require additional information, please contact

Veronica Aranda of Public Health, Planning and Land Use Liaison at (626) 430-5201 or varanda@ph.lacounty.gov.

CC:va
DPH_CLEARED_APN-2865-003-013_RPPL2023004448_04.04.2024

The following report consisting of 29 pages are the recommendations of Public Works.

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

1. Details and notes shown on the tentative map are not necessarily approved. Any details or notes which may be inconsistent with requirements of ordinances, general conditions of approval, or Department policies must be specifically approved in other conditions, or ordinance requirements are modified to those shown on the tentative map upon approval by the Advisory agency.

2. Easements are tentatively required, subject to review by the Director of Public Works to determine the final locations and requirements.

3. Easements shall not be granted or recorded within areas proposed to be granted, dedicated, or offered for dedication for public streets, highways, access rights, building restriction rights, or other easements until after the final map is filed with the Registrar-Recorder/County Clerk's Office. If easements are granted after the date of tentative approval, a subordination must be executed by the easement holder prior to the filing of the final map.

4. In lieu of establishing the final specific locations of structures on each lot at this time, the owner, at the time of issuance of a grading or building permit, agrees to develop the property in conformance with the County Code and other appropriate ordinances such as the Building Code, Plumbing Code, Grading Ordinance, Highway Permit Ordinance, Mechanical Code, Zoning Ordinance, Undergrounding of Utilities Ordinance, Water Ordinance, Sanitary Sewer and Industrial Waste Ordinance, Electrical Code, and Fire Code. Improvements and other requirements may be imposed pursuant to such codes and ordinances.

5. Adjust, relocate, and/or eliminate lot lines, lots, streets, easements, grading, geotechnical protective devices, and/or physical improvements to comply with ordinances, policies, and standards in effect at the date the County determined the application to be complete all to the satisfaction of Public Works.

6. All easements existing at the time of final map approval must be accounted for on the approved tentative map. This includes the location, owner, purpose, and recording reference for all existing easements. If an easement is blanket or indeterminate in nature, a statement to that effect must be shown on the tentative map in lieu of its location. If all easements have not been accounted for, submit a corrected tentative map to the Department of Regional Planning for approval.

7. If applicable, quitclaim or relocate easements running through proposed structures.

8. Show the remainder of the last legally created parcel as "Not a Part" on any final map to the satisfaction of the Director of Public Works.

9. If applicable, place standard residential planned development/commercial planned development/residential condominium notes on the final map to the satisfaction of Public Works.

10. Prior to final approval of the tract map, submit a notarized affidavit to the Director of Public Works, signed by all owners of record at the time of filing of the map with the Registrar-Recorder/County Clerk's Office, stating that any proposed condominium building has not been constructed or that all buildings have not been occupied or rented and that said building will not be occupied or rented until after the filing of the map with the Registrar-Recorder/County Clerk's Office.

11. Label driveways and multiple access strips as "Private Driveway and Fire Lane" and delineate on the final map to the satisfaction of Public Works and Fire Department.

12. Reserve reciprocal easements for drainage, ingress/egress, sewer, water, utilities, right to grade, and maintenance purposes, in documents over the common private driveways to the satisfaction of Public Works.

13. Furnish Public Works' Street Name Unit with a list of street names acceptable to the subdivider. These names must not be duplicated within a radius of 20 miles.

14. A Mapping & Property Management Division house numbering clearance is required prior to approval of the final map.

15. If unit filing occurs, reserve reciprocal easements for drainage, ingress/egress, utilities, and maintenance purposes, in documents over the private driveways and delineate on the final map to the satisfaction of Public Works.

16. The boundaries of the unit final maps shall be designed to the satisfaction of the Departments of Regional Planning and Public Works.

17. The first unit of this subdivision shall be filed as Tract No. 73336-01, the second unit, Tract No. 73336-02, and so forth and the last unit, Tract No. 73336.

18. Show open space lots on the final map and dedicate residential construction rights over the open space lots.

19. Depict all line of sight easements on grading and/or landscaping plans.

20. If possible, modify the boundaries of the open space lots or add additional open space lots to include the airspace easements for sight distance to the satisfaction of Regional Planning and Public Works.

21. A final tract map must be processed through the Director of Public Works prior to being filed with the Registrar-Recorder/County Clerk’s Office.

22. Prior to submitting the tract map to the Director of Public Works for examination pursuant to Section 66442 of the Government Code, obtain clearances from all affected Departments and Divisions, including a clearance from the Subdivision Mapping Section of the Land Development Division of Public Works for the following mapping items; mathematical accuracy; survey analysis; and correctness of certificates, signatures, etc.

23. A final guarantee will be required at the time of filing of the final map with the Registrar-Recorder/County Clerk’s Office.

24. Permission is granted to record large lots (20-acre or more) parcel/tract map as shown on the insert map provided full street right of way and slope easements are dedicated along the latest IEC approved alignments on Ridge Route Road to the satisfaction of Public Works. In addition, make an offer of private and future right of way and dedicate slope easements along all remaining interior streets on alignments to the satisfaction of Public Works.

25. Within 30 days of the approval date of this land use entitlement or at the time of the first plan check submittal, the applicant shall deposit the sum of $5,000 with Public Works to defray the cost of verifying conditions of approval for the purpose of issuing final map clearances.

Prepared by Jose Cruz Phone (626) 458-4921 Date 9/17/2025
tr73336L-Rev2-RPPL2023004336
N/A

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
WWW.DPW.LACOUNTY.GOV

TRACT NO.: 073336 – rev 2

TENTATIVE MAP DATE: 08/20/2025
EXHIBIT "A" DATE: 08/20/2025

HYDROLOGY UNIT CONDITIONS OF APPROVAL

Prior to Improvement Plans Approval:

1. Comply with hydrology study, which was approved on 04/27/2017, or the latest revision, to the satisfaction of the Department of Public Works.

2. FEMA flood zone must be analyzed and mapped to determine whether a Conditional Letter of Map Revision (CLOMR) from FEMA is required. Public Works, Stormwater Engineering Division, should be contacted to obtain required procedures.

Prior to recordation of a Final Map or Parcel map Waiver:

1. Submit plans of drainage facilities as required by hydrology study for design of drainage facilities to the satisfaction of Department of Public Works.

2. Show and dedicate to Flood Control District or to the County of Los Angeles easements and/or right of way on the final map to the satisfaction of the Department of Public Works.

3. An assessment district shall be formed to finance the future ongoing maintenance and capital replacement of all water quality devices/systems identified by the Department of Public Works. The Subdivider shall deposit the first year's total assessment based on the Public Works engineering report. This will fund the first year's maintenance after the facilities are accepted. The second and subsequent years assessment will be collected through the property tax bill. This is required to the satisfaction of the Department of Public Works.

Prior to Improvement Acceptance for Public Maintenance:

1. A maintenance permit is required from the State Department of Fish and Wildlife, the Army Corps of Engineers, and the State Water Resources Control Board to the satisfaction of the Department of Public Works. All maintenance permits of the regulatory agencies must be active at the time of acceptance.

Review by: _____ Date: 08/21/2025 Phone: (626) 458-7102
Alex Mikhailpoor

PCA LX001129/A863
EPIC LA RPPL2023004336
Telephone: (626) 458-4925
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Los Angeles County Public Works
Geotechnical and Materials Engineering Division
GEOLOGIC AND GEOTECHNICAL ENGINEERING REVIEW SHEET
900 S. Fremont Avenue, Alhambra, CA 91803

Tentative Tract / Parcel Map	73336	**Tentative Map Dated**	**8/20/25 (Rev./Exhib.)**	**Parent Tract**	
Grading By Subdivider? [Y] (Y or N)	19,400,000 yd³	**Location**	Castaic	**APN**	
Geologist	G3SoilWorks	**Subdivider**	Northlake Associates, LLC		
Soils Engineer	G3SoilWorks	**Engineer/Arch.**	Sikand		

Review of:
Geologic Report(s) Dated:
Soils Engineering Report(s) Dated:
Geotechnical Report(s) Dated: 5/19/16, 4/18/16, 2/10/16
References: Petra Geosciences: 9/30/15, 4/28/15
Pacific Soils Engineering (for Tract Map 51852): 3/16/06, 11/24/03, 1/31/03, 11/3/00, 7/10/00, 8/11/99, 2/13/98, 7/30/96, 12/1/95, 4/6/95, 6/16/94

TENTATIVE MAP FEASIBILITY IS RECOMMENDED FOR APPROVAL FROM A GEOTECHNICAL STANDPOINT

THE FOLLOWING CONDITIONS MUST BE FULFILLED:

G1. The final map must be approved by the Geotechnical and Materials Engineering Division (GMED) to assure that all geotechnical requirements have been properly depicted. For Final Map clearance guidelines refer to policy memo GS051.0 in the County of Los Angeles Department of Public Works *Manual for Preparation of Geotechnical Reports.* The Manual is available at: ***http://dpw.lacounty.gov/gmed/permits/docs/manual.pdf***.

G2. A grading plan must be geotechnically approved by the GMED prior to Final Map approval. The grading depicted on the plan must agree with the grading depicted on the tentative tract or parcel map and the conditions approved by the Planning Commission. If the subdivision is to be recorded prior to the completion and acceptance of grading, corrective geologic bonds may be required.

G3. Prior to grading plan approval, a detailed geotechnical report must be submitted that addresses the proposed grading. All recommendations of the geotechnical consultant(s) must be incorporated into the plan. The report must comply with the provisions of the County of Los Angeles Department of Public Works *Manual for Preparation of Geotechnical Reports*. The Manual is available at: ***http://dpw.lacounty.gov/gmed/permits/docs/manual.pdf***.

G4. All geologic hazards associated with this proposed development must be eliminated. Alternatively, the geologic hazards may be designated as restricted use areas (RUA), and their boundaries delineated on the Final Map. These RUAs must be approved by the GMED, and the subdivider must dedicate to the County the right to prohibit the erection of buildings or other structures within the restricted use areas. For information on the RUA policy refer to policy memo GS063.0 in the County of Los Angeles Department of Public Works *Manual for Preparation of Geotechnical Reports.* The Manual is available at: ***http://dpw.lacounty.gov/gmed/permits/docs/manual.pdf***..

S1. At the grading plan stage, submit grading plans to the GMED for verification of compliance with County Codes and policies.

NOTE(S) TO THE PLAN CHECKER/BUILDING AND SAFETY DISTRICT ENGINEER:
A. THE GEOTECHNICAL MAPS DEPICT ADDITIONAL GRADING LOCATED EAST OF THE INTERSECTION OF PROPOSED O-STREET AND P-STREET THAT IS NOT SHOWN ON THE TENTATIVE MAP.
B. OFF-SITE GRADING IS PROPOSED.
PER THE SOILS ENGINEER:
C. ON-SITE SOILS ARE SEVERELY DELETERIOUS TO CONCRETE AND EXTREMELY CORROSIVE TO FERROUS METALS. THE USE OF TYPE V CEMENT SHOULD BE ANTICIPATED.
D. ON-SITE SOILS HAVE A VERY HIGH EXPANSION POTENTIAL.

Prepared by

George Molina
Geotechnical Section

Karin Burger
Engineering Geology Section

Date 9/18/25

NOTICE: Public safety, relative to geotechnical subsurface exploration, shall be provided in accordance with current codes for excavations, inclusive of the Los Angeles County Code, Chapter 11.48, and the State of California, Title 8, Construction Safety Orders.

1. Approval of this map pertaining to grading is recommended.

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

REQUIREMENTS PRIOR TO GRADING PLAN APPROVAL:

2. Notarized covenants shall be prepared and recorded by the applicant for any offsite impacts, as determined by Public Works. By acceptance of this condition, the applicant acknowledges and agrees that this condition does not require the construction or installation of an off-site improvement, and that the offsite covenants referenced above do not constitute an offsite easement, license, title or interest in favor of the County. Therefore, the applicant acknowledges and agrees that the provisions of Government Code Section 66462.5 do not apply to this condition and that the County shall have no duty or obligation to acquire by negotiation or by eminent domain any land or any interest in any land in connection with this condition. (Offsite work is shown on the tentative map, but not required for public improvements, and design changes during the improvement change may allow the offsite improvements or impacts to be omitted or mitigated, respectively.)

3. The BMP system currently proposed in the hydrology report is not necessarily approved and shall be subject to final engineering review. If the BMP system is found to not meet, satisfy, or conform to Public Works standards or requirements then the applicant is responsible for proposing alternate methods of satisfying the LID requirements. Alternate methods may cause alterations to the project substantial enough that the project may no longer be deemed substantially conforming with the original tentative map approval or conditions. If so, the applicant is responsible for processing any required amendments or revisions to the tentative map and any related engineering reports to attain substantial conformity.

4. Provide approval of:

   a. The latest hydrology study by the Storm Drain and Hydrology Section of Land Development Division.

   b. The location/alignment and details/typical sections of any park/trail, as shown on the grading plan, to the satisfaction of the Department of Parks and Recreation.

   c. The grading plan by the Geotechnical & Materials Engineering Division (GMED).

   d. Permits and/or letters of non-jurisdiction from all State and Federal Agencies, as

applicable. These agencies may include but may not be limited to the State of California Regional Water Quality Control Board, State of California Department of Fish and Wildlife, State of California Department of Conservation, California Geologic Energy Management Division (CalGEM), and the Army Corps of Engineers.

REQUIREMENTS PRIOR TO FINAL MAP RECORDATION:

5. Submit a grading plan for approval. The grading plan must show and call out the following items, including but not limited to: construction of all drainage devices and details, paved driveways, elevation and drainage of all pads, SUSMP and LID devices (fill in whichever is applicable), and any required landscaping and irrigation not within a common area or maintenance easement. Acknowledgement and/or approval from all easement holders may be required.

6. A maintenance agreement or CC&Rs may be required for all privately maintained drainage devices, slopes, and other facilities.



Name Nargiss Majrooh Date 9/8/2025 Phone (626) 458-4921

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

Comply with the attached approved road conditions per tentative and exhibit maps dated 9/13/17 to the satisfaction of Public Works except for the following revisions:

A. Condition 33. Shall be deleted and replaced with the following: Comply with the streetlighting conditions dated 9/4/2025.

B. Condition 35. Shall be revised to read as follows: The existing approved conceptual signing and striping plan dated 06/29/16 has expired, submit a new conceptual signing and striping plan to Traffic Safety and Mobility for review and approval. After the approval of the aforementioned conceptual signing and striping plan, submit detailed signing and striping plans (scale 1"=40') for all multi-lane streets, private drive, and highways in the vicinity of this project at any other offisite location if required to mitigate any traffic impact (per the attached letter from Traffic Safety and Mobility dated 08/28/25) to the satisfaction of Public Works.

C. Conditions 36, 38 & 39. Shall replace the Traffic Safety and Mobility letter dated 10/16/16 with the attached letter dated 8/28/25.

D. Condition 43. shall be deleted.

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

1. A minimum centerline curve length of 100 feet shall be maintained on all local streets and a minimum centerline curve radius of 100 feet on all cul-de-sac streets. Curves through intersections should be avoided when possible. If unavoidable, the alignment shall be adjusted so that the proposed BC and EC of the curve through the intersection are set back a minimum of 100 feet away from the BCR's of the intersection. Reversing curves of local streets need not exceed a radius of 1,500 feet and any curve need not exceed a radius of 3,000 feet.

2. Compound curves are preferred over broken-back curves. Broken-back curves must be separated by a minimum of 200 feet of tangent (1,000 feet for multi-lane highways or industrial collectors). If compound curves are used, the radius of the smaller curve shall not be less than two-thirds of the larger curve. The curve length of compound curves shall be adjusted to exceed a minimum curve length of 100 feet, when appropriate, in accordance with AASHTO guidelines.

3. The minimum centerline radius is 350 feet on all local streets with 64 feet of right of way and on all the streets where grades exceed 10 percent.

4. The central angles of the right of way radius returns shall not differ by more than 10 degrees on local streets.

5. Driveways will not be permitted within 25 feet upstream of any catch basins when street grades exceed six (6) percent.

6. Provide maximum 6% grade through the knuckles.

7. Provide standard and modified knuckles on streets as shown on the tentative map to the satisfaction of Public Works.

8. Provide standard and modified cul-de-sacs on streets as shown on the tentative map.

9. Provide minimum landing area of 100 feet for local collectors, 50 feet for local access roads, and 25 feet for cul-de-sacs at a maximum three (3) percent grade on all "tee" intersections.

10. The centerline alignment of Ridge Route Road shall conform to the approved Interdepartmental Engineering Committee (IEC) P-273 (PW) to the satisfaction of Public Works.

11. Dedicate variable width right of way on Ridge Route Road, varying from 40 feet from centerline to 45 feet from centerline, to the satisfaction of Public Works.

12. Dedicate variable width right of way on Northlake Boulevard, varying from 32 feet from centerline to 43 feet from centerline, to the satisfaction of Public Works.

13. Dedicate right of way 35 feet from centerline on "A" Street to the satisfaction of Public Works.

14. Dedicate right of way 33 feet from centerline on "S" Street to the satisfaction of Public works.

15. Dedicate right of way 32 feet from centerline on "A" Street, "B" Street, "D" Street, "E" Street", "F" Street, "H" Street and, "O" Street to the satisfaction of Public Works.

16. Dedicate right of way 30 feet from centerline on "C" Street, "G" Street, "I" Street, "J" Street, "P" Street, "AA" Street, "DD" Street, "EE" Street, "GG" Street, "HH" Street, "PP" street, and "QQ" Street to the satisfaction of Public Works.

17. Dedicate right of way 29 feet from centerline on "O" Street, "BB" Street, "CC" Street, "FF" Street, "II" Street, "JJ" Street, "KK" Street, "LL" Street, "MM" street, "NN" Street, "OO" Street, "PP" Street, "QQ" Street, "RR" Street, and "SS" Street to the satisfaction of Public Works.

18. The design elements (alignment, curvature, slopes, easement widths) of the Private Drives are not necessarily approved. Conform to the final design criteria (alignment, curvature, slopes, right-of-way widths) of the approved "Private Drives and Traffic Calming Design Guidelines Manual". All private drives shall be constructed per an approved grading plan to the satisfaction of Public Works.

19. Provide a minimum of 25 feet curb return radii at all local street intersections to the satisfaction of Public Works. Minimum of 35 feet radius or larger radius returns shall be provided at all highway intersections and other intersections where larger radii are warranted to provide adequate design features at the discretion of Public Works.

20. Dedicate adequate property line return radii at all intersections to adequately construct a curb ramp to Americans with Disabilities Act (ADA) standards and to

the satisfaction of Public Works. At a minimum, the property line return radii shall be consistent with the necessary curb return radii and parkway widths that are deemed appropriate by Public Works. Additional right of way corner cut offs shall be dedicated at all signalized intersections and other locations where deemed appropriate by Public Works.

21. Secure offsite easements for road and slopes prior to tentative map approval.

22. Reserve easements for ingress/egress purposes over any sidewalks or multi-purpose use trails constructed outside the public right of way to the satisfaction of Public Works.

23. Construct curb, gutter, base, pavement, and sidewalk (if applicable) on all private drives to the satisfaction of Public Works. In addition, if applicable, construct additional sidewalk pop-outs in the vicinity of any above ground utilities to meet current Americans with Disabilities Act (ADA) requirements to the satisfaction of Public Works. All final design criteria (alignment, curvature, slopes, right-of-way widths) for private drives shall conform to the approved "Private Drives and Traffic Calming Design Guidelines Manual". All private drives shall be constructed per an approved grading plan to the satisfaction of Public Works.

24. Construct a slough wall outside the street right of way when the height of the slope is greater than five feet above the sidewalk and the sidewalk is adjacent to the street right of way. The wall shall not impede any required line of sight. Slough wall is not required if there is a minimum of 3 feet wide flat area between the right of way and the toe of the slope provided there is appropriate drainage system to minimize the sloughing of the slope.

25. Permission is granted to reduce the centerline curve radius to 250 feet on "AA" Street and "C" street, and 300 feet on "G" Street to the satisfaction of Public Works.

26. Monument signs located on medians (within private drives or driveways to individual lots) shall not impede adequate line of sight to vehicles or pedestrians.

27. Provide adequate curb transitions on streets with variable right of way to the satisfaction of Public Works.

28. All gated entries proposed for any commercial lots shall substantially conform to the typical gate details provided in the "Private Drives and Traffic Calming Design Guidelines Manual" to the satisfaction of Public Works. Provide additional stacking distance if determined to be necessary to the satisfaction of Public Works.

29. All emergency vehicle access gates shall remain closed at all times, except during an emergency.

30. Provide intersection sight distance to the satisfaction of Public Works for a design speed of:

    (1) 55 mph (585 feet) on Ridge Route Road from North Lake Boulevard, "B" Street and "S" Street, on as depicted on the tentative map.

    (2) 40 mph (415 feet) on "A" Street from "D" Street and G" Street and driveway to lot 301, on "B" Street from "P" Street and driveway to lot 290, on "E" Street from "H" Street, on "I" Street from "J" Street, on "H" street from driveway to lot 304, on "O" Street from "G" Street, "P" Street, driveway to lot 293 and driveway to lot 296, as depicted on the tentative map.

    (3) 30 mph (310 feet) on "I" Street from "J" Street as depicted on the tentative map.

    Line of sight requirements for corner sight distance are not necessarily restricted to the above intersections. Additional line of sight for all other intersections and driveways shall be required if deemed necessary by the Department of Public Works. Line of sight shall be within right of way or dedicate airspace easements to the satisfaction of Public Works. Additional grading may be required.

31. Provide stopping sight distance as depicted on the tentative map and where applicable along all public streets. Line of sight shall be within right of way or dedicated airspace easements to the satisfaction of Public Works. In areas where the intersection sight distance overlaps with the stopping sight distance, the more stringent of the two shall govern.

32. All line of sight easements shall be depicted on grading and landscaping plans to the satisfaction of Public Works.

33. Comply with the street lighting requirements identified in the attached March 11, 2015 letter from our Traffic and Lighting Division to the satisfaction of Public works.

34. The roadway median layouts (pocket lengths, widths, etc) shown in the plan view of the tentative map are not necessarily approved.

35. Conform to the approved conceptual signing and striping plan (approved on June

29, 2016) and submit detailed signing and striping plans (scale 1" = 40') for all multi-lane streets, private drives, and highways in the vicinity of this project and at any other offsite location if required to mitigate any traffic impact (per the attached letter from our Traffic and Lighting Division dated October 3, 2016) to the satisfaction of Public Works.

36. Traffic Signal Plans (scale 1"=20') shall be required at any location where modification to the existing traffic signal has been deemed necessary and at locations where new traffic signals are to be installed (per the attached letter from our Traffic and Lighting Division dated October 3, 2016 to the satisfaction of Public Works.

37. Provide adequate signal easements at the entrance to any public street from a private drive/ fire lane to the satisfaction of Public Works.

38. Signing and striping plans, signal plans (where applicable), and cost estimates, are required for any segment of roadway or intersection identified in the approved traffic study as one for which the project is obligated to submit a pro-rata share payment. Should improvements to any segment of roadway or intersection as described above be included in a full mitigation for the Castaic Bridge and Major Thoroughfare (B&T) District, the project shall be exempt from submitting signing and striping, signal plans, and corresponding cost estimates for those improvements and shall only be responsible for paying the appropriate B&T District fees in effect at the time of final map recordation. If required, signing and striping plans, signal plans, and cost estimates may be conceptual in nature and shall be used solely as a tool to obtain a monetary value for the pro-rata share percentages identified in the approved traffic study. Approved cost estimates from Public Works must be obtained and the appropriate payments made prior to final map recordation.

39. Comply with the mitigation measures identified in the attached October 3, 2016 letter from our Traffic and Lighting Division to the satisfaction of Public Works. If a Bridge and Thoroughfare District is formed, and if signals identified in the study are included as facilities specifically identified for inclusion in that approved District, then the amount and eligibility for a credit against your District obligation may be given if approved by Public Works.

40. Plant street trees on all public and private streets to the satisfaction of Public Works.

41. Install postal delivery receptacles in groups to serve two or more residential units to the satisfaction of Public Works.

42. Underground all new and existing service lines and distribution lines that are less than 50 KV and new utility lines to the satisfaction of Public Works and Southern California Edison. Please contact Construction Division at (626) 458-3129 for new location of any above ground utility structure in the parkway.

43. Establish a Landscape Maintenance District (LMD), subject to the approval of Department of Public Works, Road maintenance Division, for the purpose of maintaining landscaped medians and parkways on all streets and highways to the satisfaction of Public Works. If for any reason, the LMD is not established, or ceases to exist, the maintenance responsibility will revert back to the Home Owners Association.

44. Prior to final map approval, pay the fees established by the Board of Supervisors for the Castaic Bridge and Major Thoroughfare Construction Fee District in effect at the time of recordation.

Prepared by Sam Richards Phone (626) 458-4921 Date: 10-11-17
tr73336r-rev5

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

MARK PESTRELLA, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

August 28, 2025

IN REPLY PLEASE
REFER TO FILE: T-4

Ms. Maria Morris and Mr. Daryl Zerfass
Stantec
38 Technology Drive
Irvine, CA 92618

Dear Ms. Morris and Mr. Zerfass:

NORTHLAKE SPECIFIC PLAN
TRANSPORTATION ANALYSIS FOR CALIFORNIA
ENVIRONMENTAL QUALITY ACT – NOVEMBER 19, 2024
UNINCORPORATED CASTAIC AREA

Public Works reviewed the Transportation Impact Analysis dated November 19, 2024 (2024 TIA), for the proposed Northlake Specific Plan Development located east of the Interstate 5 freeway and north of Lake Hughes Road in the unincorporated Castaic area. This letter supersedes the previous letter dated December 2, 2024.

Project Description

The project proposed the development of 1,143 single family residential units, 1,341 multi-family residential units, 345 age qualified single family residential units, and 315 affordable mixed-use housing units and 6 market-rate live-work units for a total of 3,150 residential units. The project also proposed highway commercial (e.g., retail near the highway), a middle school (as an option), private and public recreational parks, and a fire station.

Project's Transportation Impact

According to the 2024 TIA, the project would not result in new transportation impacts to the unincorporated County. We generally agree with the findings in the 2024 TIA.

In addition to the 2024 TIA, Public Works also reviewed the Traffic Impact Analysis dated September 2016 (2016 TIA), and the Supplemental Analysis for School Site Relocation (SASSR) dated September 2016 for the proposed Northlake Development project located east of the Interstate 5 (I-5) Freeway and north of Lake Hughes Road in the

unincorporated Castaic/Lake Hughes area. This letter includes all previous requirements from the previous letter dated October 3, 2016.

Project's Phase 1 Transportation Impact

According to the 2016 TIA, the traffic generated by Phase 1 of the project alone will not have a significant transportation impact to County roadways or intersections in the area based on the County's Traffic Impact Analysis (TIA) Guidelines. We generally agree with the findings of the 2016 TIA.

Project's Phase 1 Alternative Transportation Impact

According to the SASSR, the traffic generated by the Phase 1 Alternative of the project alone will not have a significant transportation impact on County roadways or intersections in the area based on the County's TIA Guidelines. We generally agree with the findings of the SASSR.

Project's Build-Out Transportation Impact

According to the 2016 TIA, the traffic generated by the project alone will have a significant transportation impact at the three intersections listed below based on the County's TIA Guidelines. We generally agree with the findings of the 2016 TIA.

- Ridge Route Road at Lake Hughes Road
- I-5 Freeway Southbound On-Ramp at Parker Road
- I-5 Freeway Northbound Off-Ramp at Ridge Route Road

Mitigation of Project's Transportation Impact

According to the 2016 TIA, the following improvements are proposed at the intersection listed below to address the project's transportation impact. However, the proposed improvements do not fully mitigate the impact. Since no additional mitigation measures are feasible within the available right of way, the project's applicant shall appropriately describe this significant and unavoidable transportation impact in the project's Environmental Impact Report.

Ridge Route Road at Lake Hughes Road

- South Approach Mitigation: Add a right-turn lane.
- East Approach Mitigation: Add a right-turn lane.
- West Approach Mitigation: Add a left-turn lane, remove one through lane, and add a right-turn lane.
- This intersection will also require the installation of a traffic signal with southbound right-turn overlap phasing.
- The above improvements are identified as Castaic Bridge and Thoroughfare (B&T) District improvements. Construction of these improvements may qualify for a B&T District credit.

According to the 2016 TIA, the project's transportation impact could be mitigated at the two intersections listed below by implementing the following improvements:

I-5 Freeway Southbound On-Ramp at Parker Road

- East Approach Mitigation: Add two left-turn lanes.
- West Approach Mitigation: Add a right-turn lane.
- This intersection will also require the installation of a traffic signal.
- The above improvements are identified as Castaic B&T District improvements. Construction of these improvements may qualify for a B&T District credit.

I-5 Freeway Northbound Off-Ramp at Ridge Route Road

- South Approach Mitigation: Add a right-turn lane.
- East Approach Mitigation: Add a through lane.
- This intersection will also require the installation of a traffic signal.
- The above improvements are identified as Castaic B&T District improvements. Construction of these improvements may qualify for a B&T District credit.

We generally agree with the mitigation measures recommended in the 2016 TIA. Detailed traffic signal plans and signing and striping plans for the above improvements shall be submitted to Public Works for review and approval.

The project shall be responsible for monitoring traffic conditions at the three above-mentioned intersections beginning at the time of first occupancy to determine when the identified improvements for each intersection are required to

be constructed. A monitoring report to determine the appropriate installation period for the identified improvements shall be submitted to Public Works for review and approval at the following milestones:

1) 1,000 residential units or 100,000 square feet non-residential uses
2) 2,000 residential units or 200,000 square feet non-residential uses
3) 3,000 residential units or 300,000 square feet non-residential uses

Project's Cumulative Transportation Impact

According to the 2016 TIA, the cumulative traffic generated by the project and other related projects will have a significant transportation impact at the six intersections listed below based on the County's TIA Guidelines. We generally agree with the findings of the 2016 TIA.

- Castaic Road at Ridge Route Road
- Ridge Route Road and Lake Hughes Road
- The Old Road at I-5 Freeway Southbound On/Off-Ramps
- I-5 Freeway Northbound On/Off-Ramps at Lake Hughes Road
- I-5 Freeway Southbound On-Ramp at Parker Road
- I-5 Freeway Northbound Off-Ramp at Ridge Route Road

Mitigation of Project's Cumulative Transportation Impact

According to the 2016 TIA, the project's cumulative transportation impacts could be mitigated at the intersections listed below by implementing the following improvements:

Castaic Road at Ridge Route Road

- South Approach Mitigation: Add a left-turn lane.
- West Approach Mitigation: Add a right turn lane.
- This intersection will also require the installation of a traffic signal with southbound right-turn overlap phasing.
- The above improvements are identified as Castaic B&T District improvements. Payment of the Castaic B&T District fees in lieu of a pro rata share would address the cumulative impact at this intersection.

The Old Road at I-5 Freeway Southbound On/Off-Ramps

- Install traffic signal with northbound right-turn overlap phasing.
- The above improvement is identified as a Castaic B&T District improvement. Payment of the Castaic B&T District fees in lieu of a pro rata share would address the cumulative impact at this intersection.

I-5 Freeway Northbound On/Off-Ramps at Lake Hughes Road

- South Approach Mitigation: Add alert-turn lane and convert shared left-turn/ through lane to a shared left-turn/through/right-turn lane.
- This intersection will also require the installation of a traffic signal.
- The above improvements are identified as Castaic B&T District improvements. Payment of the Castaic B&T District fees in lieu of a pro rata share would address the cumulative impact at this intersection.

I-5 Freeway Southbound On-Ramp at Parker Road

The following improvements could mitigate the cumulative impact but are the same as those required to mitigate the project's transportation impact.

- East Approach Mitigation: Add two left-turn lanes.
- West Approach Mitigation: Add a right-turn lane.
- This intersection will also require the installation of a traffic signal.
- The above improvements are identified as Castaic B&T District improvements. Construction of these improvements may qualify for a B&T District credit.

I-5 Freeway Northbound Off-Ramp at Ridge Route Road

- East Approach Mitigation: Add a third through lane
- Modify the traffic signal in accordance with the above improvement.
- The above improvements are identified as Castaic B&T District improvements. Payment of the Castaic B&T District fees in lieu of a pro rata share would address the cumulative impact at this intersection.

Ridge Route Road at Lake Hughes Road

The following improvements could mitigate the cumulative impact but are the same as those required to mitigate the project's transportation impact. However, the proposed improvements do not fully mitigate the impact. Since no additional mitigation measures are feasible within the available right of way, the project's applicant shall appropriately describe this significant and unavoidable cumulative impact in the project's Environmental Impact Report.

- South Approach Mitigation: Add a right-turn lane.
- East Approach Mitigation: Add a right-turn lane.
- West Approach Mitigation: Add a left-turn lane, remove one through lane, and add a right-turn lane.
- This intersection will also require the installation of a traffic signal with southbound right-turn overlap phasing.
- The above improvements are identified as Castaic B&T District improvements. Construction of these improvements may qualify for a B&T District credit.

We generally agree with the mitigation measures recommended in the 2016 TIA. The project is located within the Castaic B&T District. Consequently, the project shall pay its share of the Castaic B&T District fees prior to approval of the final map. Please contact Land Development Division for the determination and payment of these fees.

The project shall be responsible for monitoring traffic conditions at the above-mentioned intersections beginning at the time of first occupancy to determine when the identified improvements for each intersection are required to be constructed. A monitoring report to determine the appropriate installation period for the identified improvements shall be submitted to Public Works for review and approval at the following milestones:

1) 1,000 residential units or 100,000 square feet non-residential uses
2) 2,000 residential units or 200,000 square feet non-residential uses
3) 3,000 residential units or 300,000 square feet non-residential uses

Site Access Requirements

Traffic signals shall be installed at the five intersections listed below within the project site. The street names for these intersections are taken from the 2016 TIA and were not checked against the latest tentative tract maps. The project shall solely design and construct the traffic signals to the satisfaction of Public Works. The traffic signals shall be installed and operational concurrent with the installation of the curb, gutter, and the first lift of asphalt pavement. Detailed signing/striping and traffic signal plans shall be submitted to Public Works for review and approval.

- Ridge Route Road at B Street
- Ridge Route Road at Northlake Boulevard
- Northlake Boulevard at A Street
- Northlake Boulevard at E Street
- Ridge Route Road at SS Street

Additionally, traffic signals may be warranted in the future at the following intersections:

- School Driveway at Northlake Boulevard
- Ridge Route Road at Shadow Lake Lane
- Ridge Route Road at Elk Ridge Road

The project shall enter into a secured agreement with Public Works to guarantee the design and construction of the three traffic signals when the traffic conditions warrant their installation. The intersections shall be monitored for the installation of the signals every year for up to 5 years after the certificate of occupancy of the last unit is issued. Upon Public Works' determination that the traffic signals are warranted, the project's developer shall design the necessary plans and construct the signal to the satisfaction of Public Works. Any security previously submitted for traffic signal construction will be returned once the construction is completed to the satisfaction of Public Works or at the expiration of the above-mentioned monitoring period.

Flashing beacons shall be installed at the Fire Station within the project site. The project shall solely design and construct the flashing beacons to the satisfaction of Public Works. The flashing beacon shall be installed and be operational concurrent with the installation of the curb, gutter, and the first lift of asphalt pavement. Detailed signing/striping and traffic signal plans shall be submitted to Public Works for review and approval.

Other Jurisdictions

We recommend the applicant consult with the City of Santa Clarita and the California Department of Transportation to obtain concurrence with any potential transportation impacts within their jurisdiction.

If you have any questions, please contact Mr. Stephen Lamm, Traffic Safety and Mobility Division, at (626) 300-4764 or slamm@pw.lacounty.gov.

Very truly yours,

MARK PESTRELLA, PE
Director of Public Works



JULIAN GARCIA, P.E.
Assistant Division Head
Traffic Safety and Mobility Division

SL:wm
SP:\TSMPUB\STDIES\LTRS& MEMS\ESTU2023000255-N.LAKE TIA APPRVL LTR–JUN2025

bc: Land Development (Suarez, Lasso)

THE PROJECT DOES REQUIRE NEW STREETLIGHTS AND ANNEXATION IS REQUIRED. SEE BELOW FOR FURTHER DETAILS.

Project is not in the County Lighting Maintenance District (CLMD) 1687. The Subdivision project shall conform to the design standards and policies of Public Works, in particular, but not limited to the statements and conditions below:

STREETLIGHT REQUIREMENTS

1. Streetlight(s) shall be provided to the satisfaction of Public Works or as modified by Public Works on all public streets/highways within and around TR 73336.

2. Provide streetlights on new concrete pole(s) with underground wiring. The streetlights shall be designed as a County owned and maintained system.

3. Prior to recordation of final map, submit street lighting plans along with existing and/or proposed underground utilities plans to Traffic Safety and Mobility Division, Street Lighting Section, for processing and approval.

4. If annexation is required for the project, street lighting plans cannot be approved until the Board of Supervisors approve the annexation.

5. If phasing of the project is approved, each phase of the project shall be subject to the conditions for each individual phase.

6. For subdivisions, Street lighting plans shall be approved prior to map recordation.

7. Street lighting improvements shall be installed per approved plans prior to the issuance of a certificate of occupancy.

ANNEXATION AND ASSESSMENT BALLOTING REQUIREMENTS

8. The proposed project or a portion(s) of the proposed project is not within the existing CLMD and annexation to the CLMD is required, prior to recordation of final map or parcel map waiver. The Board of Supervisors must approve the annexation and levy of assessments prior to Public Works approving the street lighting plans.

9. Upon approval of the Tentative Map, the developer must notify schavez@pw.lacounty.gov in order to initiate the annexation process.

10. Upon approval of the Tentative Map, the applicant (property owner or authorized representative) shall comply with the Conditions of Annexation listed below in order for the CLMD to pay the future operation and maintenance costs of streetlight(s):

    a. Submit a street lighting plan for the proposed streetlight(s) meeting County lighting standards to the satisfaction of Public Works.

b. Provide business address and developer/property owners name(s), mailing address(es), site address, Assessor Parcel Number(s), and Parcel Boundaries in either MicroStation or Auto CADD format of territory to be developed to the Street Lighting Section.
c. Submit site map of the proposed project including any roadways conditioned for streetlights that are outside the proposed project area to the Street Lighting Section. Contact the Street Lighting Section at (800) 618-7575 for map requirements and/or questions you may have.
d. If no new streetlights are required but annexation is required, submit a street lighting plan showing the location of existing streetlights.
e. For subdivisions, provide a copy of the recorded subdivision map, if recorded.

11. The annexation and assessment balloting process takes approximately 18 months to complete once the annexation and levy of assessment timeline acknowledgment form is signed by the developer after the above information is received and approved. Therefore, untimely submittal of the above information may result in delaying the approval of the street lighting plans.

12. Upon project recordation, the developer must notify Public Works, Street Lighting Section. The applicant shall provide the status of this approval to schavez@pw.lacounty.gov.

TRANSFER REQUIREMENTS

13. The applicant (property owner or authorized representative) shall be responsible for the operation and maintenance of streetlights along with their associated costs that are installed as a condition of development. The applicant will remain responsible until the streetlights are formally accepted into the County Lighting District for operation and maintenance and their billing is transferred into a County Lighting District account with Southern California Edison.

14. Public Works can assume the responsibility for operation, maintenance, and funding all associated costs of all streetlights installed and transfer the billing when all of the following conditions are met (the transfer of billing may be delayed one or more years if the conditions are not met):

a. All required streetlights (LS-2/LS-3) in the project have been constructed per Public Works approved street lighting plan, energized, and field accepted.
b. The County Lighting Districts is receiving revenue from the benefitting properties via the annual property tax bill.
c. The County have formally accepted the transfer and conveyance of the streetlights. To initiate the process, the applicant must make a written request to schavez@pw.lacounty.gov. Alternatively, the applicant can call (800) 618-7575 to make the request over the phone. When completed, Public Works will issue a letter to the developer that the streetlights have been formally accepted.

d. Any underlying road(s) or any associated road improvements have been accepted for public use.

Once the transfer is complete, the County will authorize the release of any remaining bond, if any.

15. Prior to the County accepting the streetlights into the County Highway System to assume the operation and maintenance responsibilities for the streetlights, a final field review will be conducted to ensure all streetlights are installed per approved plans and no knockdowns have occurred at the time of transfer.

16. The County Lighting Districts cannot assume responsibility for streetlights located within gated communities or on roadways designated as a private or private-future street.

Additional Conditions for Edison owned Streetlight Transfer of Billing:

17. Comments/Additional Requirements:

None.

Prepared by: Sergio Chavez Phone: (626) 300-4733 Date: 09/04/2025

LAND DEVELOPMENT DIVISION
SEWER UNIT

TRACT MAP NO.: 73336

TENTATIVE MAP DATED 08-20-2025
EXHIBIT "A" MAP DATED 08-20-2025

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

1. The subdivider shall install and dedicate main line sewers and serve each building/lot with a separate house lateral or have approved and bonded sewer plans on file with Public Works.

2. The subdivider shall comply with the mitigation measures as identified in the approved sewer area study (PC 12245AS, dated 01/23/2024) to the satisfaction of Public Works. If the existing sewer system is found to have insufficient capacity, upgrade of the proposed and existing sewerage system is required to the satisfaction of Public Works. The approved sewer area study shall remain valid for two years after initial approval of the tentative map. After this period of time, an update of the area study shall be submitted by the applicant if determined to be warranted by Public Works.

3. The sewer area study shall be invalidated should there be an increase in the total number of dwelling units, an increase in the density, dwelling units occur on previously identified building restricted lots, a change in the proposed sewer alignment, an increase in the tributary sewershed, a change in the sewer connection points, or the adoption of a land use plan or a revision to the current plan. A revision to the approved sewer area study may be allowed at the discretion of the Director of Public Works. The approved sewer area study shall remain valid for two years from the date of sewer area study approval. After this period of time, an update of the area study shall be submitted by the applicant if determined to be warranted by Public Works.

4. All sewer pump stations shall be constructed to the satisfaction of Public Works.

5. Ingress and egress easements are required, subject to review by Public Works to determine the final locations and requirements.

6. Provide a minimum 10-foot sewer easement on the private driveway and fire lane to the satisfaction of Public Works.

LAND DEVELOPMENT DIVISION
SEWER UNIT

TRACT MAP NO.: 73336

TENTATIVE MAP DATED 08-20-2025
EXHIBIT "A" MAP DATED 08-20-2025

Prepared by P.R. Pedro Romero Phone (626) 458-4957 Date 09-04-2025

The subdivision shall conform to the design standards and policies of Public Works, in particular, but not limited to the following items:

1. Easements shall be granted to the County, appropriate agency or entity for the purpose of ingress, egress, construction and maintenance of all water-related infrastructures constructed for this land division to the satisfaction of Public Works.

2. A water system (including any approved booster pump stations) maintained by the water purveyor, with appurtenant facilities to serve all lots in the land division, must be provided. The system shall include fire hydrants of the type and location (both on-site and off-site) as determined by the Fire Department. The water mains shall be sized to accommodate the total domestic and fire flows.

3. It is the sole responsibility of the applicant to provide the most up to date Will Serve Letter from the Santa Clarita Valley Water Agency and meet all of their requirements/clearances prior to filing or recording of any final map.

Prior to obtaining the building permit from the Building and Safety Office:

4. Submit landscape and irrigation plans for each open space lot in the land division, with landscape area greater than 500 square feet, in accordance with the Model Water Efficient Landscape Ordinance.

5. Depict all line-of-sight easements on the landscaping and grading plans.

6. Install a separate irrigation system for recycled water use per landscape plans.

7. If necessary, install off-site recycle water mainline per landscape plans to serve this subdivision to the satisfaction of Public Work.

8. The recycled water irrigation systems shall be designed and operated in accordance with all local and State Codes as required per Section 7105.6.3 Chapter 71 of Title 26 Building Code.

COUNTY OF LOS ANGELES FIRE DEPARTMENT
FIRE PREVENTION DIVISION

Land Development Unit
5823 Rickenbacker Road
Commerce, CA 90040
Telephone (323) 890-4243, Fax (323) 890-9783

EPIC-LA NUMBER:	RPPL2023004336	PROJECT NUMBER:	TR 73336 (Northlake - Master Project)
CITY/COMMUNITY:	Castaic	STATUS:	Cleared
PROJECT ADDRESS:		DATE:	09/23/2025

CONDITIONS

1. A digital copy of the Final Map shall be submitted to the Fire Department's Land Development Unit for review and approval prior to recordation.
2. The driveways required for Fire Apparatus Access Roads shall be indicated on the Final Map as "Private Driveway and Fire Lane" with the widths clearly depicted. The required fire apparatus access, the fire lanes and turnarounds, shall be labeled as “Fire Lane” on the Final Map. Any proposed parking area, walkway, or other amenities within the private driveway shall be outside the required fire lane. Clearly delineate on the Final Map and submit to the Fire Department for approval.
3. A digital copy of the Grading Plan shall be submitted to the Fire Department's Land Development Unit for review and approval. Compliance is required prior to Final Map clearance.
4. A digital copy of the Water Plans for the required public fire hydrants shall be submitted to the Fire Department's Land Development Unit for review and approval. Compliance is required prior to prior to project construction. Submittal shall be provided through EPIC-LA using the following Plan Type: Fire Land Development–City Request–Water Plan & System Review.
5. Prior Final Map recordation, provide written verification stating the required public fire hydrants have been bonded for in lieu of installation. Submittal shall be provided through EPIC-LA in the project's Final Map or Water Plan plan number.
6. Prior to Final Map clearance, a copy of the Road Improvement plans shall be submitted to the Fire Department for review and approval of the proposed center medians on Ridge Route Road and Northlake Boulevard confirming they will not impact the fire apparatus access.
7. Water and access requirements for this development shall comply with the approved Tentative Map. The Exhibit Maps as part of the subdivision process are subject to change and shall be in compliance with Title 32 (County of Los Angeles Fire Code).
8. This property is located within the area described by the Fire Department as "Very High Fire Hazard Severity Zone". A "Fuel Modification Plan" shall be submitted and approved prior to building permit issuance. (Contact: Fuel Modification Unit, Fire Station #32, 605 North Angeleno Avenue, Azusa, CA 91702-2904, Phone (626) 969-5205 for details)
9. Due to the proximity of the existing overhead High Voltage Electric Power Transmission Lines to the south of the property, all proposed buildings shall be in compliance with the Fire Department’s Regulation 27. Verification for compliance will be performed during the architectural plan review prior to building permit issuance.
10. All proposed buildings shall be places such that a fire lane is provided to within 150 feet of all exterior walls of the first story. This measurement shall be by an approved route around the exterior of the building or facility. Verification for compliance will be performed during the Fire Department review of the architectural plan or the revised Exhibit A process prior to building permit issuance.
11. The fire lane for the single-family lots or detached condominium lots shall provide a minimum paved unobstructed width of 20 feet, clear to the sky. Verification for compliance will be performed during the Fire Department review of the architectural plan or the revised Exhibit A process prior to building permit issuance.
12. The fire lanes for any other lot such as multi-family residential, senior housing, commercial/industrial, or recreational/park where the vertical distance between the access roadway and the highest roof surface does

Reviewed by:

not exceed 30 feet, provide a minimum unobstructed width of 26 feet, exclusive of shoulders and an unobstructed vertical clearance “clear to sky” Fire Apparatus Access Roads to within 150 feet of all portions of the exterior walls of the first story of the building, as measured by an approved route around the exterior of the building. The highest roof surface shall be determined by measurement of the vertical distance between the access roadway and the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of parapet walls, whichever is greater. Verification for compliance will be performed during the Fire Department review of the architectural plan or the revised Exhibit A process prior to building permit issuance.

13. For buildings where the vertical distance between the access roadway and the highest roof surface exceeds 30 feet from the lowest level of the Fire Apparatus Access Road, provide a minimum unobstructed width of 28 feet, exclusive of shoulders and an unobstructed vertical clearance “clear to sky” Fire Apparatus Access Roads to within 150 feet of all portions of the exterior walls of the first story of the building, as measured by an approved route around the exterior of the building. At least one required access route meeting this condition shall be located such that the edge of the Fire Apparatus Access Roadway, not including shoulders, that is closest to the building being served, is between 10 feet and 30 feet from the building, as determined by the fire code official, and shall be positioned parallel to one entire side of the building. The side of the building on which the Fire Apparatus Access Road is positioned shall be approved by the fire code official.
14. Fire lanes, exceeding a length of 150 feet that dead end, are required to provide an approved Fire Department turnaround. All required Fire Department turnarounds shall be designed to accommodate the required fire apparatus as mentioned on the Fire Department standards due to the size of the building and shall be clearly depicted on the final design plans. Verification for compliance will be performed during the Fire Department review of the architectural plan or the revised Exhibit A process prior to building permit issuance.
15. Any change of direction within a private driveway shall provide a 32 feet centerline turning radius. Verification for compliance will be performed during the Fire Department review of the architectural plan or the revised Exhibit A process prior to building permit issuance.
16. The gradient of a fire lane shall not exceed 15 percent. Any changes in grade shall not exceed 10 percent within a 10 feet distance or 5.7 degrees. Cross slopes and required Fire Department turnarounds shall not exceed 2 percent grades. Verification for compliance will be performed during the Fire Department review of the architectural plan or the revised Exhibit A process prior to building permit issuance.
17. Parallel parking shall be restricted 30 feet adjacent to any public or private fire hydrant located on the public or private street, 15 feet on each side measured from the center of the fire hydrant. Adequate signage and/or stripping shall be required prior to occupancy.
18. The driveways required for fire apparatus access shall be posted with signs stating "No Parking-Fire Lane" and/or stripped accordingly in compliance with the County of Los Angeles Fire Code prior to occupancy.
19. All proposed streets and driveways within this development shall provide approved street names and signs. All proposed buildings shall provide approved address numbers. Compliance required prior to occupancy to the satisfaction of the Department of Public Works and the County of Los Angeles Fire Code
20. Install a total of 227 public fire hydrants as noted by the Fire Department on the Revised Tentative Track Map & Revised Exhibit A-Fire Hydrant Plan with the review date of 04/03/2024. All required public fire hydrants shall be installed, tested and accepted prior to beginning construction. All fire hydrants shall measure 6”x 4"x 2-1/2" brass or bronze, conforming to current AWWA standard C503 or approved equal, and shall be installed in accordance with the County of Los Angeles Fire Code. Fire Code 501.4
21. Install 17 public fire hydrants as noted by the Fire Department on the tentative tract map for the single family detached homes. All required public fire hydrants shall be installed, tested and accepted prior to beginning construction. All fire hydrants shall measure 6”x 4"x 2-1/2" brass or bronze, conforming to current AWWA standard C503 or approved equal, and shall be installed in accordance with the County of Los Angeles Fire Code. Fire Code 501.4
22. The following information is the total number of public fire hydrants on each sheet in the Revised Exhibit A Planning Area's:
    Sheet 2 - Exterior (off-site)-11, Interior (on-site)-8 & Single Family Residential (on-site)-2
    Sheet 3 - Exterior (off-site)-11, Interior (on-site)-13 & Single Family Residential (on-site)-0
    Sheet 4 - Exterior (off-site)-7, Interior (on-site)-3 & Single Family Residential (on-site)-5
    Sheet 5 - Exterior (off-site)-14, Interior (on-site)-0 & Single Family Residential (on-site)-7
    Sheet 6 - Exterior (off-site)-12, Interior (on-site)-6 & Single Family Residential (on-site)-0
    Sheet 7 - Exterior (off-site)-21, Interior (on-site)-9 & Single Family Residential (on-site)-0
    Sheet 8 - Exterior (off-site)-14, Interior (on-site)-0 & Single Family Residential (on-site)-6
    Sheet 9 - Exterior (off-site)-14, Interior (on-site)-0 & Single Family Residential (on-site)-4
    Sheet 10 - Exterior (off-site)-16, Interior (on-site)-0 & Single Family Residential (on-site)-1
    Sheet 11 - Exterior (off-site)-2
    Sheet 12 - Exterior (off-site)-24
23. Additional fire hydrants will be required on Lots 312, 313, 316, 317 & 318, and possibly on the park site.
24. The required fire flow for the public fire hydrants for this project other than single-family residential is 4000 GPM

Reviewed by:

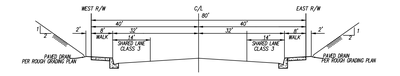


at 20 psi residual pressure for 4 hours. Three (3) public fire hydrants flowing simultaneously may be used to achieve the required fire flow. Fire Code 507.3 & Appendix B

25. The fire flow is subject to reduction during the building plan check process. Provide the type of construction and total square footage for each proposed and existing building, along with written verification of an approved automatic fire sprinkler system in conformance of NFPA 13.
26. An approved automatic fire sprinkler system is required for the proposed buildings within this development. Submit design plans to the Fire Department Sprinkler Plan Check Unit for review and approval prior to installation.
27. The required fire flow for the public fire hydrants for single family residential homes less than a total square footage of 3600 feet is 1250 gpm at 20 psi residual pressure for 2 hours with one public fire hydrant flowing. Any single family residential home 3601 square feet or greater shall comply too Table B105.1 of the Fire Code in Appendix B.
28. Fire hydrant locations and other water system requirements within the Exhibit Maps will be determined when final design plans are submitted to the Fire Department for review as architectural plans or revised Exhibit A prior to building permit issuance.
29. The fire station requirements and conditions will remain the same as previously agreed upon between the Fire Department and the applicant. The fire station site will be located on Lot 386, adjacent to Planning Area 13.

For any questions regarding the report, please contact Wally Collins at (323) 890-4243 or Wally.Collins@fire.lacounty.gov.

Reviewed by:



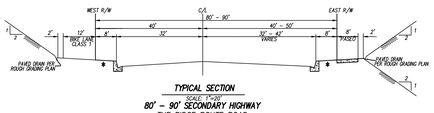
TYPICAL SECTION

SCALE: 1"=20'

80' SECONDARY HIGHWAY

THE RIDGE ROUTE ROAD

(FROM TR. 44429 TO 1200' N'LY TR. 44429)



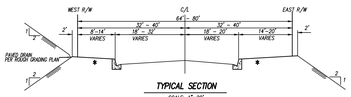
TYPICAL SECTION

SCALE: 1"=20'

80' - 90' SECONDARY HIGHWAY

THE RIDGE ROUTE ROAD

(FROM 1200' N'LY TR. 44429 TO NORTHLAKE BLVD.)



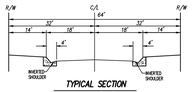
TYPICAL SECTION

SCALE: 1"=20'

64' - 80' LIMITED SECONDARY HWY

THE RIDGE ROUTE ROAD

(FROM NORTHLAKE BLVD. TO 900' N'LY NORTHLAKE BLVD.)



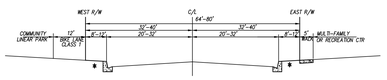
TYPICAL SECTION

SCALE: 1"=20'

64' LIMITED SECONDARY HWY

THE RIDGE ROUTE ROAD

(FROM 900' N'LY NORTHLAKE BLVD. TO 3200' N'LY OF NORTHLAKE BLVD.)



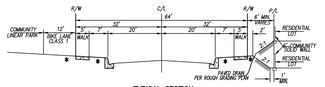
TYPICAL SECTION

SCALE: 1"=20'

80' STREET (MOD. INDUSTRIAL COLLECTOR)

NORTHLAKE BLVD.

(FROM "A" ST. TO 600' NE'LY "A" ST.)



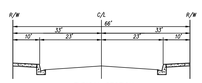
TYPICAL SECTION

SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)

NORTHLAKE BLVD.

(FROM 600 NE'LY "A" ST. TO "E" ST.)



TYPICAL SECTION

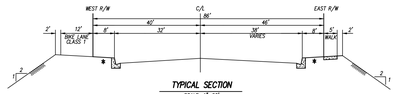
SCALE: 1"=20'

66' STREET

"S" ST.

NOTES FOR STREET SECTIONS:

1. SLOUGH WALL REQUIRED AT TOE OF ADJACENT SLOPE IF TOE OF SLOPE IS CLOSER THAN 3' TO THE BACK OF WALK, AND SLOPE IS OVER 5' HIGH.
2. PUBLICLY MAINTAINED SIDEWALKS SHALL BE PLACED 6" FROM RIGHT OF WAY UNLESS SIDEWALK ABUTS A PROPOSED WALL IN WHICH CASE IT SHOULD BE PLACED AGAINST THE WALL.
3. LANDSCAPE SLOPING AWAY FROM R/W TO BE 2:1 MAX.
4. NO RAISED MEDIAN PROPOSED.



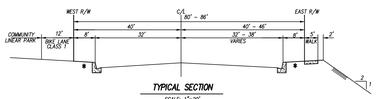
TYPICAL SECTION

SCALE: 1"=20'

86' STREET (MOD. INDUSTRIAL COLLECTOR)

NORTHLAKE BLVD.

(FROM RIDGE ROUTE ROAD TO 1000' SE'LY "A" ST)



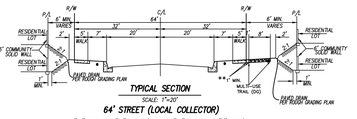
TYPICAL SECTION

SCALE: 1"=20'

80' - 86' STREET (MOD. INDUSTRIAL COLLECTOR)

NORTHLAKE BLVD.

(FROM 1000' SE'LY "A" ST TO "A" ST)

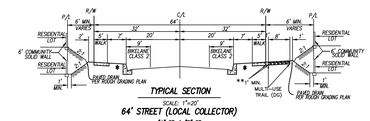


TYPICAL SECTION

SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)

"O" ST. & "F" ST. (FROM "O" ST. TO "I" ST.)

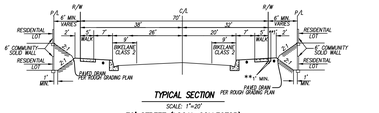


TYPICAL SECTION

SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)

"A" ST. & "B" ST.

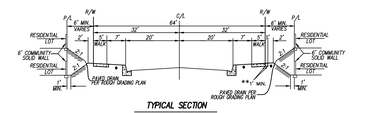


TYPICAL SECTION

SCALE: 1"=20'

70' STREET (LOCAL COLLECTOR)

"A" ST. (FROM NORTHLAKE BLVD TO "B" ST.)

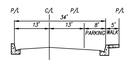


TYPICAL SECTION

SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)

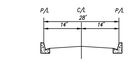
"D" ST.,"E" ST., "F" ST. (FROM "A" ST. TO "I" ST.) & "H" ST.,



TYPICAL SECTION

SCALE: 1"=20'

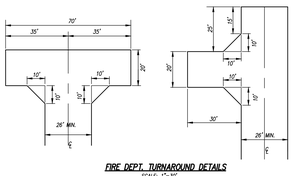
PRIVATE DRIVEWAY & FIRE LANE W/ PARKING ONE SIDE FOR MULTI-FAMILY PLANNING AREA



TYPICAL SECTION

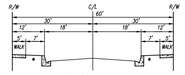
SCALE: 1"=20'

PRIVATE DRIVEWAY & FIRE LANE, NO PARKING FOR MULTI-FAMILY PLANNING AREA



FIRE DEPT. TURNAROUND DETAILS

SCALE: 1"=30'

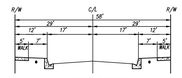


TYPICAL SECTION

SCALE: 1"=20'

60' STREET

"C" ST., "AA" ST., "DD" ST.,"EE" ST., "GG" ST., "HH" ST., & "PP" ST., & "QQ" ST.

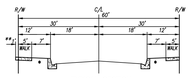


TYPICAL SECTION

SCALE: 1"=20'

58' STREET

"BB" ST., "CC" ST., "FF" ST., "II" ST., "JJ" ST., "KK" ST., "LL" ST., "MM" ST., "NN" ST., "OO" ST. & "PP" ST., "QQ" ST., "RR" ST., & "SS" ST.

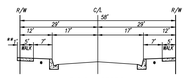


TYPICAL SECTION

SCALE: 1"=20'

60' STREET

"G" ST., "J" ST.& "P" ST.



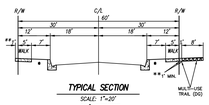
TYPICAL SECTION

SCALE: 1"=20'

58' STREET

"O" ST.

(FROM "P" ST. TO CUL-DE-SAC)



TYPICAL SECTION

SCALE: 1"=20'

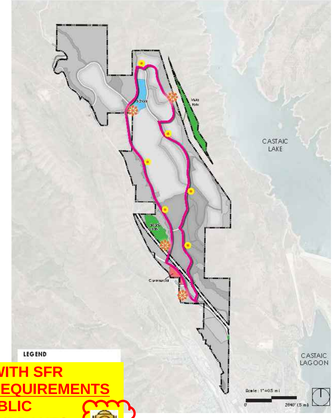
60' STREET

"I" ST.

* LANDSCAPE AREA – SEE LANDSCAPE PLAN FOR DETAILS (TO BE MAINTAINED BY A LMD OR HOA)

** HARDSCAPE: DELINEATION FOR TRAIL PURPOSES WHERE AVAILABLE.

SHEET INDEX	
SHEET NO.	SHEET TITLE
1	TITLE SHEET
2	P-1 AND P-2
3	P-9 , P-10 AND P-12
4	P-11 AND P-13
5	P-4, P-15 AND P-16 / MIDDLE SCHOOL ALT
6	P-3, P-4, P-5 AND P-6
7	P-7 AND P-8
8	P-24 AND P-25
9	P-28
10	P-26 AND P-27
11	SPORT PARK LOT
12	GENERAL COMMERCIAL LOTS



CITY TRANSIT SYSTEM

NOT TO SCALE

PARCEL NUMBERS BASED ON FIDELITY NATIONAL TITLE COMPNAY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 6, 2023.

P.T.R. PARCEL NO	A.P.N.
1*	3247-010-049 and 3247-010-050
2*	3244-003-018
3	3247-040-008 (PORTION)
4	3247-040-008 (PORTION)
5	3247-040-008 (PORTION)
6	3247-040-008 (PORTION)
7	3247-040-013 (PORTION)
8	3247-040-009 (PORTION)
9	3247-040-009 (PORTION)
10	3247-040-009 (PORTION)
11	3247-040-009 (PORTION)
12	3247-040-013 (PORTION)
13	3247-040-013 (PORTION)
14	3247-040-013 (PORTION)
15	3244-012-054 & 059
16	3244-012-057
17	3244-012-013
18	3247-041-008
19	3247-041-020
20	3247-041-021
21	3247-041-023
22	3247-041-022
23	2865-036-003
24	2865-036-002
25	2865-036-001 AND 2865-003-013
26	2865-003-035
27	3244-004-051
28	3244-004-053
29	3244-012-049
30	3244-012-048
31	3244-012-046
32	3244-012-058
33	3244-004-052
34	3244-004-024
35	3244-013-001
36	3244-012-045
37	3247-017-019
38	3244-012-050
39	3244-014-015
40	3244-014-067 & 068
41	3247-041-018
42	3247-041-015
43	3244-014-053
44*	3244-014-044
45*	3244-014-038
46*	3247-041-012
47*	3244-013-004
48*	3244-013-002
49*	3244-013-005
50*	3244-013-009
51*	3244-013-010
52	3244-014-050
53*	3244-015-018
54*	3244-014-022
55*	3244-014-021
56	3244-014-062
57*	3244-014-063
60	3247-041-007
61	3247-041-009
66	3247-041-010
68*	3244-012-056
69*	3244-014-045
70**	3244-012-904
71**	3244-004-906
72*	3244-014-902
73*	3247-017-900

*ASTERISK INDICATES PARCEL IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP OR OFFSITE IMPROVEMENT

**ASTERISK INDICATES PARCEL TO BE AQUIRED

NOTE: NORTHEASTERLY PORTION OF PARCEL 32 IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP

PARKING SPACE SUMMARY TABLE								
P.A	Product	DU	Res. Parking Req.	Res. Parking Provided	Guest Parking Req.	Guest Parking Provided	Handicap Req.	Handicap Provided
1	Valmont	189	334	334	48	48	2	3
2	Santa Rosa	91	156	156	23	24	1	1
	Magnolia	40	80	80	10	12	1	1
3	Santa Rosa	49	98	98	13	14	1	1
4	Caserta	48	96	96	12	13	2	2
5	Brookland	38	76	76	10	11	1	1
6	Brookland	21	42	42	6	8	1	1
7	Caserta	88	176	176	22	28	2	2
8	Meriwether	111	222	222	28	33	2	3
9	Santa Rosa	112	192	192	28	31	2	2
10	Caserta	100	200	200	25	25	1	2
11	Meriwether	81	162	162	21	29	2	2
12	Brookland	117	234	234	30	32	2	2
13	Knolls	71	142	142	18	29	1	2
14	Magnolia	36	72	72	9	12	1	1
	Knolls	44	88	88	11	17	1	1
15	Magnolia	31	62	62	8	10	1	1
	Knolls	32	64	64	8	13	1	1
16	Knolls	42	84	84	11	18	1	1
24	Bungalows	138	276	276	35	44	2	2
25	Casitas	61	122	122	16	18	2	2
26	Casitas	61	122	116	16	19	1	1

MANUFACTURED OS	
Lot	Area (Ac.)
330	3.4
331	8.4
332	2.8
333	1.7
335	3.6
336	14.2
337	9.4
338	6.8
339	4.4
340	0.2
341	14.3
342	0.7
343	18.9
344	10.1
345	7.8
346	5.5
347	4.8
348	1.7
349	2.7
350	3.1
351	0.7
352	12.3
353	10.5
354	3.8
355	5.1
	9.5
	0.7
	1.6
	3.1
	21.
	7
	sle

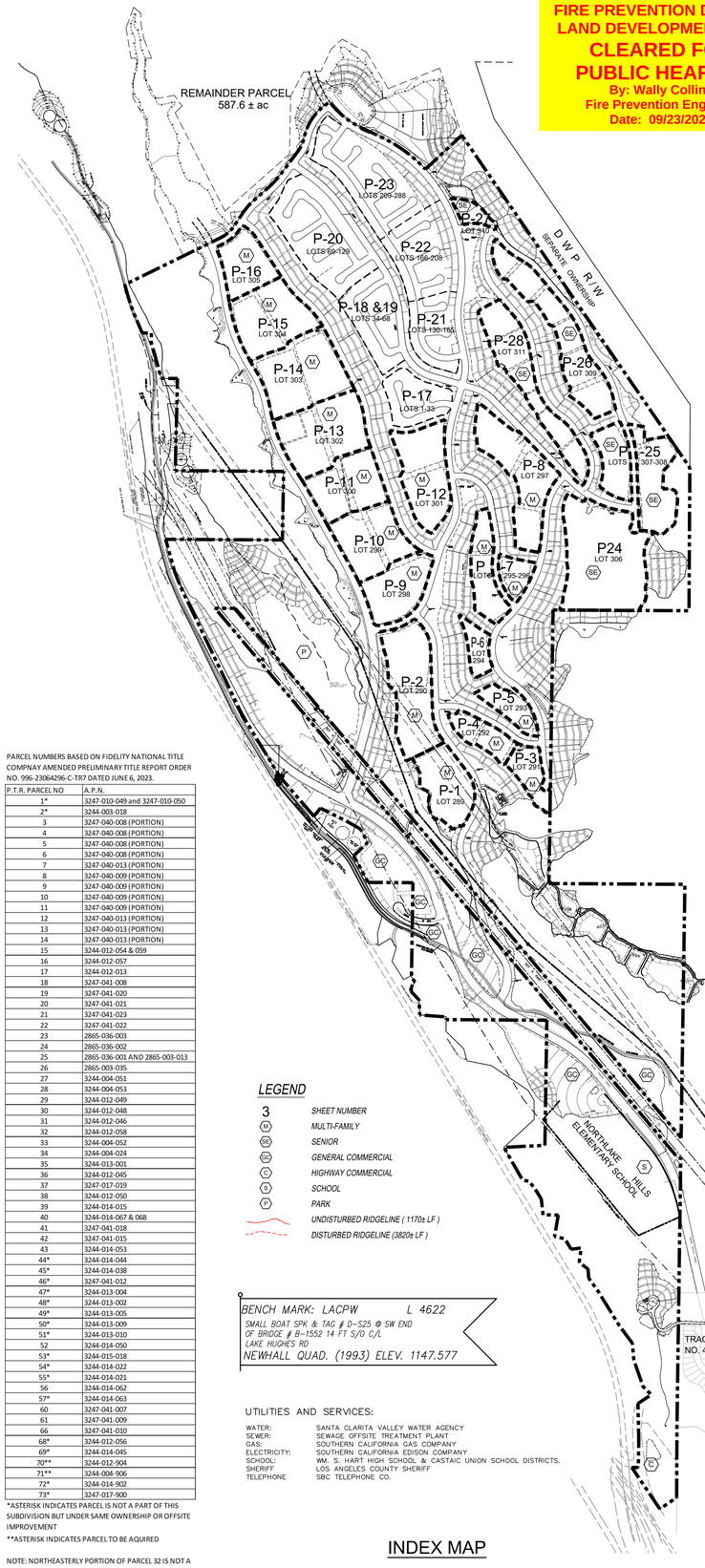
NATURAL OS	
Lot	Area (Ac.)
334	2.5
358	39.6
359	33.0
360	12.4
361	9.3
362	4.8
363	10.2
364	10.9
365	34.6
366	6.6
	163.9

TOTAL EXTERIOR PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 146 PUBLIC 6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503
PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

TOTAL INTERIOR W/O SFR PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 39 PUBLIC 6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503
PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

TOTAL INTERIOR WITH SFR PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 34 PUBLIC 6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503
PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR

COUNTY OF LOS ANGELES FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025



LEGEND

3	SHEET NUMBER
M	MULTI-FAMILY
SE	SENIOR
GC	GENERAL COMMERCIAL
C	HIGHWAY COMMERCIAL
S	SCHOOL
P	PARK
	UNDISTURBED RIDGELINE (1170± LF)
	DISTURBED RIDGELINE (3820± LF)

BENCH MARK: LACPW L 4622
SMALL BOAT SPK & TAG @ D-525 @ SW END OF BRIDGE @ 8-1552 14 FT S/O C/L LAKE HUGHES RD
NEWHALL QUAD. (1993) ELEV. 1147.577

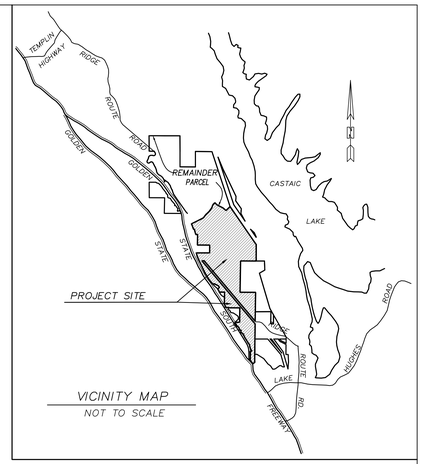
UTILITIES AND SERVICES:

WATER:	SANTA CLARITA VALLEY WATER AGENCY
SEWER:	SEWAGE OFFSITE TREATMENT PLANT
GAS:	SOUTHERN CALIFORNIA GAS COMPANY
ELECTRICITY:	SOUTHERN CALIFORNIA EDISON COMPANY
SCHOOL:	WM. S. HART HIGH SCHOOL & CASTAIC UNION SCHOOL DISTRICTS.
SHERIFF	LOS ANGELES COUNTY SHERIFF
TELEPHONE	SBC TELEPHONE CO.

INDEX MAP

0 500 1000 2000 Feet

1"=500'



DATA SUMMARY:

ACRES(GROSS)	719.8 ± AC
ACRES(NET)	635.5 ± AC
EXISTING & PROPOSED ZONING	NORTHLAKE S.P
EXISTING & PROPOSED GENERAL PLAN (2012 SCVAP)	NORTHLAKE S.P
EXISTING LAND USE	VACANT
PROPOSED LAND USE	SINGLE & MULTIFAMILY RESIDENTIAL COMMERCIAL AND OPEN SPACE

LOT SUMMARY:

SINGLE FAMILY LOTS	(40.6 Ac.) – 288 DU'S	1 TO 288	(288)
MULTI-FAMILY LOTS	(107.2 Ac.) – 1341 DU'S	289 TO 305	(17)
SENIOR M.F. LOTS	(49.1 Ac.) – 345 DU'S	306 TO 311	(6)
GENERAL COMMERCIAL	(20.4 Ac.) – 321 DU'S	312 TO 313	(2)
		315 TO 318	(4)
HIGHWAY COMMERCIAL	(2.5 Ac.)	314	(1)
PUBLIC PARK LOT	(16.3 Ac.)	319	(1)
PRIVATE PARK LOTS	(8.0 Ac.)	320 TO 329	(10)
OPEN SPACE (MFD)	(192.9 Ac.)	330 TO 368	(39)
OPEN SPACE (NATURAL)	(163.9 Ac.)		
TANK SITE	(6.5 Ac.)	369 TO 370	(2)
DEBRIS BASIN LOTS	(11.5 Ac.)	371 TO 383	(13)
WATER QUALITY BASIN	(15.0 Ac.)	384	(1)
PUMP STATION	(0.2 Ac.)	385	(1)
FIRE STATION	(1.4 Ac.)	386	(1)
PUBLIC R/W	(84.3 Ac.)		
TOTAL LOTS	(719.8 Ac.) – TOTAL 2295 DU'S	386	

NOTES

1. TOTAL EARTHWORK APPROXIMATELY CUT 17,160,000 C.Y. ± FILL 15,840,000 C.Y. ± EARTHWORK WILL BE BALANCED ON-SITE DUE TO SHRINKAGE.
2. TOPOGRAPHIC MAPPING BY HORIZON SURVEYS, 2 FT CONTOUR INTERVAL. (JULY 8, 2002)
3. REQUEST PERMISSION TO ADJUST LOT LINES TO THE SATISFACTION OF DRP.
4. REQUEST PERMISSION TO RECORD UNIT TRACT MAPS TO THE SATISFACTION OF DRP.
5. REQUEST PERMISSION TO CREATE ADDITIONAL OPEN SPACE LOTS.
6. BOUNDARY LINE DIMENSIONS ARE TAKEN FROM RECORD DATA.
7. THE APPLICANT IS REQUESTING THE RIGHT TO ADJUST STREET AND BUILDING PAD ELEVATIONS UP TO 10 FEET ON THE FINAL GRADING PLAN TO THE SATISFACTION OF DRP AND DPW.
8. TOPS AND TOES OF SLOPES ARE SUBJECT TO CHANGE IN FINAL ENGINEERING TO SATISFACTION OF DRP AND DPW.
9. MAXIMUM SLOPE GRADE IS 2:1 FOR ALL SLOPES.
10. A LANDSCAPE MAINTENANCE DISTRICT OR HOMEOWNER'S ASSOCIATION WILL BE ESTABLISHED FOR MAINTENANCE OF OPEN SPACE AREAS AND ALL COMMON SLOPE AREAS.
11. ALL SLOPES WITHIN HOMEOWNER'S ASSOCIATION COMMON AREAS OR LANDSCAPE MAINTENANCE DISTRICTS ARE TO BE PLANTED AND IRRIGATED WITH COUNTY APPROVED MATERIAL.
12. PORTIONS OF THE OLD RIDGE ROUTE ROAD TO BE ABANDONED AND REPLACED WITH A ROAD PER CURRENT COUNTY STANDARDS.
13. MULTI-FAMILY LOTS ARE FOR CONDO PURPOSES.
14. REQUEST PERMISSION TO CREATE A LARGE LOT PARCEL MAP FOR SALES PURPOSES AND WHERE EACH LOT IS GREATER THAN 40 ACRES.
15. SITE CONTAINS NO OAK TREES.
16. ALL STREET LANDINGS ARE 3% OR LESS EXCEPT WHERE NOTED.
17. ALL GRADING ELEVATIONS ARE ± 10 FEET.
18. ALL ITEMS REQUESTED WITH CUP NO. RPPL2023004316 (i.e. GRADING, WATER TANKS, SP SITE PLAN/SCR REVIEW, AND WALLS EXCEEDING 6 FEET IN HEIGHTS), AS WELL AS THAT IN PHASE 2 WILL REQUIRE A NEW CUP. ENVIRONMENTAL ASSESSMENT NO. RPPL2023004887.
19. PRIVATE DRIVES SHALL BE DESIGNED ACCORDING TO THE WESTSIDE COMMUNITIES PRIVATE DRIVE AND TRAFFIC CALMING DESIGN GUIDELINES CONSISTENT WITH HEALTHY DESIGN REQUIREMENTS.
20. ALL STREET CURB RETURNS ARE 25' RADII UNLESS SPECIFIED ON THE PLAN.
21. LANDSCAPING IN THE COMMON AREAS AND DRIVES INCLUDING COMMON AREAS FENCING AND WALL WILL BE DROUGHT TOLERANT IN NATURE. DETAILED LANDSCAPING WILL BE PROVIDED ONCE THE PLOT PLANS ARE FINALIZED AND SUBMITTED TO THE COUNTY FOR APPROVAL.
22. BICYCLE SHOWER AND CHANGING FACILITIES (BSF) WILL BE PROVIDED FOR ALL BUILDINGS ≥ 75,000 S.F. AND WILL BE DEPICTED IN DETAIL ON FUTURE PLOT PLANS
23. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 6 22.52.1225.
24. PER THE APPROVED NORTHLAKE SPECIFIC PLAN THE MAXIMUM ALLOWED COMMERCIAL SQUARE FOOTAGE IS 67,000± AND THE MAXIMUM ALLOWED INDUSTRIAL SQUARE FOOTAGE IS 305,000±.
25. ALL SINGLE FAMILY LOTS WILL BE SERVED BY SEPARATE SEWER LATERAL FOR EACH INDIVIDUAL LOT. ALL MULTI-FAMILY, COMMERCIAL, AND INDUSTRIAL BUILDINGS WILL BE SERVED BY SEPARATE SEWER LATERAL FOR EACH INDIVIDUAL BUILDING.
26. THE CLIENT PROPOSED A POSSIBLE TRANSIT SYSTEM WITHIN THE PROJECT BOUNDARY. FOR MORE DETAILS SEE THE PLANNING NOTEBOOK.
27. ALL PARKS ARE PRIVATE EXCEPT WHERE NOTED.
28. PRIOR TO THE ISSUANCE OF 1750th BUILDING PERMIT, FIRE STATION TO BE CONVEYED TO THE CONSOLIDATED PROTECTION DISTRICT OF LOS ANGELES COUNTY.
29. A NEW TENTATIVE MAP NUMBER & CUP WILL BE ISSUED IF AND WHEN A NEW MAP IS FILED OVER THE N'LY PORTION OF NORTHLAKE SPECIFIC PLAN BOUNDARY.
30. NO PROPOSED GATES WITHIN PROJECT SITE.

EXHIBIT "A"
2015-0408

PREPARED FOR:

NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER WILLIAM R. SIKAND No.35453 Exp. 09-30-25 CIVIL STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

NO.	DATE	REVISION	BY	APP
7	8-13-2025	REVISED PRODUCT TYPE FROM AFFORDABLE HOUSING TO MULTI-FAMILY ON SHEET 12	TH	–
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	TH	–
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016	YL	–
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016	YL	–
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	–
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	–

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET OF
AS SHOWN			08/13/2025	5090-033-35	1 12

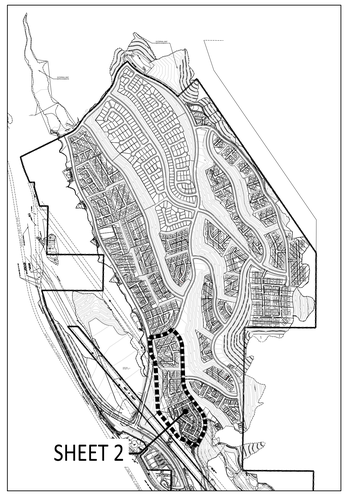
SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT

CLEARED FOR PUBLIC HEARING

By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025



KEY MAP
SCALE: 1"=1000'

SHEET 2 - PLANNING AREA 2A INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 2 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR

SHEET 2 - PLANNING AREA'S 1 & 2B INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 8 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

PLANNING AREA 2A
SUMMARY:

PRODUCT	MAGNOLIA	
GROSS AREA	NOT APPLICABLE	
NET AREA	5.3	ACRES
TOTAL UNITS	40	UNITS
DENSITY	7.5	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	80	SPACES
GUEST PARKING REQUIRED	10	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	90	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	80	SPACES
GUEST PARKING PROVIDED	12	SPACES
(GUEST PARKING INCLUDED HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	92	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

SHEET 2 - PLANNING AREA'S 1 & 2 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 11 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

PLANNING AREA 2B
SUMMARY:

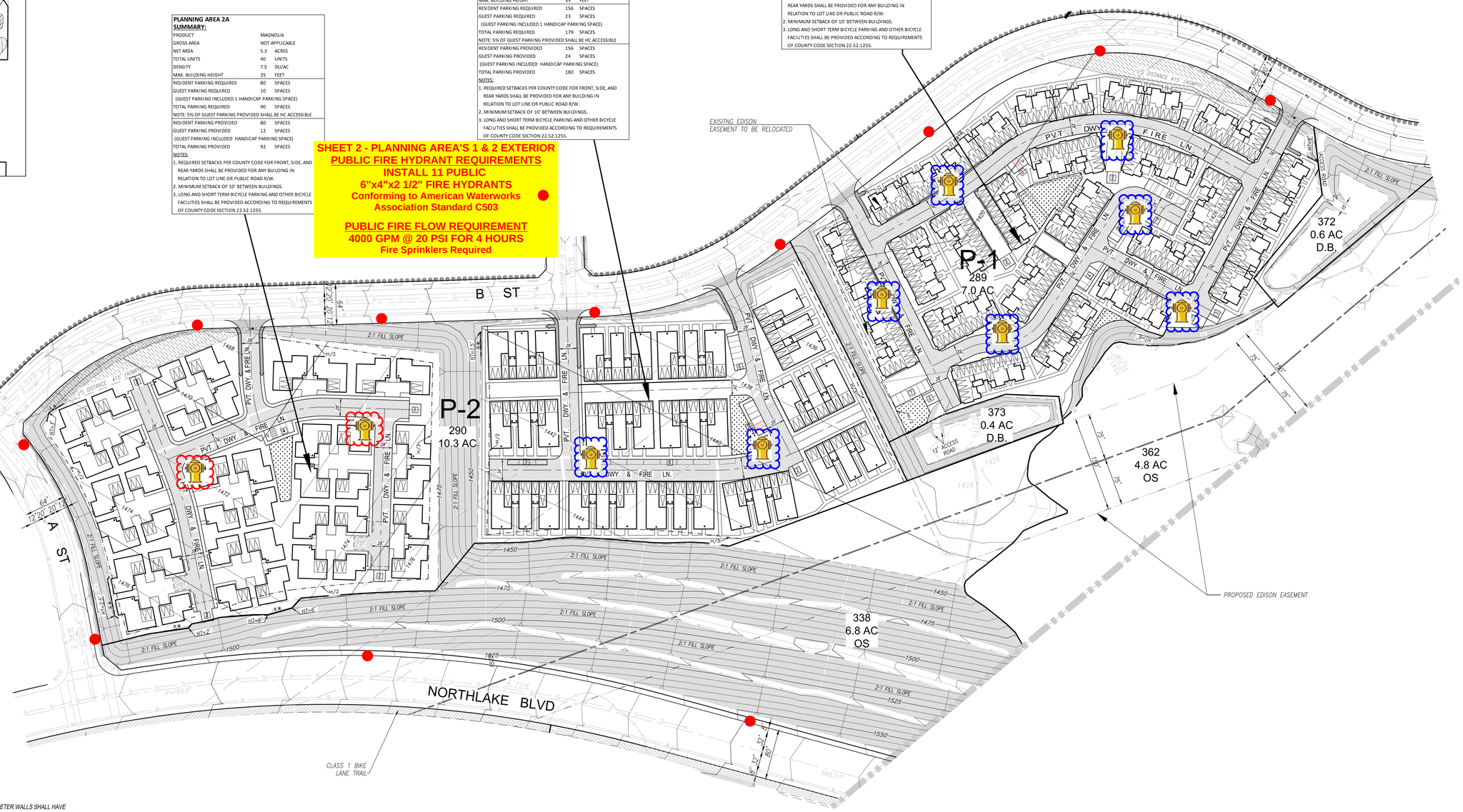
PRODUCT	SANTA ROSA	
GROSS AREA	11.6	ACRES
NET AREA	5.0	ACRES
TOTAL UNITS	91	UNITS
DENSITY	18.2	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	156	SPACES
GUEST PARKING REQUIRED	23	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	179	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	156	SPACES
GUEST PARKING PROVIDED	24	SPACES
(GUEST PARKING INCLUDED HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	180	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 1
SUMMARY:

PRODUCT	VALMONT	
GROSS AREA	7.3	ACRES
NET AREA	7.0	ACRES
TOTAL UNITS	189	UNITS
DENSITY	27.0	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	334	SPACES
GUEST PARKING REQUIRED	48	SPACES
(GUEST PARKING INCLUDED 3 HANDICAP PARKING SPACES)		
TOTAL PARKING REQUIRED	382	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	334	SPACES
GUEST PARKING PROVIDED	48	SPACES
(GUEST PARKING INCLUDED 3 HANDICAP PARKING SPACES)		
TOTAL PARKING PROVIDED	382	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.



LEGEND

- LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- PROPOSED CONTOUR
- LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (8' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

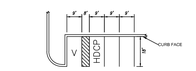
NOTES:

1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

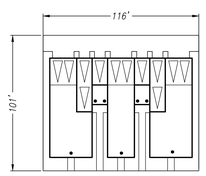
PROPOSED WALKWAY'S TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.



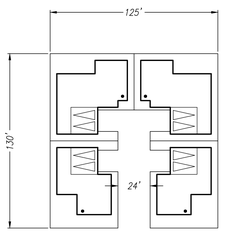
TYPICAL PARALLEL PARKING
NOT TO SCALE



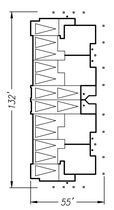
TYPICAL STANDARD PARKING WITH HANDICAPPED
NOT TO SCALE



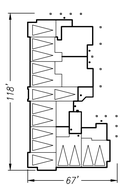
SANTA ROSA
SCALE: 1" = 40'
7 PLEX



MAGNOLIA
SCALE: 1" = 40'
4 MOTORCOURT



VALMONT I
SCALE: 1" = 40'
8 PLEX



VALMONT L
SCALE: 1" = 40'
9 PLEX

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No.35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

NO.	DATE	REVISION	BY	APP'D
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	TH	–
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016	YL	–
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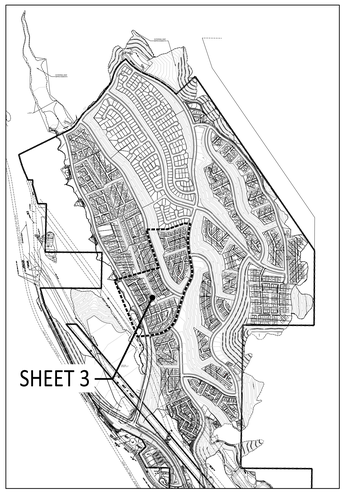
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	–
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	–

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET OF
1"=60'			08/13/2025	5090-033-35	2 OF 12

SIKAND Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025



KEY MAP
SCALE: 1"=1000'



PLANNING AREA 12
SUMMARY:

PRODUCT	BROOKLAND	
GROSS AREA	10.3	ACRES
NET AREA	8.6	ACRES
TOTAL UNITS	117	UNITS
DENSITY	11.4	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	234	SPACES
GUEST PARKING REQUIRED	30	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING REQUIRED	264	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	234	SPACES
GUEST PARKING PROVIDED	32	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING PROVIDED	266	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 10
SUMMARY:

PRODUCT	CASERTA	
GROSS AREA	8.5	ACRES
NET AREA	7.4	ACRES
TOTAL UNITS	100	UNITS
DENSITY	11.8	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	200	SPACES
GUEST PARKING REQUIRED	25	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	225	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	200	SPACES
GUEST PARKING PROVIDED	25	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	225	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 9
SUMMARY:

PRODUCT	SANTA ROSA	
GROSS AREA	7.2	ACRES
NET AREA	6.1	ACRES
TOTAL UNITS	112	UNITS
DENSITY	15.6	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	192	SPACES
GUEST PARKING REQUIRED	28	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING REQUIRED	220	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	192	SPACES
GUEST PARKING PROVIDED	31	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING PROVIDED	223	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

SHEET 3 - PLANNING AREA'S 9, 10 & 12 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 11 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

SHEET 3 - PLANNING AREA'S 9, 10 & 12 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 13 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

LEGEND

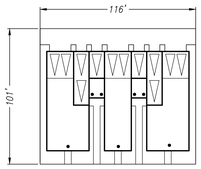
- 336 — LOT NO.
- P-1 — PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

NOTES:

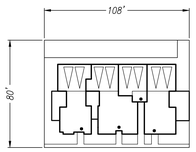
1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.

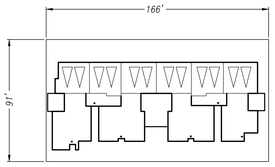
0 30 60 120 Feet
SCALE: 1" = 60'



SANTA ROSA
SCALE: 1" = 40'
7 PLEX



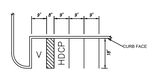
CASERTA
SCALE: 1" = 40'
4 PLEX



BROOKLAND
SCALE: 1" = 40'
6 PLEX



TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAPPED
NOT TO SCALE

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER
MARK R. SIKAND
No. 35453
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

LEGAL DESCRIPTION:
A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

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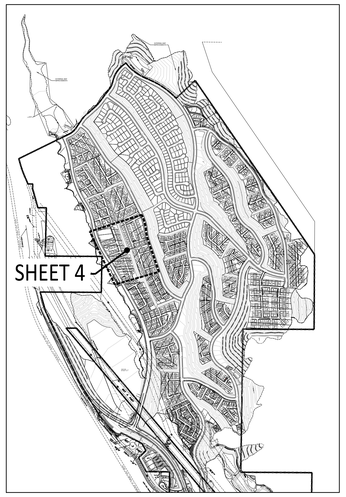
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016				YL	--
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016				YL	--
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015				YL	--
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015				YL	--
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015				YL	--
	DATE	REVISION				BY	APP
SCALE: 1"=60'	CHK'D BY:	APPROVED BY:	DATE: 08/13/2025	W.O. NO. 5090-033-35	SHEET 3	OF 12	

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

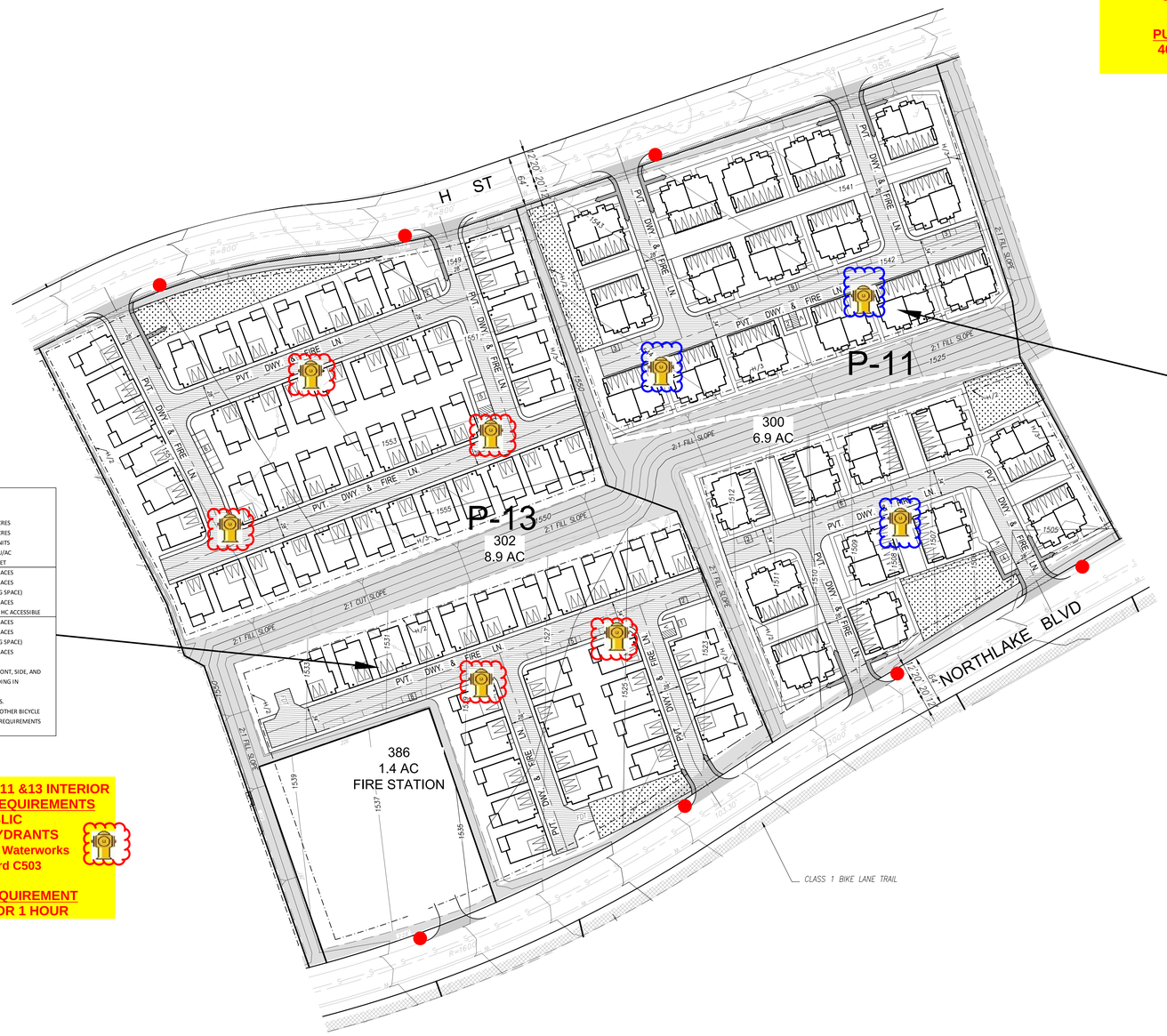


KEY MAP
SCALE: 1"=1000'

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

SHEET 4 - PLANNING AREA'S 11 & 13 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 7 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required



PLANNING AREA 11
SUMMARY:

PRODUCT	MERIWETHER	
GROSS AREA	8.4	ACRES
NET AREA	6.9	ACRES
TOTAL UNITS	81	UNITS
DENSITY	11.7	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	162	SPACES
GUEST PARKING REQUIRED	21	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	183	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	162	SPACES
GUEST PARKING PROVIDED	29	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	191	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 13
SUMMARY:

PRODUCT	KNOLLS	
GROSS ACRES	10.3	ACRES
NET AREA	8.9	ACRES
TOTAL UNITS	71	UNITS
DENSITY	8.0	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	142	SPACES
GUEST PARKING REQUIRED	18	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	160	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	142	SPACES
GUEST PARKING PROVIDED	29	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	171	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

SHEET 4 - PLANNING AREA'S 11 & 13 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 3 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

SHEET 4 - PLANNING AREA 11 &13 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 5 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR

LEGEND

- 336 / P1 — *LOT NO. / PLANNING AREA NUMBER*
- *VTTM 73336 BOUNDARY*
- *RIGHT OF WAY*
- *PROPOSED LOT LINE*
- *PROPOSED EASEMENT*
- *EXISTING EASEMENT*
- *H/2 & H/3 SETBACK LINE*
- 1000 — *PROPOSED CONTOUR*
- 415' — *LINE OF SIGHT / LINE OF SIGHT EASEMENT*
- *PROPOSED DRIVEWAY*
- *PRIVATE DRIVE AND FIRE LANE*
- *RETAINING WALL*
- *ENTRY MONUMENT (TYPE PER PLAN)*
- *MULTI-USE TRAIL (14' TRAIL)*
- *EXPANDED SIDEWALK (6' TRAIL)*
- *5' CONCRETE TRAIL*
- FDT — *FIRE DEPT. TURNAROUND*
- *DWELLING UNIT ENTRANCE*
- 3 — *GUEST PARKING*
- *RECREATION\COMMON AREA*
- *PROPOSED FIRE HYDRANT*

NOTES:

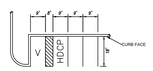
1. *ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).*
2. *ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.*
3. *FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.*
4. *FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.*
5. *NO PROPOSED GATE WITHIN PROJECT SITE.*

PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.

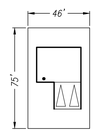
0 30 60 120 Feet
SCALE: 1" = 60'



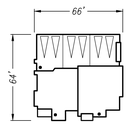
TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAPPED
NOT TO SCALE



KNOLLS
SCALE: 1" = 40'



MERIWETHER
SCALE: 1" = 40'
TRIPLEX

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — WAYNE R. SIKAND — No. 35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

NO.	DATE	REVISION	BY	APP
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S.	TH	–
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4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016	YL	–
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	–
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	–

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=60'			08/13/2025	5090-033-35	4	12

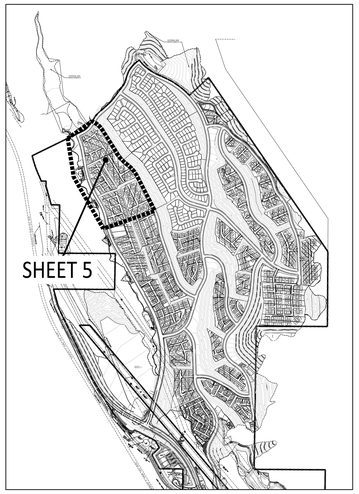
SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

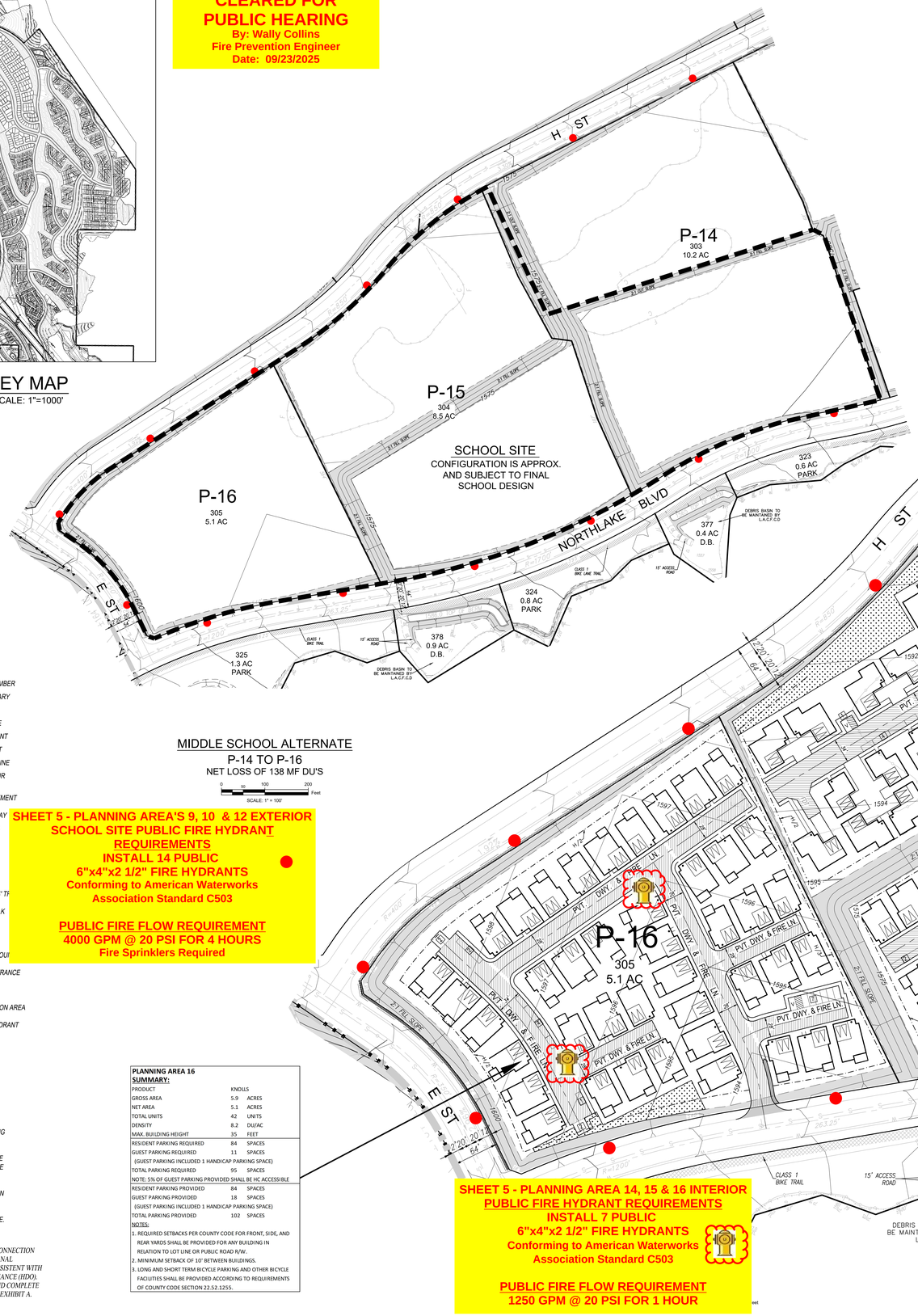
COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT

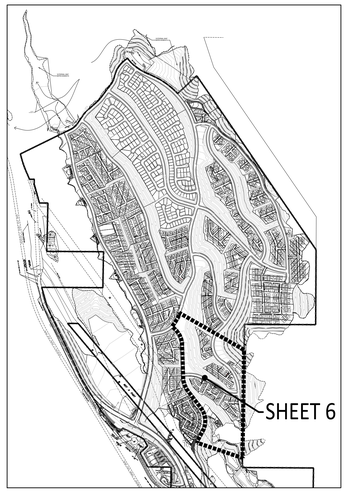
CLEARED FOR PUBLIC HEARING

By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025



KEY MAP
SCALE: 1"=1000'





KEY MAP
SCALE: 1"=1000'

SHEET 6 - PLANNING AREA'S 3, 4, 5 & 6 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 12 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA 5
SUMMARY:

PRODUCT	BROOKLAND	
GROSS AREA	3.3	ACRES
NET AREA	3.0	ACRES
TOTAL UNITS	38	UNITS
DENSITY	12.7	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	76	SPACES
GUEST PARKING REQUIRED	10	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	86	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	76	SPACES
GUEST PARKING PROVIDED	11	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	87	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 6
SUMMARY:

PRODUCT	BROOKLAND	
GROSS REA	2.4	ACRES
NET AREA	2.2	ACRES
TOTAL UNITS	21	UNITS
DENSITY	9.5	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	42	SPACES
GUEST PARKING REQUIRED	6	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	48	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	42	SPACES
GUEST PARKING PROVIDED	8	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	50	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 3
SUMMARY:

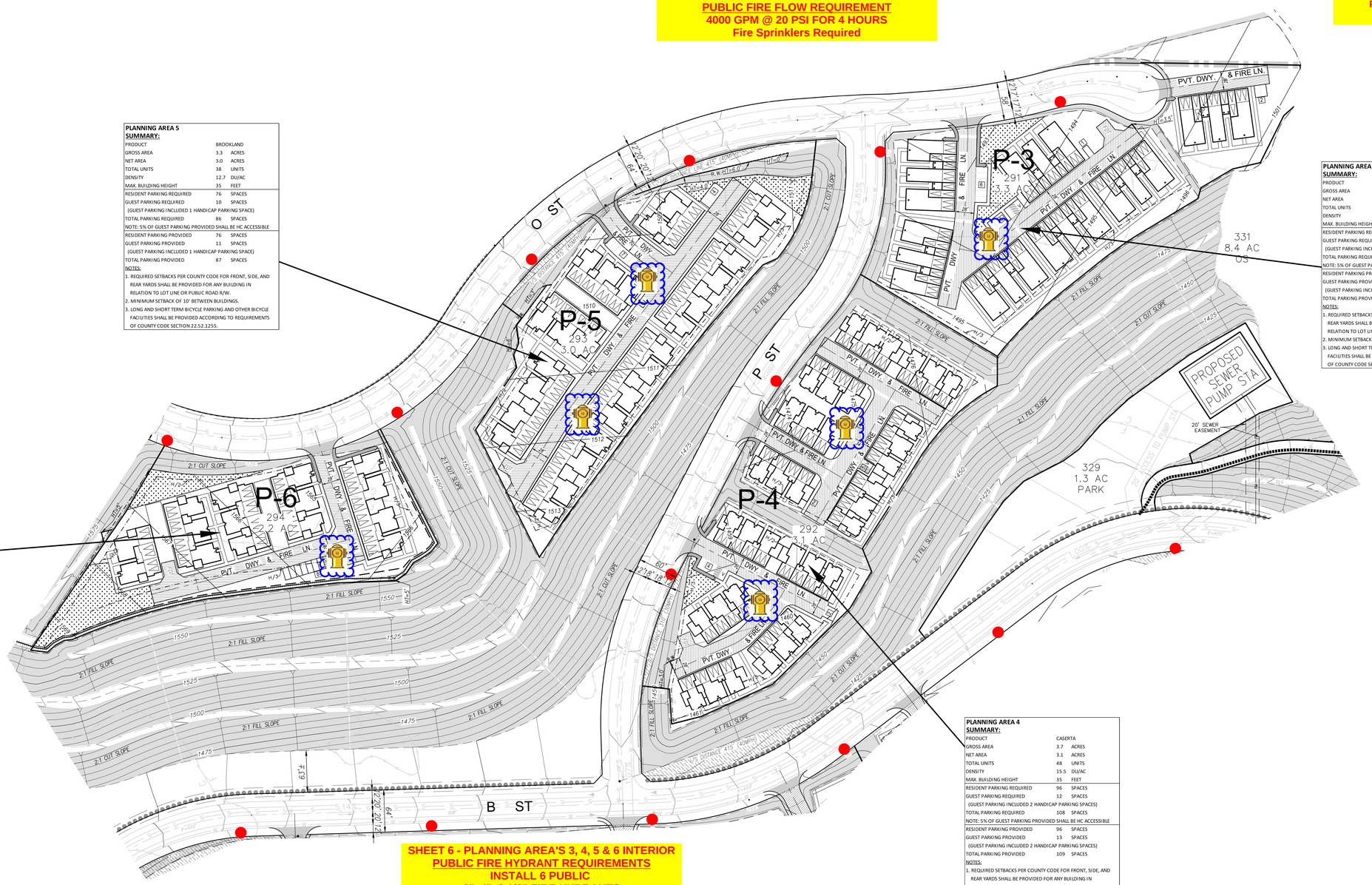
PRODUCT	SANTA ROSA	
GROSS AREA	3.5	ACRES
NET AREA	3.2	ACRES
TOTAL UNITS	49	UNITS
DENSITY	15.3	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	84	SPACES
GUEST PARKING REQUIRED	13	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	97	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	84	SPACES
GUEST PARKING PROVIDED	14	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	98	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 4
SUMMARY:

PRODUCT	CASERTA	
GROSS AREA	3.7	ACRES
NET AREA	3.1	ACRES
TOTAL UNITS	48	UNITS
DENSITY	15.5	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	96	SPACES
GUEST PARKING REQUIRED	12	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING REQUIRED	108	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	96	SPACES
GUEST PARKING PROVIDED	13	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING PROVIDED	109	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.



SHEET 6 - PLANNING AREA'S 3, 4, 5 & 6 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 6 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

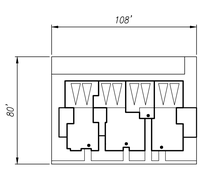
LEGEND

- 336 / P-1 — LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

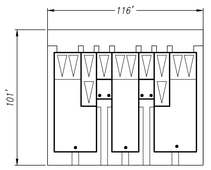
NOTES:

1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

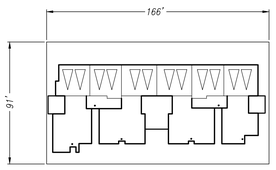
PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.



CASERTA
SCALE: 1" = 40'
4 PLEX



SANTA ROSA
SCALE: 1" = 40'
7 PLEX

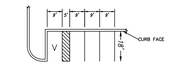


BROOKLAND
SCALE: 1" = 40'
6 PLEX
SFA





TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAP
NOT TO SCALE

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No. 35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

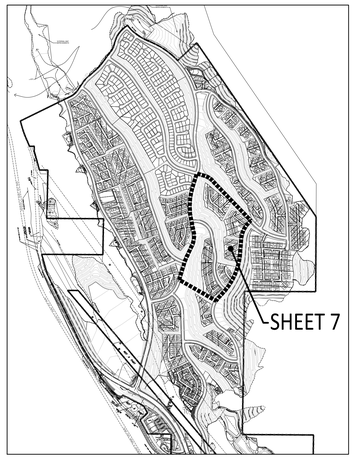
NO.	DATE	REVISION	BY	APP
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	TH	--
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016	YL	--
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016	YL	--
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	--
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	--
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	--

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=60'			08/13/2025	5090-033-35	6	12

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025



KEY MAP
SCALE: 1"=1000'

SHEET 7 - PLANNING AREA'S 7 & 8 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 21 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

SHEET 7 - PLANNING AREA'S 7 & 8 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 9 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

PLANNING AREA 8
SUMMARY:

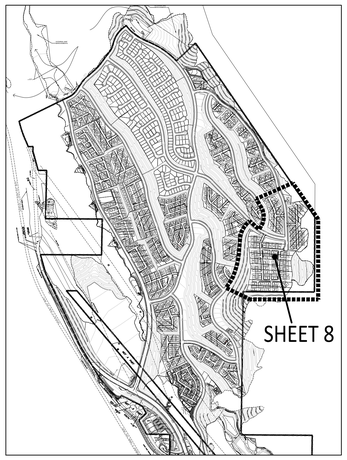
PRODUCT	MERIWETHER	
GROSS AREA	11	ACRES
NET AREA	9.9	ACRES
TOTAL UNITS	111	UNITS
DENSITY	11.2	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	222	SPACES
GUEST PARKING REQUIRED	28	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)		
TOTAL PARKING REQUIRED	250	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	222	SPACES
GUEST PARKING PROVIDED	33	SPACES
(GUEST PARKING INCLUDED 3 HANDICAP PARKING SPACES)		
TOTAL PARKING PROVIDED	255	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 7
SUMMARY:

PRODUCT	CASERTA	
GROSS AREA	7.6	ACRES
NET AREA	6.8	ACRES
TOTAL UNITS	88	UNITS
DENSITY	12.9	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	176	SPACES
GUEST PARKING REQUIRED	22	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	198	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	176	SPACES
GUEST PARKING PROVIDED	28	SPACES
(GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	204	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.



KEY MAP
SCALE: 1"=1000'

SHEET 8 - PLANNING AREA'S 24 & 25 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 14 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA 24
SUMMARY:

PRODUCT	BUNGALOWS	
GROSS AREA	18.4	ACRES
NET AREA	17.7	ACRES
TOTAL UNITS	138	UNITS
DENSITY	7.8	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	276	SPACES
GUEST PARKING REQUIRED (GUEST PARKING INCLUDED 2 HANDICAPS PARKINGS)	35	SPACES
TOTAL PARKING REQUIRED	311	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	276	SPACES
GUEST PARKING PROVIDED (GUEST PARKING INCLUDED 2 HANDICAPS PARKINGS)	44	SPACES
TOTAL PARKING PROVIDED	320	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 25
SUMMARY:

PRODUCT	CASITAS	
GROSS AREA	12.2	ACRES
NET AREA	10.6	ACRES
TOTAL UNITS	61	UNITS
DENSITY	5.8	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	122	SPACES
GUEST PARKING REQUIRED (GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)	16	SPACES
TOTAL PARKING REQUIRED	138	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	122	SPACES
GUEST PARKING PROVIDED (GUEST PARKING INCLUDED 2 HANDICAP PARKING SPACES)	18	SPACES
TOTAL PARKING PROVIDED	140	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

LEGEND

- (336) / P-1 — LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

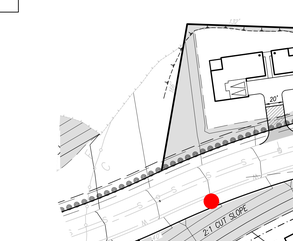
NOTES:

1. *ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).*
2. *ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.*
3. *FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.*
4. *FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.*
5. *NO PROPOSED GATE WITHIN PROJECT SITE.*

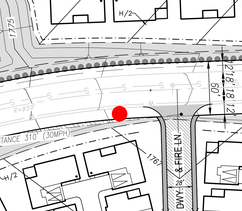
PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.

SHEET 3 - PLANNING AREA 24 & 25 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 6 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR



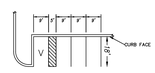
BUNGALOWS
SCALE: 1"=40'
6 HOME MOTORCOURT



CASITAS
SCALE: 1"=40'
4 HOME MOTOR COURT



TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAP
NOT TO SCALE

0 30 60 120 Feet
1"=60'

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No. 35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:
A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

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1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	--

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=60'			08/13/2025	5090-033-35	8	12

SIKAND
Engineering | Planning | Surveying
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Van Nuys, CA 91411
Tel: (818) 787-8550
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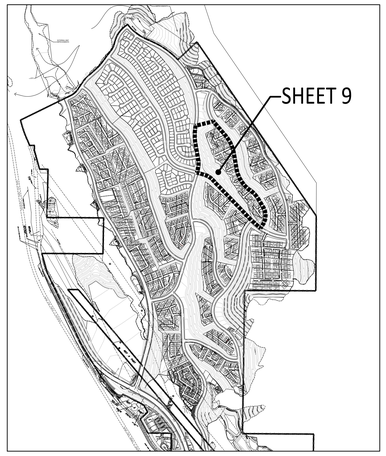
MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA



KEY MAP
SCALE: 1"=1000'

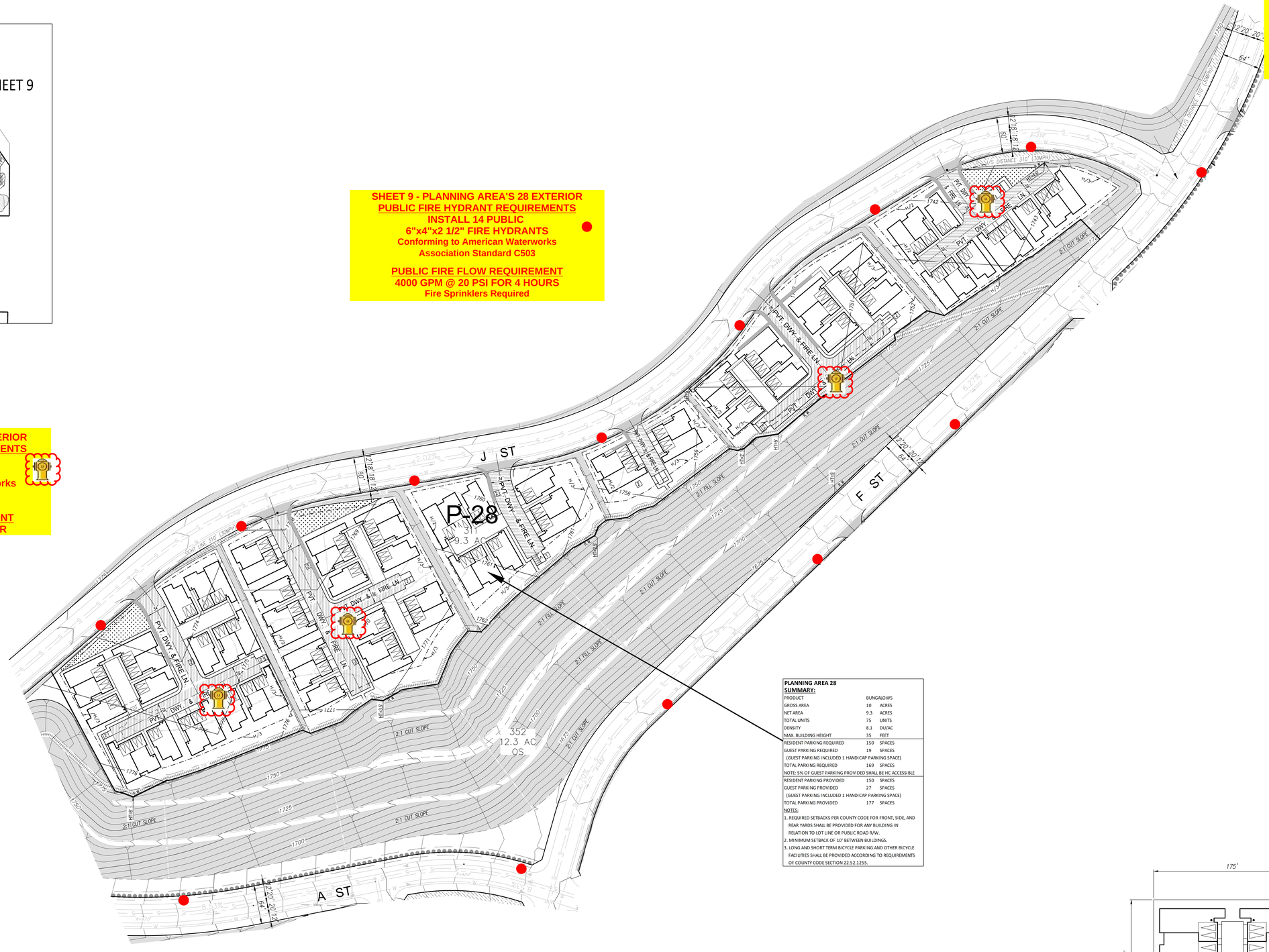
SHEET 9 - PLANNING AREA 28 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 4 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

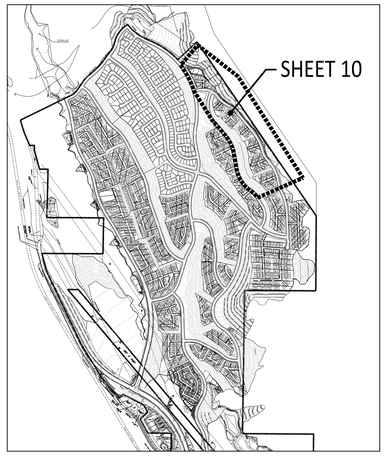
PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR

SHEET 9 - PLANNING AREA'S 28 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 14 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025





KEY MAP
SCALE: 1"=1000'

SHEET 10 - PLANNING AREA 26 & 27 INTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 1 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR

SHEET 10 - PLANNING AREA'S 26 & 27 EXTERIOR
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 16 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA 26
SUMMARY:

PRODUCT	CASITAS	
GROSS AREA	11.7	ACRES
NET AREA	10.2	ACRES
TOTAL UNITS	61	UNITS
DENSITY	6.0	DU/AC
MAX. BUILDING HEIGHT	35	FEET
RESIDENT PARKING REQUIRED	122	SPACES
GUEST PARKING REQUIRED	16	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	138	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	122	SPACES
GUEST PARKING PROVIDED	19	SPACES
(GUEST PARKING INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	141	SPACES

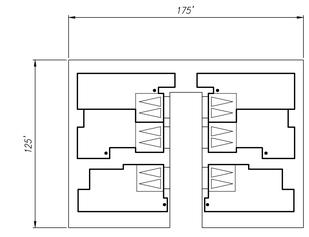
NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

PLANNING AREA 27
SUMMARY:

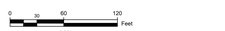
PRODUCT	BUNGALOWS	
GROSS AREA	1.5	ACRES
NET AREA	1.3	ACRES
TOTAL UNITS	10	UNITS
DENSITY	7.7	DU/AC
MAX. BUILDING HEIGHT	25	FEET
RESIDENT PARKING REQUIRED	20	SPACES
GUEST PARKING REQUIRED	3	SPACES
(GUEST PARK INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING REQUIRED	23	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	20	SPACES
GUEST PARKING PROVIDED	3	SPACES
(GUEST PARK INCLUDED 1 HANDICAP PARKING SPACE)		
TOTAL PARKING PROVIDED	23	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE OR PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

CASITAS
SCALE: 1"=40'
4 HOME MOTOR COURT

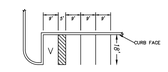


BUNGALOWS
SCALE: 1" = 40'
6 HOME MOTORCOURT





TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAP
NOT TO SCALE

LEGEND

- 336 / P-1 — LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- RECREATION/COMMON AREA
- PROPOSED FIRE HYDRANT

PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.

NOTES:

1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No. 35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S		TH	--
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016		YL	--
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016		YL	--
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015		YL	--
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015		YL	--
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015		YL	--
	DATE	REVISION		BY	APP
SCALE: 1"=60'	CHK'D BY:	APPROVED BY:	DATE: 08/13/2025	W.O. NO. 5090-033-35	SHEET 10 OF 12

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

LEGEND

- 336 — LOT NO.
- P-1 — PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
- FDT — FIRE DEPT. TURNAROUND
- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- PROPOSED FIRE HYDRANT

NOTES:

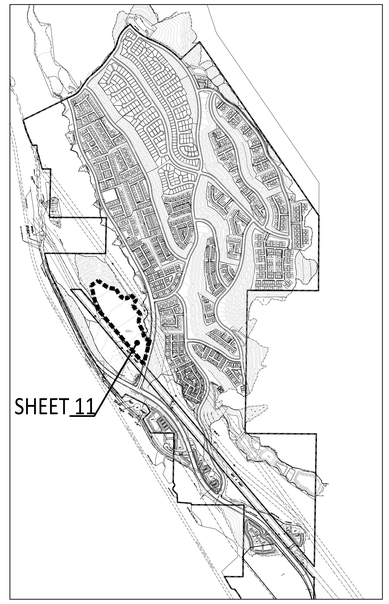
1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPOON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

SHEET 11 - PARK SITE
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 2 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

ON-SITE FIRE HYDRANTS MAYBE REQUIRED



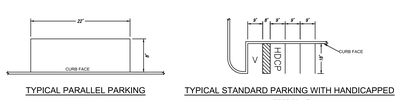
KEY MAP
SCALE: 1"=1000'



Program Summary

Item	Quantities	Size
Multi-Use Grass Areas	2	310,000 Sq.Ft.
Basketball Court	1	
Restroom and Storage	1	250 Sq.Ft. Storage
Individual Picnic Areas	5	
Family Picnic Pavilions	2	
Community / Park Monumnent	1	
Parking	160	90,000 Sq.Ft.
10' Walking Path		4,600 LFT
Maintenance Yard	1	3,500 Sq.Ft
Benches	4	

PARK SITE: SUBJECT TO MINOR MODIFICATION PRIOR TO FINAL DESIGN



TYPICAL PARALLEL PARKING
NOT TO SCALE

TYPICAL STANDARD PARKING WITH HANDICAPPED
NOT TO SCALE

0 30 60 120 Feet
1"=60'

EXHIBIT "A"
2015-0408

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No.35453 — Exp. 09-30-25 — STATE OF CALIFORNIA — CIVIL

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

NO.	DATE	REVISION	BY	APP
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4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016	YL	--
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2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	--
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	--

SCALE: 1"=60' | CHK'D BY: | APPROVED BY: | DATE: 08/13/2025 | W.O. NO. 5090-033-35 | SHEET 11 OF 12

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
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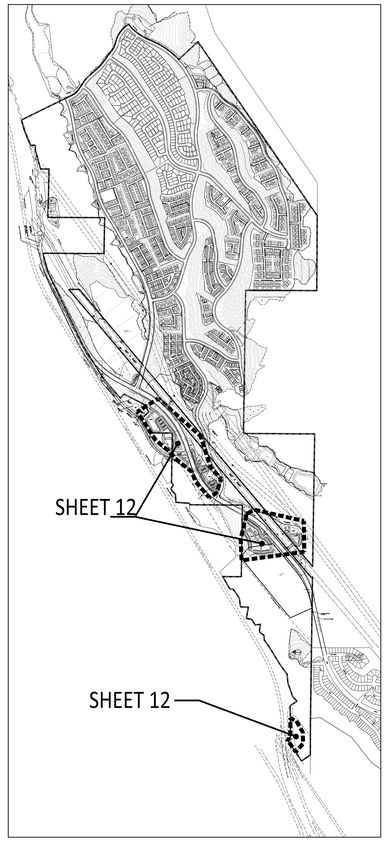

KEY MAP
SCALE: 1"=1000'

LEGEND

- LOT NO. / PLANNING AREA NUMBER
- VTTM 73336 BOUNDARY
- RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- H/2 & H/3 SETBACK LINE
- 1000 — PROPOSED CONTOUR
- 415' — LINE OF SIGHT / LINE OF SIGHT EASEMENT
- PROPOSED DRIVEWAY
- PRIVATE DRIVE AND FIRE LANE
- RETAINING WALL
- ENTRY MONUMENT (TYPE PER PLAN)
- MULTI-USE TRAIL (14' TRAIL)
- EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL
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- DWELLING UNIT ENTRANCE
- 3 — GUEST PARKING
- PROPOSED FIRE HYDRANT

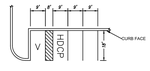
PROPOSED WALKWAYS TO PROVIDE CONNECTION BETWEEN PUBLIC STREETS AND INTERNAL CIRCULATION/BUILDING ENTRIES CONSISTENT WITH THE COUNTY HEALTHY DESIGN ORDINANCE (HDO). FINAL LOCATION, CONFIGURATION AND COMPLETE LAYOUT WILL VARY BASED ON FINAL EXHIBIT A.

NOTES:

1. ALL PERIMETER WALLS SHALL HAVE PERSONNEL PEDESTRIAN ACCESS GATES LOCATED TO SATISFACTION OF THE FIRE DEPARTMENT (NO VEHICLE ACCESS).
2. ALL DRIVER AISLES SHALL PROVIDE A MINIMUM OF 32 FOOT CENTERLINE TURNING RADIUS.
3. FIRE LANE TO BE DEDICATED BY SEPARATE INSTRUMENT BASED UPON THE FINAL SITE PLAN APPROVAL.
4. FIRE ACCESS WILL BE PROVIDED TO WITHIN 150' OF ALL EXTERIOR WALLS.
5. NO PROPOSED GATE WITHIN PROJECT SITE.



TYPICAL PARALLEL PARKING
NOT TO SCALE



TYPICAL STANDARD PARKING WITH HANDICAPPED
NOT TO SCALE

LOT NO. 317 SUMMARY:		
PRODUCT	MULTI-FAMILY	
GROSS AREA	5.3	ACRES
NET AREA	4.1	ACRES
TOTAL UNITS	102	UNITS
DENSITY	24.9	DU/AC
MAX. BUILDING HEIGHT	4 STORIES, 3 STORIES ALONG THE STREET	
RESIDENT PARKING REQUIRED	102	SPACES
GUEST PARKING REQUIRED (GUEST PARKING INCLUDED 7 HANDICAP PARKING SPACE)	26	SPACES
TOTAL PARKING REQUIRED	128	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	102	SPACES
GUEST PARKING PROVIDED (GUEST PARKING INCLUDED 7 HANDICAP PARKING SPACE)	76	SPACES
TOTAL PARKING PROVIDED	178	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

SHEET 12 - LOT'S 312, 313, 314, 316, 317 & 318
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 24 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
4000 GPM @ 20 PSI FOR 4 HOURS
Fire Sprinklers Required

LOT NO. 312 & 313 SUMMARY:		
PRODUCT	MULTI-FAMILY & LIVE-WORK	
GROSS AREA	6.7	ACRES
NET AREA	5.1	ACRES
TOTAL UNITS	78	UNITS
BUILDING AREA	7,500	SQ.FT.
DENSITY	15.3	DU/AC
MAX. BUILDING HEIGHT	4 STORIES, 3 STORIES ALONG THE STREET	
RESIDENT PARKING REQUIRED	78	SPACES
GUEST PARKING REQUIRED (GUEST PARKING INCLUDED 6 HANDICAP PARKING SPACE)	39	SPACES
TOTAL PARKING REQUIRED	117	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	78	SPACES
GUEST PARKING PROVIDED (GUEST PARKING INCLUDED 6 HANDICAP PARKING SPACE)	147	SPACES
TOTAL PARKING PROVIDED	225	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

GOLDEN STATE FREEWAY I-5 (SOUTHBOUND)

314
2.5 AC
HWY COMMERICAL
DEVELOPMENT

LOT NO. 316 SUMMARY:		
PRODUCT	MIXED USE	
GROSS AREA	4.3	ACRES
NET AREA	4.3	ACRES
TOTAL UNITS	46	UNITS
BUILDING AREA	31,200	SQ.FT.
DENSITY	10.7	DU/AC
MAX. BUILDING HEIGHT	4 STORIES, 3 STORIES ALONG THE STREET	
RESIDENT PARKING REQUIRED	46	SPACES
GUEST PARKING REQUIRED (GUEST PARKING INCLUDED 7 HANDICAP PARKING SPACE)	90	SPACES
TOTAL PARKING REQUIRED	136	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	46	SPACES
GUEST PARKING PROVIDED (GUEST PARKING INCLUDED 7 HANDICAP PARKING SPACE)	92	SPACES
TOTAL PARKING PROVIDED	138	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS

LOT NO. 318 SUMMARY:		
PRODUCT	MULTI-FAMILY	
GROSS AREA	2.9	ACRES
NET AREA	2.9	ACRES
TOTAL UNITS	95	UNITS
DENSITY	32.8	DU/AC
MAX. BUILDING HEIGHT	4 STORIES, 3 STORIES ALONG THE STREET	
RESIDENT PARKING REQUIRED	95	SPACES
GUEST PARKING REQUIRED (GUEST PARKING INCLUDED 6 HANDICAP PARKING SPACE)	24	SPACES
TOTAL PARKING REQUIRED	119	SPACES
NOTE: 5% OF GUEST PARKING PROVIDED SHALL BE HC ACCESSIBLE		
RESIDENT PARKING PROVIDED	95	SPACES
GUEST PARKING PROVIDED (GUEST PARKING INCLUDED 6 HANDICAP PARKING SPACE)	30	SPACES
TOTAL PARKING PROVIDED	125	SPACES

NOTES:
1. REQUIRED SETBACKS PER COUNTY CODE FOR FRONT, SIDE, AND REAR YARDS SHALL BE PROVIDED FOR ANY BUILDING IN RELATION TO LOT LINE PUBLIC ROAD R/W.
2. MINIMUM SETBACK OF 10' BETWEEN BUILDINGS.
3. LONG AND SHORT TERM BICYCLE PARKING AND OTHER BICYCLE FACILITIES SHALL BE PROVIDED ACCORDING TO REQUIREMENTS OF COUNTY CODE SECTION 22.52.1255.

NORTHLAKE HILLS ELEMENTARY SCHOOL

0 30 60 120 Feet
1"=60'

EXHIBIT "A"
2015-0408

7	8-13-2025	REVISED PRODUCT TYPE FROM AFFORDABLE HOUSING TO MULTI-FAMILY ON SHEET 12		TH	–
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S		TH	–
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016		YL	–
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016		YL	–
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015		YL	–
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015		YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015		YL	–
	DATE	REVISION		BY	APP

SCALE: 1"=60' | CHK'D BY: | APPROVED BY: | DATE: 08/13/2025 | W.O. NO. 5090-033-35 | SHEET 12 OF 12

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

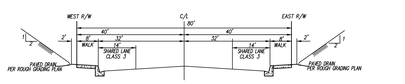
REGISTERED PROFESSIONAL ENGINEER — WAYNE R. SIKAND — No. 35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:
A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

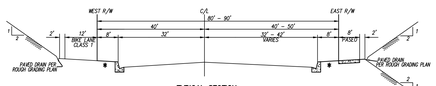
SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA



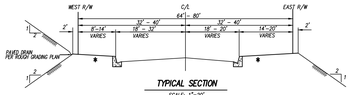
TYPICAL SECTION
SCALE: 1"=20'

80' SECONDARY HIGHWAY
THE RIDGE ROUTE ROAD
(FROM TR. 44429 TO 1200' N'LY TR. 44429)



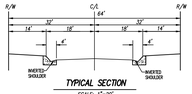
TYPICAL SECTION
SCALE: 1"=20'

80' – 90' SECONDARY HIGHWAY
THE RIDGE ROUTE ROAD
(FROM 1200' N'LY TR. 44429 TO NORTHLAKE BLVD.)



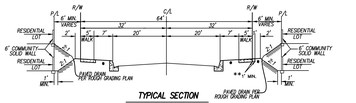
TYPICAL SECTION
SCALE: 1"=20'

64' – 80' LIMITED SECONDARY HWY
THE RIDGE ROUTE ROAD
(FROM NORTHLAKE BLVD. TO 900' N'LY NORTHLAKE BLVD.)



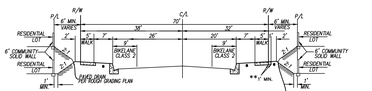
TYPICAL SECTION
SCALE: 1"=20'

64' LIMITED SECONDARY HWY
THE RIDGE ROUTE ROAD
(FROM 900' N'LY NORTHLAKE BLVD. TO 3200' N'LY OF NORTHLAKE BLVD.)



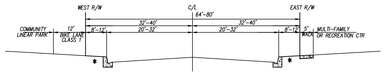
TYPICAL SECTION
SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)
"D" ST.,"E" ST.,"F" ST. (FROM "A" ST. TO "I" ST.)
& "H" ST.



TYPICAL SECTION
SCALE: 1"=20'

70' STREET (LOCAL COLLECTOR)
"A" ST. (FROM NORTHLAKE BLVD TO "B" ST.)



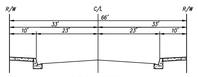
TYPICAL SECTION
SCALE: 1"=20'

80' STREET (MOD. INDUSTRIAL COLLECTOR)
NORTHLAKE BLVD.
(FROM "A" ST. TO 600' NE'LY "A" ST.)



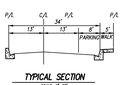
TYPICAL SECTION
SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)
NORTHLAKE BLVD.
(FROM 600 NE'LY "A" ST. TO "E" ST.)

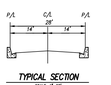


TYPICAL SECTION
SCALE: 1"=20'

66' STREET
"S" ST.



TYPICAL SECTION
PRIVATE DRIVEWAY & FIRE LANE W/ PARKING ONE SIDE FOR MULTI-FAMILY PLANNING AREA



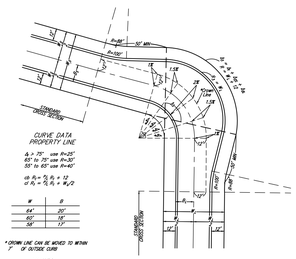
TYPICAL SECTION
PRIVATE DRIVEWAY & FIRE LANE, NO PARKING FOR MULTI-FAMILY PLANNING AREA

✱ LANDSCAPE AREA – SEE LANDSCAPE PLAN FOR DETAILS (TO BE MAINTAINED BY A LMD OR HOA)

✱✱ HARDSCAPE – DELINATION FOR TRAIL PURPOSES WHERE AVAILABLE.

NOTES FOR STREET SECTIONS:

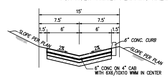
1. SLOUGH WALL REQUIRED AT TOE OF ADJACENT SLOPE IF TOE OF SLOPE IS CLOSER THAN 3' TO THE BACK OF WALK, AND SLOPE IS OVER 5' HIGH.
2. PUBLICLY MAINTAINED SIDEWALKS SHALL BE PLACED 6" FROM RIGHT OF WAY UNLESS SIDEWALK ABUTS A PROPOSED WALL IN WHICH CASE IT SHOULD BE PLACED AGAINST THE WALL.
3. LANDSCAPE SLOPING AWAY FROM R/W TO BE 2:1 MAX.
4. NO RAISED MEDIANS PROPOSED.



NOTES:
1. SUBSCRIPTS "S" AND "L" DENOTE SMALLER AND LARGER WIDTHS RESPECTIVELY.
2. ELEVATIONS ARE REQUIRED WHERE CIRCLED.
3. TRANSVERSE SLOPES SHOWN ABOVE ARE TYPICAL FOR FLAT APPROACH GRADES AND CAN BE INCREASED TO A MAXIMUM OF 4% AT CENTER OF CURVE FOR STEEP APPROACH GRADES.
4. LIMITS OF SLOPE, CROWN LINE TO OUTSIDE GUTTER, MAXIMUM = 2.2% FOR 8" C.F. AND 3.8% FOR 6" C.F.; MINIMUM = 1%

KNUCKLE
NOT TO SCALE

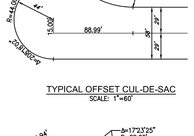
TYPICAL SECTION
PRIVATE DRIVEWAY & FIRE LANE, NO PARKING FOR MULTI-FAMILY PLANNING AREA



TYPICAL ACCESS ROAD DETAIL FOR BASINS
SCALE: 1"=10'



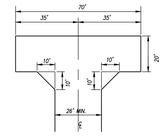
TYPICAL ACCESS ROAD DETAIL FOR WATER TANK
SCALE: 1"=10'

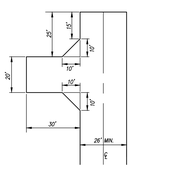


TYPICAL OFFSET CUL-DE-SAC
SCALE: 1"=60'

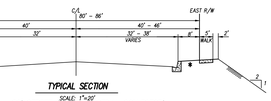


TYPICAL STANDARD CUL-DE-SAC
SCALE: 1"=40'



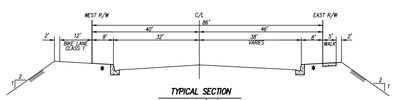


FIRE DEPT. TURNAROUND DETAILS
SCALE: 1"=30'



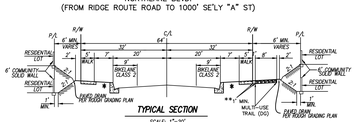
TYPICAL SECTION
SCALE: 1"=20'

80' – 86' STREET (MOD. INDUSTRIAL COLLECTOR)
NORTHLAKE BLVD.
(FROM 1000' SE'LY "A" ST TO "A" ST)



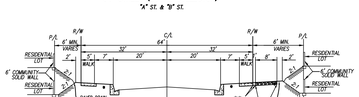
TYPICAL SECTION
SCALE: 1"=20'

86' STREET (MOD. INDUSTRIAL COLLECTOR)
NORTHLAKE BLVD.
(FROM RIDGE ROUTE ROAD TO 1000' SE'LY "A" ST)



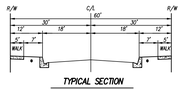
TYPICAL SECTION
SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)
"A" ST. & "B" ST.



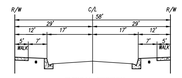
TYPICAL SECTION
SCALE: 1"=20'

64' STREET (LOCAL COLLECTOR)
"F" ST. & "O" ST. (FROM "I" ST. TO "O" ST.)



TYPICAL SECTION
SCALE: 1"=20'

60' STREET
"C" ST., "AA" ST., "DD" ST.,"EE" ST., "GG" ST.,
"HH" ST., & "PP" ST., & "QQ" ST.

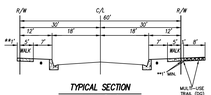


TYPICAL SECTION
SCALE: 1"=20'

58' STREET
"BB" ST., "CC" ST., "FF" ST., "II" ST., "JJ" ST., "KK" ST., "LL" ST.,
"MM" ST., "NN" ST., "OO" ST. & "PP" ST., "QQ" ST", RR" ST.,
& "SS" St.,

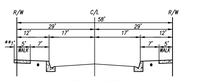
TYPICAL SECTION
SCALE: 1"=20'

60' STREET
"G" ST., "J" ST.& "P" ST.



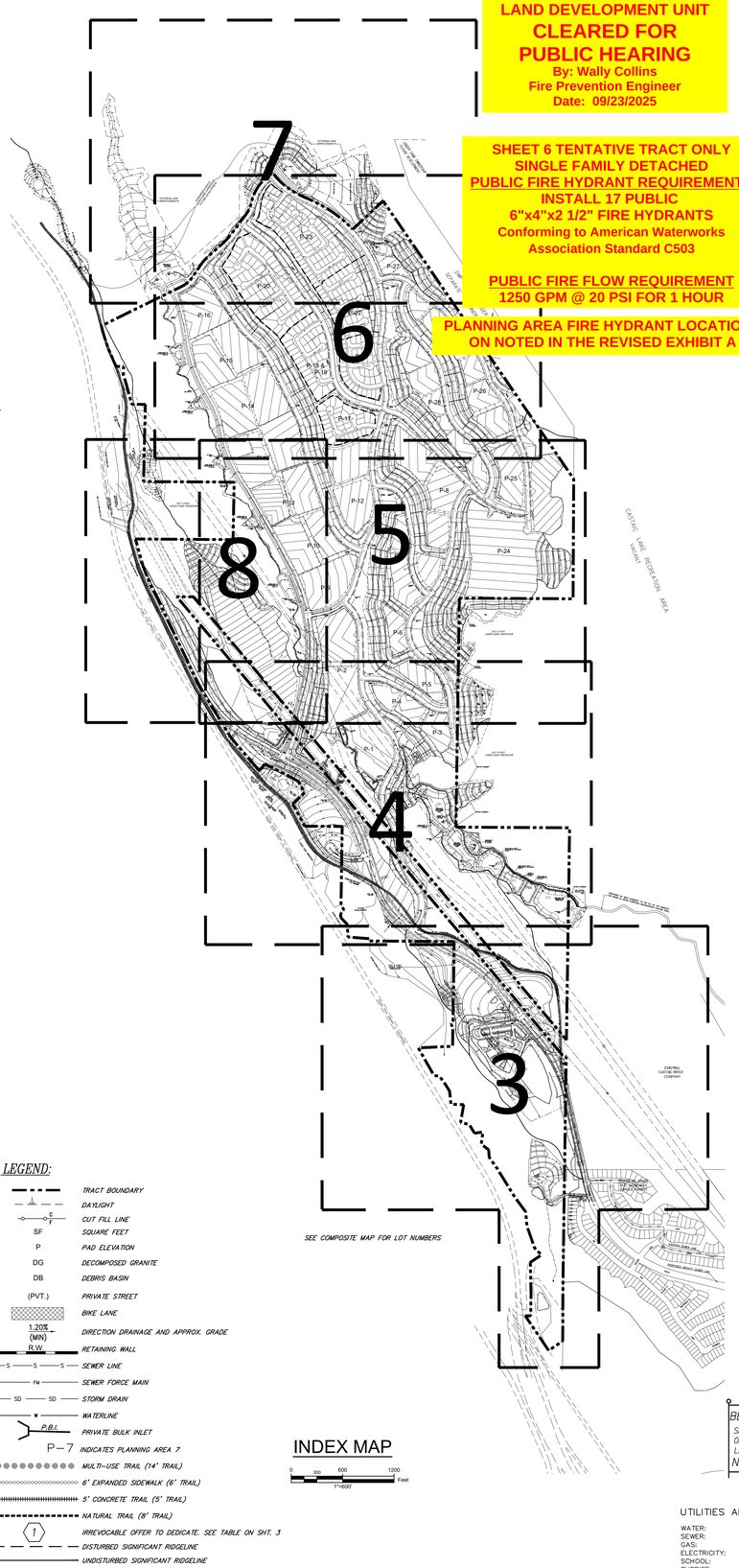
TYPICAL SECTION
SCALE: 1"=20'

60' STREET
"I" ST.



TYPICAL SECTION
SCALE: 1"=20'

58' STREET
"O" ST.
(FROM "P" ST. TO CUL-DE-SAC)



INDEX MAP
0 300 600 1200 Feet
1"=600'

LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF — SQUARE FEET
- P — PAD ELEVATION
- DG — DECOMPOSED GRANITE
- DB — DEBRIS BASIN
- (PVT.) — PRIVATE STREET
- BIKE LANE
- 1.20% (MIN) R.W. — DIRECTION DRAINAGE AND APPROX. GRADE
- RETAINING WALL
- S — S — S — SEWER LINE
- FM — SEWER FORCE MAIN
- SD — SD — STORM DRAIN
- W — WATERLINE
- P.B.I. — PRIVATE BULK INLET
- P–7 — INDICATES PLANNING AREA 7
- MULTI–USE TRAIL (14' TRAIL)
- 6' EXPANDED SIDEWALK (6' TRAIL)
- 5' CONCRETE TRAIL (5' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- 1 — IRREVOCABLE OFFER TO DEDICATE. SEE TABLE ON SHT. 3
- DISTURBED SIGNIFICANT RIDGELINE
- UNDISTURBED SIGNIFICANT RIDGELINE

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

SHEET 6 TENTATIVE TRACT ONLY
SINGLE FAMILY DETACHED
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 17 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR

PLANNING AREA FIRE HYDRANT LOCATIONS ON NOTED IN THE REVISED EXHIBIT A

Lot Numbers	No. of Lots	Sheet No.	Type (Use)	Dwelling Units	Total Acres
Area P-1					
289	1	4	Multi-family	189	7.0
372-373	2	4	Debris Basin		1.1
Area P-2					
290	1	4	Multi-family	91	5.0
		5	Multi-family	40	5.3
Area P-3					
291	1	4	Multi-family	49	3.3
Area P-4					
292	1	4	Multi-family	48	3.1
Area P-5					
293	1	5	Multi-family	38	3.0
Area P-6					
294	1	5	Multi-family	21	2.2
Area P-7					
295, 296	2	5	Multi-family	88	6.8
Area P-8					
297	1	5	Multi-family	111	9.9
Area P-9					
298	1	5	Multi-family	112	6.1
Area P-10					
299	1	5	Multi-family	100	7.4
Area P-11					
300	1	5	Multi-family	81	6.9
Area P-12					
301	1	5	Multi-family	117	8.6
Area P-13					
302	1	5	Multi-family	71	8.9
Area P-14					
303	1	6	Multi-family	44	5.1
		4	Multi-family	36	5.1
Area P-15					
304	1	6	Multi-family	32	4.3
		4	Multi-family	31	4.2
Area P-16					
305	1	6	Multi-family	42	5.1
Area P-17					
1-33	33	6	50'X80' SF (4000 sf) min.	33	4.5
Area P-18 & P-19					
34-68	35	6	55'X90' SF (4950 sf) min.	35	5.8
Area P-20					
69-129	61	6	60'X100' SF (6000 sf) min.	61	11.2
Area P-21					
130-165	36	6	50'X80' SF (4000 sf) min.	36	4.2
Area P-22					
166-178	13		50'X80' SF (4000 sf) min.	13	1.3
179-205	30	6	55'X90' SF (4950 sf) min.	30	4.3
Area P-23					
209-288	80	6	50'X80' SF (4000 sf) min.	80	9.4
Area P-24					
306	1	5	Senior	138	17.7
Area P-25					
307, 308	2	5	Senior	61	10.6
Area P-26					
309	1	6	Senior	61	10.2
Area P-27					
310	1	6	Senior	10	1.3
Area P-28					
311	1	6	Senior	75	9.3
Miscellaneous					
312-313,315-318	6	4	General Commercial***	321	20.4
314	1	1	Highway Commercial		2.5
319	1	6	Public Park		16.3
320-329	10	5 & 6	Private Park		8.0
330-333, 335-357, 367-368	29		Open Space		192.9
334, 358-366	10		Open Space (Natural)		163.9
369-370	2	3 & 8	Water Tank		6.5
371, 374-383	11	4, 5 & 6, 8	Debris Basin *		10.4
384	1	4	Water Quality Basin Lot **		15.0
385	1	4	Pump station		0.2
386	1	4	Fire station		1.4
			Public R/W		84.3

* DEBRIS BASINS TO BE MAINTAINED BY LA COUNTY PUBLIC WORK FLOOD CONTROL DISTRICT (LACFCD).

** WATER QUALITY BASIN TO BE MAINTAINED BY LA COUNTY THROUGH DRAINAGE BENEFIT ASSESSMENT AREA (DBAA).

*** AFFORDABLE HOUSING AND LIVE WORK (LOT 313).

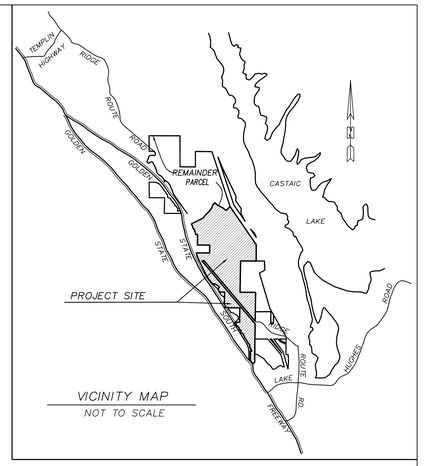
LOT SUMMARY TABLE	
Type (Use)	Quantity
Multi-family	23
50'X80' SF (4,000 sf) min.	162
55'X90' SF (4,950 sf) min.	65
60'X100' SF (6,000 sf) min.	61
Open Space (Manufactured Slopes)	29
Open Space (natural)	10
General Commercial	6
Highway Commercial	1
Public Park	1
Private Park	10
Debris Basin	13
Water Quality Basin Lot	1
Water Tank	2
Pump Station	1
Fire Station	1
Total	**386**

SHEET INDEX	
SHEET NO.	SHEET TITLE
1	TITLE SHEET
2	COMPOSITE MAP
3	TENTATIVE MAP - SOUTHERLY IMPROVEMENTS
4	TENTATIVE MAP - PA 1, 3 AND 4
5	TENTATIVE MAP - PA 2, 5 -13 AND 24 - 25
6	TENTATIVE MAP - PA 14 - 23 AND 26 - 28
7	TENTATIVE MAP - EXTERNAL IMPROVEMENTS
8	TENTATIVE MAP - PA 10, 11 AND SPORT PARK
9	UNIT PHASING MAP
10	LARGE LOT MAP
11	TRAIL MAP
12	EASEMENT MAP TITLE SHEET
13	EASEMENT MAP
14	EASEMENT MAP
15	EASEMENT MAP
16	EASEMENT MAP

BENCH MARK: LACPW L 4622
SMALL BOAT SPK & TAG @ D–S25 @ SW END OF BRIDGE @ B–1552 14 FT S/O C/L LAKE HUGHES RD
NEWHALL QUAD. (1993) ELEV. 1147.577

UTILITIES AND SERVICES:

WATER:	SANTA CLARITA VALLEY WATER AGENCY
SEWER:	SEWAGE OFFSITE TREATMENT PLANT
GAS:	SOUTHERN CALIFORNIA GAS COMPANY
ELECTRICITY:	SOUTHERN CALIFORNIA EDISON COMPANY
SCHOOL:	WM. S. HART HIGH SCHOOL & CASTAIC UNION SCHOOL DISTRICTS.
SHERIFF	LOS ANGELES COUNTY SHERIFF
TELEPHONE	SBC TELEPHONE CO.



DATA SUMMARY:

ACRES(GROSS)	719.8 ± AC
ACRES(NET)	635.5 ± AC
EXISTING & PROPOSED ZONING	NORTHLAKE S.P
EXISTING & PROPOSED GENERAL PLAN (2012 SCVGP)	NORTHLAKE S.P
EXISTING LAND USE	VACANT
PROPOSED LAND USE	SINGLE & MULTIFAMILY RESIDENTIAL COMMERCIAL AND OPEN SPACE

LOT SUMMARY:

SINGLE FAMILY LOTS	(40.6 Ac.) –	288 DU'S	1 TO 288 (288)
MULTI–FAMILY LOTS	(107.2 Ac.) –	1341 DU'S	289 TO 305 (17)
SENIOR M.F. LOTS	(49.1 Ac.) –	345 DU'S	306 TO 311 (6)
GENERAL COMMERCIAL	(20.4 Ac.) –	321 DU'S	312 TO 313 (2)
			315 TO 318 (4)
HIGHWAY COMMERCIAL	(2.5 Ac.)		314 (1)
PUBLIC PARK LOT	(16.3 Ac.)		319 (1)
PRIVATE PARK LOTS	(8.0 Ac.)		320 TO 329 (10)
OPEN SPACE (MFD)	(192.9 Ac.)		330 TO 368 (39)
OPEN SPACE (NATURAL)	(163.9 Ac.)		
TANK SITE	(6.5 Ac.)		369 TO 370 (2)
DEBRIS BASIN LOTS	(11.5 Ac.)		371 TO 383 (13)
WATER QUALITY BASIN	(15.0 Ac.)		384 (1)
PUMP STATION	(0.2 Ac.)		385 (1)
FIRE STATION	(1.4 Ac.)		386 (1)
PUBLIC R/W	(84.3 Ac.)		
TOTAL LOTS	(719.8 Ac.) –	TOTAL 2295 DU'S	386

PARCEL NUMBERS BASED ON FIDELITY NATIONAL TITLE COMPNAY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 6, 2023.

P.T.R. PARCEL NO	A.P.N.
1*	3247-010-049 and 3247-010-050
2*	3244-003-018
3	3247-040-008 (PORTION)
4	3247-040-008 (PORTION)
5	3247-040-008 (PORTION)
6	3247-040-008 (PORTION)
7	3247-040-013 (PORTION)
8	3247-040-009 (PORTION)
9	3247-040-009 (PORTION)
10	3247-040-009 (PORTION)
11	3247-040-009 (PORTION)
12	3247-040-013 (PORTION)
13	3247-040-013 (PORTION)
14	3247-040-013 (PORTION)
15	3244-012-054 & 059
16	3244-012-057
17	3244-012-013
18	3247-041-008
19	3247-041-020
20	3247-041-021
21	3247-041-023
22	3247-041-022
23	2865-036-003
24	2865-036-002
25	2865-036-001 AND 2865-003-013
26	2865-003-035
27	3244-004-051
28	3244-004-053
29	3244-012-049
30	3244-012-048
31	3244-012-046
32	3244-012-058
33	3244-004-052
34	3244-004-024
35	3244-013-001
36	3244-012-045
37	3247-017-019
38	3244-012-050
39	3244-014-015
40	3244-014-067 & 068
41	3247-041-018
42	3247-041-015
43	3244-014-053
44*	3244-014-044
45*	3244-014-038
46*	3247-041-012
47*	3244-013-004
48*	3244-013-002
49*	3244-013-005
50*	3244-013-009
51*	3244-013-010
52	3244-014-050
53*	3244-015-018
54*	3244-014-022
55*	3244-014-021
56	3244-014-062
57*	3244-014-063
60	3247-041-007
61	3247-041-009
66	3247-041-010
68*	3244-012-056
69*	3244-014-045
70**	3244-012-904
71**	3244-004-906
72*	3244-014-902
73*	3247-017-900

*ASTERISK INDICATES PARCEL IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP OR OFFSITE IMPROVEMENT

**ASTERISK INDICATES PARCEL TO BE AQUIRED

NOTE: NORTHEASTERLY PORTION OF PARCEL 32 IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP

NOTES

1. TOTAL EARTHWORK APPROXIMATELY CUT 17,160,000 C.Y. ± FILL 15,840,000 C.Y. ± EARTHWORK WILL BE BALANCED ON–SITE DUE TO SHRINKAGE.
2. TOPOGRAPHIC MAPPING BY HORIZON SURVEYS, 2 FT CONTOUR INTERVAL. (JULY 8, 2002)
3. REQUEST PERMISSION TO ADJUST LOT LINES TO THE SATISFACTION OF DRP.
4. REQUEST PERMISSION TO RECORD UNIT TRACT MAPS TO THE SATISFACTION OF DRP.
5. REQUEST PERMISSION TO CREATE ADDITIONAL OPEN SPACE LOTS.
6. BOUNDARY LINE DIMENSIONS ARE TAKEN FROM RECORD DATA.
7. THE APPLICANT IS REQUESTING THE RIGHT TO ADJUST STREET AND BUILDING PAD ELEVATIONS UP TO 10 FEET ON THE FINAL GRADING PLAN TO THE SATISFACTION OF DRP AND DPW.
8. TOPS AND TOES OF SLOPES ARE SUBJECT TO CHANGE IN FINAL ENGINEERING TO SATISFACTION OF DRP AND DPW.
9. MAXIMUM SLOPE GRADE IS 2:1 FOR ALL SLOPES.
10. A LANDSCAPE MAINTENANCE DISTRICT OR HOMEOWNER'S ASSOCIATION WILL BE ESTABLISHED FOR MAINTENANCE OF OPEN SPACE AREAS AND ALL COMMON SLOPE AREAS.
11. ALL SLOPES WITHIN HOMEOWNER'S ASSOCIATION COMMON AREAS OR LANDSCAPE MAINTENANCE DISTRICTS ARE TO BE PLANTED AND IRRIGATED WITH COUNTY APPROVED MATERIAL.
12. PORTIONS OF THE OLD RIDGE ROUTE ROAD TO BE ABANDONED AND REPLACED WITH A ROAD PER CURRENT COUNTY STANDARDS.
13. MULTI–FAMILY LOTS ARE FOR CONDO PURPOSES.
14. REQUEST PERMISSION TO CREATE A LARGE LOT PARCEL MAP FOR SALES AND LEASING PURPOSES AND WHERE EACH LOT IS GREATER THAN 40 ACRES.
15. SITE CONTAINS NO OAK TREES.
16. ALL STREET LANDINGS ARE 3% OR LESS EXCEPT WHERE NOTED.
17. ALL GRADING ELEVATIONS ARE ± 10 FEET.
18. ALL ITEMS REQUESTED WITH CUP NO. RPPL2023004316 (i.e. GRADING, WATER TANKS, SP SITE PLAN/SCR REVIEW, AND WALLS EXCEEDING 6 FEET IN HEIGHT), AS WELL AS THAT IN PHASE 2 WILL REQUIRE A NEW CUP. ENVIRONMENTAL ASSESSMENT NO. RPPL2023004887.
19. PRIVATE DRIVES SHALL BE DESIGNED ACCORDING TO THE WESTSIDE COMMUNITIES PRIVATE DRIVE AND TRAFFIC CALMING DESIGN GUIDELINES CONSISTENT WITH HEALTHY DESIGN REQUIREMENTS.
20. ALL STREET CURB RETURNS ARE 25' RADII UNLESS SPECIFIED ON THE PLAN.
21. LANDSCAPING IN THE COMMON AREAS AND DRIVES INCLUDING COMMON AREAS FENCING AND WALL WILL BE DROUGHT TOLERANT IN NATURE. DETAILED LANDSCAPING WILL BE PROVIDED ONCE THE PLOT PLANS ARE FINALIZED AND SUBMITTED TO THE COUNTY FOR APPROVAL.
22. BICYCLE SHOWER AND CHANGING FACILITIES (BSF) WILL BE PROVIDED FOR ALL BUILDINGS ≥ 75,000 S.F. AND WILL BE DEPICTED IN DETAIL ON FUTURE PLOT PLANS.
23. ALL SINGLE FAMILY LOTS WILL BE SERVED BY SEPARATE SEWER LATERAL FOR EACH INDIVIDUAL LOT. ALL MULTI–FAMILY, COMMERCIAL, AND INDUSTRIAL BUILDINGS WILL BE SERVED BY SEPARATE SEWER LATERAL FOR EACH INDIVIDUAL BUILDING.
24. THE CLIENT PROPOSED A TRANSIT SYSTEM WITHIN THE PROJECT BOUNDARY, FOR MORE DETAILS SEE PLANNING NOTEBOOK.
25. ALL PARKS AREA PRIVATE EXCEPT WHERE NOTED.
26. PRIOR TO THE ISSUANCE OF 1750TH BUILDING PERMIT, FIRE STATION TO BE CONVEYED TO THE CONSOLIDATED PROTECTION DISTRICT OF LOS ANGELES COUNTY.
27. A NEW TENTATIVE MAP NUMBER & CUP WILL BE ISSUED IF AND WHEN A NEW MAP IS FILED OVER THE N'LY PORTION OF NORTHLAKE SPECIFIC PLAN BOUNDARY.
28. NO PROPOSED GATES WITHIN PROJECT SITE.

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6	07–11–2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S		TH	–
5	6–27–2017	PER SCM COMMENTS DATED 11–3–2016		YL	–
4	9–27–2016	PER SCM COMMENTS DATED 7–21–2016		YL	–
3	6–6–2016	PER SCM COMMENTS DATED 10–7–2015		YL	–
2	9–9–2015	PER SCM COMMENTS DATED 7–16–2015		YL	–
1	6–1–2015	PER SCM COMMENTS DATED 2–17–2015		YL	–
DATE		REVISION		BY	APP
SCALE: AS SHOWN	CHK'D BY:	APPROVED BY:	DATE: 08/12/2025	W.O. NO. 5090–033–35	SHEET 1 OF 16

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER MARK R. SIKAND No.35453 Exp. 09-30-25 CIVIL STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
*COUNTY OF LOS

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA FIRE HYDRANT LOCATIONS ON NOTED IN THE REVISED EXHIBIT A



FOR SPECIFIC PLAN DETAILS, SEE THE REV. EXHIBIT "A" MAP

COMPOSITE MAP

7	08-12-2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP	TH	--
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1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	--
	DATE	REVISION	BY	APP

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
AS SHOWN			08/12/2025	5090-033-35	2	16

PREPARED FOR:

NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER
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No.35453
Exp. 09-30-25
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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

MATCH LINE SEE SHEET 4

MATCH LINE SEE LEFT

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA FIRE HYDRANT LOCATIONS ON NOTED IN THE REVISED EXHIBIT A

359
33.0 AC
OS

330
3.4 AC
OS

340
0.2 AC
OS

318
2.9 AC
GENERAL
COMMERCIAL

317
5.3 AC
GENERAL
COMMERCIAL

358
39.6 AC
OS

314
2.5 AC
HWY. COMMERICAL
DEVELOPMENT

369
4.9 AC
WATER TANK

NOT A PART UNDER SAME OWNERSHIP

GOLDEN STATE FREEWAY I-5 (SOUTHBOUND)

SO. CALIF. EDISON R/W

RIDGE ROUTE ROAD

CASTAIC ROAD

TRACT BOUNDARY

EXISTING NORTHLAKE HILLS ELEMENTARY SCHOOL
SCHOOL SITE
AREA = 20.6± Acres (GROSS)
AREA = 13.0± Acres NET PAD

NOT A PART

100' RIDGE ROUTE

REALIGNED C/L 80' WIDE RIDGE ROUTE PER TR. 44429 M.B. 1233-19-43 (NOT REFLECTED IN TITLE REPORT)

JOIN EXISTING RIDGE ROUTE RD. BEGIN IEC RE-ALIGNMENT PER P-273(FW)

EXISTING SEWER PER PC 11670

PROP. 15" VCP SEWER WILL EXTEND AND CONNECT TO EXISTING SEWER LINE LOCATED AT RIDGE ROUTE ROAD AND CASTAIC LAKE ROAD

PROPOSED TANK

20' ACCESS ROAD

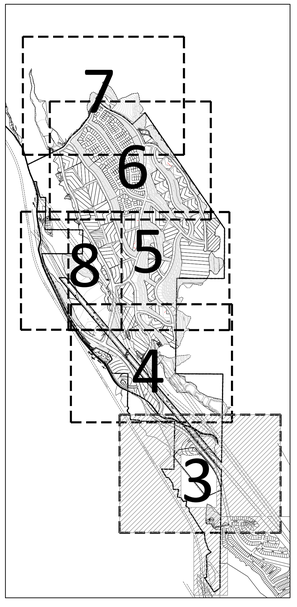
BUILDING SETBACK

EXIST. GAS LINE TO REMAIN

NW'LY LINE 10'

SE'LY LINE 10'

MATCH LINE SEE SHEET 8 INSET "A"



KEY MAP
SCALE: 1" = 1500'

LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF — SQUARE FEET
- D.B. — DEBRIS BASIN
- I/S — INTERSECTION SIGHT
- P — PAD ELEVATION
- (PVT.) — PRIVATE STREET
- BIKE LANE
- 1.20% (MIN) — DIRECTION DRAINAGE AND APPROX. GRADE
- R.W — TYPICAL RETAINING WALL
- DISTURBED SIGNIFICANT RIDGELINE
- UNDISTURBED SIGNIFICANT RIDGELINE
- RIDGELINE
- SEWER LINE
- SEWER FORCE MAIN
- STORM DRAIN
- WATERLINE
- P.B.I. — PRIVATE BULK INLET
- P-7 — INDICATES PLANNING AREA 7
- MULTI-USE TRAIL (10' TRAIL)
- NEIGHBORHOOD PEDESTRAIN TRAIL (6' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- (1) — IRREVOCABLE OFFER TO DEDICATE. SEE TABLE ON SHT. 3

0 50 100 200 Feet
1"=100'

OFFER OF DEDICATION TO THE PUBLIC AN EASEMENT FOR OFFSITE GRADING PURPOSES TO BE RECORDED BY SEPARATE INSTRUMENT

ITEM NO.	APN
(1)	3244-014-038
(2)	3244-014-045
(3)	3244-012-045 3244-012-046 3244-012-049 3244-004-051
(4)	3244-014-044 3244-014-063
(5)	3244-014-021 3244-014-022
(10)	3244-013-005 3244-013-010 3244-012-056

IRREVOCABLE OFFER TO DEDICATE TO THE COUNTY OF LOS ANGELES AN EASEMENT FOR PERMANENT ROAD PURPOSES TO BE RECORDED BY SEPARATE INSTRUMENT

ITEM NO.	APN
(6)	3244-014-038
(7)	3244-014-045
(8)	3244-014-063

IRREVOCABLE OFFER TO DEDICATE TO THE COUNTY OF LOS ANGELES AN EASEMENT FOR PERMANENT WATER QUALITY BASIN, DEBRIS BASIN OR PERMANENT ACCESS ROAD PURPOSES TO BE RECORDED BY SEPARATE INSTRUMENT

ITEM NO.	APN
(9)	3244-015-018
(11)	3244-014-022
(12)	3244-012-046
(13)	3244-012-045, 3247-041-012

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER
MARK R. SIKAND
No.35453
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

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1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	–

SCALE: 1"=100' | CHK'D BY: | APPROVED BY: | DATE: 08/12/2025 | W.O. NO. 5090-033-35 | SHEET 3 OF 16

SIKAND
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info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

MATCH LINE SEE SHEET 8

MATCH LINE SEE SHEET 5

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA FIRE HYDRANT LOCATIONS ON NOTED IN THE REVISED EXHIBIT A

336
14.2 AC
OS

338
6.8 AC
OS

371
2.5 AC
D.B.

374
0.4 AC
D.B.

P-1
289
7.2 AC

P-2
290
3.1 AC

P-3
291
3.3 AC

P-4
292
3.1 AC

P-5
293
3.0 AC

329
1.3 AC
PARK

331
8.4 AC
OS

380
1.1 AC
D.B

342
0.7 AC
OS

335
3.6 AC
OS

333
1.7 AC
OS

362
4.8 AC
OS

372
0.6 AC
D.B.

339
4.4 AC
OS

385
0.2 AC
PUMP STATION

312
5.1 AC
GENERAL
COMMERICAL

313
1.6 AC
GENERAL
COMMERCIAL

315
1.2 AC
GENERAL
COMMERCIAL

316
4.3 AC
GENERAL
COMMERCIAL

361
9.3 AC
OS
FUTURE DEVELOPMENT

332
2.8 AC
OS

334
2.5 AC
OS

359
33.0 AC
OS

381
0.7 AC
D.B.

382
0.7 AC
D.B.

383
0.8 AC
D.B.

384
15.0 AC
WATER QUALITY BASIN

360
12.4 AC
OS

NOT A PART
UNDER SAME OWNERSHIP

NOT A PART

UNDER SAME OWNERSHIP

NORTHLAKE BLVD

P ST

O ST

R ST

RIDGE ROUTE ROAD

GOLDEN STATE FREEWAY I-5 (SOUTHBOUND)

EXISTING CALTRANS R/W

SO. CALIF. EDISON R/W

PROPOSED 150' EDISON EASEMENT

EX. EDISON R/W TO BE RELOCATED

TRACT BOUNDARY

± 1326'

TRACT BOUNDARY

± 1610'

± 2669'

± 672'

OFFSITE EASEMENT

JOIN ADOPTED CASTAIC LAKE TRAIL

TOWER TO BE RELOCATED

GRADE TO DRAIN

DEBRIS BASIN TO BE MAINTAINED BY L.A.C.F.C.D

WATER QUALITY BASIN MAINTAINED BY LOS ANGELES COUNTY

INGRESS & EGRESS OF SD ESMT.

15' ACCESS ROAD

20' SEWER EASEMENT

PROPOSED WATER TANK

EXISTING WATER TANK

PROPOSED WATER TANK PER THIS MAP

POINT OF CONNECTION TO PROPOSED WATER LINE

WATER LINE POINT OF CONNECTION

JOIN EXIST. 30" WATER MAIN

EXIST. 30" WATER LINE

RELOCATED 30" WATER MAIN

PROP. FORCE MAIN SEWER LINE

EXIST. 24" CMP DRAIN PIPE TO BE REPLACED BY 36" RCP

EXIST. 30" WATER LINE

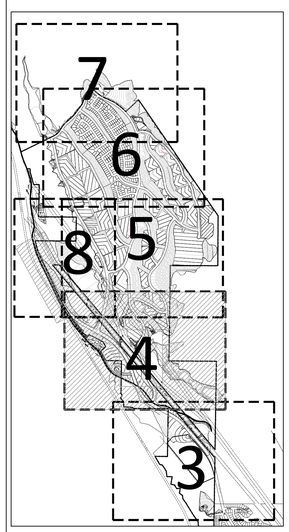
CLASS 1 BIKE LANE TRAIL

14' MULTI-USE TRAIL

8' NEIGHBORHOOD PEDESTRIAN TRAIL

0 50 100 200
SCALE: 1" = 100' Feet

KEY MAP
SCALE: 1" = 1500'



LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF — SQUARE FEET
- D.B. — DEBRIS BASIN
- I/S — INTERSECTION SIGHT
- P — PAD ELEVATION
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- 1.20% (MIN) — DIRECTION DRAINAGE AND APPROX. GRADE
- R.W. — TYPICAL RETAINING WALL
- DISTURBED SIGNIFICANT RIDGELINE
- UNDISTURBED SIGNIFICANT RIDGELINE
- R — R — R — RIDGELINE
- S — S — S — SEWER LINE
- FM — SEWER FORCE MAIN
- SD — SD — SD — STORM DRAIN
- W — WATERLINE
- P.B.I. — PRIVATE BULK INLET
- P–7 — INDICATES PLANNING AREA 7
- MULTI-USE TRAIL (10' TRAIL)
- NEIGHBORHOOD PEDESTRAIN TRAIL (6' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- 1 — IRREVOCABLE OFFER TO DEDICATE. SEE TABLE ON SHT. 3

MATCH LINE SEE SHEET 3

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1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	–
DATE		REVISION	BY	APP

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=100'			08/12/2025	5090-033-35	4	16

PREPARED FOR:

NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER
WAYNE R. SIKAND
No.35453
Exp. 09-30-25
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STATE OF CALIFORNIA

LEGAL DESCRIPTION:

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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

MATCH LINE SEE SHEET 6

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA FIRE HYDRANT LOCATIONS ON NOTED IN THE REVISED EXHIBIT A



MATCH LINE SEE SHEET 4

NOT A PART UNDER SAME OWNERSHIP

LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF — SQUARE FEET
- D.B. — DEBRIS BASIN
- I/S — INTERSECTION SIGHT
- P — PAD ELEVATION
- (PVT.) — PRIVATE STREET
- BIKE LANE
- 1.20% (MIN) — DIRECTION DRAINAGE AND APPROX. GRADE
- R.W. — TYPICAL RETAINING WALL
- DISTURBED SIGNIFICANT RIDGELINE
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- P–7 — INDICATES PLANNING AREA 7
- MULTI–USE TRAIL (10' TRAIL)
- NEIGHBORHOOD PEDESTRAIN TRAIL (6' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- (7) — IRREVOCABLE OFFER TO DEDICATE. SEE TABLE ON SHT. 3

KEY MAP
SCALE: 1" = 1500'

0 50 100 200 Feet
1"=100'

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2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL –
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL –
	DATE	REVISION	BY APP

SCALE: 1"=100' | CHK'D BY: | APPROVED BY: | DATE: 08/12/2025 | W.O. NO. 5090-033-35 | SHEET 5 OF 16

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER — MARK R. SIKAND — No.35453 — Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

LEGAL DESCRIPTION:

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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT

CLEARED FOR PUBLIC HEARING

By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

SINGLE FAMILY DETACHED
PUBLIC FIRE HYDRANT REQUIREMENTS
INSTALL 17 PUBLIC
6"x4"x2 1/2" FIRE HYDRANTS
Conforming to American Waterworks Association Standard C503

PUBLIC FIRE FLOW REQUIREMENT
1250 GPM @ 20 PSI FOR 1 HOUR

MATCH LINE SEE SHEET 7

MATCH LINE SEE SHEET 5

KEY MAP
SCALE: 1" = 1500'

LEGEND:
- TRACT BOUNDARY
- DAYLIGHT
- CUT FILL LINE
- SF SQUARE FEET
- D.B. DEBRIS BASIN
- I/S INTERSECTION SIGHT
- P PAD ELEVATION
- (PVT.) PRIVATE STREET
- BIKE LANE
- 1.20% (MIN) DIRECTION DRAINAGE AND APPROX. GRADE
- R.W. TYPICAL RETAINING WALL
- DISTURBED SIGNIFICANT RIDGELINE
- UNDISTURBED SIGNIFICANT RIDGELINE
- R RIDGELINE
- S SEWER LINE
- FM SEWER FORCE MAIN
- SD STORM DRAIN
- W WATERLINE
- P.B.I. PRIVATE BULK INLET
- P-7 INDICATES PLANNING AREA 7
- MULTI-USE TRAIL (10' TRAIL)
- NEIGHBORHOOD PEDESTRAIN TRAIL (6' TRAIL)
- NATURAL TRAIL (8' TRAIL)
- 1 IRREVOCABLE OFFER TO DEDICATE, SEE TABLE ON SHT. 3

0 50 100 200 Feet
1"=100'

N

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1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	–
	DATE	REVISION	BY	APP

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=100'			08/12/2025	5090-033-35	6	16

PREPARED FOR:

NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER
MARK R. STANLEY
No.35453
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

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Engineering | Planning | Surveying
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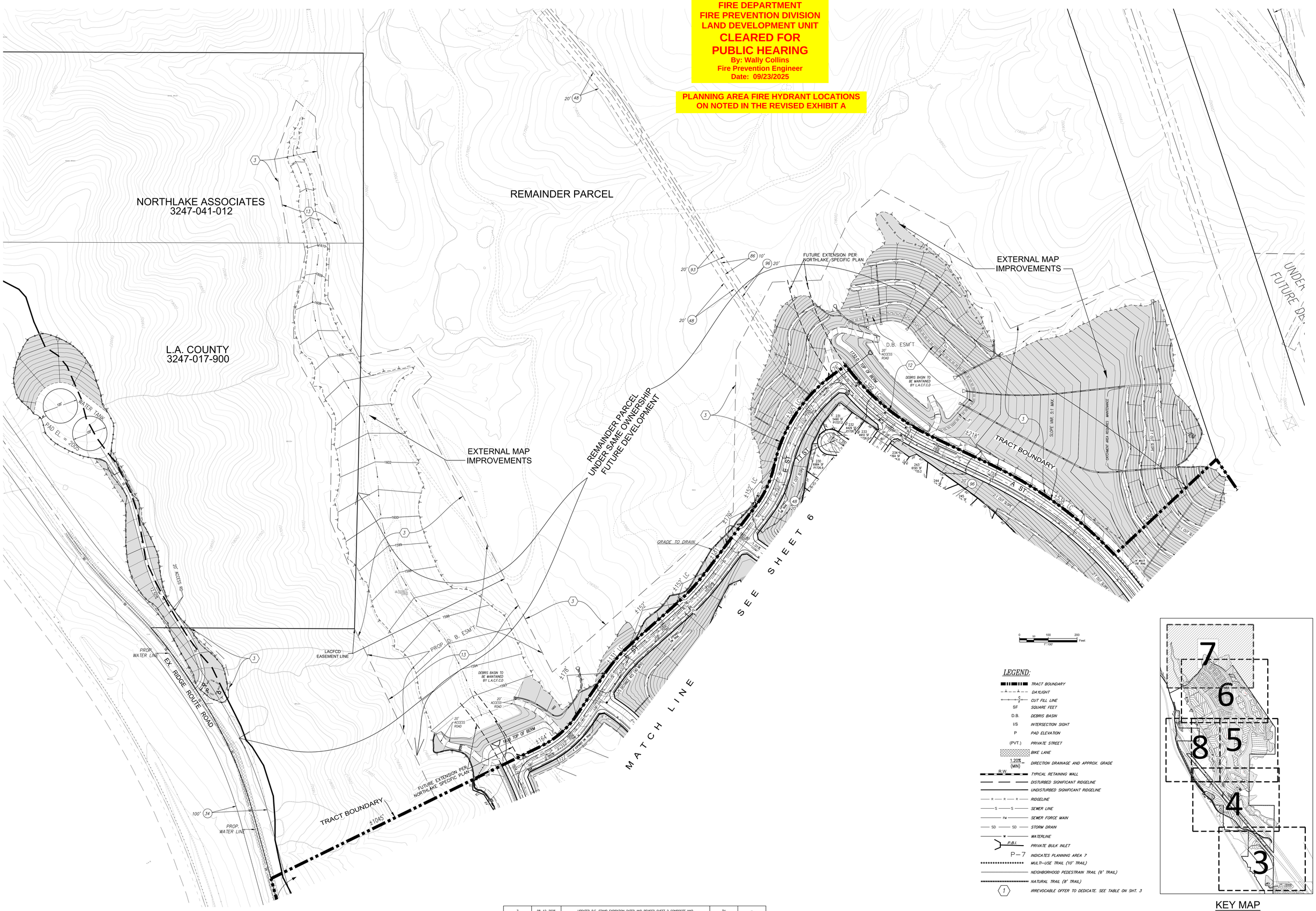
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PLANNING AREA FIRE HYDRANT LOCATIONS ON NOTED IN THE REVISED EXHIBIT A



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1"=100'			08/12/2025	5090-033-35	7	16

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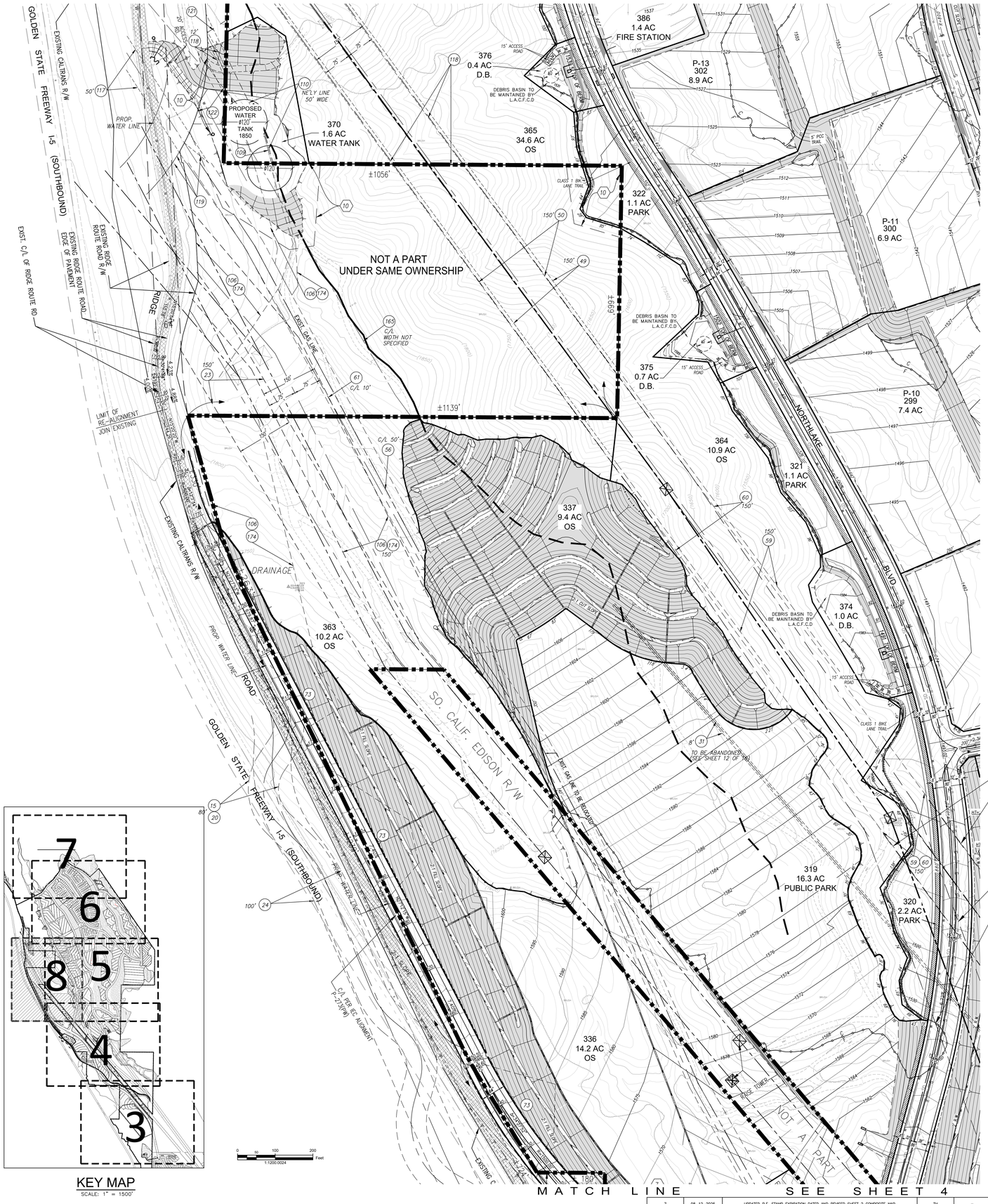

KEY MAP
SCALE: 1" = 1500'

EDISON EASEMENT TO BE RELOCATED

PROPOSED EDISON EASEMENT

LEGEND:

- TRACT BOUNDARY
- DAYLIGHT
- C / F — CUT FILL LINE
- SF — SQUARE FEET
- D.B. — DEBRIS BASIN
- I/S — INTERSECTION SIGHT
- P — PAD ELEVATION
- (PVT.) — PRIVATE STREET
- BIKE LANE
- 1.20% (MIN) — DIRECTION DRAINAGE AND APPROX. GRADE
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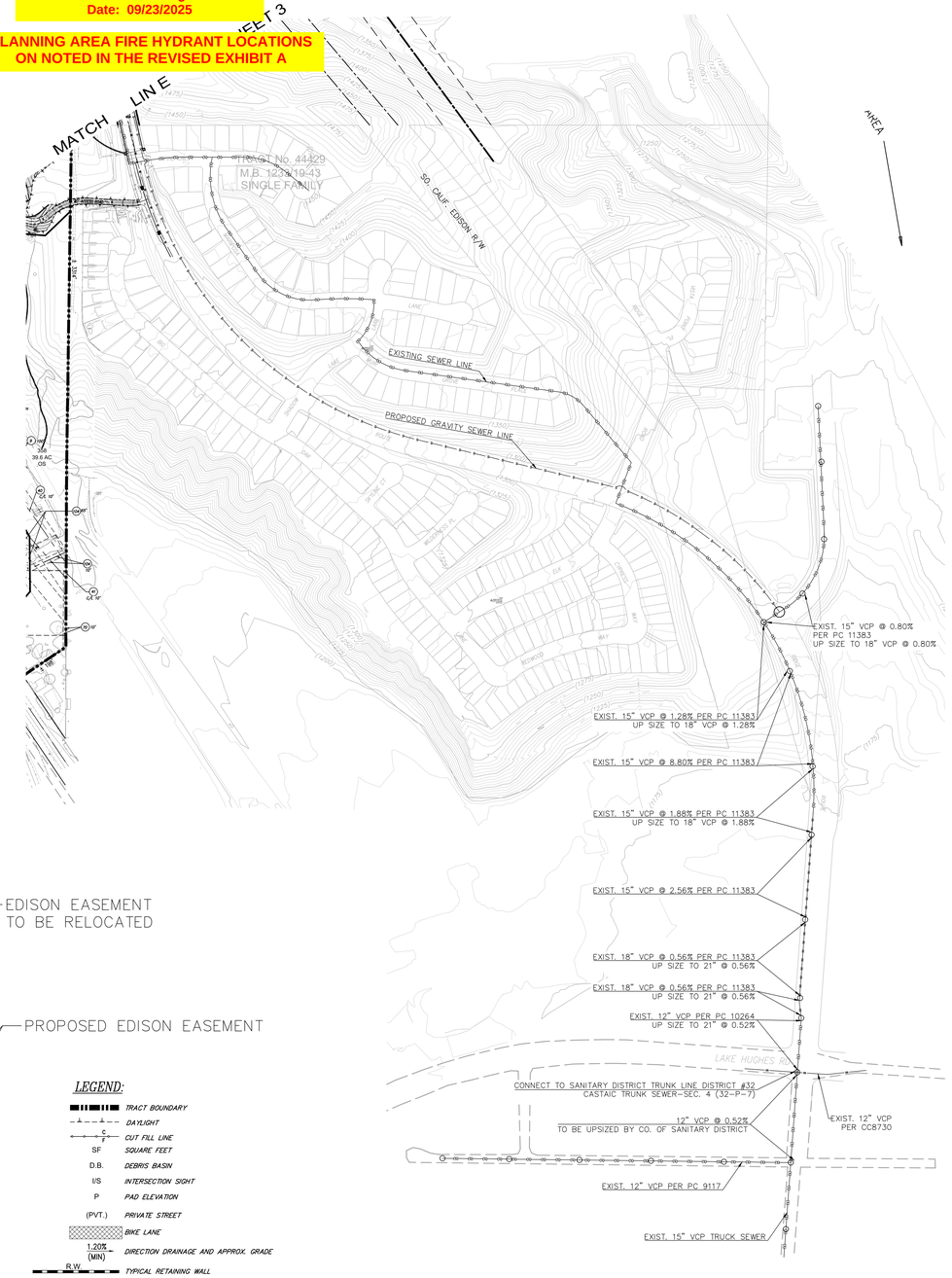

INSET "A"

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1"=100'			08/12/2025	5090-033-35	8 16

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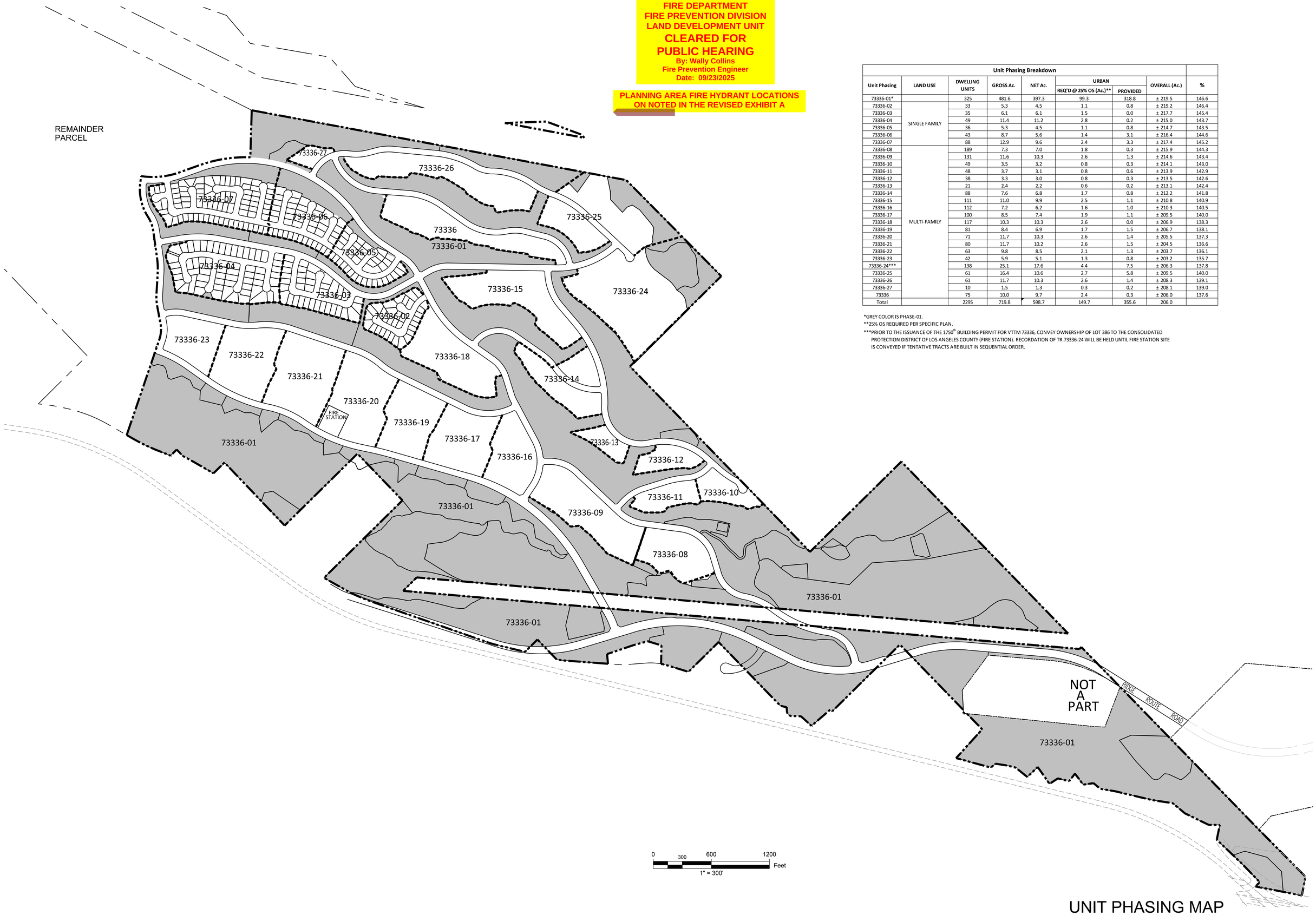

Unit Phasing Breakdown

Unit Phasing	LAND USE	DWELLING UNITS	GROSS Ac.	NET Ac.	URBAN		OVERALL (Ac.)	%
					REQ'D @ 25% OS (Ac.)**	PROVIDED		
73336-01*		325	481.6	397.3	99.3	318.8	± 219.5	146.6
73336-02		33	5.3	4.5	1.1	0.8	± 219.2	146.4
73336-03		35	6.1	6.1	1.5	0.0	± 217.7	145.4
73336-04	SINGLE FAMILY	49	11.4	11.2	2.8	0.2	± 215.0	143.7
73336-05		36	5.3	4.5	1.1	0.8	± 214.7	143.5
73336-06		43	8.7	5.6	1.4	3.1	± 216.4	144.6
73336-07		88	12.9	9.6	2.4	3.3	± 217.4	145.2
73336-08		189	7.3	7.0	1.8	0.3	± 215.9	144.3
73336-09		131	11.6	10.3	2.6	1.3	± 214.6	143.4
73336-10		49	3.5	3.2	0.8	0.3	± 214.1	143.0
73336-11		48	3.7	3.1	0.8	0.6	± 213.9	142.9
73336-12		38	3.3	3.0	0.8	0.3	± 213.5	142.6
73336-13		21	2.4	2.2	0.6	0.2	± 213.1	142.4
73336-14		88	7.6	6.8	1.7	0.8	± 212.2	141.8
73336-15		111	11.0	9.9	2.5	1.1	± 210.8	140.9
73336-16		112	7.2	6.2	1.6	1.0	± 210.3	140.5
73336-17		100	8.5	7.4	1.9	1.1	± 209.5	140.0
73336-18	MULTI-FAMILY	117	10.3	10.3	2.6	0.0	± 206.9	138.3
73336-19		81	8.4	6.9	1.7	1.5	± 206.7	138.1
73336-20		71	11.7	10.3	2.6	1.4	± 205.5	137.3
73336-21		80	11.7	10.2	2.6	1.5	± 204.5	136.6
73336-22		63	9.8	8.5	2.1	1.3	± 203.7	136.1
73336-23		42	5.9	5.1	1.3	0.8	± 203.2	135.7
73336-24***		138	25.1	17.6	4.4	7.5	± 206.3	137.8
73336-25		61	16.4	10.6	2.7	5.8	± 209.5	140.0
73336-26		61	11.7	10.3	2.6	1.4	± 208.3	139.1
73336-27		10	1.5	1.3	0.3	0.2	± 208.1	139.0
73336		75	10.0	9.7	2.4	0.3	± 206.0	137.6
Total		2295	719.8	598.7	149.7	355.6	206.0	

*GREY COLOR IS PHASE-01.
**25% OS REQUIRED PER SPECIFIC PLAN.
***PRIOR TO THE ISSUANCE OF THE 1750th BUILDING PERMIT FOR VTTM 73336, CONVEY OWNERSHIP OF LOT 386 TO THE CONSOLIDATED PROTECTION DISTRICT OF LOS ANGELES COUNTY (FIRE STATION). RECORDATION OF TR.73336-24 WILL BE HELD UNTIL FIRE STATION SITE IS CONVEYED IF TENTATIVE TRACTS ARE BUILT IN SEQUENTIAL ORDER.

UNIT PHASING MAP

PREPARED FOR:
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SCALE: 1"=300' | CHK'D BY: | APPROVED BY: | DATE: 08/12/2025 | W.O. NO. 5090-033-35 | SHEET 9 OF 16

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MAJOR LAND DIVISION
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FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
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By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

PARCEL REMAINDER

SPECIFIC PLAN BOUNDARY

SOUTHERN CALIFORNIA EDISON RIGHT-OF-WAY

RIDGE ROUTE ROAD

NOT A PART
EXISTING NORTHLAKE HILLS ELEMENTARY SCHOOL

NORTHLAKE BLVD

A ST · B ST · D ST · F ST · G ST · H ST · I ST · J ST · O ST · P ST

1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11 · 12

0 150 300 600 Feet
1"=300'

LARGE LOT TABLE			
LOT NO.	**GROSS AC. +/-**	**NET AC. +/-**	**SPCIFIC PLAN LAND USE TYPE**
1	58.4	54.5	OPEN SPACE/GENERAL COMMERCIAL
2	63.4	53.8	OPEN SPACE/GENERAL COMMERCIAL
3	54.2	48.8	OPEN SPACE
4	93.0	87.5	MULTI-FAMILY/OPEN SPACE
5	43.8	40.1	OPEN SPACE
6	69.6	61.4	MULTI-FAMILY/OPEN SPACE
7	69.6	63.4	MULTI-FAMILY/OPEN SPACE
8	45.3	40.0	MULTI-FAMILY/OPEN SPACE
9	42.4	41.0	MULTI-FAMILY/OPEN SPACE
10	71.5	63.2	MULTI-FAMLY/SINGLE FAMILY
11	61.9	55.8	MUTLI-FAMLY /OPEN SPACE
12	46.0	40.7	MULTI-FAMILY/SINGLE FAMILY/OPENSPACE
TOTAL	719.1	650.2	

ACREAGE APPROXIMATED TO THE NEAREST TENTH.

GROSS ACREAGE (INLCUDING STREET RIGHT-OF WAYS AND EXISTING RIDGE ROUTE ROAD RIGHT-OF WAY)

NET ACREAGE (EXCLUDING STREET RIGHT-OF WAYS AND EXISTING RIDGE ROUTE ROAD RIGHT-OF WAY)

(A) INDICATES A NON-EXCLUSIVE EASEMENT FOR INGRESS AND EGRESS PURPOSES

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ADOPTED CASTAIC LAKE TRAIL

P-27 P-26 P-23 P-22 P-28 P-25 P-21 P-20 P-18 & 19 P-8 P-24 P-17 P-16 P-15 P-14 P-12 P-7 P-13 P-11 P-10 P-6 P-9 P-5 P-3 P-4 P-2 P-1

TRAIL CONNECTIONS / TRAIL CONNECTION

FUTURE EXTENSION TO BE BUILT WITH PHASE II

REMAINDER PARCEL UNDER SAME OWNERSHIP FUTURE DEVELOPMENT

EXISTING DIRT ROAD

FIRE HYDRANT

JOIN ADOPTED CASTAIC LAKE TRAIL

SO. CALIF. EDISON R/W

PROPOSED 150' EDISON EASEMENT

EX. EDISON R/W TO BE RELOCATED

TRAIL CONNECTION

CONNECT TO EX. TRAIL

NORTHLAKE HILLS ELEMENTARY SCHOOL

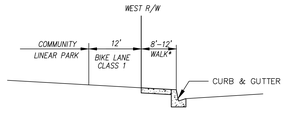
8' DG TRAIL

SOUGHT WEST FREEWAY TO SOUTHBOUND

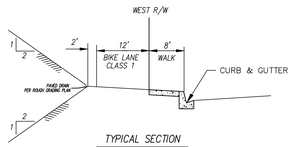
0 150' 300' 600' Feet
1" = 300'

LEGEND:

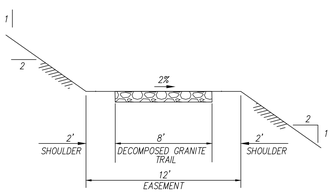
- TRACT BOUNDARY
- CLASS 1 BIKE LANE (20' TRAIL)
- NORTHLAKE MULTI-USE TRAIL (14' TRAIL)
- 6' EXPANDED SIDEWALK (6' TRAIL)
- 5' PCC TRAIL (CONCRETE TRAIL)
- ADOPTED CASTAIC LAKE TRAIL (VARIES 7'-10' WIDTH)
- NATURAL TRAILS (8' DECOMPOSED GRANITE TRAIL)
- DISTRUBED SIGNIFICANT RIDGELINE
- UNDISTRUBED SIGNIFICANT RIDGELINE



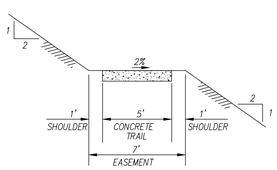
TYPICAL SECTION
N.T.S.
NORTHLAKE BLVD.
(FROM 100' NE'LY "R" ST. TO "A" ST.)
(FROM "A" ST TO "E" ST)



TYPICAL SECTION
N.T.S.
THE RIDGE ROUTE ROAD
(FROM 1200' N'LY TR. 44429 TO NORTHLAKE BLVD.)
NORTHLAKE BLVD.
(FROM RIDGE ROUTE ROAD TO 100' NE'LY "R" ST)



TYPICAL TRAIL SECTION
N.T.S.



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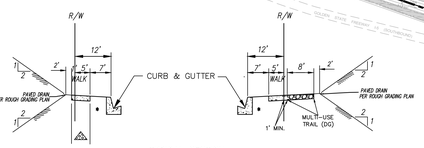
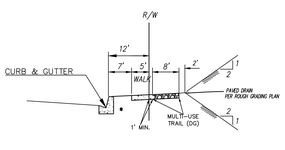
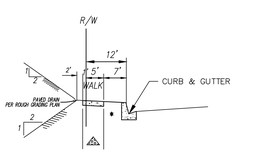


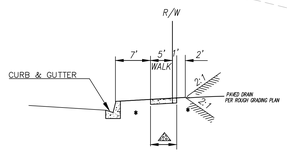
TYPICAL SECTION
N.T.S.
PORTION OF "O" ST.
"I" ST.
(FROM "A" ST. TO "J" ST.)



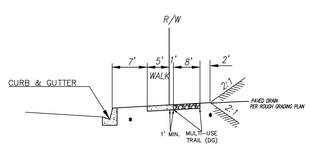
TYPICAL SECTION
N.T.S.
"I" ST.



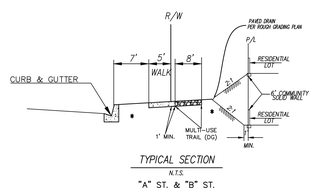
TYPICAL SECTION
N.T.S.
"D" ST., "E" ST., "G" ST., "H" ST., "J" ST.& "P" ST.



TYPICAL SECTION
N.T.S.
"F" ST. (FROM "A" ST. TO "O"ST.)



TYPICAL SECTION
N.T.S.
"O" ST. & "F" ST. (FROM "O" ST. TO "I" ST.)



TYPICAL SECTION
N.T.S.
"A" ST. & "B" ST.

NOTES:
⚠ 6' EXPANDED SIDEWALK

TRAIL MAP

7	08-12-2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP	TH	–
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	TH	–
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016	YL	–
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016	YL	–
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	–
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	–
	DATE	REVISION	BY	APP

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
AS SHOWN			08/12/2025	5090-033-35	11	16

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER MARK R. SIKAND No.35453 Exp. 09-30-25 STATE OF CALIFORNIA

LEGAL DESCRIPTION:
A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

SIKAND Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
6 *OO	PACIFIC LIGHT AND POWER CORPORATION	TRANSMISSION LINE	SERIAL REGISTER NO. L.A. 020100	TO REMAIN
9	THE EDISON ELECTRIC COMPANY	POLE LINES	JANUARY 29, 1906 BOOK 2580 PAGE 13 Dds.	TO REMAIN
10 *T	EDISON ELECTRIC COMPANY	ROAD	FEBRUARY 2, 1906 BOOK 2554 PAGE 237 Dds.	TO REMAIN
11	C. W. WALLER	PIPE AND POLE LINES	2/17/12 BOOK 4855-311 Dds. 10/10/23 BOOK 2985-371 O.R.	TO REMAIN
12	GENERAL PIPE LINE COMPANY OF CALIFORNIA	PIPE AND POLE LINES	6/01/12 BOOK 5010-253 Dds. 6/20/12 BOOK 5087-38 Dds.	TO REMAIN
13	PACIFIC LIGHT AND POWER CORPORATION	STEEL TOWERS	DECEMBER 19, 1912 BOOK 5320 PAGE 84 Dds.	TO REMAIN
14	PACIFIC LIGHT & POWER CORPORATION	POLE LINES	NOVEMBER 4, 1913 BOOK 5640 PAGE 81 Dds.	TO BE ABANDONED
15 *D	STATE OF CALIFORNIA	STATE HIGHWAY	10/30/14 BK 5893 PG 250 Dds.	TO BE ABANDONED
16 *PP	STATE OF CALIFORNIA	SLOPE	OCTOBER 30, 1914 BOOK 5893 PAGE 250 Dds.	TO REMAIN
18 *Y	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND ANCHORS	DECEMBER 9, 1914 BOOK 5951 PAGE 73 Dds.	TO REMAIN
19	PACIFIC LIGHT & POWER CORPORATION	POLES	JUNE 16, 1915 BOOK 6035 PAGE 337 Dds.	TO BE ABANDONED
20 *D	STATE OF CALIFORNIA	STATE HIGHWAY	05/16/16 INST.#107 BOOK 6255 PAGE 297 Dds.	TO BE ABANDONED
21 *L	STATE OF CALIFORNIA	DRAINAGE AND SLOPES	BOOK 6255 PAGE 297 Dds. BOOK 7494 PAGE 334 O.R.	TO REMAIN
23	SOUTHERN CALIFORNIA EDISON COMPANY	TOWERS, POLES AND CONDUITS	10/05/18 INST. NO. 842 BOOK 6736 PAGE 88 Dds.	TO REMAIN
24 *D	STATE OF CALIFORNIA	STATE HIGHWAY	MAY 3, 1929 BOOK 8140 PAGE 116 O.R.	TO BE ABANDONED
26 *I	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND CONDUITS	OCTOBER 2, 1929 BOOK 9300 PAGE 280 O.R.	TO REMAIN
27 *OO	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND CONDUITS	OCTOBER 2, 1929 BOOK 9314 PAGE 322 O.R.	TO REMAIN
28	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND CONDUITS	OCTOBER 2, 1929 BOOK 9329 PGS 364, 365 O.R.	TO BE ABANDONED
29 *W	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLES, PIPES, AND CONDUITS	OCTOBER 2, 1929 BOOK 9360 PAGE 305 O.R.	TO REMAIN
30 *A	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLES	OCTOBER 2, 1929 BOOK 9428 PAGE 117 O.R.	TO REMAIN
31	SOUTHERN CALIFORNIA EDISON COMPANY	PUBLIC UTILITIES	FEBRUARY 1, 1930 BOOK 9697 PAGE 210 O.R.	TO BE ABANDONED
32 *MM	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	WIRES, POLES	02/19/30 INST.#1122 BOOK 9767 PAGE 105 O.R.	TO REMAIN
33 *OO	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES	FEBRUARY 19, 1930 BOOK 9771 PAGE 117 O.R.	TO REMAIN
34	STATE OF CALIFORNIA	STATE HIGHWAY	OCTOBER 8, 1930 BOOK 10273 PAGE 360 O.R.	TO REMAIN
35 *E	STATE OF CALIFORNIA	SLOPES	OCTOBER 8, 1930 BOOK 10273 PAGE 360 O.R.	TO REMAIN
37	UNITED STATES OF AMERICA	POLES AND WIRES	01/05/31 INST.#939 BOOK 10612 PAGE 31 O.R.	TO REMAIN
38	SOUTHERN FUEL COMPANY	PIPE LINES	7/08/31 BK 10883-388 O.R. 10/11/39 BK 16940-144 O.R.	TO REMAIN
39	GENERAL PIPE LINE COMPANY OF CALIFORNIA	PIPE LINES	JUNE 17, 1935 BOOK 13447 PAGE 257 O.R.	TO REMAIN
40	SOUTHERN CALIFORNIA GAS COMPANY	PIPE LINES	MAY 19, 1937 BOOK 14942 PAGE 296 O.R.	TO REMAIN
41	SOUTHERN CALIFORNIA GAS COMPANY	PIPE LINES	NOVEMBER 26, 1937 BOOK 15491 PAGE 16 O.R.	TO REMAIN
42 *M	SOUTHERN CALIFORNIA EDISON COMPANY, LTD.	POLE LINES	AUGUST 26, 1942 BOOK 19516 PAGE 195 O.R.	TO REMAIN
43	SOUTHERN CALIFORNIA EDISON COMPANY, LTD.	POLES	NOVEMBER 1, 1945 BOOK 22495 PAGE 27 O.R.	TO REMAIN
45 *C	RICHFIELD OIL CORPORATION	PIPE LINES	MAY 16, 1950, #3204 BOOK 33139 PAGE 376 O.R.	TO REMAIN
46 *O	RICHFIELD OIL CORPORATION	PIPE LINES	MAY 18, 1950, #3189 BOOK 33167 PAGE 362 O.R.	TO BE RELOCATED
47 *O	RICHFIELD OIL CORPORATION	PIPE LINES	JUNE 2, 1950, #1963 BOOK 33288 PAGE 385 O.R.	TO REMAIN
48 *BB	RICHFIELD OIL CORPORATION	PIPE LINES	JUNE 12, 1950, #3031 BOOK 33364 PAGE 308 O.R.	TO BE RELOCATED
49	SOUTHERN CALIFORNIA EDISON COMPANY	POLES, CABLES GROUND WIRES	07/25/56 INST.#4187 BOOK 51833 PAGE 316 O.R.	TO REMAIN
50	SOUTHERN CALIFORNIA EDISON COMPANY	ELECTRICAL TRANSMISSION	OCTOBER 11, 1957 BOOK 55831 PAGE 430 O.R.	TO REMAIN
51	PACIFIC LIGHTING GAS SUPPLY COMPANY	PIPE LINES	11/25/57 INST.#841 BOOK 56127 PAGE 303 O.R.	TO REMAIN
52	PACIFIC LIGHTING GAS SUPPLY COMPANY	PIPE LINES	11/25/57 INST.#842 BOOK 56127 PAGE 309 O.R.	TO REMAIN
53	SOUTHERN CALIFORNIA EDISON COMPANY	PUBLIC UTILITIES	JANUARY 23, 1958, #280 BOOK 56422 PAGE 93 O.R.	TO REMAIN
54	PACIFIC LIGHTING GAS SUPPLY CO.	PIPE LINES	2/06/58 INST.2564 BK D-5 PG 475 O.R. 2/06/58 INST.2565 BK D-5 PG 479 O.R.	TO REMAIN
55	SOUTHERN CALIFORNIA EDISON COMPANY	PIPE LINES POLE LINES	FEBRUARY 18, 1958 BOOK D-15 PAGE 339 O.R.	TO BE RELOCATED
56	PACIFIC LIGHTING GAS SUPPLY CO.	PIPE LINES	10/08/58 INST.#1114 BOOK D-238 PAGE 799 O.R.	TO REMAIN
57	PACIFIC LIGHTING GAS SUPPLY CO.	PIPE LINES	02/20/59 INST.#327 BOOK D-372 PAGE 114 O.R.	TO BE RELOCATED
58	PACIFIC LIGHTING GAS SUPPLY CO.	ROAD	02/20/59 INST.#328 BOOK D-372 PAGE 120 O.R.	TO REMAIN
59	SOUTHERN CALIFORNIA EDISON COMPANY	ELECTRICAL TRANSMISSION	MARCH 31, 1959, #3995 BOOK D-416 PAGE 584 O.R.	TO BE RELOCATED
60	SOUTHERN CALIFORNIA EDISON COMPANY	ELECTRICAL TRANSMISSION	06/12/59 INST.#3440 BOOK D-500 PAGE 761 O.R.	TO BE RELOCATED
61	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND CONDUITS	12/03/65 INST.#4431 BOOK D-3135 PAGE 598 O.R.	TO REMAIN
62	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	CABLES, AND APPURTENANCES	12/03/65 INST.#4432 BOOK D-3135 PAGE 599 O.R.	TO REMAIN
63	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	PUBLIC UTILITIES	12/27/65 INST.#1854 BOOK D-3157 PAGE 454 O.R.	TO REMAIN
64	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	CONDUITS	12/27/65 INST.#1857 BOOK D-3157 PAGE 457 O.R.	TO REMAIN
65	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	UNDERGROUND CONDUITS	BOOK D.3174 PAGE 371 O.R. BOOK D.3195 PAGE 736 O.R.	TO REMAIN
66 *D	STATE OF CALIFORNIA	PIPE LINES	JUNE 23, 1966 BK D3344-729 INSTRUMENT NO. 561 O.R.	TO REMAIN
67	NEWHALL COUNTY WATER DISTRICT	WATER LINE	08/24/66 INST.#1924 BOOK D-3407 PAGE 943 O.R.	TO REMAIN
68 *E	STATE OF CALIFORNIA	PIPE LINES	8/31/66 BK D-3414 PG.381 INSTRUMENT NO. 566 O.R.	TO REMAIN
69 *N *J	STATE OF CALIFORNIA	PIPE, TELEPHONE OR TELEGRAPH	12/20/66 BK D-3511-140 INST.#360 O.R. 3/05/74 BK D6190 PG. 701 O.R	TO REMAIN
70	NEWHALL COUNTY WATER DISTRICT	UTILITY AND PIPE LINES	3/08/67 BK D-3579-144 INSTRUMENT NO. 2567 O.R.	TO REMAIN

* SEE NOTES HEREON

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
71	STATE OF CALIFORNIA	SLOPE	06/21/67 INST.#422 BOOK D-3678 PAGE 472 O.R.	TO REMAIN
73	STATE OF CALIFORNIA	SLOPE	10/06/67 INST.#994 BOOK D-3790 PAGE 908 O.R.	TO REMAIN
76	NEWHALL COUNTY WATER DISTRICT	ROAD, PIPE LINE, DRAINAGE	11/06/67 BK 3822-117 INSTRUMENT NO. 3575 O.R.	TO REMAIN
77	NEWHALL COUNTY WATER DISTRICT	ROAD, WATER & PIPE LINES	12/20/67 INST.#3096 BOOK D-3864 PAGE 411 O.R.	TO REMAIN
78	PACIFIC LIGHTING SERVICE AND SUPPLY COMPANY	PIPE LINES	12/27/67 INST.#483 BOOK D-3867 PAGE 971 O.R.	TO REMAIN
80	STATE OF CALIFORNIA	SLOPE	12/27/67 INST.#484 BOOK D-3867 PAGE 977 O.R.	TO REMAIN
81 *H	STATE OF CALIFORNIA	PIPE LINE	03/28/68 INST.#404 BOOK D-3952 PAGE 972 O.R.	TO BE RELOCATED
82 *Q	STATE OF CALIFORNIA	PIPE LINE	9/11/68, INST. #610 BOOK D-4127 PAGE 640 O.R.	TO REMAIN
83	MOBIL OIL CORPORATION	PIPE AND POLE LINE	OCTOBER 18, 1968 INSTRUMENT NO. 907 O.R.	TO REMAIN
84	SOUTHERN CALIFORNIA GAS COMPANY	PIPE LINES	10/18/68 BK D-4167 PG. 816 INSTRUMENT NO. 908 O.R.	TO REMAIN
85	SOUTHERN CALIFORNIA EDISON COMPANY	POLE LINES AND TOWERS	10/18/68 BK D-4167 PG. 847 INSTRUMENT NO. 909 O.R.	TO REMAIN
86 *JJ *J	STATE OF CALIFORNIA	PIPELINE	01/23/69 INST.#320 BOOK D4258 PAGE 977 O.R.	TO REMAIN
87 *AA	STATE OF CALIFORNIA	AQUEDUCT AND PIPELINE	01/27/69 INST.#358 BOOK D-4261 PAGE 520 O.R.	TO REMAIN
88	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	COMMUNICATION FACILITIES	3/21/69 BK D-4315 PG. 347 INSTRUMENT NO. 3135 O.R.	TO REMAIN
89	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	COMMUNICATION FACILITIES	3/21/69 BK D-4315 PG. 352 INSTRUMENT NO. 3136 O.R.	TO REMAIN
90	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	CABLES, WIRES AND CONDUITS	03/25/69 INST.#2523 BOOK D-4317 PAGE 902 O.R.	TO REMAIN
91 *GG	STATE OF CALIFORNIA	PIPELINES, CONDUITS	3/27/69 BK D-4319 PG. 805 INSTRUMENT NO. 302 O.R.	TO BE RELOCATED
92 *HH *J	STATE OF CALIFORNIA	PIPE LINE	3/27/69 BK D-4319 PG. 812 INSTRUMENT NO. 303 O.R.	TO REMAIN
93	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	CABLES, WIRES AND CONDUITS	06/03/69 INST.#3060 BOOK D4389 PAGE 996 O.R.	TO REMAIN
94	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	CABLES, WIRES AND CONDUITS	06/09/69 INST.#3041 BOOK D-4395 PAGE 823 O.R.	TO REMAIN
95	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	PUBLIC UTILITIES	07/14/69 INST.#2929 BOOK D-4434 PAGE 33 O.R.	TO REMAIN
96	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES AND CONDUITS	7/14/69 BK D-4434 PG. 39 INSTRUMENT NO. 2930 O.R.	TO BE RELOCATED
97	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	COMMUNICATION FACILITIES	5/14/70 BK M-3465 PG. 765 INSTRUMENT NO. 1734 O.R.	TO REMAIN
98	CITY OF LOS ANGELES	ROADWAY	01/11/72 INST.#2792 BOOK D-5316 PAGE 295 O.R.	TO REMAIN
99	CITY OF LOS ANGELES	ROADWAY	01/11/72 INST.#2793 BOOK D-5316 PAGE 301 O.R.	TO BE RELOCATED
100	CITY OF LOS ANGELES	ROADWAY	01/11/72 INST.#2794 BOOK D-5316 PAGE 314 O.R.	TO REMAIN
101	CITY OF LOS ANGELES	ROADWAY	01/11/72 INST.#2795 BOOK D-5316 PAGE 308 O.R.	TO REMAIN
102	CITY OF LOS ANGELES	ROADWAY	2/09/72 BK D-5348 PG. 40 INSTRUMENT NO. 2359 O.R.	TO REMAIN
103	THE CITY OF LOS ANGELES	ROAD FOR INGRESS, EGRESS	6/01/72 BK D5480 PG. 183 INSTRUMENT NO. 4488 O.R.	TO REMAIN
104	STATE OF CALIFORNIA	POLE LINES	12/24/73 BK D6119 PG. 946 INSTRUMENT NO. 273 O.R.	TO REMAIN
106	STATE OF CALIFORNIA	DRAINAGE	2/15/74 INST.#3091 BK. D-6171 PG. 742 O.R.	TO REMAIN
108	STATE OF CALIFORNIA	SLOPE	05/29/74 INST.#384 BOOK D-6287 PAGE 495 O.R.	TO REMAIN
109	STATE OF CALIFORNIA	HIGHWAY SLOPE	07/05/74 INST.#434 BOOK D6333 PAGE 930 O.R.	TO REMAIN
110	PACIFIC LIGHTING SERVICE COMPANY	GAS PIPE LINES	07/05/74 INST.#435 BOOK D6333 PAGE 933 O.R.	TO REMAIN
112	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	COMMUNICATION FACILITIES	3/11/83 INST. #83-272545 O.R. 4/23/83 INST. #83-442645 O.R.	TO REMAIN
113 *L	GEORGIA GEORGE	INGRESS AND EGRESS	APRIL 11, 1983 INST. NO.83-394248 O.R.	TO REMAIN
117	PACIFIC LIGHTING GAS SUPPLY CO.	PIPE LINES	02/07/58 INST.#2964 BOOK D-6 PAGE 787 O.R.	TO REMAIN
118	SOUTHERN CALIFORNIA EDISON COMPANY	UTILITY	07/23/59 INST.#4563 BOOK D547 PAGE 50 O.R.	TO BE RELOCATED
119	SOUTHERN CALIFORNIA EDISON COMPANY	UTILITIES	10/31/67 INST.#594 O.R.	TO REMAIN
120 *RR	SUTTER INVESTMENT CORPORATION	SLOPE PURPOSES INGRESS, EGRESS	01/08/74 INST.#1770 O.R.	TO REMAIN
121	PACIFIC LIGHTING SERVICE COMPANY	PIPE LINES	07/30/75 INST.#508 O.R.	TO REMAIN
122	STATE OF CALIFORNIA	HIGHWAY SLOPES	07/30/75 INST.#509 O.R.	TO REMAIN
124 *SS	STATE OF CALIFORNIA	SLOPE	08/21/75 INST.#2444 O.R.	TO REMAIN
125	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES	BOOK 9344 PAGE 4, O.R. 6/03/74 INST. #3880 O.R.	TO BE RELOCATED
127	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	BURIED COMMUNICATION LINE EASEMENT	06/08/72 INST.#3758 O.R. 06/03/74 INST.#3880 O.R.	TO REMAIN
128 *EE	RICHFIELD OIL CORPORATION	PIPE LINE	06/07/50 INST. #2764 BK. 33323 PG. 54 DEEDS.	TO REMAIN
129	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	POLE LINES, ANCHORS, CONDUITS, PIPES	10/02/29 BK. 9314 PG. 321 O.R.	TO BE RELOCATED
130	RICHFIELD OIL CORPORATION	PIPE LINES	06/29/50 BK. 33543 PG. 228 O.R.	TO BE RELOCATED
131 *J	STATE OF CALIFORNIA	PIPE LINE	11/09/66 BK. D-3476 PG. 326 O.R.	TO BE RELOCATED
132	PACIFIC TELEPHONE AND TELEGRAPH COMPANY	COMMUNICATION FACILITIES	01/17/69 INST.#3276 O.R.	TO REMAIN
133	CASTAIC UNIFIED SCHOOL DISTRICT	ROAD, INGRESS, EGRESS STORM DRAINS, GRADING SLOPES, UTILITIES	03/18/03 INST.#03-753979 OFFICIAL RECORDS.	TO REMAIN
194	THE COUNTY OF LOS ANGELES	PERMANENT DEBRIS BASIN	OCTOBER 05, 2017 INSTRUMENT NO. 20171143994	TO REMAIN
195	THE COUNTY OF LOS ANGELES	PERMANENT ROAD ACCESS AND WATER QUALITY BASIN	OCTOBER 05, 2017 INSTRUMENT NO. 20171143995	TO REMAIN
196	THE COUNTY OF LOS ANGELES	WATER QUALITY BASIN	OCTOBER 05, 2017 INSTRUMENT NO. 20171143996	TO REMAIN
197	THE COUNTY OF LOS ANGELES	OFFSITE GRADING	OCTOBER 05, 2017 INSTRUMENT NO. 20171143997	TO REMAIN
198	THE COUNTY OF LOS ANGELES	OFFSITE GRADING	OCTOBER 05, 2017 INSTRUMENT NO. 20171143998	TO REMAIN
199	THE COUNTY OF LOS ANGELES	OFFSITE GRADING	OCTOBER 05, 2017 INSTRUMENT NO. 20171143999	TO REMAIN
200	THE COUNTY OF LOS ANGELES	OFFSITE GRADING	OCTOBER 05, 2017 INSTRUMENT NO. 20171144001	TO REMAIN

* SEE NOTES HEREON

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
201	THE COUNTY OF LOS ANGELES	PERMANENT ROADWAY	OCTOBER 05, 2017 INSTRUMENT NO. 20171144002	TO REMAIN
202	THE COUNTY OF LOS ANGELES	PERMANENT ROADWAY	OCTOBER 05, 2017 INSTRUMENT NO. 20171144003	TO REMAIN
203	THE COUNTY OF LOS ANGELES	OFFSITE GRADING	OCTOBER 05, 2017 INSTRUMENT NO. 20171144004	TO REMAIN
204	THE COUNTY OF LOS ANGELES	PERMANENT ROADWAY	OCTOBER 05, 2017 INSTRUMENT NO. 20171144005	TO REMAIN
205	THE COUNTY OF LOS ANGELES	PERMANENT DEBRIS BASIN	OCTOBER 05, 2017 INSTRUMENT NO. 20171144006	TO REMAIN

* SEE NOTES HEREON

THE FOLLOWING ITEMS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023, AFFECT THE SUBJECT PROPERTY: (NOT PLOTTED)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
17	STATE OF CALIFORNIA	WAIVER OF CLAIMS	OCTOBER 30, 1914 BOOK 5893 PAGE 250 Dds.	TO REMAIN
22	STATE OF CALIFORNIA	WAIVER OF CLAIMS	5/16/16 BK 6255-297 Dds. 6/04/29 BK 7494-334 O.R.	TO REMAIN
25	STATE OF CALIFORNIA	WAIVER OF CLAIMS	MAY 3, 1929 BOOK 8140 PAGE 116 O.R.	TO REMAIN
36	STATE OF CALIFORNIA	WAIVER OF CLAIMS	OCTOBER 8, 1930 BOOK 10273 PAGE 360 O.R.	TO REMAIN
44	STATE OF CALIFORNIA	WAIVER OF CLAIMS	OCTOBER 31, 1947 BOOK 25630 PAGE 260 O.R.	TO REMAIN
72 *P	STATE OF CALIFORNIA	RELINQUISHED FREEWAY ACCESS	6/21/67 INST.422 BK D3678 PG 473 O.R. 5/29/74 INST.384 BK D6287 PG 495 O.R.	TO REMAIN
74	STATE OF CALIFORNIA	RELINQUISHED FREEWAY ACCESS	10/06/67 INST.#994 BOOK D-3790 PAGE 908 O.R.	TO REMAIN
75	STATE OF CALIFORNIA	WAIVER OF CLAIMS	10/06/67 INST.#994 BOOK D-3790 PAGE 908 O.R.	TO REMAIN
79	STATE OF CALIFORNIA	RELINQUISHED FREEWAY ACCESS	12/27/67 INST.#484 BOOK D-3867 PAGE 977 O.R.	TO REMAIN
105 *S	STATE OF CALIFORNIA	RELINQUISHED FREEWAY ACCESS	12/24/73 BK D6119 PG. 946 INSTRUMENT NO. 273 O.R.	TO REMAIN
107 *K	STATE OF CALIFORNIA	NO RIGHT OF ACCESS	2/15/74 INST. #3091 BK. D-6171 PG. 742 O.R.	TO REMAIN
111	COUNTY OF LOS ANGELES DEPT. OF REGIONAL PLANNING	CERTIFICATE OF COMPLIANCE	JULY 28, 1982 INST. NO.82-757295 O.R.	TO REMAIN
114	COUNTY OF LOS ANGELES DEPT. OF REGIONAL PLANNING	BRIDGE AND THOROUGHFARE	APRIL 1, 1992 INST. NO.92-560916 O.R.	TO REMAIN
115	COOK RANCH ASSOCIATES & CASTAIC UNION SCHOOL DISTRICT	MEMORANDUM OF AGREEMENT	9/14/92 INST. #92-1701972 O.R.	TO REMAIN
116	COUNTY OF LOS ANGELES & COOK RANCH ASSOCIATES	DEVELOPMENT AGREEMENT	5/28/93 INST. #93-1023682 O.R.	TO REMAIN
123	STATE OF CALIFORNIA	SEVERED HIGHWAY ACCESS	08/21/75 INST.#2444 O.R.	TO REMAIN
126 *TT	SOUTHERN CALIFORNIA TELEPHONE COMPANY	BRUSH REMOVAL	BOOK 18631 PAGE 2, O.R. 06/03/74 INST#3880 O.R.	TO REMAIN
134	NORTHLAKE LLC, CASTAIC CLAY MANUFACTURING CO. & MIKE MALOR	PROHIBIT RESIDENTIAL CONSTRUCTION WITHIN LOT 293	6/24/03 INST. #03-1160727 O.R.	TO REMAIN

* SEE NOTES HEREON

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 (SAID EASEMENT AFFECTS PARCEL 54)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
153	NADINE B. JOST ADELE TRUITT	INGRESS, EGRESS & INCIDENTAL	8/27/65 INST. NO. 5414 O.R.	TO REMAIN

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 (SAID EASEMENTS PER REPORT AFFECT PARCELS 7, 18-A, 60, 61 & 66.)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
156	MILTON B. EPSTEIN LILLIAN EPSTEIN	INGRESS, EGRESS & INCIDENTAL	3/25/66 INST. NO. 2321 O.R.	TO REMAIN
158	WILLIAM P. SCHIMMEL & NANCI SCHIMMEL	INGRESS, EGRESS & INCIDENTAL	3/9/67 INST. NO. 1253 O.R.	TO REMAIN
159	PACIFIC TELEPHONE & TELEGRAPH COMPANY	PUBLIC UTILITIES & INCIDENTAL	6/26/73 INST. NO. 2736 O.R.	TO REMAIN
163	MARK C. CRAVENS	INGRESS, EGRESS & INCIDENTAL	3/27/64 INST. NO. 1898 O.R.	TO REMAIN
164	PACIFIC TELEPHONE & TELEGRAPH COMPANY	PUBLIC UTILITIES & INCIDENTAL	4/23/69 INST. NO. 2941 O.R.	TO REMAIN

THE FOLLOWING ITEM BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 AFFECTS PARCELS 60, 61 AND 66 (NOT PLOTTABLE)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
161	PACIFIC LIGHT AND POWER	TELEPHONE LINES	9/13/34 BK. 12982 PG. 174 O.R.	TO REMAIN

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 (SAID EASEMENTS PER REPORT AFFECT PARCELS 16, 35, 49 AND 68.)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
165	SOUTHERN CALIFORNIA EDISON	POLES, CONDUITS & INCIDENTAL	10/05/18 INST. NO. 842 O.R.	TO REMAIN
174	JOHN & TERRY SCHNEIDER	INGRESS, EGRESS & INCIDENTAL	4/11/83 INST. NO. 83-394249 O.R.	TO REMAIN

THE FOLLOWING EASEMENT ITEM BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 AFFECTS PARCEL 68 (NOT PLOTTABLE) (INDETERMINATE IN NATURE)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
171 *OOO	PACIFIC LIGHTING SERVICE COMPANY	PIPE LINES	1/21/75 INST. NO. 2685 O.R.	TO REMAIN

* SEE NOTES HEREON

THE FOLLOWING ITEMS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 AFFECTS PARCEL 68 (NOT PLOTTED)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
171	PACIFIC LIGHTING SERVICE COMPANY	NO ABUTTERS RIGHTS	1/21/75 INST. NO. 2685 O.R.	TO REMAIN
172	GEORGIA GEORGE	CERTIFICATE OF COMPLIANCE	7/28/82 INST. NO. 82-757296 O.R.	TO REMAIN

EASEMENTS BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 (SAID EASEMENTS PER REPORT AFFECT PARCEL 69.)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
182 *MMM	MIDWAY GAS COMPANY	PIPE LINE & INCIDENTAL	BK. 7444 PG. 247 Dds.	TO REMAIN
186 *UUU	INDUSTRIAL FUEL SUPPLY A. CORPORATION	PIPE LINE & INCIDENTAL	BK. 11010 PG. 138 O.R. BK. 16970 PG. 39 O.R.	TO REMAIN
187 *PPP	GENERAL PIPELINE COMPANY OF CALIFORNIA	PIPE LINE & INCIDENTAL	BK. 13454 PG. 235 O.R.	TO REMAIN
188 *QQQ	GENERAL PIPELINE COMPANY OF CALIFORNIA	PRIVATE ROAD	BK. 13492 PG. 142 O.R.	TO REMAIN
190 *RRR	GENERAL PETROLEUM CORPORATION OF CALIFORNIA	TELEPHONE, TELEGRAPH POLES & INCIDENTAL	5/08/41 BK. 18368 PG. 348 O.R.	TO REMAIN

* SEE NOTES HEREON

THE FOLLOWING ITEM BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 AFFECTS PARCEL 69 (NOT PLOTTABLE)

ITEM NO.	OWNER	PURPOSE	REFERENCE	STATUS
191	CARLOS MARTINEZ	DISCHARGE OF CLAIMS	6/28/43 BK. 20055 PG. 333 O.R.	TO REMAIN

THE FOLLOWING ITEM BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023 AFFECT THE SUBJECT PROPERTY AND IS NOT PLOTTED FOR THE THE REASON LISTED BELOW THE ITEM:

ITEM 7.) RESERVATIONS, EXCEPTIONS AND PROVISIONS INCLUDING THE RIGHT OF THE UNITED STATES OF AMERICA, ITS PERMITTEE OR LICENSEE, TO ENTER UPON, OCCUPY AND USE ANY PART OR ALL THAT PORTION OF SAID LAND DESCRIBED THEREIN, LYING WITHIN A STRIP OF LAND 264 FEET IN WIDTH BEING THE TRANSMISSION LINE RIGHT OF WAY OF THE PACIFIC LIGHT AND POWER COMPANY FOR THE PURPOSES PROVIDED IN THE ACT OF JUNE 10, 1920 (41 STAT., 1063) AND SUBJECT TO THE CONDITIONS AND LIMITATIONS OF SECTION 24 OF SAID ACT, AS SET FORTH IN PATENT NO. 910117, ISSUED JUNE 26, 1923, TO FRANK POWELL, AND IN OTHER PATENTS AS DISCLOSED BY THE RECORDS OF THE BUREAU OF LAND MANAGEMENT IN SACRAMENTO, CALIFORNIA.

SAID PATENTS ALSO RECITE THE FOLLOWING:

SUBJECT TO ANY VESTED AND ACCRUED WATER RIGHTS FOR MINING, AGRICULTURAL, MANUFACTURING, OR OTHER PURPOSES AND RIGHTS TO DITCHES AND RESERVOIRS USED IN CONNECTION WITH SUCH WATER RIGHTS, AS MAY BE RECOGNIZED AND ACKNOWLEDGED BY THE LOCAL CUSTOMS, LAWS AND DECISIONS OF THE COURTS, AND THE RESERVATION FROM THE LANDS HEREBY GRANTED, A RIGHT OF WAY HEREON FOR DITCHES OR CANALS CONSTRUCTED BY THE AUTHORITY OF THE UNITED STATES.

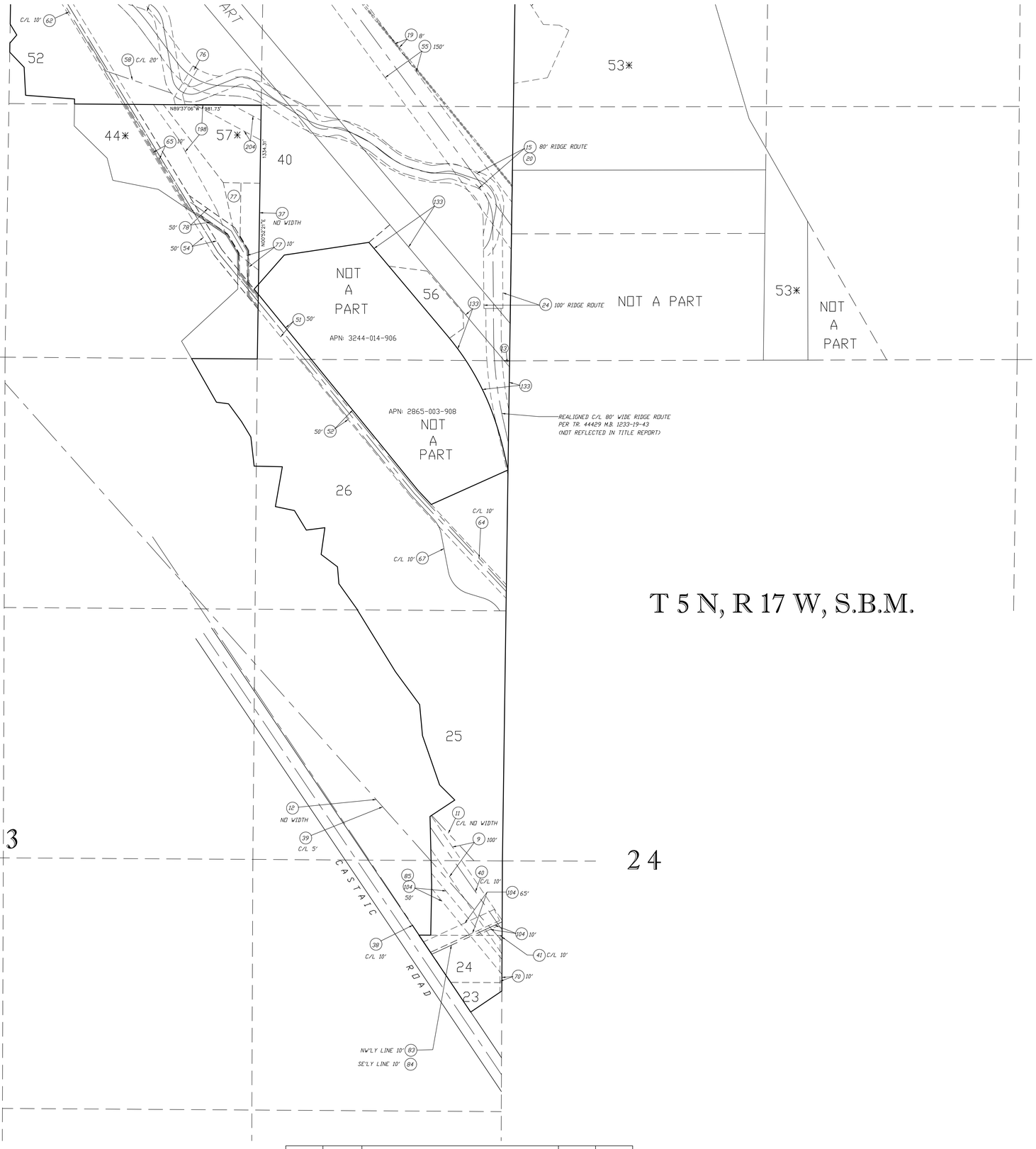
SAID LAND WAS WITHDRAWN FOR POWER SITE RESERVE NO. 489 FOR THE PURPOSES PROVIDED IN THE FEDERAL POWER ACT OF JUNE 10, 1920 (41 STAT. 1063) AS AMENDED, SUBJECT TO THE CONDITIONS AND LIMITATION OF SECTION 24, OF SAID ACT, AS AMENDED, AS DISCLOSED BY THE RECORDS OF THE BUREAU OF LAND MANAGEMENT IN SACRAMENTO, CALIFORNIA.

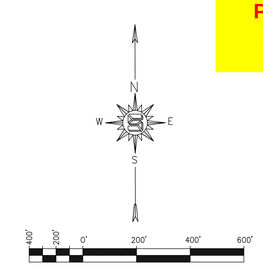
AFFECTS: PARCELS 17, 19, 20, 31, 37, 39, 40, 43 AND 56

(LOCATION OF SAID 264 FOOT WIDE STRIP IS INDETERM

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR
PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

SEE SHEET 14





Scale: 1"= 200'

T 5 N, R 17 W, S.B.M.

EASEMENTS SHOWN HEREON ARE BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023.

SEE SHEET 8 FOR EASEMENT TABLES.

NOTE: PARCELS FOLLOWED BY AN ASTERISK (46*) INDICATES SAID PARCEL IS NOT PART OF THIS SUBDIVISION BUT IS UNDER SAME OWNERSHIP.

NOTE: BOUNDARY LAYOUT BASED ON CONCEPTUAL LAND USE PLAN PROJECT WCP-01-0 DATED 01-08-2014.

PARCEL NUMBERS BASED ON FIDELITY NATIONAL TITLE COMPNAY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 6,

P.T.R. PARCEL NO	A.P.N.
1*	3247-010-049 and 3247-010-050
2*	3244-003-018
3	3247-040-008 (PORTION)
4	3247-040-008 (PORTION)
5	3247-040-008 (PORTION)
6	3247-040-008 (PORTION)
7	3247-040-013 (PORTION)
8	3247-040-009 (PORTION)
9	3247-040-009 (PORTION)
10	3247-040-009 (PORTION)
11	3247-040-009 (PORTION)
12	3247-040-013 (PORTION)
13	3247-040-013 (PORTION)
14	3247-040-013 (PORTION)
15	3244-012-054 & 059
16	3244-012-057
17	3244-012-013
18	3247-041-008
19	3247-041-020
20	3247-041-021
21	3247-041-023
22	3247-041-022
23	2865-036-003
24	2865-036-002
25	2865-036-001 AND 2865-003-013
26	2865-003-035
27	3244-004-051
28	3244-004-053
29	3244-012-049
30	3244-012-048
31	3244-012-046
32	3244-012-058
33	3244-004-052
34	3244-004-024
35	3244-013-001
36	3244-012-045
37	3247-017-019
38	3244-012-050
39	3244-014-015
40	3244-014-067 & 068
41	3247-041-018
42	3247-041-015
43	3244-014-053
44*	3244-014-044
45*	3244-014-038
46*	3247-041-012
47*	3244-013-004
48*	3244-013-002
49*	3244-013-005
50*	3244-013-009
51*	3244-013-010
52	3244-014-050
53*	3244-015-018
54*	3244-014-022
55*	3244-014-021
56	3244-014-062
57*	3244-014-063
60	3247-041-007
61	3247-041-009
66	3247-041-010
68*	3244-012-056
69*	3244-014-045
70**	3244-012-904
71**	3244-004-906
72*	3244-014-902
73*	3247-017-900

*ASTERISK INDICATES PARCEL IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP OR OFFSITE IMPROVEMENT

**ASTERISK INDICATES PARCEL TO BE AQUIRED

NOTE: NORTHEASTERLY PORTION OF PARCEL 32 IS NOT A PART OF THIS SUBDIVISION BUT UNDER SAME OWNERSHIP

7	08-12-2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP	TH	--
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	TH	--
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016	YL	--
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016	YL	--
3	6-6-2016	PER SCM COMMENTS DATED 10-7-2015	YL	--
2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015	YL	--
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015	YL	--
	DATE	REVISION	BY	APP

SCALE: 1"=200' | CH'D BY: | APPROVED BY: | DATE: 08/12/2025 | W.O. NO. 5090-033-35 | SHEET 13 OF 16

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER MARK R. SIKAND No. 35453 Exp. 09-30-25 CIVIL STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

N

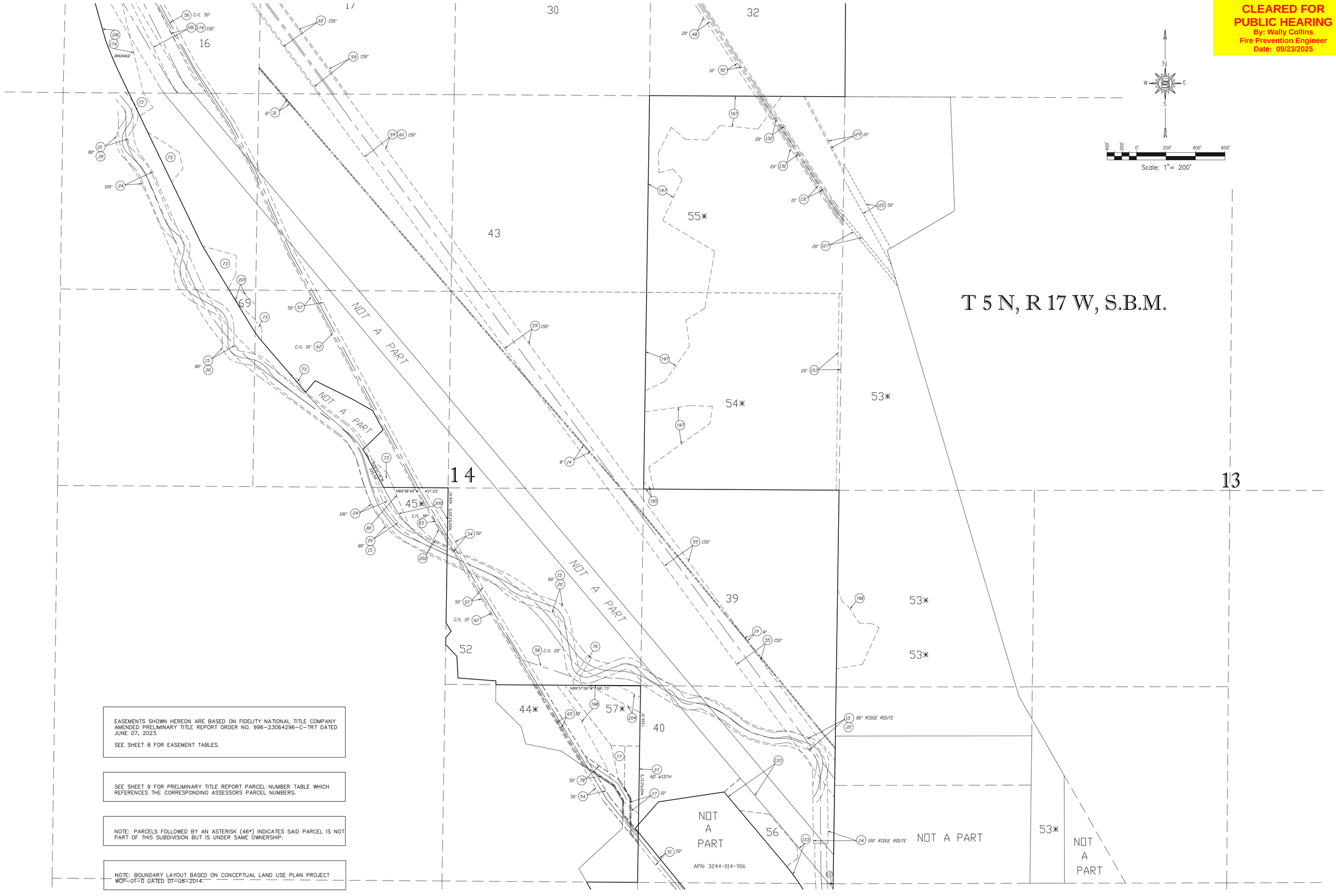
SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

EASEMENT MAP

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR
PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

SEE SHEET 15



EASEMENTS SHOWN HEREON ARE BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023.

SEE SHEET 8 FOR EASEMENT TABLES.

SEE SHEET 9 FOR PRELIMINARY TITLE REPORT PARCEL NUMBER TABLE WHICH REFERENCES THE CORRESPONDING ASSESSORS PARCEL NUMBERS.

NOTE: PARCELS FOLLOWED BY AN ASTERISK (46*) INDICATES SAID PARCEL IS NOT PART OF THIS SUBDIVISION BUT IS UNDER SAME OWNERSHIP.

NOTE: BOUNDARY LAYOUT BASED ON CONCEPTUAL LAND USE PLAN PROJECT WCP-01-0 DATED 01-08-2014.

SEE SHEET 13

EASEMENT MAP

7	08-12-2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP		TH	–
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S.		TH	–
5	6-27-2017	PER SCM COMMENTS DATED 11-3-2016		YL	–
4	9-27-2016	PER SCM COMMENTS DATED 7-21-2016		YL	–
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2	9-9-2015	PER SCM COMMENTS DATED 7-16-2015		YL	–
1	6-1-2015	PER SCM COMMENTS DATED 2-17-2015		YL	–
	DATE	REVISION		BY	APP
SCALE: 1"=200'	CHK'D BY:	APPROVED BY:	DATE: 08/12/2025	W.O. NO. 5090-033-35	SHEET 14 OF 16

PREPARED FOR:
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1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

REGISTERED PROFESSIONAL ENGINEER
MARK R. SIKAND
No.35453
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

LEGAL DESCRIPTION:

A PORTION OF SECTIONS 11, 13, 14, 23 AND 24, T5N, R17W SBM

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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

SEE SHEET 16

T 5 N, R 17 W, S.B.M.

NOT A PART

RIDGE ROUTE

Scale: 1"= 200'

EASEMENTS SHOWN HEREON ARE BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023.

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NOT A PART APN: 3244-012-904

SEE SHEET 14

EASEMENT MAP

7	08-12-2025	UPDATED P.E. STAMP EXPIRATION DATED AND REVISED SHEET 2 COMPOSITE MAP	TH	–
6	07-11-2023	UPDATED TO REFLECT NEW TITLE REPORT AND CURRENT APN'S	TH	–
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SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET	OF
1"=200'			08/12/2025	5090-033-35	15	16

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
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COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION DIVISION
LAND DEVELOPMENT UNIT
CLEARED FOR PUBLIC HEARING
By: Wally Collins
Fire Prevention Engineer
Date: 09/23/2025

N
W E
S

400' 200' 0' 200' 400' 600'
Scale: 1"= 200'

T 5 N, R 17 W, S.B.M.

30' 18-A, 62 (ESMT)
45 20'
89
10' 68
5 3 10 8
12 14 13 7
30' 156 163
88
4 6 11 9
68 10'
30' 62 (ESMT)
30' 62 (ESMT)
30' 158 163
158 156 20'
20' 159
62 60' (ESMT)
67 30' (ESMT)
18 61
20' 45
164 20'
164 VARIES
159 20'
60' 63 (ESMT)
30' 65 (ESMT)
66
158 20'
64 30' (ESMT)
100' 34
42 60 66
3
34
RIDGE
41
10' 82
C/L 20' 90
47 20'
90 NE'LY LINE
22
C/L 20' 112
C/L 20' 90
C/L 20' 112
C/L 20' 90
NOT A PART
APN: 3244-004-906
21
ROUTE
108
20
48 20'
97
10' 87
28
63 C/L 10'
19
20' 48
27
46*
71
199
205
20' 93
86 10'
96 20'
20' 48
199
194
98 50'
2
98 50'
350' 59 (ESMT)
33
50' 98
98 50'
98 50'
27

SEE SHEET 15

EASEMENT MAP

EASEMENTS SHOWN HEREON ARE BASED ON FIDELITY NATIONAL TITLE COMPANY AMENDED PRELIMINARY TITLE REPORT ORDER NO. 996-23064296-C-TR7 DATED JUNE 07, 2023.

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SEE SHEET 9 FOR PRELIMINARY TITLE REPORT PARCEL NUMBER TABLE WHICH REFERENCES THE CORRESPONDING ASSESSORS PARCEL NUMBERS.

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	DATE	REVISION	BY	APP

SCALE:	CHK'D BY:	APPROVED BY:	DATE:	W.O. NO.	SHEET OF
1"=200'			08/12/2025	5090-033-35	16 16

PREPARED FOR:
NORTHLAKE ASSOCIATES, LLC
1999 AVENUE OF THE STARS, SUITE 2850
LOS ANGELES, CA 90067
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REGISTERED PROFESSIONAL ENGINEER MARK R. SIKAND No.35453 Exp. 09-30-25 STATE OF CALIFORNIA

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MAJOR LAND DIVISION
VESTING TENTATIVE TRACT NO. 073336
LOCATED IN THE UNINCORPORATED TERRITORY OF THE
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

LOS ANGELES COUNTY
DEPARTMENT OF PARKS AND RECREATION

PARK OBLIGATION REPORT

Tentative Map # **73336**	DRP Map Date: **08/20/2025**	SCM Date:	Report Date: **09/24/2025**
Park Planning Area # **35B**	CSD: **CASTAIC AREA CSD**		Map Type: **Tentative Map - Tract**

Total Units **2,295** = Proposed Units **2,295** + Exempt Units **0**

Park land obligation in acres or in-lieu fees:

ACRES:	**16.23**
IN-LIEU FEES:	**$4,421,514**

Sections 21.24.340, 21.24.350, 21.28.120, 21.28.130, and 21.28.140, the County of Los Angeles Code, Title 21, Subdivision Ordinance provide that the County will determine whether the development's park obligation is to be met by:

1) the dedication of land for public or private park purpose or,
2) the payment of in-lieu fees or,
3) the provision of amenities or any combination of the above.

The specific determination of how the park obligation will be satisfied will be based on the conditions of approval by the advisory agency as recommended by the Department of Parks and Recreation.

The Representative Land Value (RLVs) in Los Angeles County Code (LACC) Section 21.28.140 are used to calculate park fees and are adjusted annually, based on changes in the Consumer Price Index. The new RLVs become effective July 1st of each year and may apply to this subdivision map if first advertised for hearing before either a hearing officer or the Regional Planning Commission on or after July 1st pursuant to LACC Section 21.28.140, subsection 3. Accordingly, the park fee in this report is subject to change depending upon when the subdivision is first advertised for public hearing.

The park obligation for this development will be met by:

The dedication of 16.3 acres for public park.
Conditions of approval attached to report.

Trails:

See also attached Trail Report

Comments:

The map was approved April 2, 2019 and will continue to adhere to the attached conditions of approval

For further information or to schedule an appointment to make an in-lieu fee payment:
Please contact Loretta Quach at lquach@parks.lacounty.gov or (626) 588-5305
Department of Parks and Recreation, 1000 S. Fremont Avenue, Building A-9 West, Alhambra, California 91803.

By: Loretta Quach

Loretta Quach, Departmental Facilities Planner I

LOS ANGELES COUNTY
DEPARTMENT OF PARKS AND RECREATION

PARK OBLIGATION WORKSHEET

Tentative Map # **73336** DRP Map Date: **08/20/2025** SCM Date: Report Date: **09/24/2025**
Park Planning Area # **35B** CSD: **CASTAIC AREA CSD** Map Type: **Tentative Map - Tract**

The formula for calculating the acreage obligation and or in-lieu fee is as follows:

(P)eople x (0.0030) Ratio x (U)nits = (X) acres obligation
(X) acres obligation x RLV/Acre = In-Lieu Base Fee

Where P = Estimate of number of People per dwelling unit according to the type of dwelling unit as determined by the U.S. Census
Ratio = The subdivision ordinance provides a ratio of 3.0 acres of park land for each 1,000 people generated by the development. This ratio is calculated as "0.0030" in the formula.
U = Total approved number of Dwelling Units.
X = Local park space obligation expressed in terms of acres.
RLV/Acre = Representative Land Value per Acre by Park Planning Area.

Total Units **2,295** = Proposed Units **2,295** + Exempt Units **0**

Park Planning Area = **35B**

Type of dwelling unit	People *	Ratio 3.0 Acres/ 1000 People	Number of Units	Acre Obligation
Detached S.F. Units	**3.35**	**0.0030**	**288**	**2.89**
M.F. < 5 Units	**2.52**	**0.0030**	**803**	**6.07**
M.F. >= 5 Units	**2.01**	**0.0030**	**1,204**	**7.26**
Mobile Units	**3.22**	**0.0030**	**0**	**0.00**
Exempt Units			**0**	**0.00**
TOTAL			**2,295**	**16.23**

Ratio	Acre Obligation	RLV / Acre	In-Lieu Base Fee
@ (0.0030)	16.23	$272,509	**$4,421,514**

Lot #	Provided Space	Provided Acres	Credit (%)	Acre Credit
0	public park	16.30	100.00%	16.30
			Total Provided Acre Credit:	**16.30**

Acre Obligation	Private and Crdt.	Net Obligation	RLV / Acre	**In-Lieu Fee Due**
16.23	16.30	-0.07	$272,509	**$0**

COUNTY OF LOS ANGELES
DEPARTMENT OF PARKS AND RECREATION
"Parks Make Life Better!"
John Wicker, Director
Norma E. Garcia, Chief Deputy Director

October 19, 2017

Mr. Jodie Sackett
Senior Regional Planning Assistant
Department of Regional Planning
320 West Temple Street, Room 1346
Los Angeles, California 90012

Dear Mr. Sackett:

VESTING TENTATIVE TRACT MAP 073336 (NORTHLAKE)
PARK AND TRAIL CONDITIONS OF MAP APPROVAL
REGIONAL PLANNING MAP DATED SEPTEMBER 27, 2017
SUBDIVISION COMMITTEE MEETING ON OCTOBER 19, 2017

This letter details the Department of Parks and Recreation (Department)'s park and trail conditions of map approval for the above map

PARK CONDITIONS

The proposed project is a residential subdivision located within the Northlake Specific Plan area. As shown in the attached Park Obligation Report, the basic Quimby park land obligation for this proposed residential subdivision is 17.51 net acres (maximum slope 3 percent). For details, see attached Park Obligation Report and Worksheet. The Subdivider is proposing to include one public park as part of the subdivision: Lot 319 (16.3 net acres). The Department recommends that the Subdivider develop and then convey to the County the public park provided that the site is deemed acceptable after a review of the required submittals listed below. The Subdivider is responsible for the total development costs of the public park. For detailed requirements for pre-public hearing submittals referenced in the following conditions, please refer to the Public Park Checklist of Required Submittals attached to this report.

1. Subdivider shall convey to the County a developed, 16.3 net-acre Public Park ("the Public Park"), shown on Lot 319 within the Vesting Tract Map No. 73336.

2. The Public Park shall contain the following improvements which are shown in the park schematic design approved on August 8, 2016: ADA compliant parking lot; restroom/office building; multi-use grass areas including two (2) softball fields with seating; one (1) full basketball court, drinking fountains; a 10-ft wide ADA compliant walking path; park benches; two (2) group picnic areas; five (5) individual picnic areas; Children's Play Areas to accommodate ages 2-5 and ages

5-11; maintenance yard; trash enclosure; landscaping, lighting, irrigation and park signage.

3. The following off-site improvements to the public park shall be provided without receiving Quimby credit: full street improvements and utilities/utility connections, including, but not limited to curbs, gutters, relocation of existing public utility facilities, street paving, traffic control devices, public trees, public streets and sidewalks. Utility types, sizes, and locations shall be to the satisfaction of the Department. Utilities shall include water meter and utility lines (electricity, gas, sewer, and telephone).

4. Prior to the Department clearing the first final (unit) map containing housing, enter into a Park Development Agreement (PDA) and post Faithful Performance and Labor and Materials bonds with the Department to cover design and construction of the public park in accordance with updated costs estimates for the park. The PDA shall be substantially similar in form and content to the PDA approved by the Board of Supervisors on November 15, 2011, and the content of the bonds shall be substantially similar in form and content to the bonds used by the Los Angeles County Department of Public Works (DPW). Bonds may need to be updated prior to construction commencement if contracted construction costs change. For more information, please refer to http://file.lacounty.gov/bos/supdocs/64684.pdf.

5. Prior to the Department clearing the first final (unit) map containing housing, and for the public park, Subdivider shall submit a critical path method (CPM) schedule ("Park Delivery Schedule"). Said schedule shall include design development submittals and submittals required for the various stages of construction document development, permits and approvals, park construction commencement and completion dates, ALTA title policy, deed preparation and review, and deed recordation. The Initial Park Delivery Schedule shall serve as the baseline for all activities. Subdivider shall update the Park Delivery Schedule on a monthly basis to show actual progress compared to planned progress and submit the updates to the Department on the first County business day of each month. If as a result of these monthly schedule updates it appears that the Park Delivery Schedule does not comply with the critical path, the Subdivider shall submit a Recovery Schedule as a revision to the Park Delivery Schedule showing how all work will be completed within the period for park delivery. In the event Subdivider fails to comply with this condition, the Department shall give written notice to Subdivider requesting submittal of the delinquent schedule update. Notice shall be deemed given when deposited in the U.S. Post Office or reliable over-night courier; postage prepaid, addressed to Subdivider, or by personal delivery to Subdivider's relevant address set forth in the PDA. If the requested update is not received within thirty (30) days after such notice is given, the Department will withhold further clearance of unit maps until the delinquent schedule update is received.

6. Subdivider shall submit park plans and specifications to the Department for review and approval during the design development stage (100 percent), fifty percent (50 percent), seventy five percent (75 percent), ninety percent (90 percent), and one hundred percent (100 percent) stages of construction document development. Specifications shall be in Construction Specification Institute (CSI) 8 ½-inch by 11-inch book format. Specifications and a grading plan (scale 1 inch = 40 feet or as required by the Department) shall be submitted to the Department concurrent with the final grading plan submittal to DPW. The respective stage of each submittal shall be clearly labeled on the drawings and specifications. Plan submittals shall be made by giving the Department three (3) sets of drawings and a CD-ROM containing the drawings in AutoCAD format. The Department shall have twenty-one (21) County business days from receipt of any design/construction document submittal to review and approve it. If the Department does not respond within said time period, the submittal shall be deemed approved by the Department. Any corrections or changes made by the Department during review of one stage shall be incorporated into a revision of the current drawings and specifications and resubmitted for the Department's approval of the next said stage unless it is determined that the change is significant whereas the construction document would be resubmitted prior to permission by Department for Subdivider to proceed with the next stage. The public park shall be developed in accordance with park improvement plans approved by the Department, using standard construction activities and responsible contractors licensed by the State of California to perform this type of work. Sole responsibility for completion of the park improvements, and payment of all costs incurred, lies with the Subdivider.

7. Subdivider shall obtain all applicable jurisdictional approvals, comply with all applicable federal, state, and local laws, rules, codes, and regulations; obtain, coordinate and pay for all studies, permits, fees and agency inspections required to design and build the public park; provide one (1) copy of all studies, permits, inspection reports, and written approvals to the Department's representative; provide the County with certification that the playground(s) constructed in the public park meet American Society for Testing and Materials (ASTM) standards, United States Consumer Product Safety Commission (USCPSC) standards, and all State of California accessibility playground guidelines. Playground certification shall be met by providing a satisfactory report from a third party independent auditor that holds a current certification as a Playground Safety Inspector in good standing by the National Playground Safety Institute.

8. Subdivider shall designate and identify a project manager who will oversee design and construction of the public park. The project manager shall communicate by providing written documentation via facsimile or mail to County's representative and abide by County's requirements and direction to ensure acceptable park completion; provide the County with reasonable access to the public park site and the park improvements for inspection purposes and at a minimum initiate and

coordinate the following inspections and approvals during the course of construction with not less than two County business days advanced notice of any request for inspection or approval: (1) contractor orientation/pre-construction meeting; (2) construction staking and layout; (3) progress/installation inspections to be scheduled on a weekly basis or as required to insure conformance with construction documents; (4) irrigation mainline and equipment layout; (5) irrigation pressure test; (6) irrigation coverage test; (7) weed abatement after abatement cycle, to review degree of kill; (8) plant material approval; (9) plant material/Hydroseed/pre-maintenance inspection; (10) substantial completion and commencement of maintenance period; (11) final walk through and acceptance. Continued work without inspection and approval shall make Subdivider and its subcontractors solely responsible for any and all expenses incurred for required changes or modifications. County reserves the right to reject all work not approved in conformance with this condition.

9. Subdivider shall provide the Department with written Notice of Construction Commencement for the public park site. Construction Commencement is defined as when the Subdivider starts installing utilities for the public park. The Construction Phase is defined as the period of time from said notice to the date the Department issues its Notice of Acceptance of Completed Park Improvements, inclusive of the 90-day plant establishment period. Upon completing park construction, and obtaining final sign off from DPW on all code compliance issues, notify the Department in writing by submitting a Notice of Completion of Park Construction. Within thirty (30) days after receipt of said notice, Department shall inspect the park and reasonably determine whether or not the park improvements have been constructed in accordance with the construction documents, and to a level of quality and workmanship for the Department to issue its Notice of Acceptance of Completed Park Improvements. If park construction is unacceptable, within fifteen (15) County business days after inspection, Department shall provide Subdivider with a list of items that need to be corrected, after receipt of said list, in order for the Department to issue its Notice of Acceptance of Completed Park Improvements, or issuance of said notice will be delayed until the items on the list are corrected.

10. Upon Department's Notice of Acceptance of Completed Park Improvements, Subdivider shall provide the Department with two (2) sets of record drawings, maintenance manuals, and irrigation controller charts, and contact information for utility companies and utility account codes in order for the Department to request timely transfer of utilities serving the public park. These documents shall also be submitted on a CD-ROM with the drawings in AutoCAD format.

11. Subdivider shall convey the public park by recordable grant deed showing the fee vested with the County of Los Angeles, and free of all encumbrances except those not interfering with the use of the property for park or recreational purposes.

Subdivider's designated title company shall provide the County with an ALTA title policy and survey and shall record the park deed simultaneously to County's acceptance of the park improvements, as evidenced by the County's issuance of a Certificate of Acceptance for the public park, and shall deliver the recorded deed to the Chief Executive Office - Real Estate Division, Property Management Section, 222 South Hill Street, Third Floor, Los Angeles, CA 90012.

12. Any major change proposed by the Subdivider to the public park's size (not more than a variance of two (2) acres), shape, location, or terrain as shown on the approved tentative tract or parcel map, or to the schematic design approved by the Department's Design Review Committee, shall be deemed a revision of the tentative tract or parcel map and shall require the filing of a revised map, as described in Los Angeles County Code Section 21.62.030.

TRAIL CONDITIONS

The Department has completed the trail review of Vesting Tentative Tract Map No. 073336 - Northlake. The proposed Castaic Lake Trail alignments, as shown on subject map page eleven (11) of sixteen (16) are approved.

The Department is requiring the Subdivider to dedicate twenty foot (20') wide trail easements and construct variable-width seven to ten foot (7'-10') wide multi-use (hiking, mountain biking, and equestrian) trails, to the satisfaction of the Department.

Department trail conditions of map approval, prior to final map are as follows:

1. Subdivider shall dedicate twenty foot (20') wide multi-use easements for the "Castaic Lake Trail" alignments and construct variable-width seven to ten foot (7'-10') wide natural surface trails within APN 3244-015-018 and APN 3244-014-021, as shown on subject map page eleven (11) of sixteen (16).

2. The required trail easements shall be recorded via separate instrument, prior to final map recordation. Upon request, the Department will provide a trail easement recordation template.

3. Full public access shall be provided in perpetuity for the multi-use trail.

4. Easement dedications must be outside the public road right-of-way.

5. Subdivider shall include the Department in the transmittal of the project grading plan to Regional Planning.

    a. Submit project grading plans, including trail grading information to the Department for review and approval. The trail grading information shall

conform to the County of Los Angeles Trails Manual (Trails Manual) and any applicable County codes, including but not limited to the following:

i. Cross slope gradients on natural soil not to exceed four percent (4 percent) and longitudinal (running) slope gradients not to exceed twelve percent (12 percent) for more than fifty feet (50').

ii. Typical trail section and details to include:
- Width and name of trail
- Longitudinal (running) gradients
- Cross slope gradients

iii. Appropriate drainage culverts, as appropriate.

6. After project trail grading plan approvals, but prior to building permit issuance, the Subdivider shall:

a. Submit a preliminary construction schedule showing milestones for completing the trail. Provide updated trail construction schedules, as needed, to the Department on a monthly basis.

b. Stake the centerline of the trail and then schedule a site meeting with Department Trails Section Planner for trail alignment inspection and approval.

7. Construction of trail:

a. **Trail:** Construct the Natural Trail 1 variable-width seven to ten foot (7'-10') wide trail within the twenty foot (20') wide dedicated easement in a manner consistent with the Trails Manual. The Trails Manual is available at **http://trails.lacounty.gov**. Out-slope of trail tread at 2 percent to 4 percent with trail running grade up to 8 percent for <100' or 12 percent for <50'. Significant deviation from the design guidelines in the Trails Manual must be reviewed and approved by the Department. See Section 4: "Trail Designs Trail Classification Guidelines," for trail construction guidelines and/or contact Trails Section Planner.

8. Notify the Department within five (5) business days of trail construction completion for the "Final Trail Inspection". The Final Inspection is required to obtain Department approval and ensure the trail is in compliance with the trail construction guidelines within the Trails Manual. Any portions of the constructed trail not approved, shall be corrected and brought into compliance within thirty (30) calendar days. The Subdivider shall then contact the Department to schedule another site inspection.

9. Prior to the Department's final acceptance of the constructed, "Castaic Lake Trail" alignments, the Subdivider shall:

    a. Submit electronic copy on CD (AutoCAD) of the as-built trail grading/construction drawings to the Department Trails Planning Section.

    b. Submit a letter to the Department requesting acceptance of the dedicated constructed trail. The Department will then issue an acceptance letter only after receiving a written request for final trail approval, including a single copy of the as-built trail drawings.

    c. **Note:** The Department is responsible to install appropriate trail signage and maintain the trail tread and easement area after final trail construction and easement recordation acceptance.

If you have any questions regarding the park conditions, please contact Loretta Quach of my staff at (213) 351-5120 or by email at lquach@parks.lacounty.gov. For questions regarding the trail comments, please contact Robert Ettleman at (213) 351-5134 or by email at rettleman@parks.lacounty.gov.

Sincerely,

Kathline King

Kathline J. King
Chief of Planning

KK:LQ:RE:ner

Enclosures

c: Northlake Associates, LLC (J. Arvin)
Sikand Engineering (R. Gaur)
CEO Real Estate Division (R. Hernandez)
Parks and Recreation (J. Gargan, J. McCarthy, C. Lau, L. Quach, R. Ettleman)

SUBDIVISION MAP REVIEW
TENTATIVE MAP STAGE - PRE-PUBLIC HEARING
PUBLIC PARK CHECKLIST OF REQUIRED SUBMITTALS

When proposing a public park, please submit the following items to the Department of Parks and Recreation (Department) for the Department's clearance for the public hearing stage. Include an electronic file (PDF) for each submittal:

☐ **PARK SITE GRADING PLAN** - Provide a small scale (1" = 40') drawing that shows park lot boundary lines and the proposed limits of grading to achieve the level (net acreage: maximum slope 3%) pad upon which the park will be developed. Note the net acreage, the park's lot number, and identify land use adjacent to the park lot. Include a vicinity map insert showing the park in context to the subdivision and the subdivision's surrounding area. This submittal will be used by the Department when developing the Facility Program that will be given to the Subdivider to base the park's schematic design on.

☐ **PARK SCHEMATIC DESIGN** -Schematic design at scale 1" = 40' for proposed park(s) showing proposed improvements, their relationships, and space requirements. Submit this plan on sheets 24" x 36" In size or larger and include the following information:

- Gross Acreage Notation;
- Net Acreage (maximum slope 3%) Notation and limits of grading line for net acreage;
- Park Site(s) Lot Number(s)
- Park Lot Boundary Lines;
- Layout of Park Improvements;
- Owner and Consultant/Designer Information and Drawing Date;
- Pertinent topographical features;
- Hazard Zone Information (flood plains, seismic set back zones etc.);
- Easements(s) or Rights-of-Way Lines (including conservation easements) - existing and proposed;
- Trails and Staging Area(s);
- Names of Adjacent Streets;
- Graphic Scale (1" = 40');
- North Arrow; and
- Legend of Improvements and Symbols;
- Parking Space Calculation Table showing: 1) total number of parking spaces required by Section 22.52.1175 of the Los Angeles County Code; 2) total number of parking spaces provided; and 3) number of handicapped accessible spaces.

The Park Schematic Design must be reviewed and approved by the Department's Design Review Committee (DRC).

☐ **PARK EXHIBIT MAP** (include as sheet to the Tentative Map/C.U.P Exhibit A): Thisis the DRC-approved Schematic Design converted into a line-preferably CAD-drawing.

☐ **PHASING MAP, EXHIBIT & TABLE** (Include as a sheet to the Tentative Map) - Map must show each phase and related unit map numbers. Include a table which shows for each unit map, the number of residential units in column form for each of the following categories:

- Single-family detached;
- Multi-family dwelling units, less than 5 units per building;

SUBDIVISION MAP REVIEW
TENTATIVE MAP STAGE - PRE-PUBLIC HEARING
PUBLIC PARK CHECKLIST OF REQUIRED SUBMITTALS

- Multi-family dwelling units, 5 or more units per building;
- Total number of residential units in each column category; and
- Cumulative total for all units combined (phase-to-phase running total amount of units), and projected recordation dates of each unit map.

☐ **SCHEMATIC DESIGN LEVEL COST ESTIMATE** - Provide schematic design level cost estimate to design and build the proposed park(s).

☐ **PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)** - Submit one (1) hardcopy of the ESA and a CD-ROM containing the report. The ESA must:

- Be prepared for each proposed public park site by a State of California Registered Professional Geologist or Registered Civil Engineer;
- Meet all current Environmental Protection Agency (EPA) requirements;
- Meet ASTM E1527-05 or current standards; and
- Be less than one year old.

Submit copies of all existing Phase I, Phase II ESAs, and Phase 111 Site Remediation Reports for each park site and/or for the proposed land subdivision.

☐ **GEOTECHNICAL REPORT** - The Department will request Public Works' Geotechnical and Engineering Division to review the geotechnical report that the applicant submits to Public Works to determine the geotechnical stability of each proposed park site.

☐ **PRELIMINARY TITLE REPORT** - Submit a preliminary title report on the park site(s) and copies of all existing easements affecting the park site.

☐ **COPIES OF ALL EASEMENT DOCUMENTS AFFECTING PARK SITE(S)** - Submit copies of all recorded easements or other encumbrances affecting the proposed park site(s) with a notation on the Park Exhibit Map stating Subdivider's intent to coordinate the quit claim of particular easements with the Chief Executive Office's Real Estate Division.

☐ **LETTER FROM SCHOOL DISTRICT** (if applicable) - Submit a letter from the school district serving the proposed subdivision that certifies that the school sited adjacent to the proposed public park can meet its recreational requirement without using land dedicated for park purposes.

COUNTY OF LOS ANGELES
Public Health

BARBARA FERRER, Ph.D., M.P.H., M.Ed.
Director

MUNTU DAVIS, M.D., M.P.H.
County Health Officer

ANISH P. MAHAJAN, M.D., M.S., M.P.H.
Chief Deputy Director

AZAR KATTAN, J.D., M.P.H.
Deputy Director for Health Protection

LIZA FRIAS, REHS
Director of Environmental Health

SCOTT ABBOTT, REHS, M.P.A.
Assistant Director of Environmental Health

5050 Commerce Drive
Baldwin Park, California 91706
TEL (626) 430-5374 • FAX (626) 813-3000

www.publichealth.lacounty.gov/eh/

BOARD OF SUPERVISORS

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Janice Hahn
Fourth District

Kathryn Barger
Fifth District

September 29, 2025

TO: Joshua Huntington
Supervising Regional Planner
Department of Regional Planning

Attention: Jodie Sackett

FROM: Lusi Mkhitaryan, REHS, MPH
Lusi Mkhitaryan
Branch Director, Environmental Protection Branch
Department of Public Health

SUBJECT: LAND DIVISION TENTATIVE- MAP TRACT
APN-2865-003-013
PROJECT: TR73336
RPPL2023004336

Thank you for the opportunity to review the application and site plan for the subject project. The proposed project will develop the existing vacant land with a variety of residential units and related improvements such as infrastructure and parks.

☐ Public Health has no conditions to impose on this project should the advisory agency grant its approval.

☒ Public Health conditions for this project have been met as of the date of this letter. Public Health recommends approval of the aforementioned project.

☐ Public Health DOES NOT recommend approval of the subject project and requires that the following conditions and/or information requested below are addressed prior to agency approval.

Drinking Water Program: Potable Water

The proposed project is required to have an approved, safe and reliable potable water source, either from an approved onsite source (e.g., groundwater well) or a permitted public water system that can meet the project's water demands.

The applicant provided an updated signed Water Availability Form from Santa Clarita Valley Water Agency (SCVWA), signed and dated by Brent Payne, Principal Engineer, on September 26, 2025.

Onsite Wastewater Treatment (OWT) Program: Wastewater

The proposed project is required to have an approved, safe and reliable method of wastewater disposal, either from an approved onsite wastewater treatment system or a permitted public sewer system that can meet the project's load demands.

The applicant provided an updated "Will Serve" letter from the Los Angeles County Sanitation Districts dated September 24, 2025, stating that the previous comments on the letter dated June 05, 2023, still apply to the subject project.

Community Protection Branch: Environmental Hygiene

Please Note: The following are general requirements for Noise and Air Quality recommendations for the proposed projects.

The applicant shall comply with the requirements outlined in Title 12, Section 12.08.390, of the Noise Control Ordinance for the County of Los Angeles. The following section contains recommendations along with excerpts of the code, presented in italics for reference. The full text of the codes is available for review at https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances.

Recommendations

1. Based on the proposed plan and findings, activities from the subject property should comply with requirements contained in Title 12, Section 12.08.390 Noise Control Ordinance for the County of Los Angeles.

2. Operational noise generated from the project shall comply with Title 12, Section 12.08.390, Noise Control Ordinance for the County of Los Angeles.

Exterior Noise Ordinance: Exterior Noise Standards (12.08.390)

No person shall operate or cause to be operated, any source of sound at any location within the unincorporated county, or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person which causes the noise level, when measured on any other property either incorporated or unincorporated, to exceed any of the following exterior noise standards:

Exterior Noise Standards, dBA						
Area	**Duration**	**Std # 1**	**Std # 2**	**Std # 3**	**Std # 4**	**Std # 5**
		30min/hr L50	**15min/hr L25**	**5 min/hr L8.3**	**1 min/hr L1.7**	**At no time L0**
Residential	7 am – 10 pm	50	55	60	65	70
	10 pm – 7 am	45	50	55	60	65
Commercial	7 am – 10 pm	60	65	70	75	80
	10 pm – 7 am	55	60	65	70	75
Industrial:	Anytime	70	75	80	85	90

Table 1. *Std = Standard dB that may not exceed the cumulative period*

Construction Noise Ordinance: Construction Noise Standards (12.08.440)
Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on Sunday or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real-property line, except for emergency work or public service utilities or by variance issued by the health officer is prohibited.

A. *Mobile Equipment – Maximum noise levels for nonscheduled intermittent, short-term operation (less than 10 days) of mobile equipment shall not exceed:*

	Single-family Residential	**Multi-family Residential**	**Semi residential/ Commercial**
Daily, except Sundays and legal holidays, 7:00 a.m. to 7:00 p.m.	75 dBA	80 dBA	85 dBA

Table 2. *Std = Standard dB that may not exceed*

B. *Stationary Equipment – Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment shall not exceed:*

	Single-family Residential	**Multi-family Residential**	**Semi residential/ Commercial**
Daily, except Sundays and legal holidays, 7:00 a.m. to 7:00 p.m.	60 dBA	65 dBA	70 dBA

Table 3. *Std = Standard dB that may not exceed*

For questions regarding the above comments, please contact Makkaphoeum Em at (626) 430-5201 or mem@ph.lacounty.gov.

For any additional questions regarding this report, please contact Veronica Aranda, DRP Liaison for Public Health at DPH-EHDRPLiaison@ph.lacounty.gov.

LM:va
DPH_CLEARED_APN-2865-003-013_RPPL2023004336_09.29.2025

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Air Quality (Section 5.1 of the Draft SEIR)					
MM 5.1-1	Prior to grading permit issuance, applicants shall develop a Construction Traffic Emission Management Plan to minimize emissions from vehicles including, but not limited to, scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes. (SCVAP MM 3.3-1)	Prior to grading permit issuance	Applicant	County of Los Angeles Department of Regional Planning	
MM 5.1-2	Prior to grading permit issuance, applicants shall develop a Construction Dust Emission Management Plan to minimize construction-related dust and particulate emissions. The Construction Emission Management Plan shall require the use of Best Available Control Measures, as specified in Table 1 of SCAQMD's Rule 403. If potentially significant impacts are identified after the implementation of the SCAQMD recommended Best Available Control Measures, the Construction Emission Management Plan shall include the following additional elements: (SCVAP MM 3.3-2 dust measures) • Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. When wind speeds exceed 15 miles per hour the operators shall increase watering frequency. • Active sites shall be watered at least three times daily during dry weather. • Increase watering frequency during construction or use non-toxic chemical stabilizers if it would provide higher control efficiencies. • Suspend grading and excavation activities during windy periods (i.e., surface winds in excess of 25 miles per hour). • Suspend the use of all construction equipment during first-stage smog alerts. • Application of non-toxic chemical soil stabilizers or apply water to form and maintain a crust on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). • Application of non-toxic binders to exposed areas after cut and fill operations and hydroseeded areas. • Cover or application of water or non-toxic chemical suppressants to form and maintain a crust on inactive storage piles. • Planting of vegetative ground cover in disturbed areas as soon as possible and where feasible. • Operate street sweepers that comply with SCAQMD Rules 1186 and 1186.1 on roads adjacent to the construction site so as to minimize dust emissions. Paved parking and staging areas shall be swept daily. • Reduce traffic speeds on all unpaved roads to 15 miles per hour or less. • Pave or apply gravel on roads used to access the construction sites when possible. • Designate personnel to monitor dust control measures to ensure effectiveness in minimizing fugitive dust emissions. • An information sign shall be posted at the entrance to each construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. Any reasonable complaints shall be rectified within 24 hours of their receipt.	Prior to grading permit issuance	Applicant and Future Developers	County of Los Angeles Department of Regional Planning; SCAQMD	
MM 5.1-3	Prior to grading permit issuance, applicants shall develop a Construction Equipment Exhaust Emission Management Plan to minimize construction-related exhaust emissions. The Construction Equipment Exhaust Emission Management Plan shall require the following elements: (SCVAP MM 3.3-2 exhaust emission measures) • Scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes.	Prior to grading permit issuance	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)

• Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 10:00 AM and 3:00 PM, and between 7:00 PM and 6:00 AM provided that a noise disturbance is not generated across a residential or commercial property line).
• Use of diesel-powered construction equipment shall use ultra-low sulfur diesel fuel.
• Use electric welders to avoid emissions from gas or diesel welders when such equipment is commercially available.
• Use electricity or alternate fuels for on-site mobile equipment instead of diesel equipment when such equipment is commercially available.
• Use on-site electricity or alternative fuels rather than diesel-powered or gasoline powered generators when such equipment is commercially available.
• Maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations.
• Minimize idling time either by shutting equipment when not in use or reducing the time of idling to 5 minutes as a maximum.
• Limit, to the extent feasible, the hours of operation of heavy duty equipment and/or the amount of equipment in use.
• Retrofit large off-road construction equipment that will be operating for significant periods. Retrofit technologies such as particulate traps, selective catalytic reduction, oxidation catalysts, air enhancement technologies, etc., shall be evaluated. These technologies will be required if they are certified by CARB and/or the US EPA, and are commercially available and can feasibly be retrofitted onto construction equipment.
• The project applicant shall require all on-site construction equipment to meet US EPA Tier 4 or higher emissions standards according to the following:
  ○ April 2010 through December 31, 2011: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 2 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
  ○ January 1, 2012 through December 31, 2014: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
  ○ Post-January 1, 2015: All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. A copy of each unit's certified tier specification, BACT documentations, and CARB, SCAQMD, or ICAPCD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.
• The contractor shall utilize low-VOC content coatings and solvents that are consistent with applicable SCAQMD and ICAPCD rules and regulations.				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	• Consideration shall be given to use of other transportation methods to deliver materials to the construction sites (for example, trains or conveyors) if it would result in a reduction of criteria pollutant emissions.				
MM 5.1-4	The Project Applicant or Construction Manager shall ensure that, during all grading activities, construction grading shall be discontinued on days forecasted for first-stage alerts.	During all grading activities	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-5	Prior to grading permit issuance, applicants shall be required to conduct an LST analysis (SCVAP MM 3.3-3).	Prior to grading permit issuance	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-6	The Project Applicant or Construction Manager shall ensure that, during mass grading activities, mass grading shall not occur within 1,600 feet of the Northlake Hills Elementary School when school is in session to the maximum extent feasible.	Prior to issuance of grading permits for areas within 1,600 feet of the Northlake Hills Elementary School	Construction Contractor, Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-7	Prior to final building inspection, the applicant shall provide preferential parking spaces for carpools and vanpools at major commercial and office locations. The spaces shall be clearly identified on plot plans and may not be pooled in one location (SCVAP MM 3.3-6).	Prior to final building inspection	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-8	New residential developments shall allow only natural gas-fired hearths and shall prohibit the installation of wood-burning hearths and wood-burning stoves (SCVAP MM 3.3-7).	Prior to issuance of each residential building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-9	A commuter computer program shall be developed for the NorthLake residents in an attempt to reduce commuter vehicle trips generated by the proposed projects. (1992 SP EIR MM 4.5-9).	Prior to issuance of the first residential occupancy permit	Applicant	County of Los Angeles Department of Regional Planning	
MM 5.1-10	Prior to the issuance of each non-residential building permit, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the building designs. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits. ▪ For buildings that are greater than 100,000 square feet of building space or with more than ten tenant-occupants, changing/shower facilities shall be provided as specified in Section A5.106.4.3, Nonresidential Voluntary Measures, of the California Green Building Standards (CALGreen) Code. • Facilities shall be installed to support future electric vehicle charging at each non-residential building with 30 or more parking spaces. Installation shall be consistent with Section A5.106.5.3, Nonresidential Voluntary Measures (Tier 1), of the CALGreen Code. • The Project shall install 135 electric vehicle (EV) chargers[4] at non-residential parking spaces within the Project limits and/or the greater Castaic community.	Prior to the issuance of each non-residential building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-11	Prior to the issuance of each residential building permit, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the building designs or specifications. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits ▪ Visitor parking shall include preferentially located parking spaces for alternative-fueled vehicles. • Bicycle parking shall be provided as specified in Section A4.106.9, Residential Voluntary Measures, of the CALGreen Code, or, provide required long-term and short-term bicycle parking for buildings as specified in Section 22.52.1225 of the County Zoning Ordinance, whichever is more stringent. • 100 percent of residences shall be pre-wired for an EV charging station and at least 10 percent of residences shall have an EV charging station.	Prior to the issuance of each residential building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

[4] Assumed to be Level 2 chargers that can provide enough electricity to provide a 25 mile driving range per hour spent charging.

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.1-12	Prior to issuance of each building permit for parking structures and parking lots with 20 or more parking spaces, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the parking facility. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits. • The parking facility shall include a minimum of five percent preferentially located parking spaces for alternative-fueled (electric, natural gas, or similar low-emitting technology) vehicles. • The parking facility shall include at least one electric vehicle charging station. Electrical lines shall be designed and sized to add additional charging stations for up to three percent of the total parking spaces when a demand is demonstrated. The design and installation shall be consistent with Section A4.106.8.2, Residential Voluntary Measures, of the CALGreen Code. • For residential parking facilities, bicycle parking shall be provided as specified in Section A4.106.9, Residential Voluntary Measures, of the CALGreen code.	Prior to issuance of each building permit for parking structures and parking lots with 20 or more parking spaces	Construction Contractor, Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-13	Once constructed, the Applicant shall ensure that the tenants/operators of non-residential uses include the following features and procedures. Proof of compliance shall be provided to the County within one month following the issuance of each occupancy permit. • Post signs requiring that trucks shall not be left idling for prolonged periods (i.e., in excess of 5 minutes, as required by State law). • Post both bus and Metrolink schedules in conspicuous areas. • Configure the employee work schedules around the local bus schedule and provide said schedules as evidence of compliance to Regional Planning upon request.	Within one month following the issuance of each occupancy permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-14	Prior to the issue of occupancy permits for each industrial building, the Permit Applicant/Developer shall demonstrate that ambient air quality concentrations of criteria pollutants at sensitive receptors resulting from the proposed use(s) shall not exceed the following: • Nitrogen dioxide (NO_2) – 0.10 parts per million (ppm), 1 hour average; 0.03 ppm, annual arithmetic mean • Inhalable particulate matter (PM10) – 2.5 micrograms per cubic meter ($\mu g/m^3$), 24-hour average; 1.0 $\mu g/m^3$-annual average • Fine particulate matter (PM2.5) – 2.5 $\mu g/m^3$, 24-hour average The Permit Applicant/Developer shall also demonstrate through preparation of a subsequent health risk assessment that the incremental health risks from toxic air pollutants at sensitive receptors resulting from the proposed use(s) shall not exceed the following: • Maximum incremental cancer risk – 10 in 1 million • Cancer burden – 0.5 excess cancer cases in areas where the cancer risk exceeds 1 in 1 million • Chronic hazard index – 1.0 • Acute hazard index – 1.0	Prior to the issuance of occupancy permits for each industrial building	Applicant and Future Developers	County of Los Angeles Department of Regional Planning and Department of Public Health	
MM 5.1-15	No playgrounds, ball fields, or other facilities that encourage active recreation shall be built west of the Southern California Edison (SCE) easement.	Prior to tract map approval	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-16	Prior to the commencement of brush clearing, grading, or other activity that would generate fugitive dust, the Property Owner/Developer shall employ a Dust-Control Supervisor who will be on the site within 30 minutes of the start of work taking place each morning; will have the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all South Coast Air Quality Management District (SCAQMD) Rule 403 requirements; and will have completed the SCAQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class.	Prior to brush clearing activities, issuance of grading permits, or other construction activities	Construction Contractor	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.1-17	To aid in the prevention of Valley Fever among construction crews on the Project site, the following measures shall be implemented by the Construction Contractor during all construction activities: • Hire crews from local populations where possible, since it is more likely that they have been previously exposed to the fungus and are therefore immune. • Require crews to use NIOSH-approved respiratory protection with particulate filters to restrict inhalation of particulates during Project clearing, grading, and excavation operations in accordance with California Division of Occupational Safety and Health regulations. • Where acceptable to the County of Los Angeles Fire Department, control weed growth by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering. • During rough grading and construction, the access way into the Project site from adjoining paved roadways shall be paved or treated with environmentally safe dust-control agents.	Prior to issuance of grading permits and through duration of construction activities	Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.1-18	Prior to sale, lease, or rental of any residential structure or portion thereof on the NorthLake Project site, the Property Owner/Developer shall provide to each prospective purchaser or tenant a notice and statement of acknowledgment that shall be executed (i.e., read and signed) by the prospective purchaser, lessee, or tenant that the property within NorthLake may present a temporary risk of exposure to Valley Fever spores during construction or other earth-moving activities. The form shall include strategies to reduce potential exposure to Valley Fever spores. The form and method of distribution of said notice and statement of acknowledgment shall be as approved by the County of Los Angeles Department of Regional Planning**.**	Prior to sale, lease, or rental of any residential structure or portion thereof on the NorthLake Project site	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-19	Prior to issuance of each grading and building permit, the applicant/developer shall require in contract specifications, that contractors set goals to limit unnecessary construction equipment idling to 3 minutes and include methods to encourage equipment operators to achieve the 3-minute goal.	Prior to each grading and building permit	Project Applicant and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.1-20	Prior to the issue of the first occupancy permit for commercial or industrial facilities, the master developer shall establish the NorthLake Community Transportation Program that would be established through the creation of Covenants, Codes and Restrictions (CC&Rs) for all commercial and industrial properties within the Specific Plan to establish and coordinate the following programs that would reduce single-vehicle commuting and the associated criteria pollutant and GHG emissions: • Ride share program – The program will establish a system for coordinating ride sharing among employees of on-site commercial and industrial businesses. The program will also work with employers to support vanpools. • Commuter bus program – The program will coordinate with Santa Clarita Valley Transit to (1) extend the existing bus routes into the NorthLake Project area and (2) determine employee demand for express commuter buses to the Project Site and establish commuter bus service in response to demand.	Prior to issuance of the first occupancy permit for commercial or industrial facilities	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
Biological Resources (Section 5.2 of the Draft EIR)					
MM 5.2-1	If special-status species may potentially be subject to direct loss through implementation of construction activities, mitigation measures proposed as part of biological site survey reports shall include a requirement for preconstruction special-status species surveys, followed by measures to ensure avoidance, relocation or safe escape of special-status species from construction activity, whichever action is the most appropriate. If special status species are found to be brooding, denning, nesting, etc. on site during the preconstruction survey, construction activity shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate off-site habitat areas. A qualified biologist shall be on site to conduct surveys, to perform or oversee implementation of protective measures, and to determine when construction activity may resume. **(SCVAP 2012 EIR MM 3.7-2)**	Prior to issuance of grading permits	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	
MM 5.2-2	Impacts on sensitive habitats resulting from implementation of the Area Plan shall be compensated for through the acquisition of lands described in Policies CO 10.1.3, CO 10.1.11 and CO 10.1.12. Said acquisition shall prioritize habitat types that are particularly at risk in the region. At risk habitats include but are not limited to waterways, wetlands and vernal pools; alluvial scrub; native grasslands; savannas, woodlands and forests; holly-leaf cherry and Great basin sagebrush associations; and rocklands. **(SCVAP 2012 EIR MM 3.7-2)**	Prior to issuance of grading permit(s) and during construction	Project Applicant, Future Developers, and Construction Contractor	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.2-3	Removal of riparian habitat will require coordination with the California Department of Fish and Wildlife and the U.S. Army Corps of Engineers. Mitigation for riparian habitat lost may include one or a combination of the following measures: 1) project alteration to avoid impacting the onsite riparian habitat; 2) the onsite creation of at least an equal amount of equal quality habitat; 3) enhancement of poor quality onsite habitat, usually greater than 1:1 ratio (habitat lost to habitat enhanced); and 4) creation of offsite habitat where none currently exists. Final mitigation requirements shall be determined through consultation with the appropriate agencies. **(1992 SP EIR MM 4.7-5)**	Prior to issuance of grading permit(s) and during construction	Project Applicant, Future Developers, and Construction Contractor	County of Los Angeles Department of Regional Planning and California Department of Fish and Wildlife and U.S. Army Corps of Engineers	
MM 5.2-4	Mitigation for the club-haired mariposa lily and the slender mariposa lily shall consist of transplantation of lilies to a mitigation site and establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*).[5] The *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from lilies that are located within the impact boundaries and bulbs will be subsequently excavated and stored for later transplantation to the translocation site depicted on Exhibit 5 of the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the club-haired mariposa lily and the slender mariposa lily: • A pre-grading survey shall be conducted for two seasons following emergence of leaves and during the peak flowering period (approximately March through June) by the Biological Monitor. The Biological Monitor shall clearly identify each lily location within the impact area with a pin flag for later collection. The pre-grading survey shall also document the approximate coverage of native and non-native plants at each lily population to be impacted. • Prior to seed collection, the existing lily locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities. • Individual lily bulbs shall be excavated and collected following the seed collection and once the bulbs have entered their winter dormancy period (approximately September 1). The bulbs shall be stored by a qualified nursery or institution with appropriate storage facilities and all non-target bulbiferous species shall be discarded. • A portion of the collected seeds will be used to grow 500 slender/club-haired mariposa lilies for contingency purposes and stored a native plant nursery until needed as determined by the project biologist. • Receptor site or sites identified in BonTerra's *Feasibility Analysis of NorthLake Biological Mitigation Requirements* and refined by GLA (as shown on Exhibit 5 of the *Special-Status Plants Impact Assessment and Habitat Mitigation and* Monitoring *Plan*) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. • Receptor sites on lands currently owned by NorthLake will be managed by SMMC or other approved entities. Prior to commencing the actions set forth in this plan, the applicant shall submit final agreements to CDFW and the County with the acceptable entities that will hold the Conservation Easement(s) (CE) and provide long-term management. • Funding for this measure shall be suitably established to the County's satisfaction.	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[5] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• Performance criteria have been developed in the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan,* dated February 2023, and pre-approved by the LACDRP and CDFW. The performance criteria shall address (1) native and non-native plant coverage requirements (mitigation site conditions should be consistent with lily populations in the impact area) and (2) percentage of lilies that exhibit emergent leaves that that bloom each year as follows (because the salvaged plantings will be phased over a three-year period as described above, the monitoring period would be ten years for each phase or a minimum of 13 years beginning from the start of phase 1. As set forth in Table 3 of the of the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan*, under the phased translocation, 40-percent of plants would be translocated in year 1, 40-percent in year 2 and 20-percent in year 3): **Year One** • Emergence of leaves of a minimum of 70-percent of the translocated bulbs • Flowering of a minimum of 50-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Two** • Emergence of leaves of a minimum of 60-percent of the translocated bulbs • Flowering of a minimum of 40-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Three** • Emergence of leaves of a minimum of 50-percent of the translocated bulbs • Flowering of a minimum of 30-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Four** • Emergence of leaves of a minimum of 50-percent of the translocated bulbs • Flowering of a minimum of 30-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Five** • Emergence of leaves of a minimum of 60-percent of the translocated bulbs • Flowering of a minimum of 40-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• No evidence of herbivory **Year Six** • Emergence of leaves of a minimum of 70-percent of the translocated bulbs • Flowering of a minimum of 50-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Seven** • Emergence of leaves of a minimum of 70-percent of the translocated bulbs • Flowering of a minimum of 50-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Eight** • Emergence of leaves of a minimum of 80-percent of the translocated bulbs • Flowering of a minimum of 60-percent of the translocated bulbs **Year Nine** • Emergence of leaves of a minimum of 90-percent of the translocated bulbs • Flowering of a minimum of 70-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Ten** • Emergence of leaves of a minimum of 100-percent of the translocated bulbs • Flowering of a minimum of 70-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory • Potential seed sources from additional donor sites shall also be identified in case it becomes necessary to collect additional seed for use on the site following performance of remedial measures. The monitoring shall be conducted for ten years (for each phase) from installation of the translocated bulbs or from installation of container plants. As noted, this could result in two separate and unrelated ten-year monitoring efforts, including one that originates with bulb installation and a subsequent effort that begins with container stock installation. If the performance standards are not being met during the first year, additional measures may be suggested as determined appropriate by the Project Biologist as set forth in the Contingency				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Plan set forth in the Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan as set follows: • If any of the translocation/receptor sites are observed to be failing significantly to achieve the performance standard during the ten-year monitoring period, the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be stored at a nursery for the first year of the program. • If the receptor sites appear on track to meet the performance standards no sooner than year seven of the monitoring and maintenance period, the remaining plant material may be planted at the receptor sites (if space allows) or additional acceptable receptor sites will be identified. • Seeds and/or bulbs will continue to be harvested from lilies maintained in the nursery and installed in the receptor sites on an as-needed basis to ensure receptor sites are progressing toward final performance. • If the receptor sites fail to achieve the performance standards by the tenth year of the program, the monitoring period may be extended if the Project Biologist in consultation with LACDRP and CDFW, determines that the site is continuing to progress and can ultimately achieve the performance standards. Alternatively, if it is determined that a particular receptor site is not able to meet performance standards, then additional receptor sites will be identified to make up the difference. Thus, for example, if a receptor site received 500 bulbs, at the 80-percent success criteria it must have 400 emergent plants or 300 flowering plants to be successful. If the site only exhibits 40-percent emergent plants and 30-percent of flowering Mariposa lilies, then the site would be credited with the partial success achieved and an additional site where the shortfall could be made up would be identified. • Potential seed sources from additional donor sites shall also be identified in case it becomes necessary to collect additional seed for use on the site following performance of remedial measures.				
MM 5.2-5a Mitigation for the round-leaved filaree shall consist of transplantation of round-leaved filaree to a mitigation site and establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*).[6] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from round-leaved filaree that are located within the impact boundaries and stored for propagation of container plants to provide for introduction of propagated plants to the translocation site depicted on Exhibit 4A of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the round-leaved filaree: • A pre-grading survey shall be conducted for two seasons, prior to grading of the occupied area, during the peak flowering period (approximately March through May) by the Biological Monitor. The Biological Monitor shall clearly identify the extent of the round-leaved filaree location within the impact area with pin flags and record the extent of the population using sub-meter GPS for later collection. The pre-grading surveys shall also document the approximate coverage of native and non-native plants at the location of the population to be impacted. • Prior to seed collection, the existing round-leaved filaree locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities.	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[6] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• Collected seeds, up to one half, will be used to grow a minimum of 300 plants and the remaining half will be stored to allow for contingency purposes all of which would be planted at the receptor site once performance standards are achieved. • Receptor site or sites identified by GLA during site assessments in 2021 (see Exhibit 4A in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[7]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP and CDFW. In developing the performance standards for the round-leaved filaree, it is important to consider the primary goal of the plan referenced above, which is to establish a self-sustaining population of this plant consisting of the number of individuals/population size determined during pre-construction surveys. With replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors: • The number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe the translocated populations over a period of years to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track emergent plants along with flowering individuals which in combination provides the best and easiest indicators to track that the translocation is succeeding. • Various threats to the plants must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of recruited individuals, with seed set, leading to future germination/successful reproduction. • Habitat characteristics, including non-native grasses and herbaceous weeds, are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory. Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the variability in the number of flowering individuals from year-to-year, the performance standards will have been achieved during at least three years of the ten-year monitoring program. Thus, the standards provide specific criteria showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction. **Year One Through Year Ten** • Flowering of a minimum of 100-percent of the total number of flowering plants counted during pre-construction surveys originating from container stock or seed bank. As noted, the number of container stock individuals planted or plants originating from seed following the initial establishment will equal or exceed the number impacted as determined during pre-construction surveys during at least three years of the ten-year monitoring period; and • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial planting (30-percent).				

[7] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Contingency Plan In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards: • If the receptor site is observed to be failing significantly to achieve the performance standards during the ten-year monitoring period (e.g., flowering of 100-percent is not achieved after three years with normal or above-normal rainfall), the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be propagated from the contingency seed supply held at the nursery for contingency purposes (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials. The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, the container stock would be propagated from the contingency seed and the plants would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance, would be initiated as set forth above.				
MM 5.2-5b Mitigation for the paniculate tarplant shall consist of transplantation of paniculate tarplant by means of seed broadcasting to a mitigation site with establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*). [8] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from paniculate tarplant that are located within the impact boundaries and stored for introduction to the receptor site depicted on Exhibit 4A of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the paniculate tarplant: • A pre-grading survey shall be conducted for two seasons during the peak flowering period (approximately June through August) by the Project Biologist. The Project Biologist shall clearly identify the extent of the paniculate tarplant location within the impact area with perimeter pin flags and sub-meter GPS for later use during seed collection. The pre-grading survey shall also document the approximate coverage of native and non-native plants at the location of the population to be impacted. • Prior to seed collection, the existing paniculate tarplant locations marked during pre-construction surveys shall be monitored every two weeks by the Project Biologist or a qualified Seed Collector under the direction of the Project Biologist to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities. • One third of the collected seeds will be used to broadcast on the receptor site during an initial year and one third would be retained for the second year at the receptor site. The remaining one-third of the seed would be held for contingency purposes until performance standards are achieved. Once they are achieved, the contingency seed would be distributed into the mitigation site. • The receptor site identified by GLA during 2021 (see Exhibit 4A in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[9]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[8] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

[9] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP (and CDFW). In developing the performance standards for the paniculate tarplant, it is important to consider the primary goal of the plan as set forth above, which is to establish a self-sustaining population of this plant consisting of the number of individuals/population size determined during the largest population number of the two years of pre-construction surveys. With replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors: • The number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe the translocated populations over a period of years to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track flowering individuals to confirm that the translocation is succeeding. • Various threats to the plants must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of recruited individuals, with seed set, leading to future germination/successful reproduction. • Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory. Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the variability in the number of flowering individuals from year-to-year, the performance standards will have been achieved during at least three years during the ten-year monitoring program. Thus, the annual standards provide specific criteria showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction. **Year One Through Year Ten** • Flowering of a minimum of 100-percent of the total number of flowering plants counted during the larger of the two years during which pre-construction monitoring was conducted. This would be achieved during at least three years of the ten-year monitoring period); and • Habitat subject to translocation must exhibit same or less cover by non-native grasses; and forbs than during the initial planting (30-percent). **Contingency Plan** In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards: • If the receptor site is observed to be failing significantly to achieve the performance standards during the ten-year monitoring period (e.g., flowering of 100-percent is not achieved after three years with normal or above-normal rainfall), the Biological Monitor will identify an alternate site(s) in which to install the contingency seed held at the nursery for contingencies purposes (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials. • The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, contingency seed would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance would be initiated as set forth above.				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.2-5c	Mitigation for the southwestern spiny rush includes two components to ensure long-term persistence of southwestern spiny rush in northern Los Angeles County. Mitigation includes 1) preservation of streambed habitat within Marple Canyon that contains 523 individuals of the spiny rush, and 2) planting of southwestern spiny rush at a mitigation site with establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan)*.[10] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seed will be collected from southwestern spiny rush plants located within the impact boundaries. The collected seed will be stored for propagation of container plants. Once propagated, the container plants would be introduced to the translocation site depicted on Exhibit 4B of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan.* The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the southwestern spiny rush: • A pre-grading survey shall be conducted during a single season during the peak flowering period (approximately March through May) by the Biological Monitor. The Biological Monitor shall identify the extent of the southwestern spiny rush location within the impact area using sub-meter GPS for later seed collection. • Prior to seed collection, the existing southwestern spiny rush locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities. • Collected seeds will be used to grow a minimum of 600 plants to allow for contingency purposes all of which would be planted at the receptor site. Half of the seed collected will be retained by the nursery for additional propagation as a contingency measure. • Receptor site or sites identified by GLA during site assessments in 2021 (see Exhibit 4B in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[11]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP and CDFW. In developing the performance standards for the southwestern spiny rush, it is important to consider the primary goal of the plan as set forth above, which is to provide for a combination of preservation and establishment of a self-sustaining population of this plant consisting of the 300 individuals, which in combination of the preservation in Marple Canyon would mitigate impacts to this species. In order to achieve survival of 200 plants within Grasshopper Creek, 300 individuals will be planted initially to allow for natural attrition. With the combined preservation and replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors: • Southwestern spiny rush is a perennial plant and the number of flowering individuals in any given year does not vary substantially. However, based on environmental conditions, it is not expected that populations change significantly over the period of years needed to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track the existing population within Marple Canyon along with established individuals in Grasshopper Creek to determine progress.	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[10] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

[11] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• Various threats to the plants established within Grasshopper Creek must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of planted and recruited individuals, with seed set, leading to future germination/successful reproduction. • Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory. Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the expected stability in the number of flowering individuals from year-to-year, the performance standards will have been achieved at the end of the ten-year monitoring program. Thus, the annual standards provide a guide showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction. **Marple Canyon Year One Through Year Ten** • Persistence of Marple Canyon population totaling 523 individuals with no more than ten-percent reduction due to such factors such as drought. Thus, there would be a minimum of 471 individuals at the end of the ten-year monitoring period. **Grasshopper Creek Year One** • Survival of 80-percent of the 200 established individuals. • Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year. **Grasshopper Creek Year Two** • Survival of 90-percent of the 200 established individuals. • Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year. **Grasshopper Creek Year Three through Ten** • Survival of 100-percent of the 200 established individuals. • Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year. **Contingency Plan** In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards: • If the Grasshopper Creek receptor site is observed to be failing significantly to achieve the performance standard during the ten-year monitoring period (e.g., survival of 100-percent of 200 established individuals is not achieved by the end of ten years), the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be propagated from the contingency seed supply held at the nursery for the (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials. The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, the container stock would be propagated from the				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	contingency seed and the plants would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance, would be initiated as set forth above.				
MM 5.2-6	The loss of sage scrub habitat within the impact area is considered a significant impact. Sage scrub habitat shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but shall be no less than 2:1 for habitat restoration, enhancement or preservation, or combination thereof. A total of 634.70 acres of sage scrub would be impacted by Project implementation, which includes Purple sage scrub, California sagebrush–California buckwheat scrub, Black sage scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, California sagebrush–California buckwheat scrub/California annual grassland, and the burned sage scrub areas: burned Purple sage scrub, burned California sagebrush–California buckwheat scrub, burned Black sage scrub, and burned California sagebrush–California buckwheat scrub/California annual grassland. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, and preservation shall depend on the initial quality of the habitat area to be restored, enhanced or preserved and would be determined by the Project Applicant and the LACDRP. Sage scrub habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. Where restoration or enhancement is the proposed mitigation, the Project Applicant shall develop a Habitat Mitigation and Monitoring Program (HMMP) and shall submit it to the LACDRP and the California Department of Fish and Wildlife (CDFW) for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to the issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants of suitable sage scrub species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), Peirson's morning-glory will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria, which shall include the following items: **Responsibilities and Qualifications**. The responsibilities and qualifications of the Project Applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures and/or State or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency. b. **Performance Criteria**. Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The HMMP shall state that the use of the mitigation site by special status wildlife species (e.g., coastal California gnatcatcher), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off. c. **Site Selection.** The mitigation sites shall be determined in coordination with the Project Applicant and the LACDRP. The site(s) shall be located in dedicated open space areas (or areas available for dedication), and shall be contiguous with other natural open space areas. Mitigation sites include onsite, NorthLake-owned offsite property, and obtaining acres from a CDFW-approved mitigation bank or through purchase and long-term conservation of suitable habitat, including areas where restoration or enhancement is needed, or a combination of the two options to account for the remainder. The Project Applicant shall demonstrate acquisition of suitable lands for restoration, enhancement, or preservation prior to issuance of the Project grading permit.	Prior to issuance of grading permits, and HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	County of Los Angeles Department of Regional Planning/California Department of Fish and Wildlife	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
d. **Native Plant and Seed Materials Procurement**. For restoration or enhancement, at least three years prior to mitigation implementation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin: i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. All container plants shall be propagated from seed of local origin as defined above. No plant or seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the' following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. e. **Wildlife Surveys and Protection.** The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., coastal California gnatcatcher]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. The HMMP shall also describe potential restrictions on these management tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). f. **Site Preparation and Plant Materials Installation.** For restoration or enhancement, mitigation site preparation shall include, as necessary (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, decompacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photodegradable'] fiber roll); (f) application of salvaged native plant materials (i.e., duff) as available, and supervised by a biological monitor, (g) temporary irrigation installation; (h) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials including specification of approved herbicides); (i) planting of container species; and (j) seed mix application. g. **Schedule.** An implementation schedule shall be developed for restoration or enhancement, that includes planting and seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). h. **Maintenance Program**. The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal-including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) replacement of dead container plants (as needed); (g) application of remedial seed mixes (as needed); (h) herbivory control; and (i) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. The mitigation site shall be maintained for a period of five years to ensure the successful sage scrub habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria. i. **Monitoring Program**. The Monitoring Program for restoration or enhancement shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring (e.g., randomly placed point-intercept transects); (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the Project Applicant has been released from maintenance requirements by the LACDRP. j. **Long-term preservation**. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.2-7	The loss of California annual grassland/wildflower fields within the impact area is considered to be a significant impact. California annual grassland/wildflower fields shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 24.23 acres of Foothill needlegrass grassland and burned Foothill needle grass grassland would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). California annual grassland/wildflower fields habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP and the California Department of Fish and Wildlife (CDFW) for review and approval. The HMMP shall be developed by a qualified restoration ecologist submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for burrowing owls. Habitat restoration/enhancement shall consist of seeding of suitable California annual grassland/wildflower fields plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria, which shall include the following items: • The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration enhancement programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency. • Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program. • The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas or areas available for dedication as open space, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owls and other wildlife species; e.g., opportunities for escape and refuge from stochastic events such as fire, flood, etc.; (3) consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible. soil types and microhabitat conditions suitable for the special status plant species listed above. • At least two years prior to mitigation plant and seed installation associated with restoration of enhancement, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in	Prior to issuance of grading permits, HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	County of Los Angeles Department of Regional Planning/California Department of Fish and Wildlife	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. • The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owls, to determine the species' occupation of the mitigation site(s). The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). • For restoration or enhancement, mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) temporary irrigation installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)--including specification of approved herbicides; and (g) seed mix application. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. • An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). • The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal-including specification of approved herbicides; (d) maintenance of erosion control measures; (e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria for restoration or enhancement. • The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo documentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.				
MM 5.2-8	The loss of foothill needlegrass grassland within the impact area is considered to be a significant impact. Foothill needlegrass grassland shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 342.85 acres of California annual grassland/Wildflower fields would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the	Prior to issuance of grading permits, HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	County of Los Angeles Department of Regional Planning/California Department of Fish and Wildlife	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). Foothill needlegrass grassland habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP and the California Department of Fish and Wildlife (CDFW) for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for the burrowing owl. Habitat restoration/enhancement shall consist of seeding of suitable foothill needlegrass grassland plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria, which shall include the following items: a. **Responsibilities and Qualifications**. The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency. b. **Performance Criteria**. Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for the burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off. c. **Site Selection**. The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas or areas available for dedication, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owls and other wildlife species; e.g., opportunities for escape and refuge from stochastic events such as fire, flood, etc.; (3) consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible, soil types and microhabitat conditions suitable for the special status plant species listed above. d. **Seed Materials Procurement.** At least two years prior to mitigation plant and seed installation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area. in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. e. **Wildlife Surveys and Protection**. The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation,				

TABLE 4-1
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Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owls, to determine the species' occupation of the mitigation site(s). The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). f. **Site Preparation and Plant Materials Installation**. For restoration or enhancement, mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, decompacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photodegradable'] fiber roll); (f) temporary irrigation installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)--including specification of approved herbicides; and (h) seed mix application. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. g. **Schedule**. An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). h. **Maintenance Program**. The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal- including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shalt reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria. i. **Monitoring Program.** The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP. j. **Long-term preservation**. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.				
MM 5.2-9 A mitigation program for western spadefoot toad (WST) shall be implemented prior to construction, ground disturbance, or vegetation removal that would impact the WST breeding habitat, or areas within 1,000 feet of WST-occupied ponds within the Project Site. The mitigation program would include the components set forth below. A detailed methodology for this effort shall be reviewed by the CDFW and the LACDRP prior to implementation of the mitigation program. Results of the mitigation program shall be provided to the CDFW and the LACDRP. • Prior to implementing the Spadefoot Relocation Plan, two focused surveys during average or above-average rainfall years will be conducted within the prior appropriate seasons. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e.,	Prior to construction activities in the spring during the breeding season	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	California Department of Fish and Wildlife and County of Los Angeles Department of Regional Planning	

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Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied pond as well as those identified in recent surveys. • Suitable sites for seasonal pond creation, within the Project open space, specifically within other NorthLake-owned properties, have been identified and 1.07 acres of seasonal pond habitat will be created. The specific location of the 1.07-acre pool complex is depicted on Exhibit 5 of the *NorthLake Castaic, Los Angeles County, California, Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan July 2022 (Revised March and June 2023)* (HMMP). As described in the WST Mitigation Implementation Plan, three pools would be created based on current grading plans. The combined size of the three pools (1.07 acres) exceeds the maximum combined size of potential WST habitat currently at the Project Site (0.95 acres, as shown in Table 2-4, above). The WST Mitigation Implementation Plan would address the following issues specific to the site or sites: o Soil Characteristics and whether clay liners will be necessary o Pool locations and site access routes for construction o Types of habitat potentially affected by construction and measures to restore damaged habitat subject to temporary impacts o Watershed size and characteristics o Grading plan with cross section for each pool to be created o Specifications for clay liner (if needed) including source of clay and installation methods o Upland habitat characteristics, including soil suitability for burrowing and vegetative buffer, will also be addressed in the plan • Following creation of the 1.07-acre pool complex or complexes and prior to grading of the impacted pools, each pool within each complex will be monitored during the rainy season to ensure that the created pools exhibit at least 60 days of ponding during an average or above-average rainfall year. • Following documentation of adequate ponding for each created pool during an average or above-average rainfall year, and prior to grading of the impacted pools, soil inoculum from the impacted pools will be translocated to the created pools to provide a food source for WST. • Following documentation of adequate ponding for each created pool during an average or above-average rainfall year, and prior to grading of the impacted pools, WST egg masses, larvae and metamorphs will be translocated to the created pools for at least two wet seasons where WST egg masses, larvae and metamorphs are present in the impact pools and suitable conditions to receive the WST egg masses, larvae and metamorphs are present in the created pools. In addition, data regarding successful breeding will be submitted to CDFW for concurrence that sufficient reproduction has occurred to allow impacts to the pools in the development area. • During grading of the pools to be impacted, the Project Biologist will be present to rescue any adult WST that would be relocated to the created pool complex. • Following the two seasons of translocation of WST egg masses, larvae and metamorphs, and successful breeding, the created pools will be monitored for ten years as set forth in HMMP Table 6 (Conceptual Schedule for Pond Creation Milestones) to document the progression of the WST toward the performance standards provided in the WST HMMP prepared for the project: o **Hydrological Monitoring Performance Standard.** Ponding duration of at least 60 days must be documented to occur during average or above average rainfall years prior to translocation of egg masses, larvae, metamorphs, or adults. Ponding duration of at least 60 days must also be documented during the 10-year monitoring period. At the end of the ten-year monitoring period, this performance standard will have been achieved if ponding duration equals or exceeds ponding duration of 60 days during average or above-average rainfall years. It is important to note that during below-average rainfall years, depending on the severity of drought conditions that the created ponds will not pond for sufficient duration to allow WST to reach maturity. Thus, during the ten-year monitoring period, it is to be expected that some years will not pond for 60 days. Nevertheless, the performance standard				

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	for hydrology will be considered achieved as long a ponding for 60 days occurs during average rainfall years. Finally, hydrology may be augmented at the direction of the Project Biologist, especially once breeding is observed and is threatened by declining water levels in the pools due to lower-than average rainfall. In the event that the Project Biologist determines that additional water should be added to any pond occupied by egg masses or larvae, it will be necessary to ensure protection of the egg masses and larvae by discharging water to the pool(s) in a manner that does not disturb the egg masses or larvae and does not result in the erosion of soil into the pool(s). This could be accomplished through temporary placement of large gravel at the discharge site (at the edge of the pool(s)) underlain by plastic that would allow the water to enter the pool(s) slowly and with no sediment. ○ **Performance Standard Prior to Grading**. Prior to Project grading that removes the impacted doner pools, during an average or above-average rainfall year, at least two of the three created ponds within the pond complex exhibits emergence of metamorphs in each pond to ensure breeding in subsequent years. Successful breeding would be determined by the presence of egg masses that are not present due to translocation but which occur due to reproduction. Should this occur during a below-average rainfall year, the condition would be satisfied as it would show that the pools are performing as intended. In any case, data regarding successful breeding will be submitted to CDFW for concurrence that sufficient reproduction has occurred to allow impacts to the pools in the development area. ○ **Performance Standard Post-Grading**. Following Project grading that removes the impacted donor pools, during an average or above-average rainfall year, at least two of the three created ponds within the pond complex will exhibit breeding as indicated by the presence of WST egg masses, tadpoles/larvae/ or metamorphs, to confirm establishment of breeding WST for each pond complex created. Should this occur during a below-average rainfall year, the condition would be satisfied as it would show that the pools are performing as intended.				
MM 5.2-10	A Biological Monitor shall be on site during all vegetation clearing activities and thereafter on an as-needed basis. The Biological Monitor will conduct a clearance sweep prior to clearing activities to minimize potential for special status reptile mortality. If feasible, special status reptiles will be removed from the disturbance area and relocated to suitable habitat in adjacent areas.	Prior to and during all vegetation clearing activities	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	
MM 5.2-11	Riparian vegetation shall be preserved, restored, or enhanced on site or off site at a ratio identified in the USACE and CDFW permits/agreements for the project. The ratio shall be no less than 2:1 for habitat restoration or preservation. Habitat enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. The mitigation ratio for habitat enhancement shall depend on the initial quality of the habitat area to be enhanced, and would be determined by the Project Applicant, the USACE, the CDFW, and the LACDRP. Riparian habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The Project Applicant shall develop a HMMP and shall submit it to the USACE, the CDFW, and the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist and approved by the USACE, the CDFW, and the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants and cuttings of suitable riparian plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), spiny rush will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP and according to its specified materials, methods, and performance criteria, which shall include the following items: a. **Responsibilities and Qualifications.** The responsibilities and qualifications of the Project Applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under USACE and CDFW permit conditions. A successful program shall be defined as one that has been signed off on by the USACE and the CDFW.	Prior to issuance of grading permits, HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and County of Los Angeles Department of Regional Planning	

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Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
b. **Performance Criteria.** Mitigation performance criteria to be specified in the HMMP shall conform to USACE and CDFW permit conditions. The HMMP shall state that the use of the mitigation site by special status wildlife species (e.g., least Bell's vireo), though not a requirement for site success, would be regarded by the USACE, the CDFW, and the LACDRP, as a significant factor in considering eligibility for program sign-off. c. **Site Selection.** The mitigation sites shall be determined in coordination with the Project Applicant, the USACE, the CDFW, and the LACDRP. The site(s) shall be located in dedicated open space areas, and shall be contiguous with other natural open space areas. d. **Seed Materials Procurement.** At least two years prior to mitigation implementation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. e. **Wildlife Surveys and Protection.** The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., least Bell's vireo]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). f. **Site Preparation and Plant Materials Installation.** Mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) application of salvaged native plant materials (i.e., coarse woody debris), as available and supervised by a biological monitor; (g) temporary irrigation installation; (h) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)—including specification of approved herbicides; (i) planting of container plant and cutting species; and (j) seed mix application. g. **Schedule.** An implementation schedule shall be developed that includes planting and seeding to occur in late fall and early winter (i.e., between November 1 and February 15) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). h. **Maintenance Program.** The Maintenance Program shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal—including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) replacement of dead container plant and cuttings (as needed); (g) application of remedial seed mixes (as needed); (h) herbivory control; and (i) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. The mitigation site shall be maintained for a period of five years to ensure the successful sage scrub habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the USACE, the CDFW, and the LACDRP prior to five years if the mitigation program has achieved all performance criteria. i. **Monitoring Program.** The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring (in conformance with the USACE 2015 Guidelines); and (c) annual monitoring reports, which shall be submitted to the USFWS, the CDFW, and the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and				

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	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the Project Applicant has been released from maintenance requirements by the USACE, the CDFW, and the LACDRP. j. **Long-term preservation.** Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.				
MM 5.2-12	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of vegetation associated with project implementation, the limits of disturbance shall be clearly defined and marked in the field using lath and flagging or orange snow fencing. The Biological Monitor shall review the limits of disturbance prior to initiation of construction activities. The Biological Monitor shall be on site during the initial vegetation clearing and thereafter on an as-needed basis to assist the Project Applicant with mitigation measure compliance and to provide guidance in avoiding and/or minimizing impacts to biological resources.	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of vegetation associated with project implementation	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	
	MM 5.2-13 The Project shall be conducted in compliance with the conditions set forth in the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code with methods approved by USFWS and CDFW to protect active bird//raptor nests. The nature of the Project requires that work would be initiated during the breeding season for nesting birds (March 15-September 15) and nesting raptors (February 1-June 30). LACFCO, in consultation with a qualified biologist, may employ bird exclusionary measures (e.g., mylar flagging) prior to the start of bird breeding season to minimize opportunities for birds to nest within established boundaries of the Project. In order to avoid direct impacts on active nests, a pre-construction survey shall be conducted by a qualified Biologist for nesting birds and/or raptors within 3 days prior to clearing of any vegetation or any work near existing structures (i.e., within 50 feet for nesting birds and within 500 feet for nesting raptors). If the Biologist does not find any active nests within or immediately adjacent to the impact area, the vegetation clearing/construction work shall be allowed to proceed. Results of the surveys will be provided to the CDFW and the LACDRP. CDFW will be consulted for their determination of the need for an Incidental Take Permit, in the event that any listed or candidate species are encountered during pre-construction surveys. If the Biologist finds an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted or breeding activities substantially disrupted, the Biologist shall delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the nature of the construction activity. Typical nest buffers may be approximately 200 feet for song birds and 500 feet for raptors. Any nest found during survey efforts shall be mapped on the construction plans. The active nest shall be protected until nesting activity has ended. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by a qualified Biologist: (1) clearing limits shall be established within a buffer around any occupied nest, unless otherwise determined by a qualified Biologist and (2) access and surveying shall be restricted within the buffer of any occupied nest, unless otherwise determined by a qualified Biologist. Encroachment into the buffer area around a known nest shall only be allowed if the Biologist determined that the proposed activity would not disturb the nest occupants. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest or the nest has failed.	Within 3 days prior to vegetation clearing activities or work near existing structures	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	California Department of Fish and Wildlife and County of Los Angeles Department of Regional Planning	
MM 5.2-14	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable wintering burrowing owl habitat, the area shall be assessed during the appropriate time of year (October 15 to March 31). In the event that wintering owls or burrows are detected, CDFW will be consulted. If the habitat assessment concludes that the area lacks potentially suitable burrowing owl burrows, no additional action is required. However, if potentially suitable burrows are located in the assessment area, any burrows that may be impacted by the project will be replaced with artificial burrows	Prior to grading and/or construction related activities involving the disturbance and/or removal of potentially suitable wintering burrowing owl habitat	Project Applicant, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	

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	within on-site or off-site (if applicable) preserved areas with potentially suitable burrowing owl habitat, following consultation with CDFW. If a wintering owl is observed during the non-nesting season, the burrow will be monitored by a qualified Biologist and, when the burrowing owl is away from the burrow, the burrow will be removed (or the burrow closed) so the burrowing owl cannot return to the burrow, following consultation with CDFW. The qualified Biologist will supervise the removal of the burrow.				
MM 5.2-15	Due to the close proximity of occupied habitat of a federally listed coastal California gnatcatcher, the Project shall not commence without consultation with the USFWS due to the potential for take per the FESA. The consultation will occur within the framework of Section 7 through the USACE regulatory permitting process. If required by the USFWS, a Biological Assessment will be provided to support the Service's Biological Opinion.	Prior to the initiation of any grading and/or construction-related activity	Project Applicant and Future Developers	U.S. Fish and Wildlife Service and County of Los Angeles Department of Regional Planning	
MM 5.2-16	To limit the amount of operational noise (i.e., from residents) to surrounding natural open space areas, a 100-foot buffer within the fuel-modification zone shall be planted along the boundary of developed land uses with plant species to be reviewed and approved by the Los Angeles County Fire Department and the LACDRP Biologist. The vegetation within the transition zone buffer will block sound waves and screen noise from the adjacent development so that the amount of indirect noise reaching the wildlife habitat would be reduced. Landscaping in areas adjacent to natural open space shall use species native to the project region that are considered fire-retardant (e.g., toyon [*Heteromeles arbutifolia*]). The Planting Plan shall be submitted to the Los Angeles County Fire Department and LACDRP Biologist for review and approval prior to issuance of a building permit.	Prior to the initiation of any grading and/or construction-related activity	Project Applicant, Future Developers, and Construction Contractor	Los Angeles County Fire Department and County of Los Angeles Department of Regional Planning	
MM 5.2-17	Prior to the issuance of building permits, a Lighting Plan for the subject tract shall be submitted to the LACDRP for review and approval to demonstrate that lighting from the proposed project shall be directed away from natural open space areas and any proposed biological resources mitigation sites. Land uses with high-intensity lighting shall be relocated within the development to areas away from natural open space.	Prior to the issuance of building permits	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.2-18	To limit the amount of human disturbance to surrounding natural open space areas, a Fencing Plan to deter project occupants from entering the natural areas shall be prepared by the project developer and implemented. The Fencing Plan shall include provisions for signs and wildlife-friendly split-rail fencing to direct residents to keep out of sensitive natural open space and revegetation and/or mitigation areas. In areas bordering natural open space and fuel-modification zones, the Landscape Plan shall reflect a transition zone designed to buffer natural habitats from developed areas and proposed fencing. This transition zone should reduce impacts associated with invasion by introduced species and should help buffer human activity adjacent to the wildlife habitat. Landscaping in areas adjacent to natural open space shall use species native to the project region (e.g., toyon) and be consistent with guidelines from the Los Angeles County Fire Department.	Prior to the initiation of any grading and/or construction-related activity and throughout Project operation	Project Applicant, Future Developers and Construction Contractor	Los Angeles County Fire Department and County of Los Angeles Department of Regional Planning	
MM 5.2-19	Landscaping designs shall be submitted to LACDRP for review and approval by a qualified Biologist. The review shall ensure that no invasive, exotic plant species are used in any proposed landscaping and that suitable substitutes are proposed. Excluded plant species shall be consistent with the California Invasive Plant Council current list at the time of installation. Only native species from the Santa Clarita Valley region shall be used in landscaping along the project boundaries adjacent to open space.	Prior to approval of landscape plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.2-20	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable bat roosting habitat, namely rocky outcrops or trees, a qualified Biologist shall conduct a pre-construction bat habitat assessment of the potential habitat marked for removal. Potential for roosting will be categorized by (1) potential for solitary roost sites and (2) potential for colonial roost sites (i.e., ten bats or more). If the potential for colonial roosting is determined, CDFW will be consulted and those rocky outcrops or trees shall not be removed during the bat maternity roost season (March 1 to July 31). Trees potentially supporting colonial roosts outside the maternity roost season and trees potentially supporting solitary roosts may be removed via a two-step removal process whereby, at the direction of the Biologist, some level of disturbance (such as trimming of lower branches of trees) is applied to the habitat on the day prior to removal to allow bats to escape during the darker hours. In the case of a tree, it shall be removed the following day (i.e., there shall be no less or more than one night between initial disturbance and the grading or tree removal). Rock outcrops potentially supporting colonial roosts outside the maternity roost season and rock	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable bat roosting habitat	Project Applicant, Future Developers and Qualified Biologist	California Department of Fish and Wildlife and County of Los Angeles Department of Regional Planning	

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	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	outcrops potentially supporting solitary roosts may be fitted with a bat exclusionary device, at the entry location, whereby bats are allowed to leave the structure but unable to return. The structure can be demolished the following day. In addition, the habitat replacement requirements of other Mitigation Measures further reduce the impact to bats through the preservation, enhancement, restoration and/or creation of impacted vegetation, which shall be generally suitable for impacted bat species. Prior to disturbance of any roosting habitat, a Bat Relocation Monitoring Plan (BRMP) shall be submitted and approved by the CDFW and the LACDRP. The BRMP shall include, at a minimum, the following items: (1) species of bats present onsite, (2) habitat uses of the site (i.e., roosting, hibernating, etc.) (3) roosting habitat replacement feature guidelines, (4) construction monitoring guidelines, (5) habitat replacement feature monitoring, and (6) reporting requirements. Reporting shall occur annually to LACDRP and CDFW. The BRMP will be submitted annually for five years.				
MM 5.2-21	Prior to the issuance of a grading permit, the project applicant will apply for coverage under the State Water Resources Control Board's General Permit for Storm Water Discharge Associated with Construction Activity (Construction Activities General NPDES Permit) and will comply with all the provisions of the permit, including the development of a Storm Water Pollution Prevention Plan, which includes provisions for the implementation of Best Management Practices and erosion control measures. Best Management Practices will include both structural and non-structural measures. The purpose of this mitigation measure is to ensure that site runoff does not adversely affect downstream biological resources including Castaic Lake, Castaic Creek, and the Santa Clara River.	Prior to the issuance of a grading permit	Project Applicant	State Water Resources Control Board	
MM 5.2-22	The project applicant shall retain a qualified biologist with the appropriate handling permits to conduct focused surveys for Crotch's bumble bee within the proposed habitat restoration/enhancement sites prior to implementation of the HMMP as set forth in MM 5.2-6 through MM 5.2-8. Focused surveys shall follow California Department of Fish and Wildlife's (CDFW) Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023). Focused surveys shall also be conducted throughout the entire proposed mitigation areas and during the appropriate flying season to ensure no missed detection of Crotch's bumble bee occurs. Survey results, including negative findings, shall be submitted to CDFW and LACDRP prior to the start of a monitoring program.	Prior to the implementation of the HMMP and during the appropriate flying season	Project Applicant	County of Los Angeles Department of Regional Planning	
Cultural Resources (Section 5.3 of the Draft SEIR)					
MM 5.3-1	If human remains are encountered during a public or private construction activity, other than at a cemetery, State Health and Safety Code 7050.5 states that no further disturbance shall occur until the Los Angeles County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The Los Angeles County Coroner must be notified within 24 hours. If the coroner determines that the burial is not historic, but prehistoric, the Native American Heritage Commission (NAHC) must be contacted to determine the most likely descendent (MLD) for this area. The MLD may become involved with the disposition of the burial following scientific analysis. (**SCVAP 2012 EIR MM 3.8.7)**	During grading and earth disturbance activities	Project Applicant and Construction Contractor	Los Angeles County Coroner and Native American Heritage Commission	
MM 5.3-2	In the unlikely event that artifacts are found during grading within the County's Planning Area or future roadway extensions, an archaeologist will be notified to stabilize, recover, and evaluate such finds. (**SCVAP 2012 EIR MM 3.8.3)**	During grading and earth disturbance activities	Project Applicant, Construction Contractor, and Qualified Archaeologist	County of Los Angeles Department of Regional Planning	
MM 5.3-3	For archeological sites accidentally discovered during future construction, there shall be an immediate evaluation of the find by a qualified archeologist. If the find is determined to be a historical or unique archeological resource, as defined under CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be provided. Construction work may continue on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i). (**SCVAP 2012 EIR MM 3.8.5)**	During grading and earth disturbance activities	Project Applicant, Construction Contractor, and Qualified Archaeologist	County of Los Angeles Department of Regional Planning	
MM 5.3-4	During grading activities. In the unlikely event that artifacts are found during grading within the Project site, a paleontologist will be notified to stabilize, recover, and evaluate such finds. (**SCVAP 2012 EIR MM 3.8.6, modified)**	During grading and earth disturbance activities	Project Applicant, Construction Contractor, and Qualified Paleontologist	County of Los Angeles Department of Regional Planning	
MM 5.3-5	Avoidance is the preferred treatment for cultural resources. Where feasible, project plans shall be developed to allow avoidance of cultural resources. Where avoidance of construction impacts is possible, covering of the cultural resource site with a layer of chemically stable soil and avoidance planting (e.g., planting of prickly pear	During grading and earth disturbance activities	Project Applicant	County of Los Angeles Department of Regional Planning	

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	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	cactus) shall be employed to ensure that indirect impacts from increased public availability to the site are avoided. Where avoidance is selected, cultural resource sites shall be deeded into permanent conservation easements or dedicated open space. **(SCVAP 2012 EIR MM 3.8.1)**				
MM 5.3-6	If avoidance and/or preservation of in place cultural resources is not possible, the following mitigation measures shall be initiated for each impacted site: a. A participant-observer, as determined by the Native American Heritage Commission (NAHC), shall be used during archaeological testing or excavation in the project site. Prior to the issuance of a grading permit for the project, the project proponent shall develop a test level research design detailing how the cultural resource investigation shall be executed and providing specific research questions that shall be addressed through the excavation program. In particular, the testing program shall characterize the site constituents, horizontal and vertical extent, and, if possible, period of use. The testing program shall also address the California Register and National Register eligibility of the cultural resource and make recommendations as to the suitability of the resource for listing on either Register. The research design shall be submitted to the County of Los Angeles Regional Park and Open-Space District for review and comment. For sites determined, through the Testing Program, to be ineligible for listing on either the California or National Register, execution of the Testing Program will suffice as mitigation of project impacts to this resource. (**SCVAP 2012 EIR MM 3.8.2)**	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant and Construction Contractors	County of Los Angeles Regional Park and Open Space District and Native American Heritage Commission	
MM 5.3-7	All Project-related ground-disturbing activities in archaeologically sensitive sediments shall be monitored by a qualified Archaeologist to reduce any archaeological resources impacts to a level considered less than significant. The construction monitoring program shall be preceded by a pre-grade meeting in the field in which the Project Archaeologist shall explain the procedures necessary to protect and safely remove potentially significant archaeological resources, and shall establish procedures for monitoring based on the sensitivity of the sediments being graded, schedule, and other information received from the applicant. If potential cultural sites are identified during construction-related ground disturbances, all work in that location shall cease or be immediately diverted until the qualified archaeologist has evaluated the nature and significance of the find. The Project Applicant shall then be notified if the materials are believed to be potentially significant, and the archaeologist may recommend further study and mitigation to the satisfaction of LACDRP.	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant, Construction Contractors, and Qualified Archaeologist	County of Los Angeles Department of Regional Planning	
MM 5.3-8	At such time when the Project Archaeologist is on-site for monitoring activities, a qualified Native American Tribal Monitor shall be notified and invited to observe ground-disturbing activities. The Native American Tribal Monitor shall coordinate with the Project Archaeologist and provide input regarding potential resources or cultural sites. Should any resources be discovered, the procedures set forth in MM 5.3-2 shall be followed.	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant, Construction Contractors	County of Los Angeles Department of Regional Planning and Native American Heritage Commission	
MM 5.3-9	All Project-related ground-disturbing activities in paleontologically sensitive sediments shall be monitored by a qualified Paleontologist to reduce any impacts to non-renewable fossil resources to a level considered less than significant. The construction monitoring program shall be preceded by a pre-grade meeting in the field in which the Project Paleontologist shall explain the procedures necessary to protect and safely remove potentially significant fossil materials for study and curation at the Natural History Museum of Los Angeles County, and shall establish procedures for monitoring based on the sensitivity of the sediments being graded, schedule, and other information received from the applicant. If potential paleontological sites are identified during construction-related ground disturbances, all work in that location shall cease or be immediately diverted until the qualified paleontologist has evaluated the nature and significance of the find. The Project Proponent will then be notified if the materials are believed to be potentially significant, and the paleontologist may recommend further study and mitigation to the satisfaction of LACDRP.	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant, Construction Contractors, and Qualified Paleontologist	County of Los Angeles Department of Regional Planning	
Energy (Section 5.4 of the Draft SEIR)					
MM 5.4-1	The County shall review all development plans to guarantee that energy conservation and efficiency standards of Title 24 are met and are incorporated into the design of the proposed project prior to approval. (**SCVAP 2012 EIR MM 3.17-7)**	Prior to approval of development plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.4-2	The County shall review all development proposals to guarantee that sufficient energy resources and facilities are available to supply adequate energy to the proposed project and associated uses prior to approval. (**SCVAP 2012 EIR MM 3.17-6)**	Prior to approval of development plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Greenhouse Gas Emissions (Section 5.7 of the Draft SEIR)					
MM 5.7-1	Prior to the issuance of building permits, the applicant shall provide evidence of green building practices and design elements that reduce GHG emissions, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-1**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-2	Prior to the issuance of building permits, the applicant shall provide evidence of energy- efficient designs, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards, such as those found in the Leadership in Energy and Environmental Design ("LEED") Green Building Ratings and/or comply with Title 24, Part 11, the California Green Building Standards Code. (**SCVAP MM 3.4-2**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-3	Prior to the issuance of building permits, the applicant shall provide evidence of energy efficient lighting, heating and cooling systems, appliances, equipment, and control systems, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-3**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-4	Prior to the issuance of building permits, the applicant shall provide evidence of light colored "cool" roofs and cool pavements, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-4**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-5	Prior to the issuance of building permits, the applicant shall provide evidence of efficient lighting (including LEDs) for traffic, street, and other outdoor lighting purposes, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-5**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-6	Prior to the issuance of building permits, the applicant shall provide evidence of efficient pumps and motors for pools and spas, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-6**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-7	Prior to the issuance of building permits, the applicant shall provide evidence of the ability to install solar, and solar hot water heaters, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-7**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-8	Prior to the issuance of building permits for, the applicant shall provide evidence of water-efficient landscapes, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-8**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-9	Prior to the issuance of building permits, the applicant shall provide evidence of water efficient irrigation systems and devices, such as soil-based irrigation controls and use water-efficient irrigation methods, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-9**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-10	Prior to the issuance of building permits, the applicant or their contractor shall submit a site construction management plan for the reuse and recycle construction and demolition (including soil, vegetation, concrete, lumber, metal, and cardboard) to the Department of Public Works for review and approval in accordance with the requirements of the ordinances developed pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-10**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-11	Prior to the issuance of building permits, the applicant shall provide evidence of reuse and recycling receptacles in residential, industrial, and commercial projects, in accordance with the requirements of the ordinances developed pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-11**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-12	Prior to the issuance of building permits, the applicant shall provide evidence of consistency with "smart growth" principles to reduce GHG emissions (i.e., ensure mixed- use, infill and higher density projects provide alternatives to individual vehicle travel and promote efficient delivery of goods and services). (SCVAP MM 3.4-12)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.7-13	Prior to implementing project approval, the applicant shall preserve existing trees, to the extent feasible and consistent with mitigation measures, encourage the planting of new trees consistent with the final landscape palettes, and create open space where feasible. (**SCVAP MM 3.4-13**)	Prior to implementing project approval	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-14	Prior to the issuance of each residential occupancy permit, the Applicant or successor developer shall submit for approval to the County the plan for the applicable future homeowners association(s) to provide educational information to each homeowner on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; (5) the use of solar heating, automatic covers, and efficient pumps and motors for pools and spas; and (6) recycling to all homeowners prior to individual purchase of property and again annually.	Prior to the issuance of each residential occupancy permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-15	Prior to the issuance of each nonresidential occupancy permit, the Applicant or successor developer shall submit for approval to the County the plan to provide educational information to each owner or tenant on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; and (5) recycling to all homeowners prior to individual purchase of property and again annually.	Prior to the issuance of each nonresidential occupancy permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-16	Prior to the issuance of each grading and building permit, the applicant/developer shall require in contract specifications, that contractors set goals to limit unnecessary construction equipment idling to 3 minutes and include methods to encourage equipment operators to achieve the 3-minute goal.	Prior to the issuance of each grading and building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-17	Prior to the issue of the occupancy permit for the 1,000th residential unit, the master developer shall provide the County with plans for a weekly farmers' market to be sponsored by the homeowners' association or similar entity.	Prior to the issue of the occupancy permit for the 1,000th residential unit,	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
Hydrology and Water Quality (Section 5.8 of the Draft SEIR)					
MM 5.8-1	The Project will develop and implement an Integrated Pest Management Plan as a mitigation measure in accordance with the integrated pest management and pesticide and fertilizer application guidelines established by the University of California Division of Agriculture and Natural Resources Statewide Integrated Pest Management Program (http://www.ipm.ucdavis.edu/). The IPM Plan, which will serve to control nutrients and reduce pesticide use, will include the following components: 1. Roles and responsibilities. The IPM Plan will identify the key decision makers in the program, other key roles (such as the person responsible for recordkeeping), and the program funding mechanisms. 2. Pest identification. The IPM Plan will identify plant species and potential pests for these plant species. The Plan shall provide references to resources (e.g., existing field manuals) and identify tools (e.g., hand lens) that can be used to facilitate identification. 3. Practices to prevent pest incidence and reduce pest buildup. The IPM Plan will include a list of acceptable management strategies for each potential pest. For example, effective practices include modifying landscaping to be less conducive to pest survival, using pest-resistant plant varieties, using mulch to suppress weeds, encouraging naturally occurring biological controls, educating the public to be more tolerant of pests, removing pests mechanically or with barriers and traps, developing a list of pesticides that are less toxic to the environment, and developing formulations that will control the pest if other methods are not successful. 4. Monitoring to examine vegetation and surrounding areas for pests to evaluate trends and to identify when controls are needed. The IPM Plan will establish monitoring guidelines for the potential pests and beneficial insects. Monitoring procedures shall include regular visual inspections or checking with traps and methods to quantify observations. The monitoring program shall be used to evaluate when pests may become intolerable and to evaluate the level of effectiveness of controls. 5. Establishment of action thresholds that trigger control actions. The IPM Plan will establish injury levels and action thresholds for each potential pest that is listed in the plan. The injury level is the number of pests	Prior to issuance of occupancy permits and throughout Project operation	Construction Contractor, Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
associated with intolerable damage. Action thresholds are the set of conditions required to trigger a control action, usually pesticide application. 6. Pest control methods. The IPM Plan will describe cultural, mechanical, environmental, and biological pest control methods and shall list pesticides authorized for use and the Safety Data Sheets for each pesticide. The Plan will include specific criteria for selecting pest management methods, for example, those that are least disruptive to natural controls and least damaging to water quality, and procedures for evaluating the effectiveness of the control method. 7. Fertilizer management. The IPM Plan will describe soil assessment techniques, fertilizer types, application methods, and proper storage and handling of fertilizers. 8. Pesticide management. The IPM Plan will discuss pesticide safety (e.g., Material Safety Data Sheets, precautionary statements, and protective equipment); regulatory requirements; spill mitigation; groundwater and surface water protection measures associated with pesticide use; and pesticide applicator certifications, licenses, and training (i.e., all pesticide applicators must be certified by the California Department of Pesticide Regulation). The IPM Plan will include a pesticide application guidelines/checklist. For example, the application equipment must be calibrated correctly and written records must be kept of any pesticide application. 9. Irrigation management. The IPM Plan will describe the low volume water approaches to landscape irrigation, such as drip type and sprinkler systems with SMART controllers, and shall also describe the training to be provided to landscape crews that will focus on applying water only when needed to enhance plant root growth, managing irrigation to avoid conditions conducive to disease development, and minimizing runoff containing pollutants. 10. Record keeping. The IPM Plan will describe the records that will be maintained for program implementation, including pest identification and monitoring results, when and where various pest suppression techniques were implemented, pesticide application records, observed side effects of the treatment on non-target species, and public complaints and positive feedback received. 11. Training. The IPM Plan will describe continuing education of pest management personnel. 12. Effectiveness evaluation. The IPM Plan will describe the methods to be used to evaluate the overall effectiveness of the program and the schedule for reviewing the Plan to incorporate new IPM technology.					
Noise (Section 5.10 of the Draft SEIR)					
MM 5.10-A	With concurrence from the Castaic Union School District, the Applicant will construction a minimum 3-foot-high sound wall along the eastern edge of the outdoor fields, a 6-foot high wall along the eastern edge of the school parking lot, and a 3-foot high wall along the western edge of Ridge Route Road north of the school parking lot to block noise from project-related traffic to the school playground and school buildings. The location of the proposed sound wall is shown in Figure 1.	Prior to issuance of grading permits and building permits and during construction	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-B	During construction, the Applicant will place a flagman at the campus during school hours to ensure school and construction traffic flow safely in the school vicinity.	Prior to issuance of grading permits and building permits and during construction	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-C	The Applicant will ensure that access to the campus is always preserved during construction.	Prior to issuance of grading permits and building permits and during construction	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-1	Maintain adequate buffer distances from nearby residences to freeways, high traffic volume roads, railroads, airports, manufacturing facilities, industrial facilities, mining centers and other existing processing plants where the public may be affected by noise. **(SCVAP MM 3.18-2)**	Prior to issuance of grading permits and building permits	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-2	Sound barriers should be required of the owners of the proposed sensitive land uses adjacent to high noise sources, to protect the public from significant noise impacts. **(SCVAP MM 3.18-4)**	Prior to issuance of grading permits and building permits	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.10-3	The placement of telecommunication towers and antennas power boxes should comply with noise ordinances. All related equipment should be rated not to exceed 45 dB(A) at any residential property line. **(SCVAP MM 3.18-6)**	Prior to approval of utility plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-4	Prior to the issuance of each permit for clearing, grading, or building within 500 feet of existing residences or the Northlake Elementary School, the Developer shall demonstrate that the construction plans or specifications include the following noise-abatement and control measures. This measure applies to all phases of construction. • All construction equipment, including internal combustion engines and stationary equipment (used for construction purposes) shall be equipped with noise-reducing features such as, but not limited to, improved mufflers, intake silencers, ducts, engine enclosures, and acoustical shields or shrouds. • Stationary sources located within 450 feet of the Northlake elementary School or off-site residences shall have noise abatement, such as engine enclosures or placed behind barriers, to limit the noise level at the sensitive receptor to 60 dBA L_{eq} or less. • Stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers. • On-site and off-site construction haul routes shall be designed to avoid noise-sensitive uses, as feasible. • Equipment and material staging areas and equipment maintenance areas shall be located at least 500 feet from sensitive noise receivers, if feasible.	Prior to the issuance of each permit for clearing, grading, or building within 500 feet of existing residences or the Northlake Elementary School	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-5	To the extent feasible, intensive noise activity (e.g., operation of earth moving equipment) within 750 feet of the Northlake Elementary School shall be scheduled to occur when classroom instruction is not scheduled. If grading or similar construction activity within 150 feet of the school is to occur for longer than one day while school is in session, the Developer shall install a temporary noise barrier between the construction area and the school. The barrier shall be 12 feet high and solid from the ground to the top. The barrier shall be constructed with plywood that is at least ½ inch thick or with another material that creates a noise transmission loss of at least 20 dBA. The barrier shall be located to break the line of sight between the school and the construction area. Where feasible, the barrier shall remain in place until the completion of construction near the school. This measure applies to all phases of construction.	Prior to initiation of any construction activity within 750 feet of Northlake Elementary School	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-6	If grading or similar construction activity within 150 feet of off-site residences is to occur for longer than one day, the Developer shall install a temporary noise barrier between the construction area and the residences. The barrier shall be 12 feet high and solid from the ground to the top. The barrier shall be constructed with plywood that is at least ½ inch thick or with another material that creates a noise transmission loss of at least 20 dBA. The barrier shall be located to break the line of sight between the residences and the construction area. Where feasible, the barrier shall remain in place until the completion of construction near the residences. This measure applies to all phases of construction.	Prior to issuance of a building permit for each industrial and commercial land use	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-7	Prior to issuing of a building permit for each industrial and commercial land use, the Developer shall submit a noise analysis to the County demonstrating that projected noise levels from stationary sources, vehicle activity, loading docks, and similar sources will not exceed the exterior noise standards of Section 12.08.390 of the County Code. For purposes of this MM, school use shall be considered as a residential use (Zone II) in the County Code. The noise analysis shall, to the extent feasible, be cumulative, considering not only the noise generated by the proposed development but also noise generated by adjacent and nearby stationary sources. Where the adjacent properties have not been developed, the analysis should show that the noise level from the proposed development would be far enough below the standard to allow a reasonable increment for future noise sources without exceeding the standard.	Prior to issuance of a building permit for each industrial and commercial land use	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-8	Prior to issuing of a building permit for each multi-family residential use, the Developer shall submit a noise analysis to the County demonstrating that projected air conditioning and refrigeration equipment noise levels would be exceed the standards of Section 12.08.530 of the County Code.	Prior to issuance of a building permit for each multi-family residential use	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-9	Prior to issuing of building permits for single family and duplex residences adjacent to Ridge Route Road, Northlake Boulevard, A Street, B Street, or E Street, and for multi-family residences adjacent to Ridge Route	Prior to issuance of building permits for single family and duplex	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Road and Northlake Boulevard, the Developer shall submit a noise analysis to the County demonstrating that projected exterior noise levels at areas where residents would reasonably be expected to spend more than one hour, such as back yards, would not exceed 60 dBA CNEL for single family and duplex residences and 65 dBA CNEL for multi-family residences. This standard is based on the California Land Use Compatibility Guidelines. Noise abatement may be achieved by setbacks, berms, and walls. The noise analysis shall also demonstrate that interior noise levels in all habitable rooms would of duplexes and multi-family residences would not exceed 45 dBA CNEL, as required by the California Building Code.	residences adjacent to Ridge Route Road, Northlake Boulevard, A Street, B Street, or E Street, and for multi-family residences adjacent to Ridge Route Road and Northlake Boulevard			
MM 5.10-10 Prior to issuing of building permits for commercial land uses adjacent to Ridge Route Road, the Developer shall submit a noise analysis to the County demonstrating that projected exterior noise levels at areas where patrons would reasonably be expected to spend more than one hour, such as outdoor restaurant seating, would not exceed 70 dBA CNEL.	Prior to issuance of building permits for commercial land uses adjacent to Ridge Route Road	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-11 Prior to the issuance of each grading permit, the Developer shall submit plans and/or specifications to the County demonstrating that site preparation and grading within 265 feet of a residence or the NorthLake Elementary School shall be performed with equipment that will not cause a vibration exceeding 0.01 peak particle velocity (ppv) inch per second (in/sec).	Prior to the issuance of each grading permit	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-12 If blasting is required, the Applicant or its contractor shall hire a certified blasting expert to develop a blasting program to be approved by the County Department of Public Works. The program shall include but not be limited to the following elements: • Design the blast to limit noise and vibration at any residence or the NorthLake Elementary School to the limits recommended by the Office of Surface Mining Reclamation and Enforcement or similarly recognized authority. • Based on the blasting locations, define an impact area where noise and vibration impacts are anticipated to be distinctly perceptible. • Inform all homeowners and tenants in the impact area of the Project, the planned blasting program, and the anticipated noise and vibration impacts. In addition to printed literature, have a public meeting. Provide a contact for homeowners for pre- and post-blast questions. • Use blast signals to notify residents prior to each blast. • Monitor blasts to verify noise and vibration levels at the nearest receptor(s).	Prior to commencement of any blasting activities	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
Public Services				
SCVAP MM 3.15-2 Concurrent with the issuance of building permits, the project applicant shall participate in the Developer Fee Program to the satisfaction of the County of Los Angeles Fire Department.	Concurrent with the issuance of building permits	Applicant	County of Los Angeles Fire Department	
SCVAP MM 3.15-3 Adequate water availability shall be provided to service construction activities of any project to the satisfaction of the County of Los Angeles Fire Department.	Prior to approval of development plans	Applicant	County of Los Angeles Fire Department	
SCVAP MM 3.15-4 Development applicant(s) shall be required to pay the Los Angeles County Sheriff's established law enforcement facility fees for North Los Angeles County prior to issuance of a certificate of occupancy on any structure. The fees are for the acquisition and construction of public facilities to provide adequate service to the residents of the County's Planning Area.	Prior to approval of development application	Applicant	County of Los Angeles Fire Department	
SCVAP MM 3.15-1 Project developers shall pay the current library fee at the time of building permit issuance ($885.00 per residential unit for FY 2016-17) to the County of Los Angeles to offset the demand for library items and building square footage generated by the proposed project. The library mitigation payment shall be made on a building permit by building permit basis by the developer for residential projects.	Prior to issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
Traffic, Access, and Circulation (Section 5.11 of the Draft SEIR)				
MM 5.11-3 Prior to construction activities, the Project Applicant shall prepare and submit a detailed Construction Traffic Control Plan to the County of Los Angeles Department of Public Works for review and approval. The Construction Traffic Control Plan shall describe in detail safe detours and provide temporary traffic control during construction activities for the project. To reduce traffic congestion, the Plan shall include, as necessary,	Prior to the issuance of building permit	Project Applicant and Future Developers	County of Los Angeles Department of Public Works	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	appropriate, and practicable, the following: temporary traffic controls (e.g., a flag person) during all phases of construction to maintain smooth traffic flow; dedicated turn lanes for movement of construction trucks and equipment on and off site; scheduling of construction activities that affect traffic flow on the arterial system to off-peak hours; consolidation of truck deliveries; rerouting of construction trucks away from congested streets or sensitive receptors; and/or signal synchronization to improve traffic flow.				
Utilities (Section 5.12 of the Draft SEIR)					
MM 5.12-1	The project applicant shall provide all onsite water system improvements and shall contribute to required new or upgraded existing offsite improvements to meet all water supply needs for the proposed development. (**1992 SP EIR MM 4.12.1)**	Prior to the issuance of building permits	Project Applicant and Future Developers	County of Los Angeles Department of Public Works and Newhall County Water District	
MM 5.12-2	All water system improvements shall be sized at the water improvement plan check stage of development. **(1992 SP EIR MM 4.12.2)**	Prior to approval of water improvement plan(s)	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Public Works	
MM 5.12-3	Project connection fees would be deposited into a capital improvement fund to help pay for new facilities and expansion required by the Districts; **(1992 SP EIR MM 4.9.3)**	Prior to connection to Los Angeles Sanitation Districts facilities	Project Applicant	County of Los Angeles Department of Regional Planning and Los Angeles Sanitation Districts	
MM 5.12-4	Payment of the connection fees is required for issuance of a permit to connect the project to surrounding Los Angeles County Sanitation District facilities, if necessary**. (1992 SP EIR MM 4.9.4)**	Prior to issuance of permit to connect the project to surrounding Los Angeles County Sanitation District facilities	Project Applicant	County of Los Angeles Department of Regional Planning and Los Angeles County Sanitation District	
MM 5.12-5	Routine testing of pre-discharge treated effluent should be conducted to monitor compliance with established water quality control limits. (**1992 SP EIR MM 4.9.7)**	During construction activities and Project operation	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-6	Prior to issuance of occupancy permits, the Project Applicant shall provide evidence to the County of payment of connection fees in compliance with the requirements of the Newhall County Water District.	Prior to issuance of occupancy permits	Project Applicant	County of Los Angeles Department of Regional Planning and Newhall County Water District	
MM 5.12-7	Prior to connection to the Los Angeles County Sanitation District's wastewater system, the Project Applicant shall provide evidence of payment of the Santa Clarita Valley Sanitation District's Connection Fee Program.	Prior to connection to the Los Angeles County Sanitation District's wastewater system	Project Applicant	Los Angeles County Sanitation District and Santa Clarita Valley Sanitation District	
MM 5.12-8	Prior to issuance of occupancy permits, the Project Applicant shall coordinate with the Los Angeles County Sanitation Districts to upsize the existing 12-inch VCP Castaic Trunk Sewer in Ridge Route Road (south of the intersection with Lake Hughes Road), as determined necessary by the LA County Sanitation Districts to accommodate future flow volumes.	Prior to the issuance of occupancy permits	Project Applicant	County of Los Angeles Department of Regional Planning and Los Angeles County Sanitation District	
MM 5.12-9	Monitor growth, and coordinate with water districts as needed to ensure that long-range needs for potable and reclaimed water will be met. (**SCVAP 2012 EIR MM 3.13.3)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-10	If water supplies are reduced from projected levels due to drought, emergency, or other unanticipated events, take appropriate steps to limit, reduce, or otherwise modify growth permitted by the Area Plan in consultation with water districts to ensure adequate long-term supply for existing businesses and residents. **(SCVAP 2012 EIR MM 3.13.4)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-11	Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval. (**SCVAP 2012 EIR MM 3.13.5)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-12	Require the use of drought tolerant landscaping, native California plant materials, and evapotranspiration (smart) irrigation systems. (**SCVAP 2012 EIR MM 3.13.6)**	Prior to approval of landscape plans	Project Applicant	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.12-13	In making land use decisions, consider the complex, dynamic, and interrelated ways that natural and human systems interact, such as the interactions between energy demand, water demand, air and water quality, and waste management. (**SCVAP 2012 EIR MM 3.13.8)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-14	In coordination with applicable water suppliers, adopt and implement a water conservation strategy for public and private development. (**SCVAP 2012 EIR MM 3.13.9)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-15	Provide examples of water conservation in landscaping through use of low water use landscaping in public spaces such as parks, landscaped medians and parkways, plazas, and around public buildings. (**SCVAP 2012 EIR MM 3.13.10)**	Prior to approval of landscape plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-16	Require low water use landscaping in new residential subdivisions and other private development projects, including a reduction in the amount of turf-grass. (**SCVAP 2012 EIR MM 3.13.11)**	Prior to approval of landscape plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-17	Provide informational materials to applicants and contractors on the Castaic Lake Water Agency's Landscape Education Program, and/or other information on xeriscape, native California plants, and water conserving irrigation techniques as materials become available. (**SCVAP 2012 EIR MM 3.13.12)**	Prior to commencement of grading or construction activities	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-18	Promote the use of low-flow and/or waterless plumbing fixtures and appliances in all new non-residential development and residential development of five or more dwelling units. (**SCVAP 2012 EIR MM 3.13.13)**	Prior to issuance of occupancy permits	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-19	Support amendments to the County Building Code that would promote upgrades to water and energy efficiency when issuing permits for renovations or additions to existing buildings. (**SCVAP 2012 EIR MM 3.13.14)**	Prior to the issuance of permits for renovations or additions to existing buildings	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-20	Apply water conservation policies to all pending development projects, including approved tentative subdivision maps to the extent permitted by law. Where precluded from adding requirements by vested entitlements, encourage water conservation in construction and landscape design. (**SCVAP 2012 EIR MM 3.13.15)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-21	Upon the availability of non-potable water services, discourage and consider restrictions on the use of potable water for washing outdoor surfaces. (**SCVAP 2012 EIR MM 3.13.16)**	At the time when non-potable water services are available	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-22	In cooperation with the Sanitation District and other affected agencies, expand opportunities for use of recycled water for the purposes of landscape maintenance, construction, water recharge, and other uses as appropriate. (**SCVAP 2012 EIR MM 3.13.17)**	Prior to construction and during Project operation	Project Applicant and County of Los Angeles Department of Regional Planning	County of Los Angeles Department of Regional Planning and Los Angeles County Sanitation District	
MM 5.12-23	Require new development to provide the infrastructure needed for delivery of recycled water to the property for use in irrigation, even if the recycled water main delivery lines have not yet reached the site. (**SCVAP 2012 EIR MM 3.13.18)**	Prior to approval of development plan	Project Applicant and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-24	Participate and cooperate with other agencies to complete, adopt, and implement an Integrated Regional Water Management Plan to build a diversified portfolio of water supply, water quality, and resource stewardship priorities for the Santa Clarita Valley. (**SCVAP 2012 EIR MM 3.13.20)**	Prior to and during Project operation	Project Applicant and County of Los Angeles Department of Regional Planning	County of Los Angeles Department of Regional Planning	
MM 5.12-25	Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval. (**SCVAP 2012 EIR MM 3.13.21)**	Prior to project approval	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-26	Promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel or additions. (**SCVAP 2012 EIR MM 3.13.22)**	Prior to approval of applicable permits for remodel or additions	County of Los Angeles Department of Regional Planning	County of Los Angeles Department of Regional Planning	
MM 5.12-27	Landscaping shall emphasize drought-tolerant vegetation (xeriscaping) where not watered with reclaimed water. Plants of similar water use shall be grouped to reduce over-irrigation of low-water-using plants. Those areas not designed in xeriscape shall be gauged to receive irrigation using the minimal requirements. (**1992 SP EIR MM 4.12.6)**	Prior to approval of landscape plans	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-28	Residential occupants shall be informed as to the benefits of low-water-using landscaping and sources of additional assistance in xeriscaping. (**1992 SP EIR MM 4.12.7)**	During operation	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.12-29	The County of Los Angeles shall follow state regulations in implementing the goals, policies, and programs identified in the Los Angeles County Integrated Waste Management Plan in order to achieve and maintain a minimum of 50 percent reduction in solid waste disposal through source reduction, reuse, recycling, and composting. In response to California's 75 Percent Initiative, at least 75 percent of all solid waste will be recycled or reused by 2020. Additionally, the Project Applicant or Construction Manager shall ensure that a minimum of 65 percent of the non-hazardous construction and demolition debris will be recycled and/or salvaged or meet a local construction and demolition waste management ordinance. (**SCVAP 2012 EIR MM 3.17.1)**	During construction activities and Project operation	Project Applicant, Future Developers, and/or Construction Manager	County of Los Angeles Department of Regional Planning	
MM 5.12-30	The County shall require all future commercial, industrial and multifamily residential development to provide adequate areas for the collection and loading of recyclable materials (i.e., paper products, glass, and other recyclables) in compliance with the State Model Ordinance, implemented on September 1, 1994, in accordance with AB 1327, Chapter 18, California Solid Waste Reuse and Recycling Access Act of 1991. (**SCVAP 2012 EIR MM 3.17.2)**	During construction activities and Project operation	Project Applicant and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-31	The County shall require all development projects to coordinate with appropriate County agencies to ensure that there is adequate waste disposal capacity to meet the waste disposal requirements of the County's Planning Area, and the County shall recommend that all development projects incorporate measures to promote waste reduction, reuse, recycling, and composting. (**SCVAP 2012 EIR MM 3.17.3)**	Prior to development plan approval	Project Applicant	County of Los Angeles Department of Regional Planning and Sanitation Districts of Los Angeles County	
MM 5.12-32	All new development in the County's Planning Area will be required to implement existing and future waste reduction programs in conformance with the County's Planning Area SRRE program. (**SCVAP 2012 EIR MM 3.17.4)**	During construction activities and Project operation	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-33	Any hazardous waste that is generated on site, or is found on site during demolition, rehabilitation, or new construction activities shall be remediated, stored, handled, and transported in compliance per appropriate local, state, and federal laws, as well as with the County's SRRE. (**SCVAP 2012 EIR MM 3.17.5)**	During demolition, rehabilitation, or construction activities	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-34	Collection/storage facilities for recyclables shall be incorporated into all building designs and/or a conveniently located recycling area shall be developed on the project site for use by all occupants/users of the commercial/industrial uses. (**1992 SP EIR MM 4.13.1)**	During construction activities and Project operation	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-35	The owner and/or tenants of all onsite commercial and industrial uses shall comply with all applicable federal, state and local requirements for handling hazardous materials. Onsite businesses handling hazardous materials shall submit a Business Plan which will include information or inventories, employee training and emergency response plans and procedures. (**1992 SP EIR MM 4.13.2)**	During Project operation	Applicant, Future Developers, and Onsite commercial and industrial owners and/or tenants	County of Los Angeles Department of Regional Planning	
MM 5.12-36	Removal of hazardous materials, waste from the project site shall be conducted by registered waste hauler in accordance with all applicable rules and regulations. (**1992 SP EIR MM 4.13.3)**	During construction activities and Project operation	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-37	All hazardous materials used in association with future onsite businesses shall be stored in specific locations and clearly marked as to contents. (**1992 SP EIR MM 4.13.4)**	During Project operation	Applicant, Future Developers, and Onsite commercial and industrial owners and/or tenants	County of Los Angeles Department of Regional Planning	

Los Angeles County
Department of Regional Planning

Planning for the Challenges Ahead

On-Site Grading Exceeding 100,000 cy and Walls Exceeding 6' in height

CONDITIONAL USE PERMIT BURDEN OF PROOF

Pursuant to Zoning Code Section 22.56.040, the applicant shall substantiate the following:

(Do not repeat the statement or provide Yes/No responses. If necessary, attach additional pages.)

A. That the requested use at the location will not:
1. Adversely affect the health, peace, comfort or welfare of persons residing or working in the surrounding area, or
2. Be materially detrimental to the use, enjoyment or valuation of property of other persons located in the vicinity of the site, or
3. Jeopardize, endanger or otherwise constitute a menace to the public health, safety or general welfare.

A CUP is being requested for proposed grading of approximately 17.2 million cubic yards of cut and 15.8 million cubic yards of fill. Due to shrinkage, it will balance on site. Included in this grading is approximately 80,000 cubic yards of dirt for construction of the northerly off-site tanks and access road. The grading footprint was previously reviewed and approved as part of the Northlake Specific Plan. All grading will balance on-site; no import or export is proposed.

B. That the proposed site is adequate in size and shape to accommodate the yards, walls, fences, parking and loading facilities, landscaping and other development features prescribed in this Title 22, or as is otherwise required in order to integrate said use with the uses in the surrounding area.

The development proposes up to 2,295 units on 719.8 acres as Phase I. The development as proposed with this application will meet all current planning and zoning requirements upon approval of this CUP request. All walls in excess of 6 feet are shown on the tentative map. These walls, 6 feet and above are proposed due to topographic constraints needed to achieve pad and street grades. In addition, there are two tank site locations. The water tanks proposed are at higher elevations to serve the community and maintain the fire protection zone.

C. That the proposed site is adequately served:
1. By highways or streets of sufficient width, and improved as necessary to carry the kind and quantity of traffic such use would generate, and
2. By other public or private service facilities as are required.

The subject site will be served by Ridge Route Road, a major highway. The infrastructure proposed with the development will include grading, street and traffic improvements to serve the development and the related increase in traffic. Mitigation requirements to offset project related impacts will be determined during the phase specific traffic analysis.

NorthLake Specific Plan Project Recirculated Partial Final Supplemental Environmental Impact Report

SCH No. 2015031080

Prepared for

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December 2025

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SECTION 1.0 INTRODUCTION AND SUMMARY

1.1 INTRODUCTION

The NorthLake Specific Plan Draft Supplemental EIR (2019 Draft SEIR) was eased on May 2, 2017, and circulated for a 45-day public review and comment period ending on June 15, 2017. Following the close of the public comment period on the 2019 Draft SEIR on June 15, 2017, detailed responses to all public agency comments and comments received from members of the general public received regarding the Project and the analyses of the 2019 Draft SEIR were prepared and are contained in the 2019 Final SEIR.

An Errata was released in February 2018, prior to the County Regional Planning Commission (Regional Planning Commission) hearing to make minor technical corrections to the 2019 SEIR and to provide further information in response to public comments received prior to the Regional Planning Commission meeting. The Errata included only minor technical changes to the SEIR and additional information to support the SEIR's conclusions, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. At the February 21, 2018, public hearing, the Regional Planning Commission requested that the Applicant include an affordable housing component in the Project. Based on this request, the Applicant made minor revisions to the Project analyzed in the 2019 SEIR to include an affordable component. An Errata dated April 4, 2018 was prepared which concluded that the revisions involve only minor changes to the distribution of land uses and an overall reduction in density and intensity or use, and the Errata merely clarified or amplified or made insignificant modifications to the adequate 2019 SEIR. On April 18, 2018, the Regional Planning Commission adopted the required findings, certified the SEIR, and granted the requested Project approvals. On April 23, 2018, appeals were filed by the Center for Biological Diversity, the Santa Monica Mountains Conservancy, and the Golden State Environmental Justice Alliance. A Second Errata dated August 2018 was prepared to make minor technical corrections in the 2019 SEIR and to provide further information in response to public comments at the Regional Planning Commission meeting.

On September 25, 2018, the County Board of Supervisors (Board) held a public hearing on the Project and the appeals and voted to reject the appeals, uphold the Regional Planning Commission approvals, and certify the 2019 SEIR. On April 2, 2019, the Board adopted the Project entitlements, CEQA findings and Mitigation Monitoring and Reporting Program, and Project conditions.

A Petition for Writ of Mandate was filed in May 2019 challenging the Project. The Los Angeles Superior Court's ruling in the *Center For Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al*, Case No. 19STCP01610, dated January 11, 2021 (Court Ruling) granted in part and denied in part the petitioner's Petition for Writ of Mandate. Specifically, the Court Ruling held that the SEIR for the Northlake Specific Plan Project failed to comply with CEQA because it contained: (1) inadequate alternatives analysis (for failing to fully analyze a creek avoidance alternative); (2) inadequate Western Spadefoot Toad (WST) baseline assessment and, therefore, inadequate mitigation (to recreate baseline conditions; mitigation inadequate in detail and commitment); and (3) improper deferred mitigation as to rare plants (measure lacked sufficient detail). The Court denied the Petition for Writ of Mandate regarding: (1) impacts to mountain lions/wildlife crossings, (2) aesthetics, (3) air quality/public health, (4) wildfire impacts, and (5) recirculation.

The Los Angeles County Department of Regional Planning prepared a Recirculated Partial Draft SEIR (RPDSEIR). The RPDSIER did not revise the SEIR in any respect other than as directed by the Court and was limited to a few portions of the 2019 SEIR. Pursuant to CEQA Guidelines Section 15088.5(c), the County only needed to recirculate the portions of the 2019 SEIR that were

modified by the RPDSEIR. The County did not recirculate the other portions of the SEIR for public review and comment because those portions were not modified.

Before approving a project, CEQA requires that the Lead Agency prepare and certify a Final EIR per State CEQA Guidelines Section 15090. As Lead Agency, the County has the principal responsibility for approval of the project. According to Section 15132 of the State CEQA Guidelines, the Final EIR must include:

- The Draft EIR or a revision of the Draft EIR;
- Comments and recommendations received on the Draft EIR either verbatim or in summary;
- A list of persons, organizations, and public agencies commenting on the Draft EIR;
- The responses of the Lead Agency to significant environmental points raised in the review and consultation process; and
- Any other information added by the Lead Agency.

This Recirculated Partial Final Supplemental Environmental Impact Report (RPFSEIR) has been prepared by the County of Los Angeles Department of Regional Planning, acting in the capacity of "Lead Agency" under Los Angeles County's (County) Environmental Guidelines, for the NorthLake Specific Plan Project (Project). This RPFSEIR has been prepared consistent with California Environmental Quality Act (CEQA) statutes (Cal. Pub. Res. Code, Sections 21000 et seq., as amended) and implementing guidelines (Cal. Code Regs., Title 14, Sections 15000 et seq.).

1.2 PUBLIC REVIEW PROCESS

The RPDSEIR was made available for public review and comment pursuant to State CEQA Guidelines Section 15087. Copies of the RPDSEIR and appendices were available for a review period of 45 calendar days from April 14, 2025 to May 29, 2025. As CEQA Guidelines Section 15088.5, subdivision (f)(2) permits, the County requested that the scope of public comment be limited to the material that was addressed within the text of the revised portions and the appendices included in the RPDSEIR.

The RPDEIR was available to the general public for review at the following locations:

County of Los Angeles Building and Safety
Antelope Valley Field Office
335 East Avenue K-6 #A
Lancaster, CA 93535
Hours: Monday through Friday,
8:00 a.m.to 4:30 p.m.
Saturday and Sunday, Closed

Castaic Library
27971 Sloan Canyon Road
Castaic, CA 91384
Hours: Monday through Thursday, 10:00 a.m. to 8:00 p.m.
Friday and Saturday, 10:00 a.m. to 6:00 p.m.
Sunday, Closed.

The RPDSEIR was also available for review online at:

https://lacdrp.legistar.com/LegislationDetail.aspx?ID=7297239&GUID=8CCA3A7D-4458-4A58-970D-251E36B9454F&Options=ID|Text|&Search=25-092

Electronic files related to this Project were also made available for download from the Project website provided above. Written comments regarding the RPDSEIR were required to be submitted no later than May 29, 2025 at 5:00 p.m., and were able to be submitted in-person, by mail and by e-mail.

On April 14, at the beginning of the public review period, an electronic copy of the RPDSEIR with appendices, was submitted to the State Clearinghouse located in the Governor's Office of Land Use and Climate Innovation along with a Notice of Availability (NOA) of a RPDSEIR (Appendix A), Notice of Completion & Environmental Document Transmittal (NOC) form, and a Summary Form for Electronic Document Submittal (i.e., SCH Summary Form). Also on April 14, 2025, the NOA was mailed to public entities and interested parties and was filed with the Los Angeles County Clerk-Recorder and remained posted through the end of the public review period. The NOA described where the RPDSEIR was available and how to submit written comments on the RPDSEIR.

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SECTION 2.0 RESPONSE TO COMMENTS

The following is a list of public agencies, organizations, and persons that submitted comments on the RPDSEIR. Comments have been numbered and responses have been developed with corresponding letters/numbers. Appendix B, Comment Letters, contains all comments received from public agencies, persons, and organizations.

2.1 LIST OF WRITTEN COMMENTERS

A list of the public agencies and the persons and organizations that submitted written comments on the RPDSEIR is provided in Table 2-1. Public agency comments are provided below in Section 2.2 of this RPFSEIR.

TABLE 2-1
COMMENTS RECEIVED ON THE RPDSEIR FROM AGENCIES, ORGANIZATIONS, AND INDIVIDUALS

Comment Letter	Date	Name
Public Agencies		
A.1	May 28, 2025	California Department of Fish and Wildlife
A.2	May 29, 2025	Department of Transportation, District 7
A.3	May 29, 2025	County of Los Angeles, Office of the Sheriff
Persons and Organizations		
B.1	April 22, 2025	Reylene Borrego, Yuhaaviatam of San Manuel Nation
B.2	April 22, 2025	Dan Silver, Endangered Habitats League
B.3	May 14, 2025	Francis Tinney, Center for Biological Diversity
B.4	May 29, 2025	Francis Tinney and Tiffany Yap, Center for Biological Diversity
B.5	May 29, 2025	Paul Edelman, Santa Monica Mountains Conservancy

2.2 COMMENTS AND RESPONSES

All comment letters received by the County during the 45-day public review period for the RPDSEIR have been included and responded to in this RPFSEIR. Comments that raise environmental issues have been addressed in these responses. Comments that do not require a response include those that (1) do not address material within the text of the revised portions and the appendices included in the RPDSEIR, (2) do not address the adequacy or completeness of the RPDSEIR; (3) do not raise substantive environmental/CEQA issues; (4) do not address the Project; or (5) request the incorporation of additional information not relevant to environmental issues.

Regarding the evaluation and response to comments, Section 15088 of the State CEQA Guidelines states:

a) The lead agency shall evaluate comments on environmental issues received from persons who reviewed the Draft EIR and shall prepare a written response. The Lead Agency shall respond to comments raising significant environmental issues received during the noticed comment period and any extensions and may respond to late comments;

b) The Lead Agency shall provide a written proposed response, either in a printed copy or in an electronic format, to a public agency on comments made by that

public agency at least 10 days prior to certifying an environmental impact report;

c) The written response shall describe the disposition of significant environmental issues raised (e.g., revisions to the proposed project to mitigate anticipated impacts or objections). In particular, the major environmental issues raised when the Lead Agency's position is at variance with recommendations and objections raised in the comments must be addressed in detail giving reasons why specific comments and suggestions were not accepted. There must be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice. The level of detail contained in the response, however, may correspond to the level of detail provided in the comment (i.e., responses to general comments may be general). A general response may be appropriate when a comment does not contain or specifically refer to readily available information, or does not explain the relevance of evidence submitted with the comment; and

d) The response to comments may take the form of a revision to the Draft EIR or may be a separate section in the Final EIR. Where the response to comments makes important changes in the information contained in the text of the Draft EIR, the lead agency should either:

    1. Revise the text in the body of the EIR; or
    2. Include marginal notes showing that the information is revised in the response to comments.

With respect to comments letters received, aside from certain courtesy statements, introductions, and closings, individual comments within the body of each letter have been identified and numbered. A copy of each comment letter is included in Section 2.2 of this RPFSEIR, preceding the response. Brackets delineating the individual comments and a numeric identifier have been added to the right margin of the letter. The County's responses to each applicable comment are included in this section. Responses are delineated to match the numeric identifier of each comment letter. In the process of responding to the comments, there were minor revisions to the text of the RPDSEIR shown in this section and in Section 3.0, Corrections, Clarifications, and Additions to the RPDSEIR, of this RPFSEIR. None of the comments or responses constitute "significant new information," and none of the conditions set forth in Section 15088.5 of the State CEQA Guidelines that would require recirculation of the RPDSEIR have been met. Therefore, this Response to Comments section, the Corrections, Clarifications, and Additions to the RPDSEIR section, and the Mitigation Monitoring Program section are included as part of this RPFSEIR along with the RPDSEIR for consideration by the Regional Commission.

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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

May 28, 2025

Jodie Sackett
Los Angeles County
320 W Temple Street, Fl. 13
Los Angeles, CA 90012
jsackett@planning.lacounty.gov

SUBJECT: PARTIAL RECIRCULATED DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR THE NORTHLAKE SPECIFIC PLAN PROJECT, SCH NO. 2015031080, LOS ANGELES COUNTY, CA

Dear Jodie Sackett:

The California Department of Fish and Wildlife (CDFW) reviewed the Partial Recirculated Draft Supplemental Environmental Impact Report (RPDSEIR) from Los Angeles County (County) for the Northlake Specific Plan Project (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines[1].

A.1-1

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Fish & G. Code, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

A.1-2

CDFW may also act as a Responsible Agency under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law[2] of any species protected under the California Endangered Species Act (CESA; Fish & G. Code, § 2050 et seq.) or the Native Plant Protection Act (NPPA; Fish & G. Code, §1900 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

A.1-2 cont.

PROJECT DESCRIPTION SUMMARY

A.1-3

Proponent: Northlake Associates, LLC

Objective: The previously approved Project consists of development of Phase 1, Phase 2, and off-site external map improvements (65.14 acres), which include remedial grading, drainage features, and road and utility alignments. Project activities in Phase 1 would include the development of 2,295 dwelling units, commercial development, open space and parks, roadways, a school pad, and a fire station across 720 acres within the Project area. Phase 2 would consist of the development of single-family homes, parks, trails, open space, school uses, and associated roadway and infrastructure improvements across 545 acres.

Additional Project construction improvements include a 4.64-acre connection of Grasshopper Creek Park, a debris basin, 2.39 acres in trail connections, a 5.1-acre pad for a water tank, 29.79 acres of manufactured slopes, and 11.98 acres of natural open space. Lastly, an existing crude oil pipeline easement that traverses the entire north-south length of the Project area would be relocated to an alignment along the eastern boundary of the proposed development area.

Creek Avoidance Alternative (CAA): The design basis for the CAA is to avoid disturbing the Grasshopper Creek bottom that runs through the Project site and completing the proposed land plan. The CAA would remove and recompact the underlying landslides to provide suitable soil conditions for development; this is per standard engineering and design practices and Los Angeles County requirements, according to the RPDSEIR. A 300-foot setback from the creek bottom was determined to be the appropriate buffer due to several existing landslides directly underneath the creek bottom. The CAA would require construction of a new road, export of 8.2 million cubic yards of soil, and construction of three clear span bridges. The Project would decrease the developable acreage by approximately 78 acres and decrease the developable footprint by approximately 29 percent compared to the previously approved Project.

[2] "Take" is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

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A.1-3 cont.

The CAA would reduce impacts to sensitive vegetation communities and special-status species discussed in the RPDSEIR. Impacts to western spadefoot toad (*Spea hammondii*; Endangered Species Act (ESA) proposed threatened; California Species of Special Concern (SSC)) are proposed to be similar to the previously approved Project based on the location of the pond habitat. While the CAA would avoid direct impacts to Grasshopper Creek, the RPDSEIR claims that grading to remediate landslides would result in the loss of up to two-thirds of the creek's current tributary water and eliminate subsurface water. Additionally, the CAA is proposed to create significant indirect impacts to southwestern spiny rush (*Juncus acutus ssp. leopoldii*; California Rare Plant Rank (CRPR) 4.2) and other riparian phreatophytes in and near the creek. In conclusion, according to the RPDSEIR, the CAA would be considered infeasible.

Partial Creek Avoidance Alternative (PCAA): The PCAA would reduce the development scope of Phase 2 of the Project. The PCAA would avoid landslides in the northern portion and, therefore, avoid associated risk of additional loss of creek area. The disturbance area would be reduced in Phase 2 by 61 percent, reduce earthwork, and maintain similar land plan goals proposed by the Project. Lastly, the PCAA would provide approximately 37 fewer acres of active recreational and open space areas.

The PCAA would impact sensitive vegetation communities and special-status species in a similar manner to the previously proposed project. It would reduce impacts to Grasshopper Creek and associated phreatophyte vegetation by 20 percent compared to the previously approved Project. According to the RPDSEIR, the PCAA would be the environmentally superior alternative.

Location: The Project area encompasses approximately 1,330 acres of undeveloped land in unincorporated Los Angeles County. The Project area is located between Interstate 5 to the west, Castaic Lake to the east, and the Angeles National Forest to the west, north, and east. The town of Castaic is located to the south of the proposed Project.

Biological Setting: The Project area is bound by open space to the north and west, and residential development and Castaic Lagoon in the south. The Project area consists of a variety of vegetation communities which include, but is not limited to, California sagebrush, California annual grassland, Foothill needlegrass grassland, wildflower fields, riparian vegetation such as cottonwoods (Populus spp.) and willows (Salix spp.), and ephemeral ponds. Additionally, Grasshopper Creek flows north to south through the center of the Project area.

Updated surveys for western spadefoot toad were conducted by Glenn Lukos Associates (GLA) during the 2022/2023 and 2023/2024 rainfall seasons. Multiple western spadefoot toads were observed in three existing features within the Project area where the species had been detected previously. In April 2022, a GLA biologist conducted a site visit and observed paniculate tarplant (*Deinandra paniculata*; CRPR 4.2). Focused surveys for southwestern spiny rush (*Juncus acutus ssp. leopoldii*; CRPR

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4.2) were conducted in 2021 and was detected at Grasshopper Creek. Moreover, several individual Crotch's bumble bee (*Bombus crotchii*; CESA candidate endangered) were detected within the Project area during focused surveys, following protocol produced by GLA, in May and June 2024.

A.1-3 cont.

Sensitive species that are of concern for the Project include Crotch's bumble bee. The RPDSEIR provides mitigation measures relating to western spadefoot toad, round-leaved filaree, paniculate tarplant, southwestern spiny rush, slender mariposa lily (*Calochortus clavatus var. gracilis*; CRPR 1B.2) and club-haired mariposa lily (*C. clavatus var. clavatus*; CRPR 4.3), and compensatory mitigation for impacts to Crotch's bumble bee suitable habitat (i.e., coastal sage scrub, grassland, wildflower field, and needlegrass grassland).

Project History: CDFW previously reviewed the Notice of Preparation in 2015 and provided comments on the Draft Supplemental Environmental Impact Report (DSEIR) in 2017. Previous comments from the DSEIR include, but are not limited to, the range of alternatives considered, DSEIR analysis of wildlife crossing, western spadefoot toad presence and mitigation, impacts to Grasshopper Creek and its tributaries, and impacts to rare plants and vegetation communities.

The RPDSEIR was prepared by the County in accordance with the Los Angeles Superior Court ruling on the Center For Biological Diversity and Endangered Habitats League v. County Of Los Angeles, et al, and Real Parties in Interest, Northlake Associates, et al, Case No. 19STCPO1610 ruling (Court Ruling), dated January 11, 2021. The Court held the ruling that the DSEIR failed to comply with CEQA and required revision of the CEQA document. The Lead Agency drafted the RPDSEIR with revised and updated portions of the Project proposal. Lastly, as referenced in the RPDSEIR, CDFW has reviewed and approved the Habitat Mitigation and Monitoring Plan for special-status plants (July 2022 [Revised October and December 2022 and February 2023) and western spadefoot toad (July 2022 [Revised March and June 2023]).

COMMENTS AND RECOMMENDATIONS

A.1-4

CDFW offers the comments and recommendations below to assist the County in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources.

COMMENT # 1: Crotch's Bumble Bee

Issue: Mitigation Measures 5.2-6 through 5.2-8 for Crotch's bumble bee may be improved to ensure impacts to the species are appropriately mitigated.

Specific impact: CDFW is not included in the review and approval process for habitat restoration/enhancement that is proposed to be suitable for Crotch's bumble bee. CDFW is concerned that the selected habitat restoration/enhancement sites may not

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contain Crotch's bumble bee; therefore, the Project would not be mitigating impacts to a level less than significant.

A.1-4 cont.

Why impact would occur: According to the RPDSEIR and focused survey results, Crotch's bumble bee is present throughout the Project area. CDFW appreciates that the County has incorporated Mitigation Measures 5.2-6 through 5.2-8, which outlines habitat restoration/enhancement at a 2:1 ratio. CDFW is concerned that the RPDSEIR requires the County's review and approval of the mitigation measures but not CDFW's review and approval. Given that the Project proponent intends to obtain an Incidental Take Permit (ITP) for take authority of Crotch's bumble bee, CDFW should be involved alongside the County regarding the mitigation measures outlined in the RPDSEIR. Additionally, the habitat restoration or enhancement sites that would be proposed as compensatory mitigation should be surveyed to confirm presence of Crotch's bumble bee. Having mitigation sites with vegetation communities that support suitable habitat for the species, but no confirmed presence does not constitute as effective mitigation. Impacts due to Project activities have not been fully mitigated if the targeted species is not present and thriving successfully in the proposed mitigation sites.

Evidence impact may be significant: The California Fish and Game Commission accepted a petition to list the Crotch's bumble bee as endangered under CESA, determining the listing "may be warranted" and advancing the species to the candidacy stage of the CESA listing process. Take of any endangered, threatened, candidate species that results from the Project is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9). CDFW considers impacts to species that are candidates for CESA listing to be significant, under CEQA. Accordingly, the Project may have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or the United States Fish and Wildlife Service (USFWS).

Recommended Potentially Feasible Mitigation Measure(s)

Mitigation Measure #1: CDFW Survey Protocol

CDFW recommends the Project proponent retain a qualified biologist with the appropriate handling permits to conduct focused surveys within the proposed habitat restoration/enhancement sites prior to implementation of the HMMP. Focused surveys shall follow CDFW's Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023). Focused surveys shall also be conducted throughout the entire proposed mitigation areas and during the appropriate flying season to ensure no missed detection of Crotch's bumble bee occurs. Survey results, including negative findings, shall be submitted to CDFW and the County prior to the start of a monitoring program.

Mitigation Measure #2: MM 5.2-6 To MM 5.2-8 Revision

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Given that the Project proponent intends to obtain an ITP, CDFW would be involved in the review and approval process of compensatory mitigation. CDFW recommends the County revise Mitigation Measures 5.2-6 through 5.2-8 in the RPDSEIR to include review and approval from CDFW.

A.1-4 cont.

Recommendation #1: CDFW ITP

A.1-5

The focused surveys conducted by GLA were performed without coordination and review of the survey methodology by CDFW. Additionally, it is unclear from the survey report and RPDSEIR if the GLA biologists had the appropriate handling permits prior to conducting focused surveys for Crotch's bumble bee. CDFW strongly recommends that the Project proponent coordinates with CDFW to determine whether the focused surveys are valid to move forward in the ITP process.

Recommendation #2: CEQA

A.1-6

CDFW's issuance of an ITP for a Project is subject to CEQA. As a Responsible Agency, CDFW may consider the CEQA document from the lead agency/Project proponent for the Project. However, additional documentation may be required as part of an ITP application for the Project in order for CDFW to adequately develop an accurate take analysis and identify measures that would fully mitigate for take of CESA-listed species. To minimize additional requirements by CDFW pursuant to Fish and Game Code section 2081 and/or under CEQA, the Project's CEQA document should fully identify the potential impacts to Crotch's bumble bee and provide adequate avoidance, mitigation, monitoring, and reporting commitments for issuance of the ITP.

COMMENT # 2: Creek Avoidance Alternatives

A.1-7

Issue: The CAA and PCAA would impact Grasshopper Creek and its associated species.

Specific impact: CDFW is concerned that the CAA evaluated in the RPDSEIR did not include meaningful creek avoidance that leaves a hydrologically functioning Grasshopper Creek. Therefore, the RPDSEIR might have selected an alternative that may be more impactful to the environment.

Why impact would occur: The RPDSEIR defines Grasshopper Creek as an ephemeral drainage. By definition, ephemeral drainages only have flows during and immediately following precipitation and are primarily fed from surface runoff (CDFG 2010). The RPDSEIR erroneously states that some of the ephemeral channel is fed by surface and subsurface runoff from landslide formations, which contradicts the definition of ephemeral. Therefore, the RPDSEIR's claims of eliminating subsurface waters may not be a substantial impact to Grasshopper Creek; thus the CAA may be an environmentally superior alternative.

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In addition, the RPDSEIR claims that the CAA cannot sustain the hydrology necessary to support the riparian vegetation post-development. However, the RPDSEIR did not provide necessary details such as surface flow contributions from the tributaries that support the hydrology of Grasshopper Creek. Information specific to the contributions from the tributary channels are necessary to assess if removing those inputs would substantially alter the hydrology of Grasshopper Creek. Given the lack of necessary flow information and the ephemeral nature of Grasshopper Creek (whereby definition is not reliant on subsurface flow), reduction of subsurface flows through landslide remediation may not result in substantial impacts as claimed in the RPDSEIR. In addition, additional alternatives, as discussed below (Recommendation #3-7), may be considered to further reduce concerns of substantial impacts.

A.1-8

Finally, the technical memos (F2 and F3 of the RPDSEIR) state that the habitat in Grasshopper Creek is of “poor” habitat quality, thereby claiming that the ephemeral habitat is less valuable. Ephemeral streams naturally contain less vegetative cover and are typically dominated by shrubs, exposed substrate, and bedrock. Ephemeral habitat type is no more or less biologically valuable in an ecosystem than riparian vegetation or phreatophytic vegetation; instead, it serves a different ecological niche. Thus, CDFW advocates for the avoidance and preservation of ephemeral streams as provided by the CAA.

A.1-9

Evidence impact would be significant: Section 15126.6(a) of the State CEQA Guidelines requires an EIR to describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. Additionally, Section 15126.6(e)(2) of the State CEQA Guidelines requires that an EIR identify an environmentally superior alternative among the alternatives evaluated. The proposed environmentally superior alternative, PCAA, would have similar impacts to the previously approved Project. Therefore, the RPDSEIR does not entirely satisfy the avoidance of Grasshopper Creek and its potential associated species impacts.

A.1-10

Recommended Potentially Feasible Mitigation Measure(s)

Recommendation #3: Reevaluation of the CAA

CDFW recommends that the CAA be reevaluated in a manner that avoids Grasshopper Creek and avoids significant impacts to its associated species, while leaving the Creek hydrologically functioning. This may include the removal of extensive landslide remediation. Additionally, CDFW recommends the CAA be achieved through engineering solutions such as using swales throughout the development to deliver surface runoff to Grasshopper Creek or subsurface drains that retain flow to Grasshopper Creek consistent with current subsurface discharge. CDFW welcomes coordination with the County and Project proponent to lessen significant impacts to the maximum extent feasible.

A.1-11

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Recommendation #4: Riparian Habitat Compensatory Mitigation A.1-12

If preservation of the existing creek hydrology is not possible, the final CEQA document should contain an alternative that protects Grasshopper Creek in place. This alternative should identify the vegetation alliances and stream habitat acreages that would be avoided as well as the vegetation alliances and acreages that will be lost as a result of the change in hydrology. The vegetation alliances should be mitigated at a minimum 3:1 ratio in the same sub-watershed to mitigate the biological value it provides to resources in the area.

Recommendation #5: Figures and Maps A.1-13

The final CEQA document should include figures or maps that provide vegetation alliance information, locations of habitat created by the change in landslide hydrology, and meaningful comparisons between the PCAA, CAA, and the original Project in terms of these vegetation alliances.

Recommendation #6: CAA Project Redesign A.1-14

CDFW recommends eliminating the single-family housing, proposed to the northwest of Grasshopper Creek in the CAA, and the sports park proposed to the west of Grasshopper Creek in the PCAA. This is to reduce the edge effect and preserve more biologically valuable open space in this area. Additionally, this is to reduce the biological impacts to Grasshopper Creek and preserve more biologically valuable open space in this area.

Recommendation #7: Remediation of Landslides A.1-15

The final CEQA document should address why the CAA appears to include remediation of landslides that occur on the opposite side of Grasshopper Creek. In addition, the final CEQA document should address why landslide remediation would need to occur across the creek from where development is proposed and provide an avoidance alternative to reduce edge effect and impact to the proposed open space.

ADDITIONAL COMMENTS A.1-16

Fuel Modification. The final CEQA document should discuss how fuel modification requirements would impact any avoided stream and open space habitat and clarify if fuel modification requirements are included in the impact calculations and mitigation analysis.

Debris Basin Impacts to Creeks. Page 104 of the RPDSEIR includes a figure that includes turning Grasshopper Creek and unnamed tributaries into debris basins and other in-line water quality features. CDFW does not support turning streams into basins for water quality. Any feature designed to attenuate flow and/or improve water quality should be located outside of the stream with a 300-foot buffer. CDFW does not support A.1-17

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the use of in-line basins or type conversion of ephemeral streams to water quality features. The addition of urban runoff into ephemeral streams type converts them from ephemeral systems to intermittent or perennial systems. This changes the vegetation communities and hydrology, which allows invasive species such as Argentine ants, bullfrogs, crawfish, and invasive aquatic weeds to proliferate and damage the overall value of the surrounding habitat. The RPDSEIR should locate all water quality features outside of streams with a minimum 300-foot buffer. If water will be continually present in the basin from urban runoff, the basin should be located a minimum 500 feet from any stream to prevent the spread of Argentine ants into adjacent stream habitat (S.B Menke, et al. 2007 & Conservation Biology 2010).

A.1-17 cont.

Western Burrowing Owl. On October 10, 2024, the Fish and Game Commission voted unanimously to advance the western burrowing owl to candidacy under the CESA. As such, it is afforded all the legal protections of a CESA-listed species. CDFW considers adverse impacts to a species protected by CESA, for the purposes of CEQA, to be significant without mitigation. There is potential for burrowing owl to occur within the Project area, and burrowing owl was mentioned in the RPDSEIR in multiple Mitigation Measures. Burrowing owls use burrows dug by other species, such as the California ground squirrel (*Spermophilus beecheyi*), as well as natural rock cavities, debris piles, culverts, and pipes for nesting during the breeding season and for roosting and cover, year-round. We recommend coordinating with CDFW's CESA Program to determine if take authorization is necessary and discuss appropriate avoidance, minimization, and mitigation measures.

A.1-18

Mitigation and Monitoring Reporting Plan. CDFW recommends the Project's environmental document include mitigation measures recommended in this letter. CDFW has provided comments via a mitigation monitoring and reporting plan to assist in the development of feasible, specific, detailed (i.e., responsible party, timing, specific actions, location), and fully enforceable mitigation measures (CEQA Guidelines, § 15097; Pub. Resources Code, § 21081.6). The County is welcome to coordinate with CDFW to further review and refine the Project's mitigation measures. Per Public Resources Code section 21081.6(a)(1), CDFW has provided a summary of our suggested mitigation measures and recommendations in the form of an attached Draft Mitigation Monitoring and Reporting Plan (Attachment A).

A.1-19

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity

A.1-20

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Database (CNDDB). The CNDDB website[3] provides direction regarding the types of information that should be reported and allows on-line submittal of field survey forms.

A.1-20 cont.

In addition, information on special status native plant populations and sensitive natural communities, should be submitted to CDFW's Vegetation Classification and Mapping Program using the Combined Rapid Assessment and Relevé Form[4].

The County should ensure data collected for the preparation of the RPDSEIR is properly submitted.

FILING FEES

A.1-21

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the County and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

A.1-22

CDFW appreciates the opportunity to comment on the RPDSEIR to assist the County in identifying and mitigating Project impacts on biological resources. CDFW requests an opportunity to review and comment on any response that the County has to our comments and to receive notification of any forthcoming hearing date(s) for the Project (CEQA Guidelines, § 15073(e)).

Questions regarding this letter or further coordination should be directed to Joleena De La Fe[5], Environmental Scientist.

Sincerely,

DocuSigned by:
5991E19EF8094C3...

Victoria Tang
Environmental Program Manager
South Coast Region

[3] https://wildlife.ca.gov/Data/CNDDB
[4] https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Submit
[5] Phone: (858) 354-3527; Email: joleena.delafe@wildlife.ca.gov

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ATTACHMENTS

Attachment A: Draft Mitigation, Monitoring, and Reporting Program

ec: California Department of Fish and Wildlife
Victoria Tang, Environmental Program Manager
Frederic (Fritz) Rieman, Senior Environmental Scientist Supervisor
Joleena De La Fe, Environmental Scientist
Kelly Schmoker, Senior Environmental Scientist Specialist

Office of Planning and Research
State.Clearinghouse@opr.ca.gov

REFERENCES

[CDFG] California Department of Fish and Game. 2010. A Review of Stream Processes and Forms in Dryland Watersheds. Available from https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=25779

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ATTACHMENT A: DRAFT MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

CDFW provides the following language to be incorporated into the MMRP for the Project.

Mitigation Measure	Timing	Responsible Party
Mitigation Measure #1: CDFW Survey Protocol CDFW recommends the Project proponent retain a qualified biologist with the appropriate handling permits to conduct focused surveys within the proposed habitat restoration/enhancement sites prior to implementation of the HMMP. Focused surveys shall follow CDFW's Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023). Focused surveys shall also be conducted throughout the entire proposed mitigation areas and during the appropriate flying season to ensure no missed detection of Crotch's bumble bee occurs. Survey results, including negative findings, shall be submitted to CDFW and the County prior to the start of a monitoring program.	Prior to Project Initiation	Project Proponent/Qualified Biologist
Mitigation Measure #2: MM 5.2-6 To MM 5.2-8 Revision Given that the Project proponent intends to obtain an ITP, CDFW would be involved in the review and approval process of compensatory mitigation. CDFW recommends the County revise Mitigation Measures 5.2-6 through 5.2-8 in the RPDSEIR to include review and approval from CDFW.	Prior to Project Initiation	Lead Agency
Recommendation #1: CDFW ITP The focused surveys conducted by GLA were performed without coordination and review of the survey methodology by CDFW. Additionally, it is unclear from the survey report and RPDSEIR if the GLA biologists had the appropriate handling permits prior to conducting focused surveys for Crotch's bumble bee. CDFW	Prior to Project Initiation	Project Proponent/Qualified Biologist

Docusign Envelope ID: 5BFB120E-1690-47C7-85B1-1070F17EDB1D

Mitigation Measure	Timing	Responsible Party
strongly recommends that the Project proponent coordinates with CDFW to determine whether the focused surveys are valid to move forward in the ITP process.		
Recommendation #2: CEQA CDFW's issuance of an ITP for a Project is subject to CEQA. As a Responsible Agency, CDFW may consider the CEQA document from the lead agency/Project proponent for the Project. However, additional documentation may be required as part of an ITP application for the Project in order for CDFW to adequately develop an accurate take analysis and identify measures that would fully mitigate for take of CESA-listed species. To minimize additional requirements by CDFW pursuant to Fish and Game Code section 2081 and/or under CEQA, the Project's CEQA document should fully identify the potential impacts to Crotch's bumble bee and provide adequate avoidance, mitigation, monitoring, and reporting commitments for issuance of the ITP.	Prior to Project Initiation	Lead Agency
Recommendation #3: Reevaluation of the CAA CDFW recommends that the CAA be reevaluated in a manner that avoids Grasshopper Creek and avoids significant impacts to its associated species, while leaving the Creek hydrologically functioning. This may include the removal of extensive landslide remediation. Additionally, CDFW recommends the CAA be achieved through engineering solutions such as using swales throughout the development to deliver surface runoff to Grasshopper Creek or subsurface drains that retain flow to Grasshopper Creek consistent with current subsurface discharge. CDFW welcomes coordination with the County and Project proponent to lessen significant impacts to the maximum extent feasible.	Prior to Project Initiation	Lead Agency

Docusign Envelope ID: 5BFB120E-1690-47C7-85B1-1070F17EDB1D

Mitigation Measure	Timing	Responsible Party
Recommendation #4: Riparian Habitat Compensatory Mitigation If preservation of the existing creek hydrology is not possible, the final CEQA document should contain an alternative that protects Grasshopper Creek in place. This alternative should identify the vegetation alliances and stream habitat acreages that would be avoided as well as the vegetation alliances and acreages that will be lost as a result of the change in hydrology. The vegetation alliances should be mitigated at a minimum 3:1 ratio in the same sub-watershed to mitigate the biological value it provides to resources in the area.	Prior to Project Initiation	Lead Agency/Project Proponent
Recommendation #5: Figures and Maps The final CEQA document should include figures or maps that provide vegetation alliance information, locations of habitat created by the change in landslide hydrology, and meaningful comparisons between the PCAA, CAA, and the original Project in terms of these vegetation alliances.	Prior to Project Initiation	Lead Agency
Recommendation #6: CAA Project Redesign CDFW recommends eliminating the single-family housing, proposed to the northwest of Grasshopper Creek in the CAA, and the sports park proposed to the west of Grasshopper Creek in the PCAA. This is to reduce the edge effect and preserve more biologically valuable open space in this area. Additionally, this is to reduce the biological impacts to Grasshopper Creek and preserve more biologically valuable open space in this area.	Prior to Project Initiation	Lead Agency/Project Proponent

Docusign Envelope ID: 5BFB120E-1690-47C7-85B1-1070F17EDB1D

Mitigation Measure	Timing	Responsible Party
Recommendation #7: Remediation of Landslides The final CEQA document should address why the CAA appears to include remediation of landslides that occur on the opposite side of Grasshopper Creek. In addition, the final CEQA document should address why landslide remediation would need to occur across the creek from where development is proposed and provide an avoidance alternative to reduce edge effect and impact to the proposed open space.	Prior to Project Initiation	Lead Agency

Response to Comment Letter A.1

Victoria Tang, Environmental Program Manager
California Department of Fish and Wildlife
May 28, 2025

Response A.1-1

The comment acknowledges receipt of the RPDSEIR for review. The comment does not address the content or adequacy of the RPDSEIR under CEQA or the State CEQA Guidelines; no additional response is required. The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Response A.1-2

The comment contains introductory language regarding CDFW. The comment does not address the content or adequacy of the RPDSEIR under CEQA or the State CEQA Guidelines; no additional response is required. The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Response A.1-3

The comment contains introductory language regarding Project. The comment does not address the content or adequacy of the RPDSEIR under CEQA or the State CEQA Guidelines other than to note that "CDFW has reviewed and approved the Habitat Mitigation and Monitoring Plan for special-status plants (July 2022 [Revised October and December 2022 and February 2023) and western spadefoot toad (July 2022 [Revised March and June 2023])"; no additional response is required. The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Response A.1-4

The commenter requests CDFW be added to Mitigation Measures MM 5.2-6 through 5.2-8 for review and approval of the Habitat Mitigation and Monitoring Program (HMMP) regarding Crotch's bumble bee. Mitigation Measures MM 5.2-6 through 5.2-8 have been revised to include CDFW for review and approval of the HMMP. Cal. Code Regs., tit. 14, § 783.2, subd. (a)(8) requires the proposal of measures to minimize and fully mitigate the impacts of the proposed taking; implementation of measures MM 5.2-6 through 5.2-8 fully mitigate the impacts to Crotch's bumble bee**.** In addition, commenter requests that an additional mitigation measure be included requiring focused surveys by qualified biologists at mitigation sites for Crotch's bumble bee. This is not needed to fully mitigate impacts to Crotch's bumble bee. However, Mitigation Measure MM 5.2-22 has been added based on the commenter's recommendation.

As further discussed in Section 3.0, Corrections, Clarifications and Additions to the RPDSEIR, the following text is modified as part of the RPFSEIR. The change in text signified by strikeouts (~~strikeouts~~) where text has been removed and by bold underlining (**underline**) where text has been added. The revisions reflect minor updates or clarifications to the content of the RPDSEIR, and thus and do not represent material changes or revisions that modify the findings.

MM 5.2-6 The loss of sage scrub habitat within the impact area is considered a significant impact. Sage scrub habitat shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but shall be no less than 2:1 for habitat restoration, enhancement or preservation, or combination thereof. A total of 634.70

acres of sage scrub would be impacted by Project implementation, which includes Purple sage scrub, California sagebrush–California buckwheat scrub, Black sage scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, California sagebrush–California buckwheat scrub/California annual grassland, and the burned sage scrub areas: burned Purple sage scrub, burned California sagebrush–California buckwheat scrub, burned Black sage scrub, and burned California sagebrush–California buckwheat scrub/California annual grassland. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, and preservation shall depend on the initial quality of the habitat area to be restored, enhanced or preserved and would be determined by the Project Applicant and the LACDRP. Sage scrub habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. Where restoration or enhancement is the proposed mitigation, the Project Applicant shall develop a Habitat Mitigation and Monitoring Program (HMMP) and shall submit it to the LACDRP **and the California Department of Fish and Wildlife (CDFW)** for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to the issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants of suitable sage scrub species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), Peirson's morning-glory will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP **and CDFW** and according to its specified materials, methods, and performance criteria, which shall include the following items:

MM 5.2-7 The loss of California annual grassland/wildflower fields within the impact area is considered to be a significant impact. California annual grassland/wildflower fields shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 24.23 acres of Foothill needlegrass grassland and burned Foothill needle grass grassland would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). California annual grassland/wildflower fields habitat restoration/enhancement implementation shall begin not more than one year

following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP **and the California Department of Fish and Wildlife (CDFW)** for review and approval. The HMMP shall be developed by a qualified restoration ecologist submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for burrowing owls. Habitat restoration/enhancement shall consist of seeding of suitable California annual grassland/wildflower fields plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP **and CDFW** and according to its specified materials, methods, and performance criteria, which shall include the following items:

MM 5.2-8 The loss of foothill needlegrass grassland within the impact area is considered to be a significant impact. Foothill needlegrass grassland shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 342.85 acres of California annual grassland/Wildflower fields would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). Foothill needlegrass grassland habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP **and the California Department of Fish and Wildlife (CDFW)** for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for the burrowing owl. Habitat restoration/enhancement shall consist of seeding of suitable foothill needlegrass grassland plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP **and CDFW** and according to its specified materials, methods, and performance criteria, which shall include the following items:

MM 5.2-22 **The project applicant shall retain a qualified biologist with the appropriate handling permits to conduct focused surveys for Crotch's bumble bee within the proposed habitat restoration/enhancement sites prior to implementation of the HMMP as set forth in MM 5.2-6 through MM 5.2-8. Focused surveys shall follow California Department of Fish and Wildlife's (CDFW) Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023). Focused surveys shall also be conducted throughout the entire proposed mitigation areas and during the appropriate flying season to ensure no missed detection of Crotch's bumble bee occurs. Survey results, including negative findings, shall be submitted to CDFW and LACDRP prior to the start of a monitoring program.**

Response A.1-5

The comment states that focused surveys for Crotch's bumble bee were performed without coordination and review of the survey methodology by CDFW. The focused surveys conducted (see RPDSEIR Appendix J) were for the purpose of determining the presence of CBB and if mitigation was necessary in accordance with CEQA. The surveys were not performed specifically as part of the Incidental Take Permit (ITP) process but do provide baseline information that will be incorporated into the ITP permitting process. Focused surveys will be conducted following CDFW's protocols as part of the ITP process. Please note that GLA biologists have been approved by CDFW for conducting focused surveys for Crotch's bumble bee in support of ITPs, in coordination with CDFW on a case-by-case basis and that currently, three GLA biologists have valid Memorandums Of Understanding from CDFW for Crotch's bumble bee surveys. No further analysis is necessary or required.

Response A.1-6

The comment states that the Project's CEQA document should fully identify the potential impacts to Crotch's bumble bee to minimize additional requirements by CDFW as part of the ITP. RPDSEIR Appendix J fully identifies the potential impacts to CBB as set forth at pages 2-27 – 2-28 of the RPDSEIR. As set forth in Response A.1-4, mitigation measures MM 5.2-6 through MM 5.2-8 have been revised as per the commenter's direction and mitigation measure MM 5.2-22 has been added. Nothing more is required to comply with the requirements of CEQA. All ITP requirements will be followed when an ITP application is submitted. No further analysis is necessary or required.

Response A.1-7

The commenter claims the evaluation of the CAA did not include "meaningful creek avoidance that leaves a hydrologically functioning Grasshopper Creek." The Court Ruling (RPDSEIR Appendix A) required that the CAA be recirculated with a complete alternatives analysis. The CAA was previously screened out from full alternatives analysis as it was determined to be infeasible. The Court Ruling does not require any specific parameters of the CAA to be revised, including providing for a hydrologically functioning Grasshopper Creek. Rather, the Court Ruling only requires there to be a complete alternatives analysis. The RPDSEIR CAA analysis complies with the Court Ruling and the mandates of CEQA. The comment states that the RPDSEIR erroneously states that some of the ephemeral channels are fed by surface and subsurface runoff from landslide formations, which contradicts the definition of ephemeral. The commenter is incorrect that the RPDSEIR is inconsistent with the definition of ephemeral. As set forth in the Geotechnical/Hydrogeologic Review of the Creek Avoidance Alternative Design (RPDSEIR Appendix F-2), "Surface flows have become ephemeral with extended dry periods and only occasional flows ranging from a trickle following typical rain events to a torrent following extreme rain events. Sources of water to the creek include surface water directed by tributaries and transient groundwater / moisture stored

largely within landslide debris and, to a lesser extent, along bedding planes and other structure that is hydraulically favorable (see Glossary).” Thus, the subsurface flows are a result of rainfall events, consistent with the definition provided by the commenter. In any event, the CAA is infeasible for numerous reasons, including from an engineering geologic and geotechnical perspective. (See RPDSEIR pages 2-79 through 2-80.) No further analysis is necessary or required.

Response A.1-8

The comment states that the CAA cannot sustain the hydrology necessary to support the riparian vegetation post-development and RPDSEIR did not provide necessary details such as surface flow contributions from the tributaries that support the hydrology of Grasshopper Creek. The information requested is not necessary to conclude that the CAA is not a feasible alternative. The RPDSEIR and its supporting technical appendices provide substantial evidence that the CAA is not feasible from an engineering geologic, geotechnical, and hydrologic perspective. The comment regarding additional alternatives is addressed below. No further analysis is necessary or required.

Response A.1-9

The comment advocates for the avoidance and preservation of ephemeral streams as provided by the CAA. As set forth in Response A.1-7, above, the RPDSEIR is not inconsistent with the definition of ephemeral. With respect to habitat quality, the determination of poor habitat quality was based on an evaluation of existing conditions, not as to whether that are ephemeral streams. (See RPDSEIR Appendix F-2, pages 2-3 and Glossary Figure 2a-d.) Moreover, the CAA is infeasible for numerous reasons, including from an engineering geologic and geotechnical perspective. As per the Court Ruling (RPDSEIR Appendix A), the CAA was to be recirculated with a complete alternatives analysis. The RPDSEIR CAA analysis complies with the Court Ruling and the mandates of CEQA. CDFW’s support for the CAA is noted and will be forwarded to the decision-makers for review and consideration. No further analysis is necessary or required.

Response A.1-10

The comment claims the RPDSEIR does not “entirely satisfy” the avoidance of Grasshopper Creek and its potential associated species impacts. As noted in Response A.1-9, above, as per the Court Ruling (RPDSEIR Appendix A), the CAA was to be recirculated with a complete alternatives analysis. None of the project objectives was to avoid impacts to Grasshopper Creek. Moreover, all biology and hydrology impacts were determined to be Less Than Significant with mitigation. CEQA Guidelines Section 15126.6 is clear that alternatives to be considered need to be able to “feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.” The CAA, as compared to the previously approved Project would have reduced impacts regarding biological resources:

> In summary, impacts to Foothill needlegrass, black sage scrub, California annual grassland/Wildflower fields, California sagebrush–California buckwheat scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, slender/club-haired mariposa lily, and southern California walnut, California gnatcatcher, and an open water area would be reduced but would remain significant. Impacts to CBB would be reduced as impacts to suitable habitat would be less than the previously approved Project. Impacts to WST would be similar to the previously approved Project. Indirect impacts to Grasshopper Creek would remain significant. Impacts to southwestern spiny rush would remain the same as the previously approved Project. Impacts to paniculate tarplant would be avoided; therefore, implementation of MM 5.2-5(b), above, would not be required.

(RPDSEIR, page 2-79.) See also RPDSEIR Table 2-12 for a comparison of the CAA impacts compared to the previously approved Project. The analysis of the CAA contained in the RPDSEIR complies with the Court Ruling and the mandates of CEQA. See also Response A.1-11, below. No further analysis is necessary or required.

Response A.1-11

The comment requests reevaluation of the CAA and suggests various revisions to the CAA. The RPDSEIR provides a complete analysis of the CAA supported by numerous technical reports. Based on those technical reports, it was determined that the CAA was not feasible from an engineering geologic and geotechnical perspective, as well as hydrologic perspective. The commenter's redesign suggestions will not eliminate the significant geologic and geotechnical issues that render the CAA infeasible. Moreover, CEQA does not require analysis of modified versions of the same alternative. (See *Village Laguna of Laguna Beach, Inc. v. Board of Supervisors* (1982) 134 Cal.App.3d 1022, 1028-1029 [EIR not required to evaluate variation of an alternative that fell within the continuum of alternatives discussed in the EIR)]; *Planning & Conservation League v. Department of Water Resources* (2024) 98 Cal.App.5th 726, 760 [an EIR need not consider every conceivable alternative; rejecting request for analysis of an additional alternative that was a part of two analyzed alternatives]; *Salton-stall v. City of Sacramento* (2015) 234 Cal.App.4th 549, 577 [EIR not required to study alternative that would have impacts similar to another alternative that was studied in the EIR]; *Town of Atherton v. California High-Speed Rail Authority* (2014) 228 Cal.App.4th 314, 356 [EIR not required to evaluate additional alternative routes similar to those evaluated in EIR].) The alternatives analysis of the CAA contained in the RPDSEIR complies with the Court Ruling and the mandates of CEQA. No further analysis is necessary or required.

Response A.1-12

The comment states that the final CEQA document should contain an alternative that protects Grasshopper Creek in place. See Response to Comment A.1-11, above. Additional analysis or modification of the CAA is not required. The alternatives analysis of the CAA contained in the RPDSEIR complies with the Court Ruling and the mandates of CEQA. No further analysis is necessary or required.

Response A.1-13

The comment requests a comparison of vegetation alliances as between the CAA, PCAA, and the previously approved Project. Such information is not needed to compare potential vegetation impacts from the various alternatives. Extensive vegetation mapping was conducted across the entire Project Site, and the RPDSEIR contains biology resource impact analysis for the CAA and PCAA as compared to the previously approved Project. For example, regarding the CAA, "As with the previously approved Project, the CAA would continue to have the potential to significantly impact biological resources. However, due to the reduced development footprint, impacts to Foothill needlegrass, black sage scrub, California annual grassland/Wildflower fields, California sagebrush–California buckwheat scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, slender/club-haired mariposa lily, and southern California walnut as well as impacts to California gnatcatcher and an open water area would be reduced under this alternative." (RPDSEIR, page 2-78.) Regarding the PCAA, "as with the previously approved Project, the PCAA would continue to have the potential to significantly impact biological resources but due to the reduced development footprint, impacts to Foothill needlegrass, black sage scrub, California annual grassland/Wildflower fields, California sagebrush–California buckwheat scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, slender/club-haired mariposa lily, and southern California walnut as well as impacts to California gnatcatcher and an open water area would be reduced under this alternative. Impacts

to the paniculate tarplant would be similar to the previously approved Project." (RPDSEIR, page 2-90.) No further analysis is necessary or required.

Response A.1-14

The comment recommends design changes to the CAA to reduce the edge effect and preserve more biologically valuable open space. As set forth in Response A.1-11, the commenter's redesign suggestions will not eliminate the significant geologic and geotechnical issues that render the CAA infeasible. Moreover, CEQA does not require analysis of modified versions of the same alternative. The alternatives analysis of the CAA contained in the RPDSEIR complies with the Court Ruling and the mandates of CEQA. No further analysis is necessary or required.

Response A.1-15

The comment states that the final CEQA document should address why the CAA includes remediation of landslides on the western side of Grasshopper Creek. Landslide remediation only takes place on the eastern side of Grasshopper Creek, above the 300-foot setback from Grasshopper Creek. The proposed development only occurs on the eastern side of Grasshopper Creek, but for proposed bridges that span the creek. Regarding the suggestion for an additional avoidance alternative, as set forth in Response A.1-11, the commenter's redesign suggestions to reduce the edge effect and impacts to the proposed open space will not eliminate the significant geologic and geotechnical issues that render the CAA infeasible. Moreover, CEQA does not require analysis of modified versions of the same alternative. The alternatives analysis of the CAA contained in the RPDSEIR complies with the Court Ruling and the mandates of CEQA. No further analysis is necessary or required.

Response A.1-16

The comment states that the final CEQA document should discuss how fuel modification requirements would impact any avoided stream and open space habitat. The Los Angeles County Fire Department (LACFD) requires distances up to 200 feet of fuel modification, depending on the adjacent fire potential as measured by the slope, aspect, fuel characteristics, fire history and weather data (wind, temperature and relative humidity). (RPDSEIR Appendix D-1 (Wildfire Technical Report), page 81.) Based on the proposed Site Plan for the previously approved Project (RPDSEIR Figure 1, page 1-2), the 200-foot distance from proposed structures would not intrude into avoided stream and open space habitat. In addition, the determination of biological impacts, including mitigation, is based on the ultimate grading limits of the Project (disturbance area), which includes all construction activities (including staging, grading, equipment areas) and fuel-modification areas. (See 2019 Draft SEIR Appendix D (Biological Technical Report), page 58.) No further analysis is necessary or required.

Response A.1-17

The comment references Exhibit 3, NorthLake Partial Creek Avoidance Alternative (RPDSEIR page 2-87), to address the inclusion of debris basins and other in-line water quality features as part of the PCAA and recommends that these features be located outside of the stream with a 300-foot buffer. However, there is no rule or regulation that requires this. Moreover, as set forth in Response A.1-11, variations of an analyzed alternative do not need to be analyzed. The downstream basins are designed to attenuate volume-related discharge changes and mitigate potential hydromodification impacts to the downstream watercourse. Basin locations are determined by existing topographic constraints, and their effects have been evaluated and incorporated within the development's defined disturbance limits. The basins are a project feature and have been evaluated as part of the previously approved Project. No further analysis is necessary or required.

Response A.1-18

The comment suggests coordinating with CDFW's CEQA Program to determine if take authorization is necessary for the burrowing owl. The comment correctly notes that multiple mitigation measures address the burrowing owl (MM 5.2-7 through MM 5.2-9). Coordination with CDFW's CESA Program will be pursued if take authorization is necessary. No further analysis is necessary or required.

Response A.1-19

The comment recommends inclusion of mitigation measures identified in the comment letter. Please refer to Responses A.1-4 and A.1-6, above, that address each of the recommended mitigation measures. No further analysis is necessary or required.

Response A.1-20

The comment states that all information collected be reported to the appropriate repositories. All required survey reporting will be complied with, including submittal of information to the California Natural Diversity Database. No further analysis is necessary or required.

Response A.1-21

The comment states the Project is subject to CDFW fees upon filing the Notice of Determination. The project Applicant will pay the required fees at the appropriate time. No further analysis is necessary or required.

Response A.1-22

The comment acknowledges the opportunity to comment on the RPDSEIR. The commenter will be provided with this document, the RPFSEIR, containing the responses to the comment letter. Notice of project hearings will also be provided.

DEPARTMENT OF TRANSPORTATION
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Making Conservation a California Way of Life

May 29, 2025

Mr. Jodie Sackett, Subdivisions
Los Angeles County
Department of Regional Planning
320 W. Temple Street, FL. 13
Los Angeles, CA 90012

RE: Northlake Specific Plan Project-
Recirculated Partial DSEIR
SCH # 2015031080
Vic. LA-05/PM R59.0508 to R59.007
GTS # LA-2017-04795-DSEIR

A.2-1

Dear Mr. Jodie Sackett:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above-referenced environmental document. The previously approved Project (not certified) consists of development of Phase 1, Phase 2, and associated offsite map improvements for both Phase 1 and Phase 2. Phase 1, which includes the entitlements Vesting Tentative Tract Map ("VTTM") No. 073336, Vesting Tentative Parcel Map ("VTPM") No. 073335, and Conditional Use Permit ("CUP") No. RPPL2023004316, comprises development of a 720-acre portion of the Project Site with a total of 2,295 dwelling units, including 288 single family units on approximately 41 acres, 1,341 multi-family units on approximately 107 acres, 345 senior multifamily units on approximately 49 acres, and 315 affordable units and six market-rate live/work units (included within 20 acres of commercial use). Phase 1 also includes commercial uses (22 acres), open space and parks uses (412 acres), roadways (86 acres), a school pad (21 acres), water tank pad (5.1 acres), and a fire station pad (1.4 acres).

The remainder of the Project Site, referred to as the Phase 2 area, would be developed with 855 single family units; 386 acres of parks, trails, and open space; 23 acres of school uses; and 36 acres of associated roadway and infrastructure improvements. Phase 2 is not included in VTTM 073336 and will require a separate map number. VTPM 073335 requests 21 large lot parcels (40 acres or more) for future lease and finance purposes and covers both phases.

Associated off-site map improvements in both Phase 1 and Phase 2 total 65.13 acres, including remedial grading, drainage features, and road and utility alignments.

A.2-1 cont.

The Project improvements would consist of the construction of Ridge Route Road at the Project's main entrance to the south and a secondary access route to the northwest, construction of Northlake Parkway adjacent to and west of the Phase 2 portion of the Project Site, a 4.64 acre connection of Grasshopper Creek Park, a debris basin, 2.39 acres in trail connections, a 5.1-acre pad for a water tank, 29.79 acres of manufactured slopes, and 11.98 acres of natural open space. In addition, extensions of the existing electrical distribution circuitry would occur along the existing Ridge Route Road to reach the Project, and substation upgrades would occur on Southern California Edison property.

In addition to the above improvements, an existing crude oil pipeline easement containing two oil pipelines that traverse the entire north-south length of the Project Site and both Phases 1 and 2 would be relocated to an alignment along the eastern boundary of the proposed development area and within the identified grading footprint.

The SEIR concluded that impacts associated with the 2019 previously Approved Project (not certified) would result in significant and unavoidable environmental impacts related to Operational, Construction, and Cumulative Air Quality; Construction, Operational, and Cumulative Noise; and Project and Cumulative Traffic. The RPDSEIR evaluates the potential for environmental impacts based on the Court Order. The RPDSEIR provides supplemental analysis related to:

1) Revised biological impact analysis only as to the Western Spadefoot Toad, special-status plants, and crotches' Bumble Bee;
2) Updated Traffic Analysis as to Vehicle Miles Travelled pursuant to Senate Bill 743 and CEQA Guidelines Section 15064.3;
3) Updated Wildfire Analysis pursuant to Appendix G of the CEQA Guidelines; and
4) Revised alternatives analysis only as to the addition of a Creek Avoidance Alternative and a Partial Creek Avoidance Alternative.

The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. Senate Bill 743 (2013) has codified into CEQA law and mandated that CEQA review of transportation impacts of proposed development be modified by using Vehicle Miles Traveled (VMT) as the primary metric in identifying transportation impacts for all future development projects. As a reminder, all environmental document should

A.2-2

include Vehicle Miles Traveled. You may reference the Governor's Office of Planning and Research (OPR) for more information:

https://opr.ca.gov/ceqa/#guidelines-updates

A.2-2 cont.

The Final SEIR appropriately acknowledges significant impacts to multiple State transportation facilities along the I-5 corridor. Specifically, the impacted locations include the I-5 northbound ramps at Lake Hughes Road, the I-5 southbound ramps at Parker Road, the I-5 northbound off-ramp at Ridge Route Road, and the I-5 southbound ramps at The Old Road. These locations are projected to experience operational deficiencies under cumulative conditions. While the County does not have direct jurisdiction over State facilities, we support the County's recognition of these impacts and the County's stated intent to coordinate with Caltrans District 7 to advance potential mitigation strategies. Improvements may include ramp widening, geometric enhancements at ramp terminals, new traffic signals, and intersection control modifications to address queuing, delay, and safety concerns. Ongoing collaboration with Caltrans will be essential to ensure that these improvements are fully evaluated and implemented through the appropriate project development and funding processes. Caltrans concurs that funding mechanisms such as the County's Castaic Bridge and Major Thoroughfare District, along with the payment of applicable district fees, are appropriate to satisfy the project's fair share obligations for improvements to State transportation facilities.

A.2-3

We noticed that the analysis uses 27.0 VMT per service population, based on the previously approved Northlake Specific Plan, as the threshold for determining transportation impacts. We respectfully ask the lead agency to clarify why a reduction-based threshold was not considered in this case. Given the statewide shift under SB 743, it's important to understand how this approach supports the intent of CEQA moving forward.

As a reminder, the Governor's Office of Planning and Research (OPR) recommends using a threshold that reflects a 15% reduction below the regional or jurisdictional average VMT. This benchmark is intended to help projects contribute meaningfully to reducing vehicle travel, emissions, and other transportation-related impacts. We encourage the County to revisit the VMT threshold applied in the analysis and share its reasoning for not incorporating a reduction target, especially in light of the broader goals set by SB 743 and OPR guidance.

A.2-4

To further support VMT reduction and for the County's consideration, we recommend that the project incorporate a Transportation Demand Management (TDM) program. TDM strategies such as enhanced transit connectivity, subsidized transit passes, carpool/vanpool programs, employer-based trip reduction incentives, bicycle and pedestrian infrastructure, and telecommuting support can materially reduce project-level VMT. These measures should be quantified, monitored, and integrated into project conditions or mitigation measures to ensure accountability and effectiveness. A.2-5

Please be reminded that any work performed within the State Right-of-way will require an Encroachment Permit from Caltrans. Any modifications to State facilities must meet all mandatory design standard and specifications. A.2-6

Any transportation of heavy construction equipment and/or materials that require the use of oversized transport vehicles on State highways will need a Caltrans transportation permit. Any large-size truck trips be limited to off-peak commute periods for the construction phase and operation phase. Construction truck loads should be covered with a tarpaulin cover. A.2-7

Storm water run-off is a sensitive issue for Los Angeles County. Please be mindful that projects should be designed to discharge clean run-off water. Additionally, discharge of storm water run-off is not permitted onto State highway facilities without any storm water management plan. A.2-8

In addition, a truck/traffic construction management plan may be needed for this project because the project is near by Caltrans on/off-ramps. Traffic Management Plans involving lane closures or street detours which will impact the circulation system affecting traffic to and from freeway on/off-ramps should be coordinated with Caltrans. A.2-9

If you have any questions, please feel free to contact Mr. Alan Lin, the project coordinator, at (213) 269-1124 and refer to GTS # LA-2017-04795-DSEIR.

Sincerely,

Miya Edmonson

MIYA EDMONSON
LDR/CEQA Branch Chief

email: State Clearinghouse

Response to Comment Letter A.2

Miya Edmonson, LDR/CEQA Branch Chief
California Department of Transportation, District 7
May 29, 2025

Response A.2-1

The comment contains introductory language regarding the Project. The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Response A.2-2

The comment contains introductory language regarding Caltrans and Senate Bill 743 and the requirement to include a Vehicle Miles Traveled (VMT) analysis. As discussed in Section 2.2 of the RPDSEIR, a VMT analysis was prepared and is included as Appendix C-1 to the RPDSEIR.

Response A.2-3

The comment expresses support for the County's recognition of impacts on State transportation facilities in the 2019 Final SEIR traffic analysis. The County will coordinate and collaborate with Caltrans as needed. No further analysis is necessary or required.

Response A.2-4

The comment requests clarification for the basis of using the NorthLake Specific Plan (NLSP) VMT per service population (27.03) as the significance threshold for determining an impact. The NLSP VMT per Service Population (27.03) is the baseline for comparison to the previously approved Project VMT per Service Population (25.70) per the methodology required by the County Department of Public Works. Per the County Department of Public Works, this threshold is appropriate because the NLSP approval occurred before SB 743 and modifications are being made after SB 743. Therefore, the previously approved Project does not need to be evaluated against the County baseline like a brand new project. Because the previously approved Project VMT per Service Population is less than the NLSP, VMT impacts were determined to be less than significant. Public Works approved the VMT Transportation Analysis. (See RPDSEIR Appendix C-2 (Department of Public Works December 2, 2024 Transportation Impact Analysis Approval Letter).) No further analysis is necessary or required.

Response A.2-5

The comment recommends that the County incorporate a Transportation Demand Management (TDM) program and identifies potential TDM strategies. While TDM programs are effective in reducing VMT, here, VMT impacts were determined to be less than significant, and therefore no mitigation is necessary or required. As set forth in the Northlake Specific Plan Transportation Impact Analysis for CEQA (RPDSEIR Appendix C-1), there are a number of project features of the previously approved Project that tend to reduce VMT such as constructing a pedestrian network, integrating affordable housing, constructing bicycle trails and expanding the transit network which the previously approved Project is not taking quantitative credit for. No further analysis is necessary or required.

Response A.2-6

The comment states that an Encroachment Permit from Caltrans will be required for any work performed in the State right-of-way. As required, an Encroachment Permit will be applied for and

the work will meet all mandatory design standards and specifications. Commenter made a similar comment to the 2019 SEIR that was responded to. (2019 Final SEIR Response to Comment 3-12 (page 2-40).)

Response A.2-7

The comment states that any transportation of heavy construction equipment and/or materials that require use of oversized transport vehicles on State highways will need a Caltrans transportation permit. As discussed in Section 2.2 of the RPDSEIR, a Construction Traffic Control Plan would be required as detailed in Mitigation Measure MM 5.11-3, which includes scheduling construction activities that affect traffic flow to off-peak hours. Additionally, all construction truck loads would be covered with a tarpaulin cover. Commenter made a similar comment to the 2019 SEIR that was responded to. (2019 Final SEIR Response to Comment 3-11 (pages 2-39 to 2-40).)

Response A.2-8

The comment states that projects should be designed to discharge clean run-off water and that discharge of storm water is not permitted onto State highway facilities. In accordance with the Court Ruling and CEQA Guidelines section 15088(c), the RPDSEIR was not required to recirculate the impact analysis related to stormwater because those portions of the SEIR were not modified. As such, the SEIR contains the final analysis related to stormwater, and the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of that issue. (See *Ione Valley Land, Air, and Water Defense Alliance, LLC v. County of Amador* (2019) 33 Cal.App.5th 165, 171; *Sierra Club v. County of Fresno* (2020) 57 Cal.App.5th 979, 990-991; *Citizens For Open Government v. City of Lodi* (2015) 205 Cal.App.4th 296, 325; see also Response B.4-1.) Pursuant to CEQA Guidelines section 15088.5(f)(2), the County requested that reviewers limit their comments to the material included in the RPDSEIR and the County is not required to respond to comments that are not related to the material included in the RPDSEIR. The Project will implement a Storm Water Pollution Prevention Plan (see Mitigation Measure MM 5.2-21). Discharge will not be to State highway facilities. (2019 Draft SEIR page 5.8-75.) Commenter made a similar comment to the SEIR which was responded to. (2019 Final SEIR Response to Comment 3-10 (page 2-39).)

Response A.2-9

The comment states that a truck/traffic construction management plan may be needed for the Project. Please refer to Response A.2-7, above.

OFFICE OF THE SHERIFF

COUNTY OF LOS ANGELES

HALL OF JUSTICE

May 29, 2025

ROBERT G. LUNA, SHERIFF

Mr. Jodie Sackett, Senior Planner
County of Los Angeles
Department of Regional Planning
Subdivisions
320 West Temple Street, Room 1362
Los Angeles, California 90012

Dear Mr. Sackett:

NOTICE OF COMPLETION AND AVAILABILITY OF RECIRCULATED PARTIAL DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR THE NORTHLAKE SPECIFIC PLAN PROJECT NO. R2015-00408-(5) REVIEW COMMENTS

Thank you for inviting the Los Angeles County Sheriff's Department (Department) to review and comment on the April 14, 2025, Notice of Completion and Availability (NOC-NOA) of the Recirculated Partial Draft Supplemental Environmental Impact Report (Draft SEIR) for the Northlake Specific Plan Project No. R2015-00408-(5) (Project). The approximate 1,330-acre Project Site is located east of Interstate (I) 5, west of Castaic Lake, and north of the community of Castaic, California in unincorporated Los Angeles County. Regional access to the Project area is provided by I-5, and site access is provided via Parker Road and Lake Hughes Road exits from I-5. Local access to the Project Site is provided by Ridge Route Road, which traverses northerly along the western edge of the Project Site.

A.3-1

The proposed Project is located within the service area of the Department's Santa Clarita Valley Sheriff's Station (Station), which is now located at 26201 Golden Valley Road, about 14 miles southeast of the Project site, and no longer located at 23740 Magic Mountain Parkway, Valencia location.

The Station has concerns over the proposed development due to its location, which historically has experienced significant wildland fire incidents. Some examples of those large fires which have impacted and/or threatened the Santa

A.3-2

Clarita Valley area include the Ridge Route and Hughes Fires. The Station also notes that these specific incidents serve as critical reminders of the persistent and severe fire threat in this region. The inherent fire risk associated with the project location, underscored by the history of significant fires in the surrounding area, necessitates careful and thorough consideration during the project approval process and all phases of development. The Station advises that it is imperative to integrate robust precautionary measures into the project design and implementation to mitigate fire hazards and the need for emergency responses. Additionally, comprehensive and effective emergency management plans are essential to ensure the safety of future residents and the broader community in the event of a wildland fire are addressed.

A.3-2 cont.

The Department's Pitchess Detention Center (PDC) is located just southeasterly of this development. Specific details of the south portion of the Project would need to be further evaluated and may require mitigation in order to ensure that security for PDC is maintained.

A.3-3

With the expected demand for law enforcement services for this Project, which will include but not limited to residential, commercial, recreation, schools and infrastructure, as well as previously approved projects in the region, the cumulative areawide impacts of this Project and other development will likely require additional Sheriff personnel as well as facilities to support those services. The Specific Plan dated June 1992 indicates that funding associated with these additional services and facilities would be included in the Department's requested annual budget to be appropriated by the Board of Supervisors from the County General Fund. However, these funds are not guaranteed, and the proposed Project will warrant a Countywide assessment where the Department, CEO, and BOS will evaluate each development and discuss the funding required for facilities, personnel and/or associated operational equipment to mitigate the impacts. To the extent the Department is being considered as the provider of these law enforcement services, it should be noted/understood that our Department may not have the capacity to provide the necessary staff resources when this project is contemplated and/or completed. It is recommended that jurisdictional agencies evaluate the needs of the community as well as the availability of local law enforcement to provide these services prior to approving the project. The Project Applicant should be required to pay all development impact fees associated with the project.

A.3-4

For future reference, the Department provides the following updated address and contact information for all requests for review comments, law enforcement service information, California Environmental Quality Act documents, and other related correspondence:

Jennifer Fang, Acting Bureau Director
Facilities Planning Bureau, SBB-4th Floor
Los Angeles County Sheriff's Department
211 West Temple Street
Los Angeles, California 90012
Attention: Planning Section

Should you have any questions regarding this matter, please contact me, at (323) 526-5657, or your staff may contact Ms. Bee Bee Pee, of my staff, at (323) 526-5697.

Sincerely,

ROBERT G. LUNA, SHERIFF

Jennifer Fang, Acting Bureau Director
Facilities Planning Bureau

JF:BP

c: Richard Martinez, Assistant Division Director, ASD
Brandon Barclay, Acting Captain, Santa Clarita Valley Sheriff's Station (SVC)
Richard O'Neal, Lieutenant, SCV
Andrew B. Cruz, Captain, Contract Law Enforcement Bureau (CLEB)
Erick F. Martinez, Lieutenant, CLEB
Julie A. Lowe, Sergeant, CLEB
Kelly Chiu, Capital Projects Program Manager, Facilities Planning Bureau (FPB)
Bee Bee Pee, Departmental Facilities Planner I, FPB
Chrono
File
(EIR – Northlake SP NOC DSEIR Project)

Response to Comment Letter A.3

Robert Luna, Sheriff
County of Los Angeles, Office of the Sheriff
May 29, 2025

Response A.3-1

The comment acknowledges receipt of the RPDSEIR for review, and contains introductory language regarding the Project and the Los Angeles County Sheriff's Department (Sheriff's Department). The comment does not address the content or adequacy of the RPDSEIR under CEQA or the State CEQA Guidelines; no additional response is required.

Response A.3-2

The comment states concerns regarding potential for wildland fire incidents. The RPDSEIR wildfire analysis and the Wildfire Technical reports (RPDSEIR Appendices D-1, D-2 and K) comport with the requirements of CEQA and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act*" guidelines. The wildfire analysis includes assessment of the Ridge Route Fire which the Wildfire Technical Report referred to as the "Route Fire." (RPDSEIR Appendix D-1 (Wildfire Technical Report), pages 25-30.) The Wildland Fire Risk Report was prepared in December 2024, a month before the Hughes Fire. As such, it was not included in the fire history section of the report as it had not occurred at the time the report was prepared. Inclusion of that wildfire does not change any of the impact conclusions in the RPDSEIR or the Wildland Fire Risk Report. In fact, the Hughes Fire was predicted by Scenario 6 - LakeSpotsat40, with the origin within the County Recreation Area (RPDSEIR Appendix D-1, page 65, 68 and Appendix B), and the Evacuation Report determined that there would be sufficient time to evacuate the previously approved Project (RPDSEIR Appendix D-1, Table 6; see also RPDSEIR Appendix D-1, page 68) with no impediment to all three evacuation points. The fact that the Hughes Fire happened, which was predicted, does not change the analysis, conclusion, or determination that the wildfire impact is less than significant. The Wildfire Technical report contains numerous precautionary measures, regulatory compliance measures, and project design features that will be implemented as part of the Project to reduce fire hazards and the need for emergency responses. (RPDSEIR Appendix D-1 (Wildfire Technical Report), pages 77-78.) Impacts will be less than significant, and no further analysis is required.

Response A.3-3

The comment identifies that the Pitchess Detention Center is located southeasterly of the Project site and states mitigation may be required to ensure that facility security is maintained. In accordance with the Court Ruling and CEQA Guidelines section 15088.5(c), the RPDSEIR was not required to recirculate the impact analysis related to law enforcement services or impacts to surrounding land uses, including the Pitchess Detention Center, because those portions of the SEIR were not modified. As such, the SEIR contains the final analysis related to law enforcement services and impacts to surrounding land uses, and the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of that issue. (See *Ione Valley Land, Air, and Water Defense Alliance, LLC v. County of Amador* (2019) 33 Cal.App.5th 165, 171; *Sierra Club v. County of Fresno* (2020) 57 Cal.App.5th 979, 990-991; *Citizens For Open Government v. City of Lodi* (2015) 205 Cal.App.4th 296, 325; see also Response B.4-1.) Pursuant to CEQA Guidelines section 15088.5(f)(2), the County requested that reviewers limit their comments to the material included in the RPDSEIR and the County is not required to respond to comments that are not related to the material included in the RPDSEIR. The commenter states that impacts to the detention center would need to be further evaluated, but does not identify any impacts to this off-

site facility. To the extent required, these impacts were addressed in the SEIR. The comment is acknowledged; no further response is required.

Response A.3-4

The comment states that the Project would contribute to the cumulative areawide impacts related to law enforcement services. (See Response A.3-3.) Pursuant to CEQA Guidelines section 15088.5(f)(2), the County requested that reviewers limit their comments to the material included in the RPDSEIR and the County is not required to respond to comments that are not related to the material included in the RPDSEIR. These impacts were addressed in the SEIR to the extent required. The project Applicant will be conditioned to pay all required development impact fees. However, any increased costs on governmental agencies related to the provision of public services is not considered a project impact. In *City of Hayward v. Board of Trustee of California State University* (2015) 242 Cal. App. 4th 833, the court found that Section 35 of Article XIII of the California Constitution requires local agencies to provide public safety services, including police and fire protection and emergency medical services, and that it is reasonable to conclude that the city (here the County) will comply with that provision to ensure that public safety services are provided. The *Hayward* ruling also concluded that “assuming the city continues to perform its obligations, there is no basis to conclude that the project will cause a substantial adverse effect on human beings” and the “need for additional fire protection services is not an environmental impact that CEQA requires a project proponent to mitigate.”

From: Raylene Borrego
Sent: Tuesday, April 22, 2025 4:01 PM
To: Jodie Sackett <jsackett@planning.lacounty.gov>
Subject: Response to Notice of Completion and Availability of DSEIR: Northlake Specific Plan Project, Project No. R2015-00408-(5), Los Angeles County; [COU-LA-2025-7]

CAUTION: External Email. Proceed Responsibly.

Hello Jodie,

B.1-1

Thank you for contacting the Yuhaaviatam of San Manuel Nation (formerly the San Manuel Band of Mission Indians) regarding the above-referenced project. YSMN appreciates the opportunity to review the project documentation, which was received by the Cultural Resources Management Department on April 15th, 2025. The proposed project is located outside of Serrano ancestral territory and, as such, YSMN will not be requesting to receive consulting party status with the lead agency or to participate in the scoping, development, or review of documents created pursuant to legal and regulatory mandates.

Kind Regards,
Raylene

Raylene Borrego
Cultural Resources Technician

Response to Comment Letter B.1

Raylene Borrego, Cultural Resources Technician
Yuhaaviatam of San Manuel Nation
April 22, 2025

Response B.1-1

The comment acknowledges receipt of the RPDSEIR for review and states that the Project is located outside of Serrano ancestral territory. The comment does not address the content or adequacy of the RPDSEIR under CEQA or the State CEQA Guidelines; no additional response is required.

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From: Dan Silver
Sent: Tuesday, April 22, 2025 5:49 PM
To: Jodie Sackett <jsackett@planning.lacounty.gov>
Subject: NorthLake Specific Plan RPDSEIR

CAUTION: External Email. Proceed Responsibly.

April 22 2025

Jodie Sackett
County of Los Angeles, Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

RE: NorthLake Specific Plan RPDSEIR

Dear Mr. Sackett:

Endangered Habitats League has a question and comment pertaining to consistency with General Plan Policies S4.1, S4.20, and L1.10 relating to fire hazard. According to the RPDSEIR, this project's previous entitlements were "rescinded" by the County due to court order. Its zoning must have reverted to a prior baseline, meaning that the new project entails a density increase. Similarly, the rescinding of the prior Specific Plan entitlements means that there is now no "existing" Specific Plan. B.2-1

However, there is no analysis of these General Plan consistency issues in the RPDSEIR, which should be rectified. Or, is it the County's position that the project is exempt from Policies S4.1, S4.20, and L1.10, and if so, why? B.2-2

Yours truly,
Dan Silver, Executive Director
Endangered Habitats League

Response to Comment Letter B.2

Dan Silver
Endangered Habitats League
April 22, 2025

Response B.2-1

The comment states that, according to the RPDSEIR, the project's previous entitlements were "rescinded" by the County due to the Court Ruling, therefore, zoning must have reverted to a prior baseline. As a result, the comment states that the new project entails a density increase. Similarly, the comment states that rescission of the prior Specific Plan entitlements means that there is now no "existing" Specific Plan. The commenter is incorrect; the NLSP was not rescinded. The NLSP was approved in 1992; it was not part of the 2019 Project approvals. The County did not rescind the approval of the NLSP as part of its action on May 18, 2021, nor did the Court order the County to do so. (See RPDSEIR pages 1-4.) In accordance with the Court Ruling, the County's action on May 18, 2021, was limited to setting aside the 2019 Project approvals, and the NLSP remains in place. Thus, the correct baseline is the NLSP. The previously approved Project did not increase density from the NLSP.

Response B.2-2

The comment states that there is no analysis of consistency with General Plan Policies S4.1, S4.20 and L1.10 in the RPDSEIR, which should be rectified. The SEIR Land Use Section was not subject to legal challenge and was not modified. Accordingly, pursuant to the Court Ruling and CEQA Guidelines section 15088.5(c), the SEIR Land Use Section was not required to be recirculated. As such, the SEIR contains the final analysis related to land use impacts, and the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of that issue. (See *Ione Valley Land, Air, and Water Defense Alliance, LLC v. County of Amador* (2019) 33 Cal.App.5th 165, 171; *Sierra Club v. County of Fresno* (2020) 57 Cal.App.5th 979, 990–991; *Citizens For Open Government v. City of Lodi* (2015) 205 Cal.App.4th 296, 325; see also Response B.4-1.) Pursuant to CEQA Guidelines section 15088.5(f)(2), the County requested that reviewers limit their comments to the material included in the RPDSEIR and the County is not required to respond to comments that are not related to the material included in the RPDSEIR. This comment is beyond the scope of the RPDSEIR and the County does not need to respond to it. The following response is for informational purposes only.

Regarding Policy LU 1.10, that policy provides: "Prohibit plan amendments that increase density of residential land uses within mapped fire and flood hazard areas unless generally surrounded by existing built development and the County determines the adjoining major highways and street networks can accommodate evacuation as well as safe access for emergency responders under a range of emergency scenarios, as determined by the County." This policy is not applicable as the NLSP was not rescinded, and the proposed Project is not seeking a plan amendment. Additionally, the proposed Project is consistent with this policy in that the Project Site is generally surrounded by existing built development including the 5-freeway to the west, urban development to the south and State recreational areas to the east, and the RPDSEIR Wildfire Impact Analysis established that there is capacity for safe evacuation on the existing roadways under all modelled wildfire scenarios, as well as emergency access for first responders. See RPDSEIR Section 2.3, Wildfire, and RPDSEIR Appendices D-1, D-2 and K.

Regarding Policy S4.1, that policy provides: "Prohibit new subdivisions in VHFHSZs unless: (1) the new subdivision is generally surrounded by existing or entitled development or is located in an existing approved specific plan or is within the boundaries of a communities facility district adopted by the County prior to January 1, 2022, including any improvement areas and future

annexation areas identified in the County resolution approving such district; (2) the County determines there is sufficient secondary egress; and (3) the County determines the adjoining major highways and street networks are sufficient for evacuation as well as safe access for emergency responders under a range of emergency scenarios, as determined by the County. Discourage new subdivisions in all other FHSZs." The proposed Project is consistent with this policy as the NLSP is an existing approved specific plan approved in 1992, and the RPDSEIR Wildfire Impact Analysis confirms there is sufficient secondary egress as well as capacity on the highway and street network for safe evacuation, as well as access for first responders. See RPDSEIR Section 2.3, Wildfire, and RPDSEIR Appendices D-1, D-2 and K.

Regarding Policy S4.20, that policy provides: "Prohibit new and intensification of existing general assembly uses in VHFHSZs unless: (1) the use is located in an existing approved specific plan or (2) the County determines there is sufficient secondary egress and the County determines the adjoining major highways and street networks are sufficient for evacuation, as well as safe access for emergency responders under a range of emergency scenarios, as determined by the County. Discourage new general assembly uses in all other FHSZs." The proposed Project is consistent with this policy for the same reasons it is consistent with Policy S4.1, including that the proposed Project is located in an existing approved specific plan – the NLSP.

From: Frances Tinney
Sent: Wednesday, May 14, 2025 2:36 PM
To: Jodie Sackett <jsackett@planning.lacounty.gov>
Cc: DRP Info; Theresa Rettinghouse
Subject: Recirculated Portions of the Supplemental Draft EIR for the NorthLake Specific Plan

CAUTION: External Email. Proceed Responsibly.

Good afternoon,

I am aware that the County has published Recirculated Portions of the Supplemental Draft EIR for the NorthLake Specific Plan (SCH 201503180)and I am writing to clarify the County's actions.

Is the County planning to recirculate the Draft Supplemental EIR and the Final Supplemental EIR that the County certified on September 25, 2018, and then decertified on May 18, 2021, for public review and comment? If not, does the County plan to recertify those portions of the EIR without public review and comment? If the County does not intend to recirculate those documents, the Center will comment on them along with our comments on the RPSDEIR.

We also request an extension of the comment deadline for the RPSDEIR for at least thirty days given the document with appendices is over 1000 pages.

We request a response to this email by Friday, May 16.

B.3-1

Thank you,

Frances

Frances Tinney
she/her
Attorney
Urban Wildlands Program
CENTER *for* BIOLOGICAL DIVERSITY
509-432-9256

Response to Comment Letter B.3

Francis Tinney
Center for Biological Diversity
May 14, 2025

Response B.3-1

As set forth in the Notice of Completion and Availability, the County only circulated for review and comment the Recirculated Partial Draft Supplemental Environmental Impact Report ("RPDSEIR"), which revises the SEIR as directed by the Court. Given that the revision is limited to certain chapters and portions of the SEIR, CEQA Guidelines section 15088.5(c) only requires the County to recirculate the RPDSEIR.

Further, pursuant to CEQA Guidelines section 15088.5(f)(2), the County requested that reviewers limit their comments to the material included in the RPDSEIR.

The County does not agree to your request for an extension.

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May 29, 2025

Sent via email

Jodie Sackett
Senior Planner
320 W Temple Street, Fl. 13
Los Angeles, CA 90012
jsackett@planning.lacounty.gov

Re: Comments on the Partial Recirculated Draft Supplemental Environmental Impact Report NorthLake Specific Plan (State Clearinghouse No. 2015031080)

Dear Jodie Sackett:

This letter is submitted on behalf of the Center for Biological Diversity ("Center") regarding the Partial Recirculated Draft Supplemental Environmental Impact Report ("PRDSEIR") for the NorthLake Specific Plan ("Project") (State Clearinghouse No. 2015031080.) As you are aware, the Center successfully challenged this Project in 2019. As a result of that lawsuit, the Court ordered Los Angeles County ("County") to set aside its approval of the Project and decertify the 2018 Supplemental EIR ("2018 EIR" or "SEIR"). This PRDSEIR revises parts of the biological resources analysis, the VMT analysis, and the alternatives analysis in the County's next attempt to circulate a legally compliant EIR. But the revised EIR sections are still not adequate, and the sections that the County did not revise are seven years old and now must be updated to account for significant new information. The County must revise and recirculate a complete EIR that fully analyzes and mitigates the Project's impacts.

B.4-1

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 1.7 million members and online activists throughout California and the United States. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people throughout Los Angeles County.

B.4-2

I. THE COUNTY CANNOT LIMIT PUBLIC COMMENT TO THE REVISED PORTIONS OF THE EIR.

B.4-3

As a preliminary matter, the County cannot limit public comment to only the Recirculated Portions of the Draft EIR. Where an agency's actions violate CEQA, "it must do the environmental review process over if it wants to approve the project." (*Woodward Park Homeowners Assn., Inc. v. City of Fresno* (2007) 150 Cal.App.4th 683, 690.) Because the *entire* EIR was decertified in 2021, the County will need to again certify the completion of the revised EIR *as a whole*, not only the PRDSEIR's revised sections. (Guidelines § 21100.) If the County plans to recertify the entire EIR, it must follow the legal procedures to do so. Accordingly, before approving the Project, the County must prepare and circulate for public review a revised EIR that complies with CEQA. (*See, e.g., King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, 901 [where EIR inadequate, County must revise EIR, circulate it for public review and comment, and prepare responses to the comments before reapproving same or modified project].). Any revised draft EIR must comply with CEQA's mandatory requirements for public review, including completing and filing with the State Clearinghouse, providing a 45-day comment period, and consulting with public agencies. (Guidelines §§ 15082-88, 15105.) The County must also consider and respond in detail to the public's comments. (*See* § 21091(d) [requiring agency responses to comments on draft EIRs]; Guidelines § 15088(c) [requiring "good faith, reasoned analysis" in responses]); (*Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 Cal.App.4th 256, 266-67 ["recirculation and consideration of public comments" necessary before revised project approval].)

B.4-4

Moreover, as a matter of policy, nothing limits the County to correcting only the flaws the court identified. All modified projects such as this require revised environmental analysis, and any CEQA document must reflect the County's "independent judgment." (Guidelines §§ 21082.1 & 15090.) The County should take this opportunity to hear from the public on all project aspects and ensure that the Project complies with its policies and intentions for its citizens now, in 2025. And the County should ensure that environmental review contains the analysis needed to allow the public and decisionmakers to understand environmental consequences of the Project and fully comply with CEQA. Restricting the public's ability to comment on the 2018 EIR circumvents CEQA's core purposes to allow for public input on projects. (Pub. Res. Code § 21061.) Accordingly, the Center incorporates here via reference its June 15, 2017, April 16, 2018, April 1, 2019, and December 22, 2020 letters on the previously circulated SEIR. (Exhibits A, B, C, and D).

II. SIGNIFICANT NEW INFORMATION REQUIRES THE COUNTY TO REVISE AND RECIRCULATE NUMEROUS OTHER SECTIONS OF THE 2018 EIR.

B.4-5

CEQA makes plain that significant new information on a project prior to EIR certification requires revision and recirculation for public review. (Pub. Res. Code § 21092.1; CEQA Guidelines § 15088.5(a).) CEQA specifically provides that a supplemental EIR is required when "[n]ew information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available." (Pub. Res. Code § 21166(c).) CEQA defines significant new information as information showing: (1) "[a] new significant environmental impact would result from the project . . ."; or (2) "[a] substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance." (CEQA Guidelines § 15088.5(a).) Additionally, CEQA requires a revised EIR when "substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report." (Pub. Res. Code § 21166(b).)

B.4-5 cont.

In this instance, the original EIR was certified in 2018 and entirely decertified in 2021. In the seven years since, significant new information has emerged regarding the Project's wildfire risk, climate change impacts, and uncertain water supply. Not only have multiple devastating wildfire seasons changed our understanding of wildfire risk, but groundbreaking climate change research has emerged, California has committed to new ambitious climate targets, and the state's water regime has dramatically shifted towards both extreme drought and flooding. The County must take into account significant new information on all Project impacts and revise and recirculate the EIR before certification. (CEQA Guidelines § 15088.5(a).)

B.4-6

A. The County Must Revise the EIR to Consider New Scientific Knowledge and State Policy on Climate Change.

B.4-7

Substantial new information on the severity of the Project's contributions to climate change has become available in the past seven years. Not only has California set new GHG reduction targets, but groundbreaking climate change research sheds light on the critical need to reduce GHG emissions further than the EIR proposes. The County must take this significant information into account and require further mitigation measures aligned with statewide goals.

i. Substantial New Information on Climate Change Impacts Requires Revision.

B.4-8

First, since the County certified the original 2018 EIR, the Intergovernmental Panel on Climate Change (IPCC), the leading international scientific body for the assessment of climate change, concluded in its 2023 Sixth Assessment Report that: "[u]nsustainable and unequal energy and land use as well as more than a century of burning fossil fuels have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850-1900 in 2011-2020." (IPCC, 2023) The increase in global surface temperature has resulted in sea level

rise, more frequent extreme weather events, and "irreversible losses" at the species and ecosystem levels. (IPCC, 2023.) The United States' own 2023 Fifth National Climate Assessment, prepared by scientific experts and reviewed by the National Academy of Sciences and multiple federal agencies, echoed these findings. The 2023 Assessment concluded that "[t]he global warming observed over the industrial era is unequivocally caused by greenhouse gas emissions from human activities–primarily burning fossil fuels," and long-term responses include "sea level rise, ice sheet losses, and associated disruptions to human health, social systems, and ecosystems." (Climate Action Tracker, 2023)

B.4-8 cont.

This significant new information requires immediate and aggressive greenhouse gas emissions reductions to keep warming well below 2°C above pre-industrial levels. The IPCC Sixth Assessment Report and other expert assessments have established global carbon budgets, or the total amount of carbon that can be burned while maintaining some probability of staying below a given temperature target. According to the IPCC, "[t]he best estimates of the remaining carbon budgets from the beginning of 2020 are 500 GtCO2 for a 50% likelihood of limiting global warming to 1.5°C and 1150 GtCO2 for a 67% likelihood of limiting warming to 2°C." (IPCC 2023 at 19.) Additionally, "[i]f the annual CO2 emissions between 2020-2030 stayed, on average, at the same level as 2019, the resulting cumulative emissions would almost exhaust the remaining carbon budget for 1.5°C (50%), and deplete more than a third of the remaining carbon budget for 2°C (67%)." (IPCC 2023). As of 2023, climate policies by countries across the world would lead to an estimated 2.7°C of warming, and possibly up to 3.4°C of warming, well above the level needed to avoid the worst dangers of climate change. (Climate Action Tracker, 2023)

ii. The 2018 EIR's GHG Analysis Is Outdated.

B.4-9

The significant new information described *supra* leaves no doubt that climate change will transform California, resulting in increased temperature and frequency of wildfires, and a reduction in snowpack, precipitation levels, and water availability. (Turco et al., 2023) But the 2018 EIR does not take this into account, instead relying on an outdated GHG emissions calculation model, CalEEMod Version 2016.3.1. (SEIR at 5.7-1.) The significant new information regarding climate change impacts should be assessed under the new version of CalEEMod, which became available in 2020, and again in 2022, intended to incorporate the latest science on GHG emissions. (California Air Pollution Control Officers Association, 2021, 2022) Specifically, the newer models take into account critical sources of GHG emissions prior models did not, such as CARB's EMFAC2017 N2O emissions, and they incorporate the 2019 update to Title 24 (building efficiency percentage reduction). (CAPCOA 2021.) The County offers no justification for using a version two cycles and six years out of date that overlooks several aspects of GHG emissions. The analysis is therefore inadequate and must be revised and recirculated.

B.4-9 cont.

Further, the 2018 EIR fails to analyze the GHG emissions against a legally adequate threshold of significance. Any revised EIR must show how a project will conform to *current* statewide GHG reduction targets and adopt enforceable mitigation to achieve these goals. (*Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 62 Cal.4th 204, 225-26; *League to Save Lake Tahoe v. County of Placer* (2022) 75 Cal.App.5th 63, 121-22.)

Since 2018, the State has released new GHG reduction targets. In 2022 California enacted AB 1279, the California Climate Crisis Act, requiring the state to achieve net zero GHG emissions by no later than 2045 and maintain net negative GHG emissions thereafter. (AB 1279 2022.) To achieve that goal, CARB released a new Scoping Plan in November 2022 that requires "aggressive reduction of fossil fuels" and "rapidly moving to zero emission transportation," and identifies "a technologically feasible and cost-effective path to achieve carbon neutrality by 2045." (2022 Scoping Plan for Achieving Carbon Neutrality, 2022) Newsom has continued to issue climate-related executive orders, such as a 2020 order requiring that, by 2035, all passenger vehicles will be zero-emission, in addition to other motor vehicle emission goals. (Executive Order N-79-20 (2020).). Enforcement of and compliance with these steps are essential to stabilize the climate and avoid catastrophic impacts to our environment.

The 2018 EIR purports to evaluate the significance of GHG emissions based on consistency with regulatory programs adopted for the purpose of reducing GHG emissions. (SDEIR at 5.7-22.) But, because it was written in 2018, it does not analyze consistency with relevant regulatory programs. Using 2018 regulatory programs as the basis for a threshold of significance in 2025 is not supported by substantial evidence. The GHG significance determination is therefore inadequate and must be revised and recirculated with an updated threshold of significance.

Once the County has revised the GHG analysis, it must consider current best practices in GHG mitigation and adopt all feasible mitigation. Appendix D of CARB's 2022 Scoping Plan includes on-site GHG-reducing design features and mitigation measures, as well as offsite measures the County should consider to conform to these new targets. Other feasible measures can be found in the California Air Pollution Control Officers Association 2022 Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity. (California Air Pollution Control Officers Association, 2024) The Center urges the County to take all feasible steps to reduce GHG emissions in light of the recent climate change research outlined *supra*.

B.4-10

B. The County Must Revise the EIR to Consider Significant New Information Regarding California's Water Supply.

Since the 2018 EIR's preparation and certification, significant new information reveals that California's water supply has become more uncertain. Indeed, climate change and

population growth pose unprecedented challenges to California's efforts to allocate and conserve limited water resources. New studies predict that in the next 35 to 60 years, if GHG emissions continue unchecked, the American West's snowpack will continuously shrink, disappearing for a decade or more at a time. (Siirila-Woodburn et al., 2021) In 2022, the IPCC specifically identified the American West as vulnerable, warning that with projected warming in the western mountains, accumulated snowpack is "virtually certain to decline." (IPCC, 2022) This warning informed a recent Executive Order from Governor Newsom, declaring that California must "redouble near-, medium-, and long-term efforts to adapt its water management to a changing climate, shifting precipitation patterns, and water scarcity." (Executive Order N-7-22 (2022).)

B.4-10 cont.

Climate change has caused increased water extremes—a boom and bust cycle between flooding and drought—that scientists predict will only get worse. (Polade et al., 2017; Swain et al., 2018) During wet years, California has experienced increased run-off as more water falls than can recharge groundwater. (Becker, 2024) In this context, the 2018 EIR's assumption that precipitation averages will be consistent with pre-2018 averages and its reliance on safe groundwater yields established in 2015 ignores reality. (See SDEIR at 5.12-4.) The significant new information is relevant to understanding whether a water supply shortfall is likely and must be considered.

B.4-11

C. The County Must Revise the EIR to Consider Significant New Information Regarding Mountain Lions.

i. CEQA and CESA Require Analysis and Mitigation for Impacts to Mountain Lions.

Relevant authorities require preparation of a subsequent EIR in these circumstances. The California Environmental Quality Act ("CEQA") states that a subsequent or supplemental EIR may be required when either (1) substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report or (2) new information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available. (Pub. Res. Code § 21166.)

New information since the EIR was approved in 2018 that mountain lions in the Project area are facing an extinction vortex fits within both of these categories. Mountain lions in the Project area are part of the Central Coast South (CCS) population, which were granted "candidacy status" in April 2020 under CESA, such that they are afforded the same protections as other CESA-listed species. CEQA requires a "mandatory finding of significance" when a project has the potential to impact a CESA-listed species. (CEQA Guidelines § 15065(a)(1); *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 792 fn. 12.) And such a finding triggers a duty to consider and adopt all feasible alternatives or mitigation

B.4-11 cont.

measures to reduce such impacts. (Pub. Res. Code § 21002.) Moreover, under CESA, the County may not approve projects that could jeopardize the continued existence of these populations or result in destruction of essential habitat (Fish & Game Code § 2053(a)) and agencies must require that appropriate mitigation measures be implemented for projects that could destroy mountain lion habitat or impair connectivity (Fish & Game Code § 2054). Neither the 2018 EIR nor the 2025 PRDSEIR address these issues. Given that at least one mountain lion has been documented using a box culvert under the I-5 adjacent to the Project area (Exhibit E) moving from Grasshopper Canyon westerly into Marple Canyon, and there is other evidence of mountain lion presence in the vicinity,[1] adequate analyses and mitigation regarding the Project's impacts to mountain lions should be provided in a recirculated EIR.

ii. Numerous Scientific Studies Reveal That Mountain Lions in the Project Area are Threatened and the Project will Impact Their Long-term Survival

By way of background, continued habitat loss and fragmentation has led to 10 genetically isolated populations within California (Gustafson et al., 2018, 2021). There are six identified mountain lion populations in the Southern California and Central Coast Evolutionarily Significant Unit ("ESU"), and several are facing an extinction vortex due to high levels of inbreeding, low genetic diversity, high human-caused mortality rates from car strikes on roads, depredation kills, rodenticide poisoning, poaching, disease, and increased human-caused wildfires (Benson et al., 2016, 2019; Ernest et al., 2003, 2014; Gustafson et al., 2018; Riley et al., 2014; Vickers et al., 2015). This is detailed in the Center's petition to the California Fish and Game Commission to protect Southern California and Central Coast mountain lions under the California Endangered Species Act (Yap et al., 2019).

The effective population sizes (N_e) of the six populations within the ESU range from 2.3 to 26.9 (Gustafson et al., 2021). An effective population size of 50 is assumed to be sufficient to prevent inbreeding depression over five generations, while an effective population size of 500 is considered sufficient to retain evolutionary potential in perpetuity (Frankham et al., 2014; Traill et al., 2010). All six populations are well below that minimum threshold of 50 and none have an effective population size anywhere near 500, which indicates that these populations are at serious risk of becoming extirpated. Local mountain lions are located at the boundary of two ESU populations, the Central Coast South (CCS) and San Gabriel/San Bernardino (SGSB) populations. These southern California mountain lion populations are severely struggling. Low genetic diversity and high human-caused mortalities are driving mountain lions in the CCS and Santa Ana Mountains towards an extinction vortex (Benson et al., 2019). Scientists predict that the CCS populations is likely to become extinct within 50 years if gene flow with other mountain lion populations is not improved (Benson et al., 2019; Gustafson et al., 2021). Researchers have found that, of the California mountain lion subpopulations, the SGSB population has the smallest

[1] https://www.inaturalist.org/observations/70048855

B.4-11 cont.

effective population size and the smallest area of available habitat (Dellinger et al., 2020; Gustafson et al., 2021). Scientists suggest that the SGSB population "may be approaching levels of genetic drift and inbreeding similar to the well-monitored and genetically depauperate Santa Ana and Central Coast South populations" (Gustafson et al., 2021). Alarmingly, scientists have documented physical and reproductive signs of inbreeding depression in local mountain lions due to being boxed in by roads and development (Huffmeyer et al., 2021). If inbreeding depression sets in, the CCS population is predicted to have a 99% chance of becoming locally extinct within 50 years (Benson et al., 2019).

The Project area is located in the Sierra Pelona Mountains, an area that researchers have identified as one of the last remaining linkages for statewide genetic connectivity that is critical for the overall genetic health of Southern California and Central Coast mountain lions (Gustafson et al., 2021). It is in a sensitive and highly constrained area where the CCS, SGSB, and Western Sierra Nevada mountain lion populations converge (Yap et al., 2019). And, as mentioned, above, mountain lions have been recorded in the vicinity of the Project area and likely move through the area, as evidenced by the use of a nearby underpass to cross the I-5 going east to west (Exhibit E). One study found a single migrant improved the genetics of a small, isolated and inbred puma population in California (Gustafson et al., 2017), therefore any movement in and near the Project area, especially through adjacent crossings, is critical for gene flow and the long-term survival of local mountain lions. This emphasizes the importance of the Project area for maintaining and enhancing connectivity among and between the subpopulations and preserving habitat in the region. The SEIR fails to disclose this information and therefore fails to comply with CEQA.

Numerous studies highlight the impacts of human activities on mountain lions. Human-caused mortalities—including vehicle strikes, rodenticide poisoning, depredation kills, poaching, and wildfire—are the leading cause of death for mountain lions across California, exceeding natural mortality rates (Benson et al., 2020, 2023; Nisi et al., 2023; Vickers et al., 2015). In addition, human activities also alter these large carnivores' behavior in ways that likely further impede important movement and gene flow. For example, researchers found that mountain lions are so fearful of humans and noise generated by humans that they will abandon the carcass of a deer and forgo the feeding opportunity just to avoid humans (J. A. Smith et al., 2017). The authors concluded that even "non-consumptive forms of human disturbance may alter the ecological role of large carnivores by affecting the link between these top predators and their prey" (J. A. Smith et al., 2017). In addition, mountain lions have been found to respond fearfully upon hearing human vocalizations, avoiding the area and moving more cautiously when hearing humans (J. A. Smith et al., 2017; Suraci et al., 2019).

Other studies have demonstrated other shifts in behavior and movement patterns of pumas in response to human activities, like increased avoidance behavior in areas with more

B.4-11 cont.

roads and higher development densities and increased nocturnal activity as human presence increases (Bolas et al., 2025; Dougherty et al., 2025; Lucas, 2020; Nickel et al., 2020, 2021; Nisi et al., 2022, 2023; J. A. Smith et al., 2015, 2019; Y. Wang et al., 2017; Wilmers et al., 2013, 2021; Yovovich et al., 2020). Pumas have also been found to generally avoid areas with nearby night lighting (Barrientos et al., 2023). Thus, the increased human presence due to the Project's new roads and development could have significant negative impacts on puma survival and behavior, which could reduce the genetic health of the local population and ultimately diminish the long-term survival of the CCC population as well as the neighboring CCN and CCS populations. CEQA requires a recirculated EIR that adequately analyzes these potential impacts.

Another study further documented the impacts of human activities on mountain lions specifically on communication and reproductive behaviors important for their survival (Yovovich et al., 2020). Males use scrapes to delineate territories as well as attract potential mates (Allen et al., 2015, 2016), and the males in the study preferred to use relatively flat areas away from human influence as scrape habitat (Yovovich et al., 2020). Similarly, when nursing females (with kittens less than 8 weeks old) shrank their home ranges to an average of 9 km^2 while their young were most vulnerable, they also selected undeveloped lands away from human disturbance, opting for habitat with protective cover and sufficient water and prey availability (Yovovich et al., 2020). The loss of adequate undisturbed communication and nursery habitat could disrupt important communication and reproductive behaviors that facilitate social structure and overall survival. The authors predicted that future development within the Santa Cruz Mountains could reduce nursery and communication habitat by 20% and 50%, respectively, while further fragmenting the landscape. Such patterns likely extend to other regions within the proposed Southern California/Central Coast ESU.

Other studies document nuanced sensitivities of California mountain lions to human presence, activities, and infrastructure while also providing glimpses of how humans and mountain lions can safely coexist. Pumas in the Santa Cruz Mountains were found to less likely occur in areas with higher development densities (*i.e.*, areas with greater road and/or building densities) (Nickel et al., 2020). This aligns with other studies that have demonstrated that mountain lion avoidance behavior increases with greater development densities (J. A. Smith et al., 2015, 2019; Y. Wang et al., 2017; Wilmers et al., 2013). In addition, researchers found that in open space areas where recreational activities are allowed (*e.g.*, hiking, biking), mountain lions generally avoided human presence and became more nocturnal as human presence increased (Nickel et al., 2020). Similar shifts in puma behavior in response to human activities have been documented in other studies (Lucas, 2020; Suraci et al., 2019; Y. Wang et al., 2015, 2017). There is often a cost of these behavioral shifts, such as increased energy expenditure that could potentially reduce fitness. Studies have found that pumas expend more energy by increasing their kill rates in high housing density areas (J. A. Smith et al., 2017) and having higher nighttime activity in developed areas (Y. Wang et al., 2017). This is further supported by

B.4-11 cont.

a study that found mountain lions increased movement efficiency during the Covid-19 shutdown, which suggests that they incur energetic costs by increasing movement and space-use when avoiding human activity (Benson et al., 2021).

Although pumas have been found to have some flexibility to navigate urbanized landscapes, they spent more than 95% of their time away from developed areas and actively avoided open areas like golf courses, cemeteries, and other altered landscaped spaces (Riley et al., 2021). Mountain lions prefer larger habitat patches that are closer together and further away from buildings (Suraci et al., 2020), and they consistently select native vegetation types with dense cover, like chaparral, riparian woodland, and coastal sage scrub, with shrublands being their preferred habitat (Riley et al., 2021). This highlights the importance of intact and connected natural heterogeneous landscapes to the long-term health and persistence of constrained mountain lion populations. The authors state, "An important requirement for the effective conservation of at-risk mountain lion populations in southern California is preserving and enhancing connectivity between larger natural areas." (Riley et al., 2021). In addition, especially in areas where pumas are severely isolated and wildlife connectivity is already constrained, like in and near the Project area, it is important to note that even a single migrant from a different population can help enhance genetic diversity in inbred puma populations (Gustafson et al., 2017). This suggests that any area with important connectivity is critical for the long-term survival of local pumas. The proposed Project could drive local puma populations towards extinction while harming other wildlife.

There are many scientific studies that provide insights on the profound impacts human activities and infrastructure have on mountain lion survival, and they emphasize the need to adequately assess and mitigate impacts to these CESA candidate species in the Project area. These studies add to the accumulating evidence that mountain lions require a habitat mosaic that provides sufficient room to roam away from human-disturbed areas and connected to expansive, intact, heterogeneous habitats (Beier et al., 1995; Dickson et al., 2005; Dickson & Beier, 2002; Kertson et al., 2011; Zeller et al., 2017). Continued construction of roads and development in mountain lion habitat with little regard for their movement and behavioral needs, especially in an area where mountain lions have been detected and movement is already constrained, has significant direct and indirect lethal and sublethal impacts that threaten the persistence of Southern California and Central Coast puma populations. The SEIR fails to adequately assess and mitigate the Project's impacts to local mountain lions.

Mountain lions are a key indicator species of wildlife connectivity and healthy ecosystems. As the last remaining wide-ranging top predator in the region, the ability to move through large swaths of interconnected habitat is vital for genetic connectivity and their long-term survival. In addition, impacts to mountain lions in the region could have severe ecological consequences; loss of the ecosystem engineer could have ripple effects on other plant and animal

species, potentially leading to a decrease in biodiversity and diminished overall ecosystem function. Many scavengers, including California condors, kit foxes, raptors, and numerous insects, would lose a reliable food source (Barry et al., 2019; Ruth & Elbroch, 2014). Fish, birds, amphibians, reptiles, rare native plants, and butterflies would potentially diminish if this apex predator were lost (Ripple et al., 2014; Ripple & Beschta, 2006, 2008). In fact, a recent literature review found that mountain lions are important ecosystem engineers and have been documented to have ecological interactions with at least 485 plant and animal species (Labarge et al., 2022). Adequate assessment and mitigation of the Project's impacts to mountain lions is necessary to ensure their long-term survival as well as the long-term health of the area's biodiversity and ecosystems. The SEIR fails to adequately analyze and mitigate the Project's impacts to pumas.

B.4-11 cont.

Wildlife connectivity in this region is paramount for the survival of the Southern California mountain lions. Any project that does not adequately assess and address impacts to mountain lions and wildlife connectivity could lead to the extirpation of local mountain lions and severe loss of biodiversity and ecosystem function in the region. Further destruction of wildlife connectivity in the area will push local mountain lions closer towards extinction. See further discussion below regarding the SEIR's requirement to adequately describe, assess, and mitigate impacts to wildlife movement and connectivity.

D. The County Must Revise the EIR to Consider Significant New Information Regarding Burrowing Owls.

B.4-12

i. CEQA and CESA Require Analysis and Mitigation for Impacts to Burrowing Owls.

The previous EIR for the Project noted numerous burrowing owls have been documented in the Project area. Therefore, relevant authorities require preparation of a subsequent EIR in these circumstances to ensure potential impacts to burrowing owls are fully analyzed and, if needed, mitigated. The California Environmental Quality Act ("CEQA") states that a subsequent or supplemental EIR may be required when either (1) substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report or (2) new information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available. (Pub. Res. Code § 21166.)

New information since the EIR was approved in 2018 shows that western burrowing owls continuing to decline in California. On October 10, 2024, the California Department of Fish and Wildlife (CDFW) accepted a petition to list the Western Burrowing Owl as endangered under the California Endangered Species Act (CESA), determining the listing "may be warranted" and

advancing the species to the candidacy stage of the CESA listing process.[2] As a candidate species, the western burrowing owl now has full protection of a threatened species under CESA. (See Cal. Fish & Game Code §§ 2074.4, 2085; Cal. Code Regs. tit. 14 § 783.1(b).) "Take" of any endangered, threatened, or candidate species that results from a project is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9.) Take of individual burrowing owls and their nests is defined as "hunt, pursue, catch, capture or kill, or attempt to hunt, pursue, catch, capture or kill," and is prohibited by sections 3503, 3503.5 and 3513.

B.4-12 cont.

CESA's purpose is "to conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat." (Fish & Game Code § 2052.) As such, CESA protects not only species facing imminent risk of extinction, but also those on a trajectory towards eventual extinction. An "endangered" species is one that is "in serious danger of becoming extinct throughout all, or a significant portion, of its range." (*Id*. § 2062.) In contrast, a "threatened" species is one that, "although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of . . . special protection and management efforts." (*Id*. § 2067.) And "candidate" species are those noticed for review for future listing or proposed to be added as endangered or threatened species, (Cal. Fish & Game Code §§ 2068, 2074.4), while also receiving protection under CESA. (Cal. Fish & Game Code §§ 2074.4, 2085; *see also* Cal. Code Regs. tit. 14 § 783.1(b).)

CESA requires development of "reasonable and prudent alternatives" that will not jeopardize the existence of a listed species but will maintain the project purpose to the greatest extent feasible. (Cal. Fish & Game Code § 2053(b).) In the event that such alternatives are infeasible, agencies may still approve individual projects if appropriate mitigation measures are implemented. (Cal. Fish & Game Code § 2054.)

CESA envisions these mandates will be incorporated into the CEQA process. (Cal. Fish & Game Code §§ 2064-2065; Cal. Code Regs., tit. 14, §§ 783.3 & 783.5.) CEQA requires a "mandatory finding of significance" if substantial evidence indicates that a Project may cause a "wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species[.]" (CEQA Guidelines § 15065(a)(1).) This means that projects that reduce a listed species' habitat or reduce the number or range of a listed species are deemed to have significant impacts on the environment as a matter of law. (See *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 792 fn. 12 [citing *Defend the Bay v. City of Irvine* (2004) 119 Cal.App.4th 1261, 1273–1274].)

[2] https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=227089&inline

CEQA requires a "mandatory finding of significance" when a project has the potential to impact a CESA-listed species. (CEQA Guidelines § 15065(a)(1); *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 792 fn. 12.) And such a finding triggers a duty to consider and adopt all feasible alternatives or mitigation measures to reduce such impacts. (Pub. Res. Code § 21002.) Moreover, under CESA, the County may not approve projects that could jeopardize the continued existence of these populations or result in destruction of essential habitat (Fish & Game Code § 2053(a)) and agencies must require that appropriate mitigation measures be implemented for projects that could destroy mountain lion habitat or impair connectivity (Fish & Game Code § 2054). Neither the 2018 EIR nor the 2025 SEIR address these issues. Given that numerous burrowing owls have been documented in the Project area (2018 EIR Exhibit 5), adequate analyses and mitigation regarding the Project's impacts to burrowing should be provided in a recirculated EIR.

B.4-12 cont.

E. The County Must Revise the EIR to Consider Significant New Information Regarding Habitat Connectivity.

B.4-13

The California Environmental Quality Act (CEQA) requires an EIR to provide decision-making bodies and the public with detailed information about the effect a proposed project is likely to have on the environment, to list ways in which the significant effects of a project might be minimized, and to indicate alternatives to the project. (Pub. Res. Code § 21061.) CEQA further requires a lead agency to mitigate to the extent feasible significant impacts. (CEQA Guidelines § 15064.4.) The SEIR fails to provide sufficient analyses and mitigation for the Project's potential impacts to wildlife connectivity and special-status species that rely on connected habitats in and near the Project area, including mountain lions, and therefore fails to comply with CEQA. A recirculated EIR that complies with CEQA must be prepared.

New information since the EIR was approved in 2018 that mountain lions in the Project area are facing an extinction vortex and have been documented in the vicinity of the Project area, including an individual using an underpass adjacent to the Project area moving from Grasshopper Canyon westerly into Marple Canyon (Exhibit E), qualifies as (1) a substantial change with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report and (2) new information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available. (Pub. Res. Code § 21166.). Given that mountain lions in the Project area are part of the Southern California and Central Coast proposed ESU that was granted "candidacy status" in April 2020 under CESA and mountain lions require ample amounts of intact, heterogeneous habitats to move freely and find the resources they need to survive, CEQA requires a supplemental EIR that adequately assesses and mitigates the Project's impacts to wildlife connectivity and special-status species.

B.4-14

ii. The SEIR Fails to Adequately Assess and Mitigate the Project's Impacts to Regional Wildlife Connectivity.

The 2018 EIR fails to consider the critical importance of regional wildlife connectivity for the long-term survival of mountain lions and many other species in the area. The 2018 EIR also fails to adequately disclose, assess, and mitigate the Project's impacts to wildlife connectivity. As mentioned above, the Project area is located in the Sierra Pelona Mountains, a mountain range within the Transverse Ranges that scientists have highlighted as "a critical conservation priority in order to maintain gene flow between the Southern Coast [mountain lion] populations and the Sierra Nevada or Central Coast groups" (Gustafson et al., 2021). The Project would remove mountain lion habitat and extend and fortify a movement barrier (i.e., the I-5) in an area where connectivity is already tenuous, as shown by numerous mountain lion genetics studies (e.g., Benson et al., 2019; Ernest et al., 2003; Gustafson et al., 2018, 2021). New roads and development and increased human activities in the area will further degrade any future connectivity restoration work at this barrier. The Project will significantly impact the area's rich biodiversity and could push the local mountain lions, particular the CCS and SGSB populations, further toward local extinction.

B.4-15

ii. The SEIR Fails to Adequately Assess and Mitigate the Project's Impacts to Wildlife Connectivity in and Adjacent to the Project Area.

The County relies on the inadequate and outdated 2018 EIR, which dismisses and diminishes the importance of the Project area for wildlife movement because of the presence of a dam, lagoon, and some development west of the lagoon, stating that "[o]nly local movement of species habituated to an urban landscape (e.g., coyote) are expected to navigate the extensive set of existing barriers. However, the SEIR fails to provide substantial evidence to support such claims. The 2018 EIR reports almost 900 acres of sage scrub communities, more than 450 acres of grasslands (which includes a significant amount of native grasslands), and almost 15 acres of riparian and open water communities (2018 EIR Table 5.2-1), and numerous sensitive and special-status species are known to occur in the Project area, including but not limited to western spadefoots, western toads, gopher snakes, common kingsnakes, coastal California gnatcatchers, burrowing owls, golden eagles, white-tailed kites, badgers, and mountain lions. And the Project area is surrounded by public lands and other undeveloped wildlands. Clearly numerous wildlife species are using and moving through the Project area. Yet no wildlife movement studies or adequate analyses were conducted. The SEIR fails to adequately disclose, assess, and mitigate the Project's impacts to wildlife connectivity.

The 2018 EIR fails to adequately assess and mitigate the Project's impacts to wildlife movement that is reliant on more than three miles of blue-line stream, ephemeral waters, and

B.4-15 cont.

almost 15 acres of riparian and open water habitat in the Project area. In fact, the 2018 EIR and the current EIR fail to mention Grasshopper Creek and its tributaries in its wildlife movement discussion at all, merely referring to Castaic Creek and Castaic Dam. This is a serious misrepresentation of the Project area's importance for wildlife connectivity.

Permanent and ephemeral streams and wetlands provide important live-in and move-through habitat for a wide variety of species. For example, riparian habitats associated with streams provide important connectivity for a wide variety of species, including numerous resident and migratory birds, monarch butterflies (which have been documented nearby[3]), wide-ranging animals like bobcats and mountain lions.

Intermittent and ephemeral rivers and streams are often underestimated habitats despite their importance as live-in and move-through habitat. Recent scientific literature states that "[i]n many intermittent streams, remnant pools persist after flow ceases and provide refuge for aquatic organisms"(Bogan et al., 2019). The researchers state:

> Remnant pools in intermittent streams should be a focus of conservation efforts in regions with a Mediterranean climate, especially during extreme droughts. Native fauna adapted to harsh intermittent flow regimes can thrive in these habitats, whereas non-native taxa may fare poorly. Furthermore, remnant pools supported by deep groundwater sources, such as those along geological faults, may provide both ecological refuge and evolutionary refugia for freshwater biota. (Bogan et al., 2019)

Hydroperiod diversity is important for native amphibian population stability. Intermittent and ephemeral habitats are important refugia from invasive fish and American bullfrogs that outcompete and prey upon native amphibians in permanent waterbodies. They may also be important refuge and recovery sites for native amphibian species after extreme drought. Many native amphibian species, like western spadefoot and western toads that have been documented in the Project area, are adapted to successfully reproduce in seasonally-drying wetlands, including intermittent streams and vernal pools. But during dry years some species may go to permanent waterbodies to breed while species with long-lived adult forms may be able to recover quickly from a skipped breeding season. Although amphibian population declines due to drought have been observed, these adaptations make them more resilient than invasive species to rebound and recover (Moss et al., 2021). In fact, researchers have found that invasive fish and bullfrogs were extirpated from several permanent ponds that had completely dried out during extreme drought, which, once refilled with water, opened up new sites for native species to re-colonize

[3] https://www.inaturalist.org/observations?subview=map&taxon_id=48662

(Moss et al., 2021). This indicates that conserving intermittent and ephemeral waterways is vital for native amphibians to persist, particularly in areas where invasive species may occur or have the potential to occur. As climate change intensifies, preservation of connected habitats with diverse hydroperiods is vital for the persistence and metapopulation dynamics of native amphibians.

B.4-15 cont.

Around 90% to 95% of historic riparian habitat in the state has been lost. Continued destruction and degradation of what little is left will have severe, harmful impacts on overall biodiversity, ecosystem function and climate change resilience. Yet the SEIR ignores and fails to adequately assess and mitigate the Project's impacts to permanent and ephemeral streams and wetlands that both facilitate wildlife movement and need connectivity to upland habitat.

The SEIR's inadequate description of the baseline environmental conditions on the Project site and vicinity undermine its effectiveness as an informational document. It is critical for the SEIR to clearly disclose and adequately assess the importance and function of the habitats that occur in the Project area and the special-status species that are known or have the potential to occur or historically occurred in these habitats so that the public can determine whether the EIR adequately assesses and mitigates the Project's impacts. The SEIR effectively dismisses and downplays the Project area's importance supporting high levels of biodiversity and wildlife connectivity and ultimately fails to adequately describe and assess existing conditions while contradicting the best available science. The SEIR fails to mitigate impacts to wildlife connectivity, mountain lions, and other sensitive species to less than significant and fails to comply with CEQA.

As detailed in a 2021 Center Report (Yap, Rose, Anderson, et al., 2021), roads and development create barriers that lead to habitat loss and fragmentation, which harms native wildlife, plants, and people. As barriers to wildlife movement, poorly-planned development and roads can affect an animal's behavior, movement patterns, reproductive success, and physiological state, which can lead to significant impacts on individual wildlife, populations, communities, landscapes, and ecosystem function (Brehme et al., 2013; Ceia-Hasse et al., 2018; Haddad et al., 2015; Marsh & Jaeger, 2015; Mitsch & Wilson, 1996; Trombulak & Frissell, 2000; van der Ree et al., 2011). For example, habitat fragmentation from roads and development has been shown to cause mortalities and harmful genetic isolation in mountain lions in Southern California and along the Central Coast (Ernest et al., 2014; Gustafson et al., 2021; Riley et al., 2014; Vickers et al., 2015), increase local extinction risk in amphibians and reptiles (Brehme et al., 2018; Cushman, 2006)., cause high levels of avoidance behavior and mortality in birds and insects (Benítez-López et al., 2010; Kantola et al., 2019; Loss et al., 2014), and alter pollinator behavior and degrade habitats (Aguilar et al., 2008; Goverde et al., 2002; Trombulak & Frissell, 2000).

B.4-15 cont.

Habitat loss and fragmentation also severely impacts plant communities. An 18-year study found that reconnected landscapes had nearly 14% more plant species compared to fragmented habitats, and that number is likely to continue to rise as time passes (Damschen et al., 2019). The authors conclude that efforts to preserve and enhance connectivity will pay off over the long-term (Damschen et al., 2019). In addition, connectivity is important to allow for range shifts and species migrations as climate changes (Cushman et al., 2013; Heller & Zavaleta, 2009; Krosby et al., 2018). Loss of wildlife connectivity decreases biodiversity and degrades ecosystems. It also prevents the reestablishment of native species, like bald eagles, vernal pool fairy shrimp, and valley elderberry longhorn beetles that may occur in or near the Project area.

Edge effects like traffic, noise, and light from Project construction and operation will have impacts on wildlife and wildlife movement in an area that is already constrained. This is important to consider when open space and connectivity enhancement projects (i.e., a wildlife crossing project in the CDFW priority barrier at El Casco Creek) are nearby, as numerous wildlife have been found to be sensitive to edge effects. For example, field observations and controlled laboratory experiments have shown that traffic noise can significantly degrade habitat value for migrating songbirds (Ware et al., 2015). Subjects exposed to 55 and 61 dBA (simulated traffic noise) exhibited decreased feeding behavior and duration, as well as increased vigilance behavior (Ware et al. 2015). Such behavioral shifts increase the risk of starvation, thus decreasing survival rates. Another study found a 28% decrease in bird abundance in areas when traffic noise was present compared to when there was no traffic noise (McClure et al., 2013). Negative edge effects of roads and development have been documented in wide-ranging predators, such as mountain lions and bobcats (Crooks, 2002; Delaney et al., 2010, 2021; Lee et al., 2012; Riley et al., 2006; J. A. Smith et al., 2015), as well as smaller species with poor dispersal abilities, such as song birds, small mammals, and herpetofauna (Benítez-López et al., 2010; Cushman, 2006; Kociolek et al., 2011; Slabbekoorn & Ripmeester, 2008).

It is widely recognized that the continuing fragmentation of habitat by humans threatens biodiversity and diminishes our (humans, plants, and animals) ability to adapt to climate change. In a report for the International Union for Conservation of Nature (IUCN), world-renown scientists from around the world stated that "[s]cience overwhelmingly shows that interconnected protected areas and other areas for biological diversity conservation are much more effective than disconnected areas in human-dominated systems, especially in the face of climate change" and "[i]t is imperative that the world moves toward a coherent global approach for ecological connectivity conservation, and begins to measure and monitor the effectiveness of efforts to protect connectivity and thereby achieve functional ecological networks" (Hilty et al., 2020). New roads and development and increased human activities in the Project area will significantly impact wildlife connectivity and the rich biodiversity in the region. The SEIR fails to adequately disclose, assess, and mitigate the Project's impacts to wildlife connectivity.

B.4-16

III. THE PRDSEIR'S NEW ANALYSIS OF WILDFIRE RISK REMAINS INADEQUATE.

Wildfires are a natural and necessary process in many of California's ecosystems, and many areas need beneficial fire to restore ecosystem health and cultural connection to the land. However, the last decade of unprecedented wildfires in the wildland urban interface (WUI)—where homes extend into the natural landscape—has been devastating for people and wildlife. Poor land-use planning plays a primary role in destructive wildfire.

Since 2015, California wildfires have killed more than 230 people and destroyed more than 75,000 structures in the wildland urban interface (WUI), where homes extend into the natural landscape. Hundreds of thousands of people have had to evacuate their homes and endure power outages, and millions have been exposed to unhealthy levels of smoke and toxic air, soil, and water pollution. Meanwhile costs for fire suppression, loss of life, medical expenses, property damage, and indirect economic losses are in the hundreds of billions of dollars.

On January 7, 2025, the world watched Los Angeles go up in flames. In a matter of just three days, fires killed at least 29 people, destroyed more than 16,000 structures, and burned more than 34,000 acres of shrublands and oak woodlands. Post-fire rains caused flooding, mudslides, and debris flows, which threatened communities and polluted nearby waters. Toxic debris plagues the landscape, with dangerously high levels of lead, arsenic, and other metals in soils within and near the fire footprint.

Costs of wildfires are skyrocketing. Researchers found that the 2018 California wildfires, which included the Camp Fire that burned through Paradise and the Woolsey Fire that burned through Ventura and Santa Barbara, resulted in $148.5 billion in in capital losses, health costs related to air pollution exposure, and indirect losses due to broader economic disruption cascading along regional and national supply chains (D. Wang et al., 2021).

Experts estimate the costs of the 2025 Los Angeles fires could be as high as $432 billion when considering property and capital losses, wages lost by local businesses and employees, and a decline in county-level GDP (Li & Yu, 2025). These estimates do not include the costs of health impacts; costs could continue to rise as we learn more about the extent of the damage and the long-term impacts of exposure to toxic air pollutants, soil pollutants, contaminated water, and the trauma of fleeing wildfires and/or losing homes, schools, and communities.

The science is irrefutable. Almost all destructive wildfires are accidentally ignited by humans or human infrastructure near roads and development (Balch et al., 2024; Chen & Jin, 2022; Syphard, Rustigian-Romsos, et al., 2019). Development in fire-prone landscapes increases ignition risk while climate change is amplifying fire conditions. Meanwhile, developers make

money by selling risky homes, leaving the burden of recovery on homeowners and taxpayers. Yet the SEIR fails to adequately assess and mitigate the Project's impacts to wildfire risk and instead downplays the Project area's existing conditions and creates a false sense of security with minimal and inadequate mitigation.

B.4-16 cont.

CEQA requires an EIR to identify and analyze a project's significant environmental impacts, including those impacts caused or exacerbated "by bringing development and people into the area affected." (Pub. Resources Code, §§ 21002, 21002.1, subd. (a); CEQA Guidelines, § 15126.2, subd. (a).) The impacts of development in areas prone to wildfire specifically require consideration: "the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, *wildfire risk areas*), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazard areas." (CEQA Guidelines, § 15126.2, subd. (a), emphasis added.)

In 2018, the State officially recognized that introduction of development in the WUI increases ignition risk. (OPR 2018 Final Statement of Reasons – Update to CEQA Guidelines Checklist]; see also *Clews Land & Livestock, LLC v. City of San Diego* (2017) 19 Cal.App.5th 161, 193 [recognizing potential for significant environment effects when project brings new development to a wildfire prone area].) Moreover, as discussed in a 2021 Center Report, "*Built to Burn: California's Wildlands Developments are Playing with Fire*," policymakers must reckon with California's wildfire history and acknowledge that reckless land-use policies are increasing wildfire risk and putting more people in harm's way (Yap, Rose, Broderick, et al., 2021).

A. The PRDSEIR Fails to Adequately Describe and Assess the Project's Wildfire Ignition Risk.

B.4-17

A California Court of Appeal recently blocked development over wildfire concerns because the county failed to assess wildfire ignition risk. (See *People ex rel. Bonta v. County of Lake* (2024) 105 Cal.App.5th 1222, 1235 [finding that EIR must sufficiently discuss the project's potential adverse effect of human-cause ignitions and analyze in some detail how the project's design or mitigation measures alleviates such risks, and lead agency failed to utilize industry standard modeling tools or appropriate methodologies for its conclusory findings]). The PRDSEIR fails to do this.

The PRDSEIR falsely and erroneously states that "[n]either construction nor operation of the Project would exacerbate wildfire risks, thereby exposing occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire" (PRDSEIR at 2-67) without providing substantial evidence to support such a claim. The PRDSEIR further dismisses wildfire

B.4-17 cont.

risk, stating that the "level of risk is no greater than similar communities in the area and generally better than projects constructed prior to the current regulatory standards" (PRDSEIR at 2-66), without adequately disclosing or assessing the area's baseline conditions. The wildfire risk of existing communities in fire-prone areas is exceptionally high, as is evidenced by the numerous accidental ignitions in the WUI that have caused unprecedented levels of destruction and death in the last decade, and the risk of these existing communities is irrelevant to the Project's needed wildfire risk assessment. The science clearly shows that placing any new human presence in high fire-prone areas inevitably increases ignition risk. The Project would bring more roads and development and increased human activity into fire-prone areas, thereby increasing ignition risk and endangering the lives of new residents and existing communities.

According to a report from Governor Gavin Newsom's Office, construction of more homes in the wildland-urban interface is one of the main factors that "magnify the wildfire threat and place substantially more people and property at risk than ever before" (Governor Newsom's Strike Force, 2019). Another 2019 study found that housing and human infrastructure in fire-prone wildlands are the main drivers of fire ignitions and structure loss (Syphard et al., 2019). Sprawl developments extending into habitats that are prone to fire have led to more frequent wildfires caused by human ignitions, like power lines, arson, improperly disposed cigarette butts, debris burning, fireworks, campfires, or sparks from cars or equipment (Alexandre, Stewart, Keuler, et al., 2016; Alexandre, Stewart, Mockrin, et al., 2016; Balch et al., 2017; Bistinas et al., 2013; Keeley et al., 1999; Keeley & Fotheringham, 2003; Keeley & Syphard, 2018; Radeloff et al., 2018; Syphard et al., 2007, 2012; Syphard, Rustigian-Romsos, et al., 2019).

Reckless land-use planning that extends the WUI further into California's fire-prone landscape is causing fires to be more destructive. Almost all destructive wildfires are accidentally ignited by humans or human infrastructure near roads and development (Balch et al., 2024; Chen & Jin, 2022; Syphard, Rustigian-Romsos, et al., 2019). For example, the 2018 Camp and Woolsey fires and 2017 Tubbs and Thomas fires were sparked by powerlines or electrical equipment and the 2017 Carr fire was caused by car sparks. Exhibit 3.2-6 in the EIR shows the increased ignitions along roads. And although still under investigation, embers from a previous fire ignited by fireworks is suspected to have caused the Palisades Fire and a spark from a southern California Edison powerline likely caused the Eaton Fire. Placing more homes and people in high fire-prone areas would only increase the potential likelihood of these ignition sources, as has been documented in multiple scientific studies (Balch et al., 2017; Bistinas et al., 2013; Keeley et al., 1999; Keeley & Fotheringham, 2003; Keeley & Syphard, 2018; Radeloff et al., 2018; Syphard et al., 2007, 2012; Syphard, Rustigian-Romsos, et al., 2019).

The PRDSEIR also fails to adequately discuss the role of climate as it pertains to wildfire risk in the Project area. California's climate facilitates wildfire. With typically cool wet winters and hot dry summers, vegetation will grow and then dry out over the course of the year. Strong

seasonal winds, known as the Santa Ana winds in the Project area, occur in the fall and winter. If there is little or no precipitation prior to a strong wind event and a fire has been ignited, the winds can spread the fire dangerously fast (Cayan et al., 2022; Keeley et al., 2024).

B.4-17 cont.

Winds drive the fastest, deadliest, and most destructive wildfires in the U.S. (Balch et al., 2024). And researchers have found that fires are spreading faster. Between 2001 and 2020 the maximum daily growth rate of wildfires in the U.S. more than doubled, and California fires grew almost 400% faster (Balch et al., 2024). Experts suggest that this trend could be due to warming temperatures, habitat conversion to more flammable vegetation (i.e., nonnative grasses), and/or the co-occurrence of high winds with increasing human-related ignitions (Balch et al., 2024). Although the winds do not ignite the fires, ignitions in the WUI often coincide with strong wind events (Abatzoglou et al., 2018; Hantson et al., 2022; Mietkiewicz et al., 2020). Almost always ignited by humans and human infrastructure in dry shrublands and grasslands, these wildfires spread quickly and are difficult to contain during windy conditions, which amplifies their negative impacts to people and ecosystems (Hantson et al., 2022).

The three most destructive wildfires in California were driven by wind. Earlier this year, the Eaton Fire burned more than 10,000 acres within just 16 hours of ignition, damaging more than 9,000 structures and killing at least 18 people. The Palisades Fire burned more than 17,000 acres in the first 36 hours of ignition and resulted in almost 7,000 structures burning and at least 12 people dying. And in 2018 the Camp Fire burned more than 50,000 acres in its first day, eventually becoming California's deadliest and most destructive wildfire, killing 85 people and destroying almost 19,000 structures.

B.4-18

The Hughes Fire, which ignited on January 22, 2025 just east of the Project area, burned through more than 10,000 acres of land in less than 11 hours.[4] Although no one was injured, 31,000 people were under mandatory evacuations and more than 14,000 structures were at risk of burning. Yet the SEIR fails to mention this nearby fair and fails to adequately disclose and assess the prevailing winds in the Project area that influence and exacerbate the Project's wildfire ignition risk. The SEIR fails to comply with CEQA.

The PRDSEIR also fails to adequately assess the impacts climate change on wildfire risk. Climate change is exacerbating extreme weather conditions and wildfire impacts (Williams et al., 2019). The number of days with extreme fire weather conditions in California has doubled since 1980, and further climate change will amplify that trend (Goss et al., 2020). Hotter and drier conditions combined with later and shorter rainy seasons are making the landscape more conducive to wildfire ignitions and spread while lengthening the fire season (Dong et al., 2022; Goss et al., 2020; Luković et al., 2021; Ma et al., 2021; Swain, 2021). Wildfire risk is now year-

[4] CalFire (2025). Hughes Fire Status Update Reports. Available at: https://www.fire.ca.gov/incidents/2025/1/22/hughes-fire/updates.

round. Continued climate change and increasing fire conditions will lead to more intense and more destructive wildfires (MacDonald et al., 2023). The SEIR fails to adequately assess the Project's wildfire risk.

B.4-18 cont.

B.4-19

B. The PRDSEIR Fails to Adequately Mitigate the Project's Wildfire Risk.

The PRDSEIR fails to adequately mitigate wildfire ignition risk in the Project area while attempting to instill a false sense of security. The PRDSEIR erroneously concludes that the Project would have a "less than significant impact" before mitigation and "no mitigation is necessary" (PRDSEIR at 2-69) despite the best available science and numerous fire science experts demonstrating study after study that any increase extension of development into fire-prone areas increases ignition risk. Instead, the PRDSEIR relies on "project design features" for wildfire prevention and protection (PRDSEIR at 2-67); however, these measures are inadequate. As courts have repeatedly held, project design features cannot be used to avoid thorough analysis of a project's environmental impacts and adoption of adequate mitigation. (*Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645.) In particular, the efficacy of project design features cannot be assessed against an undefined wildfire impact and lack the enforceability of mitigation measures. Therefore, the Project's wildlife analysis is inadequate and violates CEQA.

The science clearly shows that placing any new human presence in high fire-prone areas inevitably increases ignition risk, yet the PRDSEIR simply relies on "project design features" that include compliance with Chapter 7A of the California Building Code, internal sprinklers, fuel breaks and fuel modification zones, a new fire station location (not an actual fire station with funded equipment and personnel) (PRDSEIR at 2-67). These measures do not guarantee safety when (not if) a fire burns through the area. While fire-resistant measures can reduce wildfire risk, they cannot make structures or communities fireproof. In an analysis that included more than 40,000 structures exposed to wildfire between 2013 and 2018 in California, many structures deemed "firesafe" were destroyed. And while an analysis conducted in the aftermath of the 2018 Camp Fire showed that new building codes improved home survival, with 38.5% of homes built to code undamaged compared to 11.5% of homes built prior to 2008, 61.5% of the homes built to fire-safety codes were still destroyed (Knapp et al., 2021).

In addition, even if the Project includes "a new fire station location" (PRDSEIR at 2-67), there is no guarantee that a fire station would actually be built. And even if it were to be built, it is unclear if human and monetary capital will be sufficient to sustain and maintain a new fire station. There is no requirement that the developer pay for the county's costs of building or operating a station, nor is there any guarantee that sufficient firefighting personnel and equipment will be available. During the LA wildfires in January 2025, firefighters lacked enough personnel and fire engines to keep all communities safe (Fuller et al., 2025; Toohey & Fry, 2025). The personnel cost over the life of the Project (essentially forever) will likely be hundreds

of millions of dollars. Funding is already lacking for the increasing costs of fire suppression and property damage from wildfires in California, and the developer is not required to reimburse the California Department of Forestry and Fire Protection (CalFire) for the many millions (or billions) of dollars CalFire will likely expense when (not if) Centennial needs to be defended from wildfire. The cost of fire suppression in areas managed by CalFire has skyrocketed from $114 million in the 2000-2001 fiscal year to close to $3 billion for the 2020-2021 and 2021-2022 fiscal years combined (CalFire 2022). The Legislative Analyst's Office (LAO) reported that CalFire used an estimated $3.3 billion for wildfire protection and suppression in the 2022-2023 fiscal year (LAO 2023). And as mentioned previously, climate change is amplifying extreme weather conditions and wildfire risk (Goss et al., 2020; Swain, 2021; Swain et al., 2018, 2025), which is making it more challenging to protect communities from wildfire. Such information must be analyzed when assessing wildfire risk. The PRDSEIR fails to adequately assess and mitigate the Project's impacts to wildfire risk to less than significant.

B.4-19 cont.

Development in and near fire-prone areas should be avoided. If unavoidable, mitigation measures should require structures to have ember-resistant vents, fire-resistant roofs, fire-resistant siding, double-paned windows, and irrigated defensible space immediately adjacent to structures and around communities. External sprinklers (not internal sprinklers, which are proposed in the SEIR) with an independent water source could reduce structures' flammability. Rooftop solar and clean energy microgrids could reduce fire risk from utilities' infrastructure during extreme weather. In addition, mitigation measures should include equitably retrofitting existing communities near the Project area with similar fire-resilient measures, providing wildfire personal protective equipment (e.g., N95 masks, air purifiers), and shelter-in-place facilities. Education and awareness for workers, new residents, and nearby communities should be provided and include how to reduce ignition risk. Maintenance and enforcement of ignition reduction measures should be funded and implemented in perpetuity. In addition, developers should be responsible for the insurability of homes and structures as well as recovery and remediation costs when (not if) a fire occurs in or near the Project area.

C. The EIR Must Incorporate Traditional Ecological Knowledge and Indigenous Science into Its Wildfire Analysis.

B.4-20

The PRDSEIR fails to mention or discuss the area's historical fire regimes and the role Indigenous communities likely played in shaping the fire ecology of habitats in and adjacent to the Project area. Indigenous communities should be included in discourse over climate change and wildfire. They are disproportionately impacted by wildfire. Native Americans were found to be six times more likely than other groups to live in high fire-prone areas, and high vulnerability due to socioeconomic barriers makes it more difficult for these communities to recover after a large wildfire (Davies et al., 2018). In addition, farmworkers, who are majority people of color

and often include migrant workers that come from Indigenous communities, often have less access to healthcare due to immigration or economic status. They are more vulnerable to the health impacts of poor air quality due to increased exposure to air pollution as they work. Yet farmworkers often have to continue working while fires burn, and smoke fills the air, or risk not getting paid (Herrera, 2018; Kardas-Nelson et al., 2020; Parshley, 2018).

B.4-20 cont.

Ramos (2022) states, "Indigenous communities have often been marginalized in the sciences through research approaches that are not inclusive of their cultures and histories." Traditional ecological knowledge ("TEK") is often excluded from analyses or distilled to conform to Western science (Ramos, 2022). EIRs, like this one, often fail to acknowledge that Indigenous communities and cultural burning played a role in California's historical fire activity and often only mention previous wildfires in the area in CalFire records. This perpetuates the exclusion and marginalization of Indigenous communities and TEK. Consultation with local Native Tribes and incorporation of Indigenous science, including but not limited to oral histories, ethnographies (that may include burn scars and charcoal records), and archeological data should be incorporated in fire history analysis. As a society, we need to work towards integrative research that "transcends disciplinary boundaries" and employs a range of methodological options to get a deeper understanding of the relationship between people and ecosystems (Ramos, 2022). Doing so will help inform fire management strategies and mitigation measures that work towards reducing harms of wildfire to people while facilitating beneficial fire for the appropriate ecosystems.

D. Increased Development in Fire Zones Disrupts Natural Fire Regimes and Harms California's Ecosystems and Wildlife.

B.4-21

Wildlife and the habitats they rely on have also suffered from the last decade of unprecedented fires in the WUI. Fragmented populations of sensitive species, like mountain lions, California condors, and San Joaquin kit foxes, are vulnerable to further habitat loss and fragmentation as well as the fires themselves, smoke inhalation and air pollution, post-fire landslides, and toxic runoff. The Project could amplify harms by increasing unintentional human-driven wildfires that disrupt natural fire regimes, further degrade ecosystems, and threaten California's wildlife.

E. Unintentional Wildfires Caused by Poorly Sited Development Cause Poor Air Quality and Harm People.

B.4-22

As discussed in the Center for Biological Diversity's report, *The True Cost of Sprawl: Bad Planning Harms People, Wildlife and the Climate* (Reid-Wainscoat et al., 2024), unintentional wildfires due to human activity and ill-placed developments lead to increased occurrences of poor outdoor and indoor air quality from $PM_{2.5}$ from smoke (*e.g.*, Phuleria et al.,

2005), which can have both acute and long-term health effects that disproportionately affect vulnerable populations, like children, the elderly, those with underlying chronic disease, low-income communities, and communities of color. Hospital visits for respiratory symptoms (*e.g.*, asthma, acute bronchitis, pneumonia, or chronic obstructive pulmonary disease) and cardiovascular symptoms (*e.g.*, congestive heart failure, ischemic heart disease, and myocardial infarction) have been shown to increase during and/or after fire events (Delfino et al., 2009; Künzli et al., 2006; Liu et al., 2015; Rappold et al., 2012; Reid, Brauer, et al., 2016; Viswanathan et al., 2006). In addition, epidemiologists have found that increased exposure to wildfire smoke may also be linked to higher rates of dementia (B. Zhang et al., 2023; Z. Zhang et al., 2023). Researchers estimated that between 2008 and 2018 more than 50,000 premature deaths were caused by California wildfire smoke (Connolly et al., 2024). And wildland firefighters are suffering disproportionately high rates of cancer and other serious diseases, likely due to extreme smoke exposure (Hwang et al., 2023; Johnson & Lam, 2023), as well as mental health issues due to extended fire seasons and working extended shifts away from their families (Ashton et al., 2018; Bransford et al., 2018; Del Real & Kang, 2018; Greene, 2018; Gutierrez, 2018; Simon, 2018).

B.4-22 cont.

Increases in wildfire also result in higher frequency and toxicity of smoke exposure to communities in the path of and downwind of the fires. This has become evident especially with the 2025 LA wildfires, where toxic air pollution and runoff from burned buildings and urban infrastructure are a growing concern. This can lead to harmful public health impacts due to increased air pollution not only from burned vegetation, but also from burned homes, commercial buildings, cars, etc. Buildings and structures often contain plastic materials, metals, and various stored chemicals that release toxic chemicals when burned, such as pesticides, solvents, paints, and cleaning solutions (Weinhold, 2011). During the 2018 Camp Fire that burned 19,000 structures, the smoke caused dangerously high levels of air pollution in the Sacramento Valley and Bay Area and the California Air Resources Board found that high levels of heavy metals like lead and zinc traveled more than 150 miles (CARB, 2021). And unsafe levels of lead, arsenic, and other dangerous metals have been documented in and downwind of the Eaton and Palisades fire footprints (Champlin, 2025; H. Smith & Briscoe, 2025).

F. More Unintentional Ignitions Due to Development in Fire Zones Increases Firefighting Costs and Strain on Firefighters.

B.4-23

More development in fire-prone areas will necessitate significant firefighting costs from both state and local authorities. CalFire is primarily responsible for addressing wildfires when they occur, and its costs have continued to increase as wildfires in the wildland-urban interface have grown more destructive. As mentioned above, the cost of fire suppression in areas managed by CalFire has skyrocketed from $114 million in the 2000-2001 fiscal year to close to $3 billion for the 2020-2021 and 2021-2022 fiscal years combined (CalFire 2022). The Legislative

Analyst's Office (LAO) reported that CalFire used an estimated $3.3 billion for wildfire protection and suppression in the 2022-2023 fiscal year (LAO 2023). This does not include the cost of lives lost, property damages, or clean up. As noted above, the vast majority of wildfires in California are unintentionally ignited by people in poorly-planned development in high fire prone areas (Balch et al., 2017; Keeley & Syphard, 2018). More development in high fire hazard areas will increase unintentional ignitions and associated fire suppression costs.

B.4-23 cont.

Climate change is increasing extreme weather and fire conditions, which, in combination with poorly planned development, has led to more ignitions and longer fire seasons that are increasing strain on over-burdened firefighters and first responders. According to Captain Michael Feyh of the Sacramento Fire Department, California no longer has a fire season (Simon, 2018); wildfires in California are now year-round because of increased human ignitions in fire-prone areas. Emergency calls to fire departments have tripled since the 1980s (Gutierrez & Cassidy, 2018), and firefighters (and equipment) are being spread thin throughout the state. Firefighters often work 24- to 36-hour shifts for extended periods of time (often weeks at a time), and are being kept away from their homes and families for more and more days out of the year (Ashton et al., 2018; Bransford et al., 2018; Del Real & Kang, 2018; Greene, 2018; Gutierrez, 2018; Simon, 2018). In addition, the firefighting force often must rely on volunteers to battle fires year-round. At its peak, more than 16,000 firefighters from the U.S., Canada, and Mexico, including from prison systems, were combatting the 2025 LA wildfires.

The extended fire season is taking a toll on the physical, mental, and emotional health of firefighters, as well as the emotional health of their families (Ashton et al., 2018; Del Real & Kang, 2018; Simon, 2018). As mentioned above, wildland firefighters are suffering disproportionately high rates of cancer and other serious diseases, likely due to extreme smoke exposure (Hwang et al., 2023; Johnson & Lam, 2023). For those fighting urban conflagrations, exposure to hazardous pollutants are even higher. In a preliminary study conducted on firefighters who fought the LA wildfires, lead and mercury blood levels were five and three times higher compared to firefighters who fought vegetation wildfires (Hernandez, 2025). In addition, the physical and mental fatigue of endlessly fighting fires and experiencing trauma can lead to exhaustion, which can cause mistakes in life-or-death situations while on duty, and the constant worry and aftermath that family members endure when their loved ones are away working in life-threatening conditions can be harrowing (Ashton et al., 2018). According to psychologist Dr. Nancy Bohl-Penrod, the strain of fighting fires without having sufficient breaks can impact firefighters' interactions with their families, their emotions, and their personalities (Bransford et al., 2018). There have also been reports that suicide rates and substance abuse have increased among firefighters (Cart, 2022; Greene, 2018; Simon, 2018).

G. Wildfire Disproportionately Affects Low-Income and Minority Communities.

B.4-24

B.4-24 cont.

Wildfire impacts disproportionately affect low-income and minority communities. As discussed in the Center's 2021 Built to Burn report (Yap, Rose, Broderick, et al., 2021):

> Past environmental hazards have shown that those in at-risk populations (*e.g.,* low-income, elderly, disabled, non-English-speaking, homeless) often have limited resources for disaster planning and preparedness (Richards, 2019). Vulnerable groups also have fewer resources to have cars to evacuate, buy fire insurance, implement defensible space around their homes, or rebuild, and they have less access to disaster relief during recovery (Davis, 2018; Fothergill & Peak, 2004; Harnett, 2018; Morris, 2019; Richards, 2019).
>
> In addition, emergency services often miss at-risk individuals when disasters happen because of limited capacity or language constraints (Richards, 2019). For example, evacuation warnings are often not conveyed to disadvantaged communities (Davies et al., 2018). In the aftermath of wildfires and other environmental disasters, news stories have repeatedly documented the lack of multilingual evacuation warnings leaving non-English speakers in danger. (Axelrod, 2017; Banse, 2018; Gerety, 2015; Richards, 2019). Survivors are left without resources to cope with the death of loved ones, physical injuries and emotional trauma from the chaos that wildfires have inflicted on their communities.
>
> Health impacts from wildfires, particularly increased air pollution from fine particulates ($PM_{2.5}$) in smoke, also disproportionately affect vulnerable populations, including low-income communities, people of color, children, the elderly and people with pre-existing medical conditions (Delfino et al., 2009; Hutchinson et al., 2018; Jones et al., 2020; Künzli et al., 2006; Reid, Jerrett, et al., 2016).
>
> Increased $PM_{2.5}$ levels during wildfire events have been associated with increased respiratory and cardiovascular emergency room visits and hospitalizations, which were disproportionately higher for low socioeconomic status communities and people of color (Hutchinson et al., 2018; Jones et al., 2020; Liu et al., 2017; Reid, Jerrett, et al., 2016). Similarly, asthma admissions were found to have increased by 34% due to smoke exposure from the 2003 wildfires in Southern California, with elderly and child age groups being the most affected (Künzli et al., 2006).
>
> Farmworkers, who are majority people of color, often have less access to healthcare due to immigration or economic status. They are more vulnerable to the health impacts of poor air quality due to increased exposure to air pollution as

they work. Yet farmworkers often have to continue working while fires burn, and smoke fills the air, or risk not getting paid (Herrera, 2018; Kardas-Nelson et al., 2020; Parshley, 2018).

B.4-24 cont.

When wildfires burn through communities, they threaten homes, livelihoods, lives, and health. In addition to the immediate impacts of lives and homes lost, evacuations and displacement, impacts from air pollution, soil contamination, lost jobs, and the trauma of escape and recovery extend well beyond the fire footprint and last long after the fire is extinguished. The SEIR fails to adequately assess and mitigate the Project's impacts to wildfire risk and the aftermath of a wildfire when it burns through communities in and near the Project area.

IV. THE PRDSEIR'S REVISED SECTIONS REGARDING IMPACTS TO WESTERN SPADEFOOT REMAIN INADEQUATE.

B.4-25

Due to their dependence on ephemeral aquatic breeding sites connected to suitable upland habitat, western spadefoots are particularly sensitive to habitat disruption. Increasingly fragmented habitats can create isolated subpopulations that have higher risks of local extinction (Neal et al., 2020). In southern California, western spadefoot populations have become extremely fragmented, and persistence of remaining subpopulations of is fragile (Halstead et al., 2021; Neal, 2019; Neal et al., 2020).

Additionally, western spadefoots are demographically unstable, meaning their population recruitment varies from year to year depending on environmental conditions, especially rainfall (Fisher & Shaffer, 1996). The species therefore experiences large annual fluctuations in population sizes, as breeding and recruitment can boom during exceptionally wet years and be impossible in dry/drought years. This high demographic instability makes them particularly sensitive to habitat alterations that may interfere with recolonization and reestablishment after unsuccessful recruitment years (Fisher & Shaffer, 1996).

Western spadefoot populations are often able to persist in the face of environmental variability due to metapopulation connectivity; when one population experiences declines, migrants from surrounding populations can bolster the population and prevent local extirpation. As climate change impacts become more severe and extreme weather events continue to occur, shifts in hydroperiod and increased temperatures expected to become more extreme (Montrone et al., 2019; Pyke, 2004; Thomson et al., 2016), and such population dynamics are likely to be increasingly important for species persistence. Due to reduced connectivity between suitable habitats, populations that are unable to successfully breed may decline and disappear and will be unable to be re-established by neighboring populations, leading to further permanent species decline. It is therefore highly important to consider habitat connectivity between upland and aquatic habitat as well as between different pools and pool complexes.

The PRDSEIR's analysis fails to take these important factors into account and therefore fails to provide sufficient mitigation that would ensure the local population persists into the future.

B.4-25 cont.

A. The PRDSEIR does not provide an adequate baseline regarding western spadefoot presence.

B.4-26

We appreciate that the PRDSEIR clarifies the pond descriptions and pond names in the various previous surveys and environmental review documents. However, the PRDSEIR still provides conflicting evidence regarding VP6/Pond 3. First, the PRDSEIR states that the initial fairy shrimp surveys in 2004/2005 showed that VP6 "did not support WST at the same time they were observed in SP 1 and VP 1 but did support western toad larvae leading to the conclusion that the habitat is at least potentially suitable during such above-average years." (Draft Western Spadefoot Toad (*Spea hammondii*) Impact Assessment and Habitat Mitigation and Monitoring Plan, or "WST Plan," p.8). Later, the SEIR states that "the feature designated VP 6 by BonTerra exhibited suitable ponding but WST were not detected." (WST Plan, p.10). It is not clear why the presence of tadpoles is not considered to be a detection of WST, or why the EIR would conclude that the habitat is "potentially suitable" and not "occupied." Despite claims that the pond does not support western spadefoot, the SEIR does acknowledge that it provides suitable habitat, and the proposed mitigation does include VP6/Pond 3 in its calculation of pond acreage that must be mitigated (WST Plan, p.13). Nonetheless, the characterization of VP 6/Pond 3 as unoccupied is unfounded, and downplays the importance of the existing pools to the spadefoot population present on the Project site.

B.4-27

The PRDSEIR also minimizes the importance of the western spadefoot population present at the Project site. The PRDSEIR states that the Court Ruling "suggests that WST are very rare within the Castaic area and the surrounding areas of northern Los Angeles County." (WST Plan, p.7). However, the Court Ruling merely echoes the comment letter submitted by CDFW,[5] which itself cites the Applicant's own previous environmental review document, specifically the SEIR. As quoted in the letter, the PRDSEIR states: "the Grasshopper Canyon population is one of few known populations in the region."

The PRDSEIR provides CNDDB records to show that numerous observations (35+) of western spadefoot occur in the region near the Project site and therefore claims that "WST populations are not rare in the nearby areas." (WST Plan, p.7). However, it is important to note that CNDDB observations do not necessarily represent whole populations, merely element occurrences. In fact, many western spadefoot CNDDB observations in the region are clustered and likely represent the same population. To better understand the occurrences discussed in the

[5] Courtney, Betty J. June 15, 2017. Northlake Specific Plan Project (PROJECT), DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT (DSEIR), SCH# 2015031080.

PRDSEIR, we conducted a query of CNDDB western spadefoot occurrences on May 21, 2025 including the Mint Canyon, Newhall, Val Verde, and Whitaker Peak, and San Fernando 7.5 Minute Quadrangles ("quads") (note that we included additional quads that were further from the Project site than those displayed in the PRDSEIR to capture the entire Santa Clarita Valley). Our search resulted in 44 total observations, including those at the Project site in the Whitaker Peak quad. Of these observations, only 10 had occurrence ranks (a ranking of the quality of the habitat and the condition of the population at that location) of "Good" or "Excellent;" 10 others were "Fair," 10 were "Poor," 14 were "Unknown" and one was "Possibly extirpated." The CNDDB results therefore do not necessarily indicate a healthy, widespread population—rather, they show that western spadefoot do occur in the area, but while numerous populations appear healthy, numerous others are likely struggling. We do not dispute the fact that western spadefoot occur south and west of the project, but this does not mean they are common, and it certainly does not mean they are free from risk of regional decline.

B.4-27 cont.

Additionally, the population at the Project site lies in an important location in the species' range, considering western spadefoot biogeography. Western spadefoot in southern California (south of the Transverse Ranges) are genetically distinct from western spadefoots in central and northern California (Neal et al., 2018). The western spadefoot present in the Project area belong to the southern population, which has experienced more severe declines than the northern population (although both populations have been heavily impacted by habitat loss and continue to decline). It is of course important to protect all existing western spadefoot populations, but the population present at the Project site lies at the northernmost extent of the southern western spadefoot population. If the westerns spadefoot currently present at the Project site are lost, the range of the southern population will shrink, furthering the pattern of regional decline. Thus, while the SEIR is correct in observing that other populations occur in and around the Santa Clarita Valley (Exhibit 3), it is important to recognize that this does not diminish the importance of the population at the Project site, especially considering its place at the northern edge of the southern population's range.

B. The proposed mitigation for impacts to western spadefoot is insufficient.

B.4-28

The mitigation for impacts to western spadefoot in the form of mitigation ponds is improved from previous environmental review documents but is still not sufficient to ensure long-term population persistence.

First, the PRDSEIR's analysis of previous studies misrepresents the efficacy of artificial pools as mitigation for impacts to existing aquatic habitat. The PRDSEIR cites Baumberger (2020) as evidence that artificial ponds can successfully provide habitat to western spadefoot, which we do not dispute. However, the SEIR misrepresents the results of this study, claiming that the mitigation was more successful than it was.

B.4-28 cont.

Baumberger (2020) investigated the success of artificial breeding pools that were created in 2006 as mitigation for impacts to ten breeding pools at a site in East Orange. The mitigation for this project included the creation of 21 pools to mitigate for the 10 affected pools, providing a total mitigation ratio of 2.1:1. Fifteen of these pools (which became 14 when two pools merged together) were in Irvine Mesa, and six were in Shoestring Canyon.

The PRDSEIR focuses only on the results related to Irvine Mesa, ignoring the results from pools at Shoestring Canyon. In Shoestring Canyon, all six mitigation pools failed to hold water and breeding western spadefoot were completely absent from the pools and the nearby creek bed during the 2016 survey period (Baumberger et al., 2020). The PRDSEIR omits this information, focusing only on the pools in Irvine Mesa, which had higher rates of success, thereby misrepresenting the success of the mitigation and making it appear to be more successful than it was.

Further, the results of Irvine Mesa are also misstated. The PRDSEIR quotes the following excerpt of the study itself, claiming that this excerpt shows WST breeding in 12 of the 14 pools on Irvine Mesa (WST Plan, p.31):

> Twelve of the 14 mitigation pools at Irvine Mesa held water for >30 d. During our 2016 surveys, two of the mitigation pools built by Glenn Lukos Associates, Inc. merged (Pools 5 and 9) and we considered them as one pool (Pool 9). We detected *S. hammondii* tadpoles in eight of the Irvine Mesa mitigation pools but documented successful breeding through metamorphosis at only seven of these pools in April 2016 due to desiccation and/or water quality.

However, this excerpt only says that 12 of the 14 pools held water for >30 days. It does not say that western spadefoot were breeding in those pools. In fact, the sentence following this excerpt states "*Spea hammondii* did not breed in all the pools with hydroperiods >30 d (Table 3)." (Baumberger et al., 2020). The excerpt itself states that tadpoles were only detected in eight of the pools, and breeding through metamorphosis was only observed at seven of the pools. It is difficult to understand therefore why the PRDSEIR claims that western spadefoot were breeding in 12 of the 14 pools in 2016, when the very excerpt they cite to support this statement says WST only bred in seven of these pools.

This misrepresentation makes it appear that the artificial mitigation pools were more successful during the drought year of 2016 than the reality. In fact, only ½ of the pools in Irvine Mesa showed successful breeding in 2016, and 0/6 of the pools in Shoestring Canyon showed successful breeding, leading to an overall success rate of just 33%. Thus the mitigation ratio of 2.1:1 did not even successfully mitigate for the full impacts to the ten original pools.

B.4-28 cont.

The EIR notes that the 2016 study occurred during a drought year, and that monitoring of the following 2016/2017 season showed tadpoles in 12 of the pools and "extensive breeding was present" (WST Plan p.31). The reference cited to support this claim is not published and is not publicly available (as far as we can ascertain), so it is impossible to determine whether the "12 pools" refers to pools in Irvine Mesa only or in Irvine Mesa and Shoestring Canyon, and therefore it is impossible to determine the overall efficacy of the mitigation during this "ideal" wet year. It appears likely that the study refers only to Irvine Mesa, in which case the population did show a notable increase in pool occupation, but the exclusion of Shoestring Canyon remains unexplained.

The PRDSEIR goes on to conclude that this observed change in number of pools occupied (from seven in the drought year to 12 the following wet year) shows that given adequate pool quality, "WST will increase in such ponds until a level of equilibrium is achieved (i.e., self-sustaining population), and the pools arrive at their carrying capacity" (p.31). This conclusion is unfounded and has no bearing on the adequacy of mitigation. Even if the study is limited to Irvine Mesa, it is unclear why occupancy of just 12 of the 14 pools would indicate that carrying capacity was reached. The PRDSEIR provides no explanation for this cutoff.

Further, occupancy of pools (which is what the PRDSEIR relies on in making this claim) is not enough to determine carrying capacity. Carrying capacity is the maximum population size that an area can support and sustain. Carrying capacity is therefore a demographic measure, and depends on many population factors including the number, age, and behavior of individuals, among others. Whether a pond is occupied or not does not provide this information. It is possible for ponds to be occupied by many individuals or few, and without actual demographic data it is impossible to say whether a population has reached carrying capacity. It is encouraging to see that the WST Plan includes some demographic monitoring, including counts of egg masses, larvae, and metamorphs (WST Plan, p.27). Such data collected over the ten-year monitoring period would no doubt be informative and aid in our understanding of western spadefoot ecology and demography. But without such data, claims about carrying capacity lack evidence.
Rather, what the data on increased pool occupancy during the 2016/2017 rainy season show is that the western spadefoot population size and pool occupancy varies depending on climatic conditions, as is well known. Changes in abundance between drought years and breeding years are common for western spadefoot (Fisher & Shaffer, 1996). Importantly, mitigation measures must be sufficient to support populations during drought years, not only during average or rainy years. If mitigation ratios and/or mitigation measures are designed with average or wet years in mind, they are likely to underperform during drought years and therefore leave western spadefoots vulnerable to extirpation. Given the variable conditions experienced by vernal pools including drought—which can last for years in California and is expected to become more common in the future (Diffenbaugh et al., 2015)—reliance on a simple 1:1 replacement is not sufficient to mitigate for impacts to breeding habitat by creating artificial pools.

However, this is essentially what the EIR does. The EIR proposes to create 1.07 acres of artificial ponds to mitigate for 0.95 acres of impacted ponds, which amounts to a mitigation ratio of just 1.1:1 (WST Plan, p.13, p.18). Given the success rate of the very study that is cited in the EIR (Baumberger et al., 2020), this mitigation ratio is unlikely to successfully replace the breeding habitat currently present on the property, and leaves the population at risk of decline or extirpation during extended droughts.

B.4-28 cont.

Further, the proposed mitigation ponds are very clustered, unlike the current pond arrangement. Currently, the stock pond is approximately 4,000ft away from the seasonal ponds, which are all within approximately 100-400ft of one another (including VP-6/Pond 3) (WST Plan, Exhibit 4). However, the proposed mitigation ponds are all clustered very close together on the west side of the property, within 50ft of one another (WST Plan, Exhibit 5). The EIR claims that "total acreage as opposed to number of ponds is all that is relevant" (WST Plan, p.18). However, this claim does not consider the importance of landscape connectivity and potential metapopulation dynamics. As discussed above, the natural history of western spadefoots makes them vulnerable to climate and habitat disturbances. Given the variation in geology, hydrology, climate, and habitat across a landscape, if one population declines or becomes extirpated, it is possible that others nearby can survive and re-colonize. If the ponds are all clustered, any extreme climatic events or random disturbances are likely to impact all of them in similar ways. On the contrary, if ponds are more spread out across the landscape, the local population is more resilient to random disturbance and potential climatic, hydrological, and ecological changes as well.

B.4-29

The proposed mitigation is therefore insufficient because a) the mitigation ratio is too low, and does not provide sufficient replacement habitat in the form of artificial pools and b) the ponds are too close together, increasing the risk of extirpation compared to more dispersed aquatic habitat. The EIR must remedy these deficiencies by a) increasing the mitigation ratio to at least 3:1, thereby providing increased acreage of artificial breeding ponds and b) placing additional mitigation ponds further from the three currently proposed ponds to provide landscape-level population resilience.

B.4-30

The WST Plan notes in its discussion of contingency mitigation that there are "nearby sites which can be utilized as replacement site(as) (*sic*) such that the mitigation criteria are fulfilled," including locations at the north end of the Project site and in nearby Marple Canyon (WST Plan p.30). A revised EIR should include these sites not as contingency sites, but as enforceable mitigation sites for additional artificial pools.

B.4-31

V. THE PROJECT DOES NOT ADEQUATELY DEFINE AFFORDABILITY, NOR DOES IT GUARANTEE THE LONGEVITY OF THE DESIGNATED AFFORDABLE UNITS.

B.4-32

California is experiencing an affordable housing crisis (Kimberlin, 2019). In October 2021, about half of Americans (49%) said housing affordability was a major problem where they live, up 10 percentage points from early 2018. In the same 2021 survey, 70% of Americans said young adults today have a harder time buying a home than their parents' generation did.[6]

These perceptions are backed by data. The national median sale price for a single-family home jumped 25% from $327,100 in the fourth quarter of 2019 (the last full quarter unaffected by the COVID-19 recession) to $408,100 in the fourth quarter of 2021.[6] These impacts also extend to those that are renting their homes. In 2020, 30% of all households had "unaffordable" rent or mortgage payments, defined as exceeding 30% of monthly household income. This is up 1.5 percentage points from 2019. More than 1 in 7 households paid over half of their income on housing.[7]

A variety of factors have set the stage for the financial challenges American homeowners and renters have been facing in the housing market. These include incomes that haven't kept up with inflation, a surge in investor owned properties, rising interests rates, and short term rentals. [7]

To change these trends, it is critical that the County invest in building units that are permanently designated as affordable. While this project does include affordable units at the request of the County, the PRDSEIR does not define affordability, nor does it guarantee these units will remain affordable in perpetuity.

Currently 10% of the units in the NLSP are designated as affordable (PRDSEIR, page 2-56). We encourage the County to set specific targets of either 15% of all units, designated for those that make 50% of the average median income or 20% of all units, designated for those that make 60% of average median income. Additionally, these units should never term out. They can be adjusted if the AMI changes, but they should be affordable in perpetuity.

B.4-32 cont.

VI. THE PRDSEIR'S TRANSPORTATION SECTION FAILS TO SUFFICIENTLY ANALYZE THE PROJECT'S VMTS AND MITIGATE IMPACTS.

B.4-33

Increasing a region's VMTs isn't just bad planning, it also undermines community health. Increased VMT increases emissions of air pollutants such as nitrogen oxides (NO_x), volatile organic compounds (VOCs), carbon monoxide, heavy metals, carbon dioxide and respirable particulate matter ($PM_{2.5}$). Increased VMT also leads to more ozone (O_3) production through the photochemical reactions of NO_x and VOCs emitted by vehicles (Lurmann et al., 2015). Short- and long-term exposure to several of these pollutants has been linked to premature mortality,

[6] https://www.pewresearch.org/fact-tank/2022/03/23/key-facts-about-housing-affordability-in-the-u-s/
[7] https://www.habitat.org/costofhome/2022-state-nations-housing-report-lack-affordable-housing

B.4-34

compromised birth outcomes, heart disease and a host of respiratory illnesses (Mujtaba & Shahzad, 2021).

B.4-33 cont.

Another serious direct impact of increasing the number of cars on roads is automobile crashes, which are the leading cause of death among young people (15 to 19 years old) in the United States.[8] An estimated 42,915 people in the U.S. died in car crashes in 2021 alone and 3.4 million people are injured each year, which costs an estimated $473.2 billion annually as measured by wage and productivity losses, medical expenses, motor-vehicle damage, and employers' uninsured costs (Frumkin et al., 2004; U.S. Department of Transportation, 2022).[9]

Beyond the direct impacts, increased VMT has long term impacts on commuters. In 2019, the duration of the average daily commute in the United States increased to a new high of 55.2 minutes, and a record 9.8 percent of commuters reported daily commutes of at least 2 hours (Burd et al., 2021). These long commutes reduce time available to spend with family, friends, and community, and reduce opportunities for healthy recreation. The increase in inactivity and isolation can also lead to long-term health complications such as pre-diabetes, diabetes, obesity, asthma, isolation, stress and depression (Ewing et al., 2003; Leyden, 2003).

iii. The PRDSEIR's Unsupported Baseline Invalidates the Traffic Analysis.

B.4-34

The PRDSEIR incorrectly concludes that there will be no significant transportation impacts associated with the project. The PRDSEIR's revised traffic analysis is invalid because of its reliance on an inaccurate baseline that does not reflect current environmental conditions. The EIR's resulting conclusion that this development—a sprawl development surrounded by vacant land on two sides, five miles from the nearest town—will have insignificant VMT impacts is incorrect. (SEIR at 3-1.)

CEQA requires that an EIR identify the environmental baseline against which project impacts will be assessed. (Guidelines § 15125(a) [agency must describe "baseline physical conditions by which a lead agency determines whether an impact is significant"].) "Establishing a baseline at the beginning of the CEQA process is a fundamental requirement so that changes brought about by a project can be seen in context and significant effects can be accurately identified." (*Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 89 [emphasis added].) An accurate environmental baseline is critical to the CEQA process because it forms the foundation for the entire EIR, serving as the point of comparison for

[8] Center for Disease Control and Prevention. "Underlying Cause of Death, 2018-2021." https://wonder.cdc.gov

[9] NSC Injury Facts. "Costs of Motor-Vehicle Injuries." 2021. https://injuryfacts.nsc.org/all-injuries/costs/guide-to-calculating-costs/data-details/

evaluating the significance of impacts. (*County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 953-54.) Accordingly, an EIR does not comply with CEQA where the environmental baseline is "inaccurate, incomplete, or misleading." (*Clover Valley Foundation v. City of Rocklin* (2011) 197 Cal.App.4th 200, 219 (citation omitted).)

B.4-34 cont.

An EIR must evaluate the significance of an environmental impact and the effectiveness of mitigation against a baseline of existing conditions, not against hypothetical conditions that might be allowed but have never actually occurred. (14 Cal Code Regs §15125(a)(3). See *Woodward Park Homeowners Ass'n v City of Fresno* (2007) 150 CA4th 683, 707 (EIR for planning and zoning changes for new commercial development rejected because EIR compared proposed development only to hypothetical office park that could be developed under preexisting plan but did not compare proposed development with existing physical conditions on site); *Environmental Planning & Info. Council v County of El Dorado* (1982) 131 CA3d 350 (EIR on proposed new general plan must address existing level of physical development as baseline for impact analysis, not existing plan, even though new plan would allow less growth than existing plan).)

The project site is currently undeveloped (SEIR at 2-81; 2-88; 2-92). But the PRDSEIR evaluates traffic impacts of the project not against the site's current environmental condition, as required by law, but against the hypothetical full buildout of a specific plan that was adopted in 1992 but never actually built. (PRDSEIR at 2-53, 55.) That specific plan authorized 2,337 single family units, 1,286 multi-family units, commercial and industrial space, and an 18-hole golf course. (*Id.* at 2-53.) The PRDSEIR estimates that the plan being considered here will have lower VMT than the 1992 plan. (*Id*. at 2-56.) But what might have been approved in 1992 is not the current environmental condition of the site, is not the correct baseline, and is not relevant to whether this Project has significant impacts. (14 Cal Code Regs §15125(a)(3). See *Woodward Park Homeowners Ass'n v City of Fresno* (2007) 150 CA4th 683, 707.) The traffic analysis must be revised and recirculated.

B.4-35

iv. The SEIR Fails to Mitigate for VMT Impacts.

The County must impose mitigation measures to reduce impacts associated with increasing the County's vehicle miles travelled. CEQA requires that mitigation must include concrete, specific, and enforceable actions. (*California Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173 [City's urban decay mitigation measures were inadequate under CEQA to address the impact from the development of a 234-acre regional shopping center on undeveloped agricultural land because the measures did not ensure the city would take concrete, measurable actions].) The County may not defer mitigation measures to a later date unless the EIR provides specific reasons why they cannot be developed now and provides specific performance measures to evaluate their success. (*Preserve Wild Santee v. City of Santee*

(2012) 210 CA 4th 260, 281 [mitigation measures that are so undefined that their effectiveness is impossible to determine are legally inadequate].)

B.4-35 cont.

There are many mitigation measures that can and should be incorporated. Specifically, investment in public transit should be a priority of the project. Providing alternatives to single occupancy vehicle travel is essential to building an efficient, sustainable and equitable transportation system. Unfortunately, we have a long way to go if we are going to achieve this vision in the U.S. In 2013, it was reported that of all the U.S. daily commutes to work, 76.4% are of people driving alone (McKenzie, 2015). According to the Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2015, our collective daily transportation in the U.S. constitutes about 27% of the total greenhouse gasses released (U.S. Environmental Protection Agency, 2017) California's annual average emissions associated with passenger vehicles between 2000 and 2020 was approximately 110 million metric tons of CO2e.

To change these trends, government agencies need to invest in alternative modes of transportation to not only make them cheaper to use, but more efficient than driving. **Best practices for transportation options should include providing free public transit services for future residents and workers; implementing bus only lanes; optimizing bus routes to minimize overlap and ensuring coverage across the city in line with demand; and providing high-frequency, reliable services with regular bus stops for easy access.**

Studies indicate that free public transit services typically result in ridership increase from 20% to 60% in a matter of just a few months (Studenmund and Connor, 1982). Similarly, bus lanes that reduce total transit door-to-door travel times by 5%-15% will increase urban peak ridership 2%-9% (UCLA Institute of Transportation Studies, 2019). Lastly, ensuring accessibility and convenience is essential to increasing ridership. Providing more bus stops decreases the distance residents have to travel to access such services.

It should be a priority of all governments to reduce VMTs with every new project, but instead this proposed sprawl development would steer the region in the opposite direction, eroding community and environmental health to build more sprawl development that relies on single-occupancy vehicle infrastructure. It is the "policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures which will avoid or substantially lessen the significant environmental effects of such projects." (Pub. Res. Code § 21002.)

An accurate analysis of the Project's VMT impacts is needed and adoption of feasible mitigation measures that lower the Project's overall transportation impacts and its associated contribution to climate change, bad air quality and overall decreases community health are necessary.

v. The Project Does Not Comply with the General Plan's Goal to Reduce Vehicle Miles Travelled.

B.4-36

Los Angeles County's General Plan states that the county should "support land uses that promote bicycling and walking, and reduce VMTs (Policy LU 5.3, Land-Use Element, Page 75). The Los Angeles County Sustainability Plan states that "reducing vehicle miles traveled by prioritizing alternatives to single occupancy vehicles" is a key strategy (Strategy 8A, page 118). Additionally, the Southern California Association of Government's Regional Transportation plan states that a "more compact and sustainable land use pattern, combined with the transportation network improvements and strategies identified in Connect SoCal, will result in an improved pedestrian and bicycle environment, access to more community amenities, shorter average trip lengths, reduced VMT and better regional air quality" (Connect SoCal, page 144). The RPSDEIR concludes that "the Project does not conflict with the General Plan, any program plan, ordinance, or policy addressing the circulation system" (PRDSEIR, page 2-57).

However, this again relies on the false assumption that the VMT calculation does not need to rely on the County baseline. Research shows that suburban and exurban sprawl increases a region's VMTs (Rubiera-Morollón & Garrido-Yserte, 2020; Mujtaba & Shahzad, 2021). The NLSP represents sprawl and thus it will clearly increase the regions VMTs. This makes it in conflict with the County's General Plan, Sustainability Plan and Regional Transportation Plan.

The County should divest from such poor planning practices and instead focus on development of infill areas that already have critical community infrastructure.

VII. THE REVISED ALTERNATIVES ANALYSIS REMAINS INADEQUATE.

B.4-37

The PRDSEIR's alternatives analysis is conclusory and incorrectly asserts that the environmentally superior alternative would not meet Project objectives. CEQA mandates that significant environmental damage be avoided or substantially lessened where feasible. (Pub. Res. Code § 21002; Guidelines §§ 15002(a)(3), 15021(a)(2), 15126(d).) Moreover, although "an EIR need not consider every conceivable alternative to a project . . . it must consider a reasonable range of potentially feasible alternatives that will foster informed decision decision-making and public participation." (Guidelines § 15126.6(a).) Additionally, the "key to the selection of the range of alternatives is to identify alternatives that meet most of the project's objectives but have a reduced level of environmental impacts." (*Watsonville Pilots Assn. v. City of Watsonville* (2010) 183 Cal.App.4th 1059, 1089.) Accordingly, a rigorous analysis of reasonable alternatives to the Project must be provided to comply with this strict mandate. Unfortunately, the SEIR fails to meet this requirement because its analysis of the alternatives proposed is inadequate.

CEQA requires that before approving a project with significant environmental impacts, the agency must make findings identifying the specific considerations that make the environmentally superior alternative infeasible. (Pub. Res. Code § 21081; *Preservation Action Council v. City of San Jose* (2006) 141 Cal.App.4th 1336, 1351-52.) As the Center commented in 2020, the County improperly rejected Alternative C for not meeting "all the project objectives." (DEIR, Appendix D [FEIR at 5-15].) Specifically, it determined that Alternative C would not be financially and economically feasible. (*Ibid*. ["Alternative C would not provide enough resort amenities or large enough lots for a financially viable luxury resort."].) But under CEQA, determining that an alternative "may be more expensive or less profitable is not sufficient to show that the alternative is financially infeasible." (*Preservation Action Council, supra,* 141 Cal.App.4th at 1352.) Instead, the agency must present "evidence that the additional costs or lost profitability are sufficiently severe as to render it impractical to proceed with the [alternative]." (*Id.*) This evidence may include, for example: total estimated costs, total projected income, total expenses, and the change in the per unit cost of a project that results from a project alternative or mitigation measure. (*Citizens of Goleta Valley*, *supra*, 197 Cal.App.3d at 1180.) The findings of infeasibility must be supported by substantial evidence. (*Id*. at 1176-77.)

B.4-37 cont.

The PRDSEIR failed to conduct this analysis for the Creek Avoidance Alternative, instead simply stating that it would not be feasible, without elaboration. (PRDSEIR at 2-86.) For the Partial Creek Avoidance Alternative, the PRDSEIR concludes that it would not meet the project objective of improving opportunities for outdoor recreational experiences simply because it provides 37 fewer acres of open space than the Project. However, the PRDSEIR does not establish that providing 37 fewer acres is a significant impairment of the project objective, especially given that the changed footprint would protect the health of the creek and thereby preserve its use for recreation.

B.4-38

V. CONCLUSION

B.4-39

Thank you for the opportunity to submit comments on the PRDSEIR for the Partial Recirculated Draft Supplemental Environmental Impact Report NorthLake Specific Plan. We urge the County to prepare a new EIR for the Project that fully complies with CEQA and recirculate. Because significant new information has become available on many other impacts, the County must also reevaluate and incorporate new circumstances as well as new research and studies on those impacts that have become available in the last seven years.

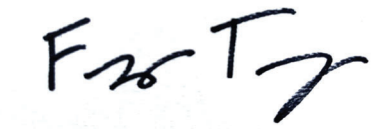
Given the possibility that the Center will be required to pursue legal remedies in order to ensure that the County complies with its legal obligations including those arising under CEQA, we would like to remind the County of its statutory duty to maintain and preserve all documents and communications that may constitute part of the "administrative record" of this proceeding. (§ 21167.6(e); *Golden Door Properties, LLC v. Superior Court* (2020) 53 Cal.App.5th 733, 762.)

The administrative record encompasses any and all documents and communications that relate to any and all actions taken by the County with respect to the Project, and includes "pretty much everything that ever came near a proposed [project] or [] the agency's compliance with CEQA . . . ." (*County of Orange v. Superior Court* (2003) 113 Cal.App.4th 1, 8.) The administrative record further includes all correspondence, emails, and text messages sent to or received by the County's representatives or employees, that relate to the Project, including any correspondence, emails, and text messages sent between the County's representatives or employees and the Applicant's representatives or employees. Maintenance and preservation of the administrative record requires that, inter alia, the County (1) suspend all data destruction policies; and (2) preserve all relevant hardware unless an exact replica of each file is made.

B.4-39 cont.

Please add the Center to your notice list for all future updates to the Project and do not hesitate to contact the Center with any questions at the number or email listed below.

Sincerely,





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ATTACHMENT A



Via Electronic Mail and USPS (w/attachments)

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Los Angeles, CA 90012
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Re: NorthLake Specific Plan, Draft Environmental Impact Report

Dear Ms. Sackett:

These comments are submitted on behalf of the Center for Biological Diversity ("Center") on the Draft Environmental Impact Report ("DEIR") for the proposed NorthLake Specific Plan Project ("Project"). The California Environmental Quality Act ("CEQA") mandated environmental review for the Project is inadequate and fails to comply with the requirements of the statute. The DEIR fails to adequately analyze a range of environmental impacts, mitigation measures, and alternatives. For the reasons detailed below, we urge that the Project be denied, or at a minimum, the DEIR must be revised and recirculated to remedy these deficiencies.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over one million members and online activists throughout California and the United Sates. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County.

I. The Current Project Description Does Not Represent The True Scope of the Project and is Misleading.

Under CEQA, a "project" is defined as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment . . . ." (*Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora* (2007) 155 Cal.App.4th 1214, 1222 (citing CEQA Guidelines § 15378, subd. (a).) An "accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR." (*Cnty. of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193; (*San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149

Cal.App.4th 645, 655 (project description held unstable and misleading) [hereinafter "*San Joaquin Raptor*"].) "However, a curtailed, enigmatic or unstable project description draws a red herring across the path of public input." (*San Joaquin Raptor*, 149 Cal.App.4th, at 655.).

An inaccurate or truncated project description is prejudicial error because it fails to "adequately apprise all interested parties of the true scope of the project." (*See City of Santee v. Cnty. of San Diego* (1989) 214 Cal.App.3d 1438, 1454-55 [hereinafter "*City of Santee*"].) "Only through an accurate view of the project may the public and interested parties and public agencies balance the proposed project's benefits against its environmental cost, consider appropriate mitigation measures, assess the advantages of terminating the proposal and properly weigh other alternatives." (*San Joaquin Raptor*, 149 Cal.App.4th, at 655.)

As a general matter, the DEIR needs to be clearer about distinguishing between the 1992 NorthLake Plan and the current Project. Adopting a clearer naming system would aid the public by eliminating confusion and helping to more easily identify which plan is being referenced.

There are also numerous deficiencies in the Project Description. The Project Description provides objectives that erroneously rely on outside data which is not provided in the DEIR. There is no way for the public to assess whether the objectives rely on meaningful studies or if a legitimate need exists in the community for this development. For example, one objective states a goal of enhancing local economic well-being by ostensibly providing jobs for the same people who will live in the new housing. (DEIR at 4-3.) This is insufficient for two reasons. First, it is unclear whether there is in fact a need for housing and the DEIR provides no evidence to support this claim. Second, there is no evidence supporting the contention that those purchasing homes will stay within the community for their employment. There are no assurances that those living in the housing development will also work on-site. This has additional implications on GHG/air quality analyses if residents will be traveling outside of community for work, yet the DEIR assumes they will remain on-site. There is also insufficient evidence to support the conclusion that this project will alleviate some need for stability within the community. Simply stating that there are new housing demands or instability in the County is insufficient without further studies or data. The DEIR mentions that this development will generate 9,734 new residents but fails to indicate the anticipated demographics of new residences, especially regarding their ability to afford the housing and their employment objectives (this also impacts the DEIR's purported need for schools and the DEIR's analysis of transportation/GHG issues from due to travel for education and employment).

The DEIR mentions several pending realignments and utility sub-projects which are conditional to development. (DEIR at 4-4; 4-17.) These include the need to build sufficient water supply, wastewater and sewer infrastructure. However, the DEIR fails to clearly indicate the siting, existing conditions, and environmental impacts of these large infrastructure projects, which are, as the DEIR stated, conditional to development. (DEIR at 4-3 – 4-5; Table at 4-1.) The DEIR also mentions the need for realignment of an oil pipeline and electrical transmission lines. (DEIR at 4-4.) Yet the DEIR fails to clearly illustrate how exactly they will realign the pipeline or electrical transmission lines, where they will move these lines, or analyze the environmental impacts of this realignment.

The DEIR's discussion of a school conflicts with the Project's objectives regarding transportation and emissions reductions. The DEIR contains a section dedicated to discussing

the inclusion of a school, yet this is only potentially part of Phase 2; there is no guarantee another school will be built. Although NorthLake Elementary School already exists, the DEIR does not contemplate the reality that school-aged residents would need to travel outside the community to attend middle and high school. Nor does the DEIR consider that some school-aged residents may attend private schools outside of the Project area.

The DEIR states that the development will "remediate" environmental hazards. (DEIR at 4-10.) This statement is problematic because it mischaracterizes the Project's interaction with environmental hazards so as to misleadingly indicate that the project is *improving* the environment through development. It is also unclear whether there will be other hazardous activities associated with the project, which are never mentioned in the Project Description.

The DEIR states that the Project requires "minimum landscaping requirements," (DEIR at 4-12) yet fails to give specifics as to what those requirements are, fails to analyze these requirements in the context of water or non-invasive plant use, and fails to provide assurances that these requirements would comply with Los Angeles County Green Building Standards. The DEIR also fails to explain *how* the Project will meet California's solid waste goals other than a cursory statement that they will do so. Mere conclusory responses are inadequate. (*See Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 935 ("To facilitate CEQA's informational role, the EIR must contain facts and analysis, not just the agency's bare conclusions or opinions."). Nor does the DEIR explain what is meant by solar panel equivalent.

The DEIR inconsistently references cattle grazing. (*See* DEIR at 1-2; *cf*. DEIR at 7-12.) The DEIR switches between referring to cattle grazing as a "historic" use and a current use of the land. (*Id.*) The DEIR also states that no cattle grazing will be permitted in the new development but fails to clarify where the cattle that currently graze will go. (DEIR at 4-19.) If the cattle are going to be moved to another location, the DEIR needs to analyze the environmental impact on the new location. The DEIR also mentions animal care and handling facilities yet never describes what types of animals will be handled or how this fits into the project as a whole. DEIR at 4-19, 5.8-40.)

The DEIR fails to analyze or disclose any of the impacts of the previously named foreseeable uses and consequently provides no firm basis to assess the environmental costs and appropriate mitigation measures of the Project. (*San Joaquin Raptor*, 149 Cal.App.4th at 655.) As such, the DEIR fails to inform decision-makers and the public of the true scope of the Project from which all interested parties could assess the direct and indirect environmental effects of the Project. (*City of Santee*, 214 Cal.App.3d, at 1454-55; *San Joaquin Raptor*, 149 Cal.App.4th, 655; *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 83-86.)

II. The Alternatives Analysis in the DEIR is Inadequate and Fails to Comply with CEQA.

CEQA mandates that significant environmental damage be avoided or substantially lessened where feasible. (Pub. Res. Code § 21002; Guidelines §§ 15002(a)(3), 15021(a)(2),

15126(d).) Moreover, although "an EIR need not consider every conceivable alternative to a project . . . it must consider a reasonable range of potentially feasible alternatives that will foster informed decision decision-making and public participation." (Guidelines § 15126.6(a).) Additionally, the "key to the selection of the range of alternatives is to identify alternatives that meet most of the project's objectives but have a reduced level of environmental impacts." (*Watsonville Pilots Assn. v. City of Watsonville* (2010) 183 Cal. App. 4th 1059, 1089.) Accordingly, a rigorous analysis of reasonable alternatives to the Project must be provided to comply with this strict mandate. Unfortunately, the DEIR fails to meet this requirement on two levels: the DEIR analysis of the alternatives proposed is inadequate and the DEIR fails to include a reasonable range of alternative.

In rejecting the Creek Avoidance Alternative, the DEIR provides insufficient explanation as to why creek avoidance was eliminated from further consideration. (*See* DEIR at 6-7.) No explanation was given for why, contrary to common sense, eliminating more than half of the residential units would still necessitate the same amount of curbs, streetlights, utilities, etc. The DEIR attempts to bolster this rejection by arguing that the development would require schools, which would need to be built regardless of the number of houses in the development. (DEIR at 6-7.) However, as the DEIR itself stated above, the school is only potentially part of Phase 2 and not integral to the Project.

In analyzing the No Project Alternative, the DEIR impermissibly rejected this alternative in a conclusory fashion. (*See Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 935 ("To facilitate CEQA's informational role, the EIR must contain facts and analysis, not just the agency's bare conclusions or opinions."). Additionally, if the reasons for rejection the No Project Alternative is for feasibility reasons, case law indicates the standard for feasibility is high. Whether a project is economically unfeasible "is not measured by increased cost or lost profit, but upon whether the effect of the proposed mitigation is such that the project is rendered impractical." (*Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 600 (internal citation omitted).) In *Citizens of Goleta Valley v. Board of Supervisors* (1988) 197 Cal.App.3d 1167, 1180, the Court agreed with the trial court that the administrative record did not contain analysis of the project alternatives in terms of comparative costs, comparative profit or losses, or comparative economic benefit to the project applicant or the community at large.

In analyzing the No Project Alternative and Alternative Site, the DEIR should have discussed the need for the Project and whether the uses that would potentially utilize the Project can be accommodated in existing areas. As CAPCOA states in its white paper, one way local governments can avoid significant increases in GHG emissions and help solve the problem of climate change is to "facilitate more efficient and economic use of the lands" already developed within the community. (CAPCOA 2008.) Reinvesting in existing communities is "appreciably" more efficient than new development and may even result in a net reduction of greenhouse gases. (CAPCOA 2008.) The DEIR should consider an alternative that relies more on higher-density mixed commercial/residential development projects on existing disturbed lands in order to support the reduction of vehicle trips, promote alternatives to individual vehicle travel, and encourage efficient delivery of services and goods. (Office of the California Attorney General 2008.). Here, the objectives do not indicate that this specific site is necessary to accomplish the project goals.

In analyzing the Project pursuant to the Specific Plan, the DEIR fails to give any detail about what species would be impacted by the development.

In analyzing the No Industrial Alternative, the DEIR indicates that this alternative actually provides no fewer environmental impacts than the Proposed Project. (DEIR at 6-21). The DEIR also concludes that this alternative that would lead to an increase in driving due to removal of on-site employment opportunities (DEIR at 6-20); however, this erroneously assumes that those living in the development would seek out industrial employment (this assumption also implicates the Project's GHG emissions). Intensive industrial uses next to a national forest will likely be problematic yet this alternative does not discuss this at all. The DEIR fails to specify what industrial uses the developers are considering; these could have huge range of impacts and analyses given the potential different uses.

In analyzing all of the alternatives, the DEIR relies on 1992 NorthLake Specific Plan for guideline conformity as though the old plan holds legal weight. The DEIR has not explained why conformance with the 1992 Plan has any relevance to the current project in 2017. Just because the earlier specific plan was approved does not mean that it necessarily is legally adequate under CEQA. Any environmental conditions or mitigation measures detailed for that plan are not necessarily reflective of current conditions and CEQA requires an analysis based upon actual physical conditions. (Guidelines § 15126.2(a); *Communities for a Better Environment v. City of Richm*ond (2010) 184 Cal.App.4th 70, 83-86.) Environmental laws and regulations as well as CEQA-specific requirements have become significantly stronger in California since 1992 such that mitigation that might have been adequate then may not be sufficient now. CEQA requires adoption of all "feasible" mitigation measures and measures which may have not been feasible in 1992 may be feasible now (such as technologically sophisticated air pollution control equipment or solar power). Additionally, the County's General Plan in 1992 is likely different than current general plan. Recent land use trends indicate a movement towards consolidating sprawl, and a valid development in 1992 might not be an acceptable land use decision in 2017.

The DEIR provides no explanation for why the applicant chose not to make this their preferred alternative given that this is deemed the environmentally superior option. Moreover, Table 6-5 provides no way to quantifiably, and therefore meaningfully, compare the options. Table 6-2 ostensibly provides some detail on which to compare the 1992 NorthLake Specific Plan and the Proposed Plan, but this table excludes all of the other alternatives and is not helpful without having the 1992 NorthLake Specific Plan or EIR. (DEIR at 6-12.) The DEIR should include quantitative and meaningful comparisons between the Project's impacts and proposed alternatives' likely impacts, including analysis of estimated GHG emissions, quantified impacts to biological resources, water resources including water quality and water availability, and traffic resulting from each proposed alternative. Under CEQA, "the public agency bears the burden of affirmatively demonstrating that, notwithstanding a project's impact on the environment, the agency's approval of the proposed project followed meaningful consideration of alternatives and mitigation measures." (*Mountain Lion Foundation v. Fish & Game Com*. (1997), 16 Cal. 4th 105, 134.) The DEIR's general statements regarding these topics are insufficient.

A. The DEIR should have analyzed a wider range of alternatives.

As illustrated above, the DEIR did not analyze a reasonable range of alternatives including, but not limited to, the following: increased density with a substantially smaller project footprint; transportation-oriented design surrounding existing transit nodes or transit corridors within or adjacent to the Project area; a low carbon alternative that would actually result in lower emissions; conversion of the land into a conservation or mitigation bank; and mixed use development combined with greater preservation and enhancement of existing wildlife habitat. As courts have made clear, "[a] potential alternative should not be excluded from consideration merely because it would impede to some degree the attainment of the project objectives, or would be more costly." (*Save Round Valley Alliance v. County of Inyo* (2007) 157 Cal. App. 4th 1437, 1456-57 (quotations omitted).) The DEIR should have included a larger range of alternatives from which decision-makers could choose.

III. The DEIR's Analysis of Surface Water is Flawed.

The DEIR indicates that the Project would have no significant impacts and no mitigation measures required for water quality and hydrology issues. (DEIR at 5.8-81) Given the proximity of the Project to bodies of water, such as Castaic Lagoon, and the projects infill of Grasshopper Creek, this conclusion is not supportable. Additionally, discussion of Marble Creek and the Santa Clara River are absent from the Project Description. Yet it is clear the Project will have impacts on both of these waterways.

While the DEIR provides a list of Best Management Practices ("BMPs") that may reduce impacts (DEIR at 5.8-38 – 5.8-40), none of BMPs listed are specified as enforceable mitigation measures, which is required under CEQA. The DEIR does not indicate that these mitigation measures are binding on the project or that the applicant is required to comply.

Moreover, the water quality and hydrology section appears to contain significant amounts of "boilerplate" information that does not necessarily assist the public in understanding the impacts of the Project. In particular, the DEIR begins its hydrology and water quality analysis on page 5.8-1 of the DEIR, yet delays any CEQA-required discussion of environmental impacts as they relate to the project until page 58-47 – in other words, 47 pages of the section do not discuss or analyze actual impacts of the Project. And substantive information and studies regarding impact are only included in two separate thousand-page documents.

A. The DEIR does not adequately analyze impacts on wildlife on aquatic wildlife.

CEQA requires the County to require all feasible mitigation measures. (Pub. Res. Code §§21002, 21081(a); CEQA Guidelines §§ 15002(a)(3), 15021(a)(2), 15091(a)(1).) In its DEIR, the County failed to justify why a 100-percent avoidance mitigation measure of Grasshopper Creek would be infeasible. The mitigation measures provided to resolve infilling the aquatic habitat only consider relocating the respective species. Relocation is generally expensive and unsuccessful, which is well documented in the scientific literature.[1] There is no mention of

[1] Fischer, J. and D.B Lindenmayer 2000. An assessment of the published results of animal relocations. Biological Conservation 96:1-11.

avoiding the creek or providing a buffer and this would be a reasonable avoidance and minimization strategy. Additionally, the County should prohibit herbicide use that may run or drift onto Spadefoot Toad habitat, because herbicides are proven to disrupt amphibian reproduction.[2] Moreover, the Project will likely impact wildlife movement by filling in a portion of Grasshopper Creek Canyon, through which a tributary flows. A recirculated EIR needs to include an alternative to avoid Grasshopper Creek and Canyon in order to avoid and minimize impacts to onsite wildlife as well as connectivity.

The DEIR describes an Integrated Pest Management ("IPM") Plan but declines to actually list pesticides that will be used or provide the IPM in the public review. Nor is this plan binding on the Project. The DEIR states that "[p]esticides in runoff may or may not increase in the post-development phase" (DEIR at 5.8-61) yet fails to address issues that may result regarding runoff and bioaccumulation. The DEIR's reliance on IPM is ill-placed. IPM is entirely voluntary; it does not legally bind the Applicant to employ IPM strategies, and fails to define which products the Applicant has promised not to use. (*Appendix H-1 Water Quality Technical Report.*) Because the Applicant is under no legal compulsion to adhere to this promise, the County cannot and should not rely on this mitigation measure to reduce harm to individuals on or near the Project property. (CEQA Guidelines § 15126.4(a)(2); *Federation of Hillside & Canyon Ass'ns v. City of Los Angeles* (2000) 83 Cal.App.4th 1252, 1261 (mitigation measures must be "fully enforceable through permit conditions, agreements, or other measures" so "that feasible mitigation measures will actually be implemented as a condition of development").) Additionally, the DEIR does not point to any study or analysis that would suggest IPM is an effective means to mitigate harm to sensitive species, such as amphibians. Thus, the DEIR fails to present IPM for the Project to interested members of the community from becoming fully informed of the benefits and risks of this form of mitigation. (Cal. Pub. Res. Code § 21002, 21003.)

The DEIR's failure to prohibit certain pesticides is all the more glaring in light of the threats facing the Santa Clara River. The DEIR admits that the Santa Clara River is considered impaired (DEIR at 5.8-20) and designated as a Significant Ecological Area ("SEA") and it is clear that the Project will impact tributaries, particularly Castaic Creek, that lead to the Santa Clara River. (DEIR at 5.2-27.) This seems likely problematic given that the Santa Clara River is home to numerous endangered wildlife. Yet the DEIR contradicts itself by stating that the Santa Clara River has remained "stable" despite increased urban growth and water use. (DEIR at 5.8-81.)

B. The DEIR Does not ensure TMDL and NPDES Permit compliance.

The DEIR fails to and must implement additional mitigation measures in order to comply with the TMDL requirements. The DEIR has not assessed how the Project will meet these mandatory requirements and must provide more than simply stating that the project will be subject to and comply with jurisdictional waters. (*Californians for Alternatives to Toxics v. Dept. of Food & Agric.* (2005) 136 Cal.App.4th 1, 17 (compliance with existing environmental laws or regulations is not sufficient to support a finding that a project will not have significant

[2] Hayes et al. 2002. Herbicides: Feminization of male frogs in the wild. Nature 419: 895-896. http://palgrave.nature.com/nature/journal/v419/n6910/full/419895a.html

environmental impacts).) None of the recommended mitigation measures explain *how* the Project will comply or provide quantifiable and binding measures to be taken.

C. The DEIR provides conflicting and inadequate information regarding runoff and sedimentation impacts.

The DEIR provides an inadequate description of mitigation measures for alleviating significant sedimentation impacts because of both construction as well as implementation of the Project. The DEIR also fails to demonstrate that these mitigation measures would be effective in reducing impacts to less than significant. The DEIR indicates that the by eliminating cattle grazing, the project will improve existing sediment loads in Castaic Lagoon. (DEIR at 5.8-2.) While cattle grazing does have some impact on water quality, there is no evidence that a project which introduces thousands of people to a previously undeveloped area will have fewer impacts than cattle grazing.

The proposed Project could result in significant nutrient loading into waterways. Yet the DEIR appears to state that the Project may reduce the volume of runoff containing sedimentation from current levels and suggests that in fact Castaic Lagoon possesses an "assimilative capacity for nutrients" so that nutrient loading from the project would not affect the water quality. (DEIR at 5.8-55.)

Thus, the DEIR casts a blanket statement that mitigation measures will reduce peak runoff and total runoff volume for the entire project that is overbroad and misleading, does not provide decision-makers the ability to assess whether mitigation measures that will result in net sedimentation reductions in compliance with existing law, and leaves out essential information like recommended mitigation measures to reduce environmental impacts. The DEIR is contrary to CEQA requirements of full disclosure and intelligent decision-making. (Cal. Pub. Res. Code § 21002, 21003.)

D. The DEIR does not adequately analyze or mitigate impacts arising from hazardous substances.

The DEIR provides that a combination of setbacks from drainage features and hazardous material management measures would minimize the potential for pesticides to enter the many waterways on the project site. (DEIR at 5.8-65.) However, the DEIR fails to provide further details on the hazardous materials business plan, including specific mitigation measures and the enforceability of the measures, which would be controlling for how hazardous materials and potential spills will be managed on the Project site. Instead, the DEIR defers this mitigation measure, an error that must be corrected in the final EIR. Additionally, the pipeline relocation analysis regarding impacts to water quality is insufficient and fails to provide more than cursory mention of compliance with BMPs and Low Impact Development ("LID") strategies. (DEIR at 5.8-66.)

IV. The DEIR Does Not Adequately Analyze or Mitigate Impacts To Groundwater.

The DEIR provides conclusory and inaccurate statements regarding impacts to groundwater. The DEIR states that increasing impervious surface will limit precipitation recharge but that this is counteracted by the increase runoff to Castaic Lagoon. (DEIR at 5.8-73

– 74.) Not only does this not make sense, but the DEIR fails to consider the fact that the runoff from the impervious surfaces will contain contaminants and fails to analyze those impacts.

The DEIR also states that the Project will recharge the Alluvial aquiver, thereby benefiting the groundwater supplies for the Project (DEIR at 58-50.) The DEIR should provide further information as to how an increase in impervious surfaces associated with development will actually benefit groundwater supplies.

V. The DEIR Fails to Adequately Analyze the Growth-Inducing Impacts of the Project.

EIRs are required to provide a detailed discussion regarding the growth-inducing impacts of a project. (Guidelines §§ 21100(b)(5); 21156.) *Napa Citizens for Honest Government v. Napa County Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 369 sets forth three factors to determine the level of detail required in a growth-inducing impacts analysis: (a) the nature of the project; (b) the directness or indirectness of the contemplated impact; and (c) the ability to forecast the actual effects the project will have on the physical environment. (*Id*.) Applying these factors here, the DEIR should have contained a detailed analysis regarding growth-inducing impacts because (a) the Project at issue is extremely large, is sited in an area with no existing development, and includes infrastructure that will undoubtedly act as a catalyst for future development in the area; (b) the Project will result in direct impacts in the area by paving the way for future development through infrastructure; (c) the County already has lists of potential proposed developments (*see* DEIR at 5.12-43)), such that the County can forecast the nature and extent of growth inducing impacts. Despite these requirements, the DEIR spends less than two pages analyzing the growth-inducing impacts of the Project. This is plainly inadequate under *Napa Citizens.*

The DEIR states that property west of I-5 may be developed but not as the result of this Project (DEIR at 7-14) but this conclusion fails to consider how the current Project will pave the way to induce more development. The DEIR relies on a flawed argument that somehow because this Project was previously approved in 1992 that means the DEIR now does not need to analyze growth-inducing impacts.

The DEIR purports to accommodate a housing crisis in Los Angeles (although the proposed development is not close enough to Los Angeles to legitimately provide housing for residents living in the city) and based on this assumption, mistakenly concludes that this somehow counteracts any growth-inducing capabilities of the Project. (DEIR at 7-14.)

Finally, the DEIR claims that it requires no changes to current zoning or codes. This statement is both inaccurate [*see* DIER at 4-8 (description of necessary Conditional Use Permit for development)] and confuses "precedent-setting action" with garden variety development that nonetheless induces growth in an otherwise undeveloped area of land and requires CEQA analysis. (DEIR at 7-15.)

VI. The DEIR Does Not Adequately Analyze Or Mitigate The Air Quality Impacts of the Project.

The DEIR's air quality impacts analysis is flawed because it underestimates the air quality impacts likely resulting from the Project and fails to adopt all feasible mitigation

measures. Californians experience the worst air quality in the nation, with annual health and economic impacts estimated at 8,800 deaths and $71 billion per year. (ALA 2013.) The Project will further degrade the region's air quality by generating considerable emissions from the construction phase through ongoing operations.

Regarding criteria pollutants, the DEIR's significance analysis is flawed because it uses the "Localized Significance Threshold" or "LST" methodology. (DEIR at 5.1-38.) This is not a proper threshold for this Project. According to South Coast Air Quality Management District ("SCAQMD"), LSTs only apply to projects that must undergo CEQA or NEPA review and "are five acres or less."[3] In contrast, the Project would develop approximately 1,330 acres. Additionally, the DEIR states that specific emissions based on land uses cannot be characterized (and therefore analyzed) without knowing the nature of the use. (DEIR at 5.1-38.) However, the DEIR cannot avoid analysis or disclosure by simply stating that future uses will comply with SCAQMD rules.

The DEIR states that industrial and commercial land uses will be potentially significant (DEIR at 5.1-40) but fails to address mitigation measures by impermissibly concluding that any potential facilities would comply with SCAQMD requirements. The DEIR also makes conclusory and erroneous statements that health risks from off-site sources would be less than significant, requiring no mitigation measures, because a study from the early 2000s set a "conservative" baseline and diesel emissions from heavy trucks have declined since then. The DEIR provides no evidence to support this conclusion.

There are numerous other inadequacies with the DEIR's air quality analysis, including the following:

- Regarding Carbon Monoxide, the DEIR uses outdated studies to conduct an analysis (*See* DEIR at 5.1-37 [citing plans from 1992 and 2003].) The DEIR also includes references to the 1992 and 2012 EIRs as though either of these provide relevant or binding data on the current Project. (DEIR at 5.1-5.)

- None of the County of Los Angeles General Plan Goals or Policies appears to be binding on the Project. (DEIR at 5.1-17.) Nor do any of the BMPs regarding construction activities. (DEIR at 5.1-21.)

- The DEIR references Best Available Control Mechanisms ("BACMs") listed in Appendix C yet this information does not appear anywhere in that appendix. (DEIR at 5.1-17.)

Regarding operational activities, the DEIR states that "[mitigation] measures provide incentives but do not guarantee any reductions [in emissions of mobile source pollutants]." (DEIR at 5.1-33.) The DEIR then goes on to list possible measures, including a suggestion from the 1992 Plan for a "commuter computer program." (*Id.*) The DEIR does not explain what this means or how it would reduce impacts.

[3] South Coast Air Quality Management District, "Localized Significance Thresholds," (available at http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds).

The DEIR makes a confusing and incorrect argument that the 2012 Air Quality Management Plan ("AQMP") took the 1992 Plan into consideration because it came many years after the creation of the 1992 Plan; the DEIR then improperly concludes that compliance with the 2012 AQMP indicates that there are no significant impacts regarding obstruction of the AQMP. (DEIR at 5.1-20.)

VII. The DEIR Fails To Adequately Analyze Or Mitigate The Impacts Of The Project On Biological Resources.

A. Habitat destruction is a leading cause of extinction.

Species diversity is critical for healthy ecosystems, and ensuring habitat integrity if a key component to species survival. (Dobson 1997.) Habitat destruct or alteration can increase incidents of wildfire and flooding as the ecosystem becomes imbalanced, making it more susceptible to these events. (Brooks 2004; Nilsson 2000.) Developments that convert open space into another use, such as housing, industry, energy or agriculture, negatively impact the species that live in these areas, and the ecosystem as a whole. (Walston 2016; Chaplin-Kramer 2015; Minnich 1998.) Many of the species that have potential to occur in the project area are already imperiled or endangered, and further encroachment onto their habitat worsens the threat to their success and survival.

While the entire habitat may not be converted or destroyed through development, it may be fragmented such that it becomes useless as a habitat for particular species. Even if the habitat remains intact, light and noise pollution can negatively impact the health and reproductive rates of species that are sensitive to these types of pollution. (Slabbekoorn 2008; Longcore 2004.) Pollution in the form of pesticides and rodenticides are also a threat, in addition to run-off pollution from roads that impacts water quality and aquatic life and the species that depend on it. (Perez 2007; Miller 2006; Relyea 2005.) Roads create habitat fragmentation since they act as dangerous physical barriers that many species won't cross, or are killed or injured if they do. (Poessel 2014; Ware 2015; Brock 2004; Swihart 1984.) Additionally, roads facilitate the spread of non-native and invasive species, particularly plants and their seeds, which threaten the survival of species native to these areas. (Gelbard 2003.) Fences create another type of habitat fragmentation by reducing mobility and prevent species from accessing all areas that they depend on for survival, or worse, they ensnare the animals that do try to cross them, resulting in injury or death. (Baines 2003; Paige 2008.) For many species, climate change will mean the need for adaptation in the form of migration to new habitats that support their needs. Fragmentation or obstruction of this mobility will result in greater mortality. (Scheffers 2016.)

Urban infill projects reuse land that has already been disturbed and that is located near urban centers, thus removing the need for conversion of open space for housing, businesses, shopping, roads and other infrastructure. (Wheeler 2002.) These projects are also good candidates for citing distributed solar, further reducing impacts to species and habitat. (Powers 2009.) Wildlife corridors, bridges and underpasses can be constructed in places where roads bisect and disconnect habitat and mobility. (Servheen 2007.) Fences should be used with an understanding of the impacts they have on species mobility, and should be constructed in such a way as to specifically exclude the target species, not all species. Consideration should be given to the type of fencing and the ways in which species could become entangles, injured or killed.

(Paige 2008.) Connective corridors between fragmented habitats will enable species to utilize the habitat and retain needed mobility for survival. (South Coast Wildlands 2008.) Alternatives to toxic and poisonous pesticides and herbicides should be used whenever possible to reduce harm to species and their habitats. (Litmans 2004.)

B. The DEIR does not contain an adequate baseline for biological resources.

CEQA requires that the lead agency analyze and disclose the existing conditions in the Project area. Unfortunately, the DEIR fails to do this by relying upon outdated surveys. In particular, the DEIR relies on surveys primarily from 1997 to 2004 and 2005 and 2006. (DEIR at 5.2-2.) Surveys that are over ten years old cannot provide information on "current conditions" on the site and are therefore not sufficient under CEQA.

Similarly, the DEIR relies upon inadequate surveys for special status species. The DEIR states that the Project site contains "potentially suitable habitat" for five species of federally endangered or threatened shrimp, but that no shrimp was observed during "2014-2015 focused surveys." The 2014-2015 rain season for Los Angeles County was barely half of average, such that shrimp's vernal pool habitat was significantly diminished. The DEIR should include surveys from years (such as 2016-2017) that contain rainfall at average or above average.

In addition, the DEIR claims that protocol level surveys were conducted in 2014-2015 for each species of fairy shrimp. (DEIR at 5.2-25.) However, the survey report does not appear to be included in the appendixes to the DEIR – only a survey report for a 2005-2006 survey is included.

The DEIR only references surveys for the California red-legged frog from 2001. These surveys are too old to provide any meaningful information on the current site conditions. Even if these surveys were not outdated, it is not clear that the surveys were conducted using established protocols. For instance, the surveys were only conducted between 11:30 a.m. and 6:30 p.m. (DEIR, Appx. D, Att. C) even though the adult red-legged frogs are nocturnal.[4] Because critical habitat for the California red-legged frog lies south east of the Project site, the County should require protocol level surveys of the California red-legged frog.

Despite the fact that the federally-threatened California gnatcatchers were located on site, including one onsite nest and a second one directly adjacent off-site, it does not appear that protocol-level surveys[5] were implemented for this species. Protocol-level surveys are necessary in order to evaluate the impacts from the project on the gnatcatcher. These documented locations for California gnatcatchers are some of the most northerly locations for this rare species,[6] and species on the edge of their range are particularly important, especially as the effects of a warming climate proceed.[7]

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[4] https://www.fws.gov/sacramento/es_species/Accounts/Amphibians-Reptiles/es_ca-red-legged-frog.htm.
[5] https://www.fws.gov/pacific/ecoservices/endangered/recovery/documents/CCalGnatcatcher.1997.protocol.pdf.
[6] CNDDB 2017.
[7] Channell, R. and M.V. Lomolino 2000. Dynamic biogeography and conservation of endangered species. Nature 403: 84-86. http://fire.biol.wwu.edu/cmoyer/zztemp_fire/biol432_W00/papers/biogeo_endspp00.pdf.

The DEIR should be recirculated after comprehensive surveys are conducted at the appropriate time of year to observe sensitive plant and animal species.

C. The DEIR fails to adequately analyze or mitigate impacts to special status wildlife.

The DEIR must analyze and mitigate all impacts on special status species, including California Department of Fish and Wildlife ("CDFW") species of special concern. The CDFW defines a species of special concern as a species that, among other things, "is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status."[8] CDFW aims to "achieve conservation and recovery of these animals before they meet California Endangered Species Act criteria for listing as threatened or endangered." (*Id*.) CDFW states that species of special concern "should be considered during the environmental review process." (*Id*.; CEQA Guidelines § 15380(b)(B).) An impact to wildlife is significant where it "substantially reduce[s] the number or restrict[s] the range of an endangered, rare or threatened species." (CEQA Guidelines, § 15065.) CDFW interprets this provision to apply to species of special concern. The County must mitigate significant effects whenever feasible. (Cal. Pub. Res. Code § 21080.5(d)(2)(A).)

- **Western Spadefoot Toad.** The DEIR states that the Project site hosts one of the few known populations of the western spadefoot in the region and that impacts would be significant. (DEIR at 5.2-36.) Yet, the DEIR states that MM 5.2-9 would render impacts less than significant. (DEIR at 5.2-52.) MM 5.2-9 is a "relocation program" that proposes to relocate the spadefoot toad population onto unspecified "suitable habitat." (*Id*.) If "suitable habitat" is not available, then MM 5.2-9 states that the habitat shall be "created." The DEIR fails to offer any evidence or analysis indicating that such a relocation program would be successful. In general, relocation programs are extremely risky and often result in the death of the relocated animals. Even if relocation programs were a reliable mitigation measure (which they are not necessarily), the DEIR provides very little detail as to how the relocation program will be conducted or where the toads will be relocated. The Project should not disrupt one of the last remaining populations of a special status species. Instead, the Project should be reconfigured or downsized in a manner that will not impact the toad populations.

- **Special status reptiles.** The DEIR states that various special status reptile species may occur on the Project site, including the silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ring-necked snack, Blaineville's horned lizard, and coast patch-nosed snake. (DEIR at 5.2-36.) The DEIR claims that "sweeps" prior to construction and "relocation…as necessary" would render impacts less than significant. (DEIR at 5.2-36.) MM 5.2-10 vaguely states, "If feasible, special status reptiles will be removed from the disturbance area and relocated to suitable habitat in adjacent areas." (DEIR at 5.2-52.) This mitigation measure does not address the habitat destruction that the Project will cause, nor does it ensure that direct mortality of special status species will not occur. And by qualifying the sentence with "if feasible," MM 5.2-10 gives the applicant a way

[8] *See* California Dep't of Fish & Wildlife, *Species of Special Concern* (available at https://www.wildlife.ca.gov/Conservation/SSC/).

to avoid conducting any mitigation if it states mitigation would not be "feasible." In any event, a "clearance sweep" immediately before construction activities begin will not result in the identification, capture, and successful relocation of over half a dozen species of small reptiles (many of which are active only at night and difficult to locate).

- **Southwestern willow flycatcher and least bell's vireo.** The DEIR states that these species have been observed on the Project area. (DEIR at 5.2-37.) In addition, the DEIR states that the Project will impact riparian habitat used by these species. (*Id.*) Given that these species are listed as endangered, the Project should avoid any development in areas used by these species. The DEIR incorrectly states that "biological monitoring" would reduce impacts to less than significant (*Id.*); monitoring will not protect these species from losing vital riparian habitat. While the DEIR promises that "suitable habitat" will be replaced at a 2:1 ratio, the proposed mitigation measures do not set forth specific plans and policies to ensure that actual habitat used by these species will be protected. And for impacts to federally listed endangered species, mitigation ratios generally should be much higher (e.g., at least 5:1).

- **California gnatcatcher.** The DEIR states that the California gnatcatcher has been observed on the Project site and that the Project would impact approximately 634.70 acres of habitat. (DEIR at 5.2-37.) While the DEIR vaguely states that impacts would be mitigated at a 2:1 ratio, the DEIR again does not specify whether it requires the preservation of 1269.40 acres of California gnatcatcher habitat, or where such habitat is located.

- **Other special status bird species.** Numerous other special status bird species inhabit the Project site. (DEIR at 5.2-37 & 38.) The DEIR states that hundreds of acres of habitat for these species would be lost, but that the loss would not be "substantial on a regional basis." (DEIR at 5.2-38.) Given the widespread habitat loss to special status bird species in Southern California caused by sprawl development, the DEIR's conclusion that such impacts are not "substantial" is not supportable.

D. The DEIR fails to set forth adequate or enforceable mitigation measures to protect special status wildlife.

The DEIR's mitigation measures are not adequate to protect special status wildlife. While MM 5.2-2 proposes acquisition of lands as described in certain Area Plan Policies, the DEIR does not provide any details regarding the types of land to be acquired, the amount of acreage, the location of the land, or which species the land acquisition will mitigate impacts. (DEIR at 5.2-42.) Such vague, deferred, and unenforceable mitigation proposals are not appropriate under CEQA. MM 5.2-3 similarly provides various potential mitigation measures (e.g., "creation" of habitat onsite or offsite) but the measures are vague and do not require the applicant to commit to any particular mitigation. CEQA requires more than a mere promise that the applicant will "consult" with applicable agencies; CEQA requires that all feasible mitigation measures be adopted ***prior*** to project approval.

MM 5.2-7 states that mitigation at a 2:1 ratio shall occur for California grassland/wildflowers fields. However, the measure also states that the ratio shall be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted. (DEIR at 5.2-47.) It is unclear how this measure will actually protect burrowing owls given that the measure does not appear to require that the protected lands actual contain existing burrowing owl populations. MM 5.2-8 contains similar language regarding the burrowing owl, but does not indicate whether any lands proposed for protection actual have existing burrowing owl populations.

An overarching problem with all of the proposed offsite mitigation is that the DEIR does not appear to require that the lands be connected to other open space. Without such a requirement, the Project could "mitigate" its impacts by protecting land that is isolated from other open space and thus has very little value because wildlife cannot migrant between the mitigation land and other open space. In contrast, the lands to be developed for the Project are adjacent to thousands of acres of open space in the Angeles National Forest.

The DEIR references a Habitat Mitigation and Monitoring Plan that will be developed and reviewed by the County's Department of Regional Planning. This plan is key to minimizing and mitigating impacts to environmental resources and should be included in the revised and recirculated EIR, so that the public and decision-makers can understand what is being proposed to minimize and mitigate the impact to on-site and off-site resources that will be affected by the project.

E. The DEIR fails to adequately analyze impacts on wildlife from noise.

Impacts on wildlife from noise are not adequately addressed within the DEIR. The DEIR merely acknowledges that noise may disrupt some species, but claims such impacts would not be significant because most of the species on the Project area are not federally listed species. (DEIR at 5.2-40.) As such, there is no analysis or determination within the DEIR as to whether noise impacts will disrupt the nesting, foraging, or other behavioral patterns of wildlife in the on-site conserved lands and adjacent open space. A full analysis of project related noise on wildlife should be provided in the revised and recirculated EIR. In addition, the DEIR must include mitigation measures for ongoing project operation to limit noise impacts to wildlife, especially given its location next to a national forest.

F. The DEIR does not address harmful interactions between humans and wildlife.

Another issue that is not addressed in the DEIR is the strong likelihood of problematic interactions between humans and wildlife. The DEIR notes that the Project site is "adjacent to open space in the Angeles National Forest (ANF) and Castaic Lake State Recreation Area (SRA), both of which provide high-quality wildlife habitat." (DEIR at 5.2-14.)

By placing over thousands of people in close proximity to open space areas, there is a strong probability that coyotes and other animals will forage in trash cans, prey on domestic pets, and otherwise disturb and frighten residents. In response, project residents may try to handle such interactions themselves, causing greater damage – for instance, putting out poison which could then kill an endangered or special status species. That interactions between humans and wildlife will occur is a problematic issue that needs to be identified and analyzed in the DEIR.

Another aspect of human and wildlife interaction that is commonly not considered is the likelihood of increasing the dependency of certain wildlife species on human-supplied food sources and human-created habitats which benefit invasive species over native species. (Hansen et al. 2005.) For example, people often place in bird feeders outside their homes which usually causes an increase in certain bird-species as well as bird predators in that area, creating competition among birds, increased predation, and the spread of parasites between species. (Shochat et al. 2010.) With the exurban type of development that this Project proposes, research has documented that native species have reduced survival and reproduction near homes, and native species richness often drops with increased exurban densities. In addition, exotic species, some human-adapted native species, and species from early successional stages often increase with exurban development. (Hansen et al. 2005.) As with this proposed project, the location of development is often nonrandom relative to biodiversity because both are influenced by biophysical factors resulting in the effects on biodiversity being disproportionately large relative to the area of exurban development. (*Id*.) In other words, not all natural areas are created equal and some of the most biodiverse areas and areas that are key to conserve for their biodiversity are often the same areas that are most attractive for exurban development.

VIII. The Project Is Not Consistent With The General Plan.

Land use decisions must be consistent with all applicable land use policies, including the General Plan and all of its elements. (*See Pfeiffer v. City of Sunnyvale City Council* (2011) 200 Cal. App. 4th 1552, 1562-1563.) Unfortunately, the Project is clearly inconsistent with multiple General Plan policies, as set forth below.

A. General Issues with General Plan Consistency

Although the DEIR defers conducting an analysis of the elements of the Santa Clarita Valley Area Plan 2012 ("SCVAP 2012"), the Project seems to conflict with the SCVAP 2012 goals, such as reducing vehicle trips and preserving water quality. (DEIR at 5.9-9.)

The DEIR states that Los Angeles County Board of Supervisors have only "indicated intent" to approve the general plan update; it is unclear if this update is binding on the Project. (DEIR at 5.9-7). The DEIR also lists several policies from the Los Angeles 1980 General Plan such as encouraging infill development and discouraging sprawling development, but then states that these goals no longer apply without further explanation as to why. (DEIR at 5.9-8.)

The DEIR provides conflicting statements regarding access to schools. The DEIR mentions building a school as part of Phase 2 of the Project and concludes this is consistent with the County's education policies (DEIR at 5.9-16) but construction of a public or private school (also it is likely inconsistent with the County's educational goals to *potentially* provide a location for a *private* school) is not guaranteed and would require travel off-site, which conflicts with travel and emission goals.

Again, the DEIR references "commuter computer program" as a legitimate means of reducing vehicle trips and ensuring consistency with emissions reduction goals. (DEIR at 5.9-21.)

The DEIR impermissibly concludes that the Project is consistent with water goals because it will comply with a NPDES permit. (DEIR 5.9-24.)

B. The DEIR impermissibly relies on 1992 Specific Plan.

The DEIR begins its land use analysis (and much of its analysis throughout the entire DEIR) with the assumption that the 1992 Northlake Specific Plan has been "adopted" and continues to carry legitimacy in providing consistency with various County plans. (DEIR at 5.9-3). The DEIR goes on to conclude, without any evidence, that the incorporation of the 1992 Plan indicates consistency with all applicable plans. (DEIR at 5.9-12.) Specifically, the DEIR states that the 1992 Plan has been incorporated into the SCVAP 2012. (DEIR at 5.9-8.) The DEIR also states that the Los Angeles County General Plan assumes future development from the 1992 Plan (DEIR at 5.9-14.) The DEIR impermissibly concludes that the 1992 Plan supersedes and replaces the Los Angeles County General Plan and SCVAP 2012. (DEIR at 5.9-10.) The DEIR does not provide any evidence for this and ignores the fact that the 1992 Plan is not applicable to the current Project.

Finally, the DEIR dedicates an entire section within the land use analysis to a discussion of the 1992 Specific Plan as though consistency with this outdated and irrelevant document provides any binding or necessary information on the current Project. (DEIR at 5.9-54.)

C. The DEIR does not adequately explain the Project's consistency with other general plan policies.

In Table 5.1-1, 2, and 3, the DEIR attempts to claim consistency with all applicable general plan policies. Unfortunately, these tables do not explain in any detail how the Project is consistent with these various policies, and instead generally refers to mitigation measures. (*See* DEIR at 5.9-13 (the DEIR should provide more explanation of applicable traffic mitigation fees); *see also* DEIR at 5.9-15 (stating that Project is consistent with the General Plan's goal of excellence in environmental resource management because impacts would be mitigated).]

The DEIR additionally could provide more specifics about how the Project will comply with Title 31 Green Building Code Standards. (DEIR at 5.9-11.)

IX. The DEIR Fails to Adequately Address its GHG Emissions.

Action to address climate change becomes ever more urgent with each passing day. The National Oceanic and Atmospheric Administration ("NOAA") and National Aeronautics and Space Administration ("NASA") confirmed that 2014 was the hottest year ever recorded. (NASA 2015.) Climate change will affect California's climate, resulting in such impacts as increased temperatures and wildfires, and a reduction in snowpack and precipitation levels and water availability.

Although some sources of GHG emissions may seem insignificant, climate change is a problem with cumulative impacts and effects. (*Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, (9th Cir. 2008) 538 F.3d 1172, 1217 ("the impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis" that agencies must conduct).) One source or one small project may not appear to have a significant effect on climate change, but the combined impacts of many sources can drastically damage California's climate as a whole. Therefore, it is the "policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures which will avoid or substantially lessen the significant environmental effects of such projects." (Pub. Res. Code § 21002.) While we are heartened to see the EIR does include measures to reduce the Project's GHG emissions, we urge the EIR be revised to include all possible steps to limit and mitigate the Project's GHG emissions.

For example, rather than committing only 50% of homes to 3-kilowatt solar panel systems, we urge the EIR to require all buildings within the development to have 3 kilowatt solar panel systems or the equivalent. (DEIR at 5.7-22.) Rooftop solar power is the most energy efficient, least-environmentally damaging form of renewable energy available for the Project and is ideal for the Project's location.

CAPCOA has also identified existing and potential mitigation measures that could be applied to projects during the CEQA process to reduce a project's GHG emissions. (CAPCOA 2008). The California Office of the Attorney General also has developed a list of reduction mechanisms to be incorporated through the CEQA process. (CAPCOA 2008 at Table 16.) These resources provide a rich and varied array of measures to be incorporated into the Project. Potential measures include ease of access to public transit, alternative construction materials, and onsite energy generation. Specific measures for the GHG emissions generated by the Project's energy consumption include, but are not limited to:

- Requiring that the Applicant seek ***and obtain*** the U.S. Green Building Council's LEED or comparable standards for energy- and resource efficient building during pre-design, design, construction, operations and management;
- Designing buildings for passive heating and cooling, and natural light, including building orientation, proper orientation and placement of windows, overhangs, skylights, etc.;
- Designing buildings for maximum energy efficiency including the maximum possible insulation, use of compact florescent or other low-energy lighting, use of energy efficient appliances, etc.;
- Reducing the use of pavement and impermeable surfaces;
- Requiring water re-use systems;
- Installing light emitting diodes (LEDs) for traffic, street and other outdoor lighting
- Limiting the hours of operation of outdoor lighting;
- Maximizing water conservation measures in buildings and landscaping, using drought tolerant plants in lieu of turf, planting shade trees;
- Ensure that the Project is fully served by full recycling and composting services;
- Ensure that the Project's wastewater and solid waste will be treated in facilities where GHG emissions are minimized and captured;
- Installing the maximum possible photovoltaic array on the building roofs and/or on the project site to generate all of the electricity required by the Project, and utilizing wind energy to the extent necessary and feasible;
- Installing solar water heating systems to generate all of the Project's hot water requirements;
- Installing solar or wind powered electric vehicle and plug-in hybrid vehicle charging stations to reduce emissions from vehicle trips;

The Project should further utilize the following measures related to construction:

- Utilize recycled, low-carbon, and otherwise climate-friendly building materials such as salvaged and recycled-content materials for building, hard surfaces, and non-plant landscaping materials;
- Minimize, reuse, and recycle construction-related waste;
- Minimize grading, earth-moving, and other energy-intensive construction practices;
- Landscape to preserve natural vegetation and maintain watershed integrity;

- Utilize alternative fuels in construction equipment and require construction equipment to utilize the best available technology to reduce emissions.

New construction, like this Project, has a unique opportunity to fully embrace and incorporate the use of renewable energy in its design, construction and operation. We urge the County to take full advantage of those opportunities, if it chooses to move forward with the Project.

X. Conclusion

Given the possibility that the Center will be required to pursue appropriate legal remedies in order to ensure enforcement of CEQA, we would like to remind the County of its duty to maintain and preserve all documents and communications that may constitute part of the "administrative record." As you may know, the administrative record encompasses any and all documents and communications which relate to any and all actions taken by the County with respect to the Project, and includes "pretty much everything that ever came near a proposed [project] or [] the agency's compliance with CEQA . . . ." (*County of Orange v. Superior Court* (2003) 113 Cal.App.4th 1, 8.) The administrative record further contains all correspondence, emails, and text messages sent to or received by the County's representatives or employees, which relate to the Project, including any correspondence, emails, and text messages sent between the County's representatives or employees and the Applicant's representatives or employees. Maintenance and preservation of the administrative record requires that, *inter alia*, the County (1) suspend all data destruction policies; and (2) preserve all relevant hardware unless an exact replica of each file is made.

Thank you for the opportunity to submit comments on the Project. We look forward to working to assure that the Project and environmental review conforms to the requirements of state law and to assure that all significant impacts to the environment are fully analyzed, mitigated or avoided. In light of many significant, unavoidable environmental impacts that will result from the Project, we strongly urge the Project not be approved in its current form. Please do not hesitate to contact the Center with any questions at the number listed below. We look forward to reviewing the County's responses to these comments in the Final EIR for this Project once it has been completed.

Sincerely,



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ATTACHMENT B





Friends of the
Santa Clara
River

April 16, 2018

Via Electronic Mail and FedEx (w/attachments)

Mr. Jodie Sackett
County of Los Angeles
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Re: NorthLake Specific Plan, Final Supplemental Environmental Impact Report

Dear Mr. Sackett:

These comments are submitted on behalf of the Center for Biological Diversity ("Center") and Friends of the Santa Clara River ("Conservation Groups") on the Final Supplemental Environmental Impact Report ("FEIR") for the proposed NorthLake Specific Plan Project ("Project").

The Conservation Groups respectfully request that the Project not be approved in its current form. As the California Department of Fish and Wildlife ("CDFW") and the Santa Monica Mountains Conservancy ("SMMC") and have already recommended in their respective comment letters, **the Project should be significantly downsized in order to avoid impacts to Grasshopper Creek, the western spadefoot toad, and other resources.**

On a broader level, it is unfortunate the County is even considering approval of such an outdated and environmentally harmful sprawl project. **The solution to the region's housing shortage is not to pave over blue-line streams, evict rare native wildlife, and destroy other irreplaceable natural resources**. Instead, the County should focus on encouraging development and affordable housing in existing communities. Approving the Project as proposed would also undermine the County's commitment to sustainability and fighting climate change. In addition, approval of the Project would endanger thousands of people, as the project area lies in a very high fire hazard severity zone.

The FEIR does not cure the deficiencies in the Draft Supplemental Environmental Impact Report ("DEIR") to adequately analyze a range of environmental impacts, mitigation measures, and alternatives; and to adequately describe the Project and its impacts. At the same time, the FEIR contains significant new information and the County has erred in failing to issue an amended DEIR, thereby depriving the public its rights to notice and opportunity to comment.

I. Background on the Conservation Groups

The Center for Biological Diversity is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over one million members and online activists throughout California and the United Sates. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County.

The mission of Friends of the Santa Clara River is to protect and preserve the cultural and biological resources of the Santa Clara River Watershed.

II. The County Should Not Approve Large-Scale Development in a Very High Fire Hazard Severity Zone.

The Project site is located in a "very high" fire hazard severity zone. (DEIR at 5.5-1.) California just experienced its worst wildfire season on record, which resulted in the loss of human life, the destruction of thousands of buildings, and extremely large expenses for the state.[1] A recent study revealed a disturbing trend in which new development is occurring fastest in high fire hazard severity zones.[2]

Unfortunately, the Project appears to continue that trend. The EIR[3] states:

> Implementation of the Project would increase the demand for fire services including personnel, equipment, and facilities as a result of the increased potential for structural fires and human-induced fires. Additionally, the Project site lies outside the service area of the Consolidated Fire District; this will thereby affect response times to the Project site. (DEIR at 5.5-1.)

The EIR later concedes that large fires occur in the SCVAP planning area approximately ***every ten* years**. (DEIR at 5.5-4.) Adding hundreds of acres of development and siting thousands of people in a very high fire hazard severity zone is irresponsible planning and will endanger future residents. Largescale development in such zones also is an irresponsible use of County and state funds and resources, as significant firefighting efforts will eventually be needed if (or when) fires occur.

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[1] *Washington Post*, "Costs to Fight 2017 California Wildfires Shatter Records" (Jan. 18, 2018); *Daily News*, "California keeps going over budget as costs of fighting wildfires continue to increase" Dec. 7, 2017).
[2] *KPCC*, "New housing grows fastest in SoCal's most fire-prone areas" (Mar. 12, 2018); Radeloff 2018.
[3] The DEIR and the FEIR together will sometimes be referred to as the "EIR" in this letter given that both documents collectively make up the EIR. However, citations will still reference the "FEIR" or "DEIR."

III. The FEIR Fails to Demonstrate That a Less Environmentally Damaging Project is Not Feasible.

The Center's comments on the DEIR outlined the County's substantive mandate under CEQA to study alternatives to the proposed project and select an alternative that minimizes impacts to the environment. The Center specifically questioned why the "Creek Avoidance Alternative" was not selected. As discussed below, the FEIR still fails to adequately answer this question.

A. The FEIR does not contain evidence that the Creek Avoidance Alternative is not feasible.

In attempting to justify why the Creek Avoidance Alternative was not selected, the FEIR claims that the Creek Avoidance Alternative would not "provide a mix of uses to reduce offsite vehicle trips and VMT…" (FEIR at 2-26.) Yet, elsewhere the FEIR takes the position that it would be "speculative" to assume that any of the jobs onsite would be filled by future residents of the Project. (FEIR at 2-81.) The FEIR does not explain how it can rely upon these onsite uses to reduce VMT while also implying that onsite jobs will ***not*** result in a reduction in VMT. In short, this justification appears to be little more than a posthoc rationalization by the developer to support its preferred project.

In rejecting the Creek Avoidance Alternative, the FEIR also claims that utility pipelines would need to cross over the creek, which would risk accidental spills, presumably which could contaminate the creek. (FEIR at 2-85.) The FEIR's purported concern for Grasshopper Creek is bewildering since the proposed project would destroy most of it. Obviously the ***risk*** of a spill is a far lesser "impact" than the ***certainty*** that a large portion of the stream will be destroyed. The FEIR fails to explain this logical inconsistency in its analysis. Similarly, the FEIR is devoid of any analysis showing why a utility pipeline would somehow make the project infeasible.

The FEIR's general complaints about how utilities will be needed regardless of project size also do not show how the Creek Avoidance Alternative is infeasible. Developments of all sizes—including those that are merely a few acres—are able to absorb the cost of attaching utilities.

In rejecting the Creek Avoidance Alternative, the FEIR claims that a reduction in project size would "not fully meet the Project objectives to enhance local economic well-being…" (FEIR at 2-85.) The FEIR contains no data backing up this claim, nor does it contain any comparison on the economic benefits of the preferred project versus the Creek Avoidance Alternative. The FEIR also ignores the reality that healthy and intact streams and ecosystems have economic benefits deriving from increased tourism. This omission is particularly notable given the Project's location next to Castaic Lake State Recreation Area, which is a local resource for recreation and tourism.

The FEIR claims that a smaller project is not feasible because the development "would also require development of amenities including schools, and parks." (FEIR at 2-79.) It is striking that the FEIR is justifying the destruction of *more* open space because of a perceived cost of "developing" parks. As noted above, the Project area is already surrounded by parks and open space, such as the Castaic Lake State Recreation Area. Surely something is wrong with the

planning process if the destruction of pristine open space is being justified due to a perceived cost of developing artificial parks. Justifying the destruction of wildlands in order to fund the creation of artificial parks also seems antithetical to the Project purpose of creating a community focused on "outdoor recreation" that "celebrate[s] the uniqueness of the place." (FEIR at 4-2.)

Likewise, the purported concern about developing schools is not consistent with various other statements in the FEIR—the FEIR refers to an "optional school site" (FEIR at 2-43) and contains analysis describing the Project's impacts if no school is developed (FEIR at 2-82.) If the Creek Avoidance Alternative is being rejected because a school would not be feasible with a smaller project, then why does the FEIR also state that a school may not be required? These types of inconsistencies render the FEIR inadequate as a decision-making document.

As discussed further below, the FEIR also contains the unsupportable claim that the Project will *not* have a significant effect on stream and riparian habitats. Because the FEIR fails to acknowledge that the Project will in fact have a significant effect on a stream and riparian habitat, it improperly concludes that no alternative that reduces biological impacts is necessary, which undermines the entire alternatives analysis. (FEIR at 2-94.)

The FEIR also failed to analyze whether a higher density project (and correspondingly smaller footprint) would be appropriate given the sensitive biological resources onsite. Such an alternative should have been included in the alternatives analysis.

The Center's comments on the DEIR also noted that there was no analysis of comparative environmental costs or economic benefits (including costs/profits) among the various project alternatives. The FEIR fails to even acknowledge—let alone respond—to this serious deficiency in the FEIR. (FEIR at 2-86.)

Finally, the FEIR fails to offer any evidence that a "low carbon alternative" is not feasible. It instead confusingly states that a "low carbon alternative" is not feasible because there is "no development on site and lower emissions isn't attainable." (FEIR at 2-91.) As discussed in the Climate Change section of this letter, a zero net energy development ***is*** feasible and a large development in the same area has agreed to seek and obtain zero net energy. Nowhere does the FEIR provide evidence demonstrating that a low carbon or zero carbon alternative is not feasible.

B. The EIR's alternatives analyses fail to account for the aesthetic degradation to Castaic Lake State Recreation Area and resulting economic losses.

Despite the FEIR's purported objective of promoting "economic growth," the FEIR fails to consider how marring the aesthetic and environmental values (and risking degraded water quality) of the Castaic Lake State Recreation Area (the "SRA") could impede economic growth. As documented on the Friends of Castaic Lake website, (http://www.castaiclake.com), the SRA is the County's largest regional park and is a local resource that supports recreation, tourism, hiking, fishing, boating, and tournaments.[4]

[4] The County's official website for Castaic Lake SRA similarly states, "Castaic Lake State Recreation Area is one of the largest and most spectacular state water reservoirs in California! It not only provides fresh water to local communities, but this 12,658-acre facility is also a great local recreational escape for the entire family!" http://parks.lacounty.gov/wps/portal/dpr/Parks/Castaic_Lake_State_Recreation_Area

The SRA's aesthetic and scenic values generate filming fees for the County as well as jobs and economic growth through film production. As the Friends of Castaic Lake website notes, "For leading film industry professionals, Castaic Lake continues to be a lucrative and expansive resource for diverse production necessities. Whether your production is large or small, the lake provides a unique environment for finding the terrain, setting and space needed to get that perfect shot. Many popular television shows such as 'C.S.I.' and 'Fear Factor' have used Castaic Lake to facilitate their production goals."[5] These aesthetic values will be significantly degraded if thousands of houses are built next to the SRA.

Despite the known aesthetic values of the SRA (which also are a driver of economic growth), the EIR contains a scant 1.5 pages of conclusory analysis on the aesthetic impacts of the Project. The EIR acknowledges that the project will be visible from the Castaic Lake SRA trail but incorrectly claims this impact is not significant due to "design guidelines." (DEIR at 7-1.) No analysis is provided supporting this untenable claim. The EIR also contains no visualizations of the extent of impacts to viewsheds, particularly in the SRA, making it impossible for decisionmakers to determine whether impacts to viewsheds would be significant.

C. The current version of the Project does not meet the project objectives.

The FEIR's fixation on the preferred alternative is unjustified because even the preferred alternative does not meet the project objectives outlined in the EIR. The EIR includes a project objective to "[i]nclude a mix of residential, commercial, industrial, recreational, and institutional uses ***that will reduce offsite vehicle trips and vehicle miles travelled***." (DEIR at 4-3, emphasis added.) However, the FEIR elsewhere states: "Regarding to employment, the Project does include employment opportunities associated with the on-site light industrial, commercial, recreational and institutional uses. While it is possible that some of these jobs may be filled by future residents of the Project, ***it is too speculative to conclude that***. It is noted that the Project Objectives (refer to page 4-3 of the Draft SEIR) identify that jobs would be created and do not identify that these jobs would necessarily be filled by future residents of the Project…it is assumed that most future residents would ***not*** work on-site." (FEIR at 2-81, emphasis added.) The FEIR thus is clear that it is likely that the Project will ***not*** "reduce offsite vehicle trips and vehicle miles travelled" by including e or commercial or industrial uses onsite. As such, the preferred alternative fails to meet the project objectives.

Even if the EIR was not internally consistent as described above, there is an even more serious error in the EIR – On April 5, 2018, the County published a 307-page "Supplemental Memo," which reveals that ***all*** of the industrial uses and virtually all of the commercial uses have now been eliminated from the Project and replaced with more dwelling units. (Memo at PDF 12.) The Memo explains that the "[r]evisions would eliminate industrial uses" and "areas that were previously proposed for industrial and commercial would now be developed with residential uses…" (Memo at PDF 14.) This revision to the Project renders it inconsistent with the Project objectives. More importantly, the County rejected (and refused to even consider) the Creek Avoidance Alternative purportedly because of a concern for reduced VMT arising from these same commercial and industrial uses. As such, the County's rejection of the Creek Avoidance Alternative on the basis that it would not provide an adequate "mix of uses" appears to be a pretext, given that the current preferred project also lacks this mix of uses.

[5] http://www.castaiclake.com/filming.html

Indeed, in the Alternatives Analysis, the EIR considers a "No Industrial Development Alternative" and concludes that it "would not meet the Project objective related to the provision of industrial uses to accommodate the projected labor force…" (DEIR at 6-21.) This conclusion remains in the FEIR.

D. The FEIR continues to misleadingly claim that large-scale development is inevitable on the site.

The FEIR continues to misleadingly suggest that development will occur even in the absence of the Project or certification of the FEIR. (FEIR at 2-87.) The FEIR goes so far as to say that "[t]he Project approved under the Specific Plan could be constructed today." (FEIR at 2-118.) This is factually inaccurate. There are numerous other regulatory requirements aside from CEQA review that are required for the prior version of the project to move forward. For instance, a streambed alteration permit would be needed from CDFW. CDFW has voiced serious concerns with the current version of the Project and those concerns likely apply to the prior version as well. In addition, it has been over 25 years since the entitlement of the original project and no development has occurred—conditions have changed, climate change has intensified, the extinction crisis has broadened. Applicable laws, plans, and regulations have changed significantly. None of these factors would have been adequately analyzed in a 26 year-old document. At a bare minimum, construction of the old version of the project would require certification of a supplemental or subsequent EIR. And CEQA requires analysis based upon existing physical conditions, not theoretical conditions. In short, the FEIR's fixation on the old version of the Project and the perceived "inevitability" of development frustrates public participation and informed decision-making.

IV. The FEIR Fails to Disclose or Mitigate Impacts to Grasshopper Creek and Other Streams.

The FEIR fails to accurately disclose the impacts of the Project on Grasshopper Creek, Castaic Creek, and the Santa Clara River. The FEIR employs a shockingly simplistic approach to determining whether these streams are impacted by considering the size of the entire watersheds instead of the areas actually impacted. For instance, the FEIR claims that the Project will impact "only 26 percent of the Grasshopper Canyon watershed" because the Project is destroying only 697 acres of the 2,685-acre watershed. (FEIR at 2-7.) This approach ignores the fact that 3.5 miles of ***the creek*** itself is part of those 697 impacted acres. The FEIR therefore equates lands at the edges of the watershed with the actual stream in order to downplay impacts to the actual stream. Taken to its logical extreme, the FEIR's approach would likewise conclude that filling the Merced River in Yosemite Valley with cement would not amount to a significant effect on the Merced River because only a few acres of the river's watershed were actually impacted with the cement.

The FEIR similarly persists in claiming that the Project only affects "approximately 1 percent" of the 129,680 acre Castaic Creek watershed and "approximately 0.4 percent" of the upper Santa Clara River watershed. (FEIR at 2-100.) This simplistic comparison is misleading for the same reasons discussed in the above.

The FEIR also fails to consider how other projects within the Castaic Creek and Santa Clara River watersheds have the potential to cumulatively impact these watersheds when

combined with the Project. In short, the FEIR's approach ignores the "death by a thousand cuts" that has slowly degraded water quality and streamflows in these streams. Instead, the FEIR claims BMPs—which are already required by law—will protect these resources that belong to all Californians. If BMPs and compliance with existing regulations were all that is necessary to ensure clean and healthy streams in Southern California, then why do many streams in Southern California fail to meet state and federal water quality standards? The FEIR never answers this crucial question.

Moreover, the FEIR reasserts the untenable claim that filling 3.5 miles of a blue-line stream is not a "significant impact" even without mitigation. The FEIR's claim is inconsistent with the comments submitted by CDFW, SMMC, and the California Department of Parks and Recreation.

The FEIR's claim also conflicts with the CEQA Guidelines. Appendix G considers an impact significant if it will (1) "have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service…." Filling 3.5 miles of a blue-line stream is categorically a "substantial adverse effect" on riparian habitat. Even accepting the FEIR's creative accounting—which misleadingly claims that only 26 percent of the Grasshopper Creek watershed will be impacted—a 26 percent reduction is still a significant impact. Moreover, CDFW already identified this "riparian habitat or other sensitive natural community"; more specifically, CDFW's comments noted that the DEIR did not include an alternative that minimized significant effects to sensitive resources, including the majority of Grasshopper Creek, vernal pools, and a perennial steep.

Appendix G also considers an impact significant if it will (1) "substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site"; or (2) "substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site…" The FEIR contains insufficient evidence to show that destroying a 3.5 miles of a stream will not alter drainage.

Because the FEIR fails to acknowledge the severity of the impacts on the watershed, it proposes insufficient mitigation. In response to the Center's comments that the DEIR failed to incorporate any BMPs as actual mitigation measures, the FEIR doubles down this approach, claiming that "[c]ompliance with regulatory requirements is not considered mitigation since it applies to the Project regardless of impacts; nor is mitigation required in order to ensure regulatory compliance…" (FEIR at 2-93.) The FEIR cites no authority for this claim. In fact, courts have held the opposite—specifically that "a condition requiring compliance with regulations is a common and reasonable mitigation measure, and may be proper where it is reasonable to expect compliance." (*Oakland Heritage Alliance v. City of Oakland* (2011) 195 Cal.App.4th 884, 906.) And while regulatory compliance ***may*** be one of many reasonable mitigation measures, courts are similarly clear that mere regulatory compliance is often insufficient to support a finding of no significant impact. (*Californians for Alternatives to Toxics v. Dept. of Food & Agric.* (2005) 136 Cal.App.4th 1, 17.)

The FEIR now includes "PDFs" or "project design features" which purport to incorporate some BMPs from the water quality technical report. Again, these are not enforceable CEQA mitigation measures. They are also deferred and vague, and are not clearly detailed in the FEIR, thereby frustrating public participation and informed decision-making.

V. The FEIR Fails to Adequately Analyze and/or Mitigate Impacts to Important Habitats and Special Status Wildlife.

The FEIR's claim that the Project would not drive special status species to below self-sustaining levels is unsubstantiated (FEIR, Response to Comments 16.55, Page 2-113). The proposed mitigation measures do not guarantee no net loss of habitat quantity or quality, nor do they ensure that displaced special-status species will thrive (whether sites are acquired or restored/established). These species and habitats are garnered special attention and protection with the intent of improving their chances of survival by avoiding take and further degradation due to impacts from actions such as those described in this project (*See* Center's DEIR Comment letter at p. 13.) The FEIR's finding that significant impacts to biological resources will be mitigated to less than significant is not supported by the facts and fails to meet CEQA's requirements.

The FEIR's assertion that a mitigation ratio of 2:1 for impacted habitats will reduce impacts to biological resources to less than significant (FEIR, Response to Comments 16.22, Page 2-94) and that established/created mitigation sites will exhibit equivalent ecological function within five years (DEIR MM 5.2-6,-7,-8,-11; FEIR, Appendix C, Draft Western Spadefoot Toad Relocation Program, Page 10) is unfounded. The FEIR needs to take into account that, due to their project, habitat loss and species displacement are immediate, while any gains from their mitigation is uncertain. Therefore, higher mitigation ratios coupled with extended years of effective monitoring and adaptive management strategies are needed to improve chances of achieving no net loss of habitats like wetlands and sage scrub (Moilanen et al.; Sudol and Ambrose; Ambrose et al.). If higher mitigation ratios are not feasible, the FEIR must provide evidence and analysis supporting that conclusion. With one third of America's plant and animal species vulnerable to impacts from human activity and one fifth at risk of extinction (Stein et al 2018), it is crucial that strategies to prevent further degradation and loss of biodiversity are explicit and scientifically sound.

<u>Western Spadefoot Toad and Non-riparian Wetland Habitat</u>

Amphibian populations in the U.S. are declining at an alarming rate of almost 4% per year (Grant et al.); therefore, impacts at the local population level must be thoughtfully and scientifically addressed, especially for species known to be in decline, such as the Western Spadefoot Toad, a California species of concern. The Draft Western Spadefoot Relocation Program provides more details regarding the translocation of western spadefoot toads that will be impacted by the project (FEIR, Appendix C). However, amphibian relocation has limited success, particularly if habitat needs to be created (Germano and Bishop). There is no scientific basis for the FEIR's claim that a Relocation Program would "result in substantial avoidance of direct impacts" to the toads, and stating that the species will persist in the region because of this mitigation is misleading and has a high likelihood of being false (DEIR, page 5.2-36).

The Draft Relocation Program fails to demonstrate that the planned relocation and created wetlands will be able to facilitate the long-term survival of the relocated toad populations (FEIR, Appendix C, Draft Western Spadefoot Relocation Program). In describing the potential sites for created pools, the Draft Relocation Program does not describe the upland habitat that would be vital to the toads' continued survival. The Draft Relocation Program states that there is "ample" upland habitat at the potential relocation site, but it does not provide further details (FEIR, Appendix C, Draft Western Spadefoot Toad Relocation Program, Page 2). Based on the map of vegetation types at the project site (DEIR, Exhibit 5.2-1), the proposed relocation sites (FEIR Appendix C, Draft Western Toad Relocation Program, Exhibit 1) are in areas dominated with California sagebrush-California buckwheat scrub with minimal areas (less than 150m at the widest point) of mixed sagebrush/scrub/California annual grasses. These toads prefer areas of open vegetation and short grasses, where soil is sandy and friable (United States Fish and Wildlife; Jansen et al.), and it is unclear if the proposed relocation sites fall in or near the mixed sagebrush/scrub/California annual grasses. In addition, according to Semlitsch and Bodie (2003), the average maximum upland habitat utilization from suitable breeding wetlands for frogs and toads is about 400m, making the California grasses habitat in/near the proposed relocation sites insufficient. If no burrowing habitat is available, toads will disperse further away from breeding ponds in search of their preferred substrate, which could lead to increased mortality and potentially no breeding functionality of the created pools (Germano and Bishop; Jansen et al.). The Draft Relocation Program lacks appropriate considerations of upland terrestrial habitat (including soil type) for the proposed created wetland habitat, making it less likely to facilitate successful toad establishment and more likely to cause toad mortality.

Should relocation be required during a drought year, the FEIR states in the Draft Relocation Program that they will transfer water to existing seasonal ponds to sustain breeding at least to the point of oviposition (FEIR, Appendix C, Draft Western Spadefoot Toad Relocation Program, Page 9). However, it is unclear whether this strategy will actually evoke the toads to emerge from their burrows to breed. These toads stay in burrows up to 0.9m deep (Ruibal et al.), and although the factors that stimulate emergence are not well understood, it is possible that sound or vibration from rain striking the ground may be the primary cue for the toads to emerge (United States Fish and Wildlife). Simply filling the pools may not be enough to motivate the toads to emerge from their burrows, which could leave the entire population to remain in their burrows and lost to construction. The failure of the FEIR to fully disclose and analyze this outcome violates CEQA.

Another factor that the toads' continued survival relies on is that the created wetlands must exhibit the appropriate hydrological and biological conditions. The proposed evaluation of wetland establishment and success based on photo-documentation (FEIR, Appendix C, Draft Western Spadefoot Toad Relocation Program, Pages 10-11) is wildly insufficient. Restoring complex ecosystems like ephemeral wetlands often results in reduced ecological function. In studies conducted in California on wetland mitigation sites permitted between 1979 and 2002, less than 20% of mitigated wetlands were performing optimally (Ambrose et al.; Sudol and Ambrose). Thus, the success of mitigation sites relies on the appropriate assessment of measurable performance standards based on habitat functions and adaptive management strategies (Bronner et al.; Matthews and Endress; Ambrose et al.; Sudol and Ambrose).

To accurately assess the ecological function of a created wetland, there are a suite of functions that must be measured, including buffer and landscape context, hydrology, physical structure (soils and topography), and biotic structure (native vs invasive plant and animal species) (Bronner et al.; Ambrose et al.; Sudol and Ambrose). The FEIR's current evaluation protocol would not provide the necessary information on any of these essential ecological functions. In addition, while the relocation program allows for adaptive management of these wetlands and toad populations, it states that monitoring will continue for only five years, whether or not the mitigation is successful (FEIR, Appendix C, Draft Western Spadefoot Toad Relocation Program, Pages 10). Five years is likely not enough time to determine the long-term trajectory for functional equivalency of created wetlands or the future survival of the Western Spadefoot Toad populations (Germano and Bishop; Zedler and Callaway; Mitsch and Wilson). The relocation program lacks consideration of the time it takes for created wetlands to have their intended functionality, the need for appropriate upland terrestrial habitat for species survival, and the importance of measuring performance criteria indicative of habitat functionality, which makes it unlikely to mitigate significant project impacts on the Western Spadefoot Toad and associated wetlands.

Southwestern Willow Flycatcher, Least Bell's Vireo, and Riparian Wetland Habitat

The FEIR claims that project impacts to riparian habitat and associated special status species are less than significant with mitigation, yet it provides little explanation as to how the mitigation plans will minimize such impacts (FEIR, Response to Comments 16.22, Page 2-94). The project would impact 13.26 acres of riparian/open water habitat, which includes filling in a portion of Grasshopper Creek and its tributaries (FEIR, Appendix C, Conceptual Habitat Mitigation Plan, Table 2). These areas are potential habitat for the federally endangered Southwestern Willow Flycatcher and Least Bell's Vireo, which have been observed in and near the project site (DEIR, Table 5.2-4, Page 5.2-24). The loss of potential habitat for these endangered birds and the fact that California has already lost ~95% of historic levels of riparian areas makes it extremely important that the mitigation of lost riparian wetland habitat clearly targets no net loss through strategic adaptive management and planning.

According to the Conceptual Habitat Mitigation Plan and MM 5.2-11, any mitigation for riparian habitat, whether onsite or offsite, would be completed at a mitigation ratio of 2:1 ratio (DEIR, MM 5.2-11, Page 5.2-54-55; FEIR, Appendix C, Conceptual Habitat Mitigation Plan, Table 2). This is insufficient, particularly since the FEIR needs to replace potential habitat for multiple endangered species. CDFW suggests a mitigation ratio of 5:1 for endangered species wetland habitat in the south coast region (California Department of Fish and Wildlife 2001). The Conceptual Habitat Mitigation Plan also states that riparian habitat will likely require habitat establishment, but no details regarding where this might be are provided, except that it will "require more intensive scouting and analysis" to find potential mitigation sites (FEIR, Appendix C, Conceptual Habitat Mitigation Plan, Page 8). The restoration/establishment of unidentified wetlands is not adequate mitigation under CEQA. In addition to siting mitigation banks approved by the USACE and CDFW (FEIR, Appendix C, Conceptual Habitat Mitigation Plan, Page 7), the Conceptual Habitat Mitigation Plan should also provide potential mitigation sites for riparian habitat restoration/establishment prior to habitat destruction.

Riparian/stream habitats are difficult to replace or create because of their complex hydrological, physical, and biotic structure, and it can take many years before an established riparian mitigation site might (or might not) become as ecologically functional as the lost habitat (Bronner et al.; Ambrose et al.; Sudol and Ambrose). The FEIR proposes a five-year monitoring program of the riparian mitigation sites in MM 5.2-11, which does not guarantee the equivalent ecological function of healthy riparian habitats (DEIR, MM 5.2-11, Page 5.2-54-55). The FEIR also does not provide measures to ensure that adaptive management strategies will be implemented to facilitate ecological function (DEIR MM 5.2-11, Page 5.2-55). Adaptive management, collecting measurable performance standards based on habitat functions to determine mitigation success, and improved documentation strategies are necessary to increase the success rate of riparian mitigation sites (Bronner et al.; Matthews and Endress; Ambrose et al.; Sudol and Ambrose).

Many of the mitigation measures in the FEIR also amount to the deferred development of mitigation. CEQA generally bars such deferred development of mitigation. In the limited circumstances in which deferred mitigation is appropriate, the agency must meet all of the following elements: (1) practical considerations prevented the formulation of mitigation measures during the planning process; (2) the agency committed itself to developing mitigation measures in the future; (3) the agency adopted specific performance criteria prior to project approval; and (4) the EIR lists the mitigation measures to be considered, analyzed, and possibly incorporated into the mitigation plan. (See *POET, LLC v. State Air Resources Bd.* (2013) 218 Cal.App.4th 681, 736-37 [review denied].) Here, the FEIR fails to establish that mitigation measures to protect biological resources could not have been developed *prior* to project approval. Nor does the FEIR establish compliance with any of the other elements set forth above for each mitigation measure.

Coastal California Gnatcatcher and Sage Scrub Habitat

As discussed in the Center's DEIR comment letter, impacts to special status species is per se significant where it substantially reduces the number or restricts the range of the species. During focused surveys conducted in 2014 and 2015, breeding and non-breeding individuals of the federally threatened Coastal California Gnatcatcher were observed throughout and directly adjacent to the project area (DEIR, Table 5.2-4, Page 5.2-24 and Exhibit 5.2-2). The project area is located in the northern region of the California gnatcatcher's current range (USFWS 2018), which is important as climate change continues to cause species to shift their distributions both in latitude and elevation (Chen et al.; Gillings et al.). According to Langham et al. (2015), over 50% of assessed North American birds are predicted to lose more than half of their current geographic range, making high quality habitat in the northern portion of the California gnatcatcher potentially critical for the future survival of the species. Preserving existing habitat known to be utilized by the species should be prioritized while considering species sensitivities and local-scale effects of climate change (Rapacciuolo et al.; Lenoir and Svenning).

The California gnatcatcher is dependent on coastal sage scrub habitat. It is estimated that over 90% of the coastal sage scrub habitat in California has been lost (Bowler, "Coastal Sage Scrub Restoration - I: The Challenge of Mitigation"), and much of the remaining habitat is highly fragmented (Bowler, "Ecological Restoration of Coastal Sage Scrub and Its Potential Role

in Habitat Conservation Plans."). Thus, the loss of 634.70 acres of remaining, intact, high quality sage scrub communities must be avoided, and if all impacts cannot be avoided, mitigated to ensure no net loss of habitat quantity or quality. Both acquisition and restoration/establishment of high quality habitat should be implemented to more effectively mitigate the loss and degradation of existing sage scrub habitat (Bowler, "Coastal Sage Scrub Restoration - I: The Challenge of Mitigation"; Bowler, "Ecological Restoration of Coastal Sage Scrub and Its Potential Role in Habitat Conservation Plans."). Although mitigation measures will prioritize existing California gnatcatcher critical habitat at a 2:1 ratio, as described in the draft Conceptual Habitat Mitigation Plan and MM 5.2-6 (FEIR, Appendix C, Conceptual Habitat Mitigation Plan, Page 7), these mitigation measures do not specify degraded areas that will be restored or replaced. In addition, for state and/or federally threatened or endangered species and their habitat, the ratio for mitigation is typically higher, ranging from 3:1 to 10:1.

In MM 5.2-6 the Applicant discusses sage scrub restoration or enhancement; however, the Applicant does not plan to measure enough indicators to determine the ecological function of the mitigation sites (DEIR, MM 5.2-6, Page 5.2-45). It is insufficient to only document the native and invasive plant cover; other indicators must be measured to assess the whole community and overall ecological functionality of the sites, including the presence/absence of native and non-native flora and fauna in the understory (Bowler et al 2000). In addition, should initial attempts of restoration/establishment fail or need improvement, mitigation measures should include adaptive management strategies that allow for protocol updates based on the most current scientific research in order to increase the chances of success. The FEIR should provide a comprehensive revegetation plan with measurable success criteria indicative of habitat functionality, and it should specify that adaptive mitigation strategies will be implemented if/when needed to improve or stabilize the intended ecological function of the mitigation sites, as overseen by the USFWS.

Sage scrub habitat is dependent on fire cycles that span many decades (Bowler, "Coastal Sage Scrub Restoration - I: The Challenge of Mitigation"; Bowler, "Ecological Restoration of Coastal Sage Scrub and Its Potential Role in Habitat Conservation Plans."). Thus, mitigation measures that provide for the maintenance and monitoring of mitigation sites for only five years are insufficient (DEIR, MM 5.2-6, Page 5.2-46-47), and long-term preservation planning should consider post-fire community changes and include burning and understory supplementation if/when necessary.

It is important to note that increased human presence coupled with the effects of climate change will likely lead to an increase in fire frequency and intensity, which would disrupt vegetation communities in and adjacent to the project that are dependent on low frequency and low intensity fire regimes, such as sage scrub (Westerling and Bryant; Syphard et al.; Fried et al.). While the FEIR provides some details regarding a Fire Management Plan, which includes a fuel modification plan, landscape plan, and irrigation plan, all to be developed in concert with LA County Fire Department approval and to be maintained by a Landscape Maintenance District or HOA (DEIR, Section 5.5), the lack of an established plan makes it difficult to ascertain whether the project footprint and consequent mitigation requirements reflect the total amount of disturbed/impacted habitat. In addition, it should be made clear that the most current fire safety recommendations from the LA County Fire Department and insurance companies, like the

California FAIR Plan Property Insurance (https://www.cfpnet.com/index.php/consumers/brushwildfirerating/), will be implemented during project development and lifetime maintenance of the site.

Burrowing Owl and Grassland Habitat

The Burrowing Owl is a species of special concern whose populations have been dramatically declining in California since the 1980s. The destruction of wintering habitat is a significant impact, as stated in the FEIR. Yet mitigation measures to offset these impacts are insufficient. In MM 5.2-13, the FEIR states that if a wintering burrowing owl is observed during the non-nesting season, the burrow(s) will be closed and the owl(s) will be excluded (DEIR, MM 5.2-13, Page 5.2-56), but they do not mention a Burrowing Owl Exclusion Plan to be developed and approved by the local CDFW office prior to exclusion, as recommended by CDFW (2012). In addition, before habitat destruction and burrowing owl exclusions take place, the FEIR should legally secure mitigation lands and develop burrowing owl monitoring and management plans (California Department of Fish and Wildlife). These mitigation measures are not included in the FEIR. This amounts to the deferred development of mitigation measures, in violation of CEQA and *POET*.

In MM 5.2-14 the FEIR states that if suitable burrows are removed or impacted, then artificial burrows will be created onsite or offsite, depending on available suitable habitat (DEIR, MM 5.2-13, Page 5.2-56). However, the FEIR does not specify where artificial burrows will be created in relation to the impacted natural burrows. According to CDFW (2012), if active burrows are closed, artificial burrows should be created in suitable habitat within 210m of the natural burrow(s) to increase the chances of successful reestablishment. These mitigation measures are not currently incorporated in the FEIR or Conceptual Habitat Mitigation Plan. Once again, this amounts to the deferred development of mitigation measures, in violation of CEQA and *POET*.

The main causes of burrowing owl declines are habitat loss, degradation, and fragmentation, yet mitigation for foothill needlegrass grassland in MM 5.2-8 only provides for a minimum mitigation ratio of 2:1 (DEIR, MM 5.2-8, Page 5.2-50). Because the burrowing owl is a species of special concern, the mitigation ratio should be at least 3:1 to prevent further loss of the species. In addition, mitigation should include both habitat preservation and establishment.

The minimum of 6.5 acres of habitat for every burrowing owl impacted, as mentioned in MM 5.2-8 (DEIR, MM 5.2-8, Pages 5.2-50), is not based on the best available science. This minimum acreage is from an outdated source (The California Burrowing Owl Consortium 1993), and new scientific data regarding burrowing owl mitigation have arisen since then. The amount of habitat required per owl depends on the quality of the habitat, and home ranges have been observed to be from 280 to 600 acres per individual (California Department of Fish and Wildlife). To facilitate the establishment of burrowing owls in mitigated habitat, Trulio (2015) recommends 30 to 140 acres per owl pair, along with open and structurally heterogeneous grassland habitat, high burrow densities, healthy ground squirrel or other fossorial mammal populations, and adjacent owl-occupied nesting habitat. No details are provided in the FEIR or

Conceptual Habitat Mitigation Plan to ensure that appropriate mitigation sites will be acquired and established to facilitate the long-term survival of burrowing owls.

Free-roaming Domestic Animals

Another controllable threat that the FEIR fails to appropriately address is the banning of free-roaming domestic animals. The FEIR states that development "edge effects" such as domestic cats and dogs will be adverse but not significant because wildlife populations in the region would not be impacted to below self-sustaining levels. However, scientific studies have shown that the impacts of free-roaming dogs and cats on wildlife are often underestimated, and in fact, they can pose significant impacts to wildlife (Loss et al.; Young et al.). This controllable impact should be addressed in order to reduce impacts to the adjacent wildlife.

Worker and Future Resident Awareness

There is no mention in the FEIR of developing or implementing a worker training program to increase awareness of potential special status species and habitats that may be encountered/impacted onsite. Providing worker training is a simple way to educate workers about why certain precautions are necessary. It is a way to help workers be able to recognize signs of these species and be more invested in their protection.

Because the project is located near natural open space and nature reserves, the FEIR should include a mitigation measure to increase education and awareness to future residents regarding environmental resources and how to minimize impacts to the environment. They should include that Home Owners Associations or similar entities provide the most up-to-date information regarding fire safety, special status species in and near the area, and the impacts of pesticides/rodenticides on local wildlife.

Pesticide and Rodenticide Impacts

The FEIR fails to appropriately address eliminating the use of rodenticides and pesticides in the proposed project area, which will likely be used for foraging by raptors (including burrowing owls), native predators, and scavengers. Secondary poisoning of wildlife from these products is increasingly decimating populations of predators, particularly in the urban wildlife interface (Mcmillin), and pesticides in urban runoff have been shown to have adverse effects on amphibian populations (Hayes et al.; Relyea.) Nonetheless, the FEIR does not appear to contain any analysis about the dangers of pesticide use in close proximity to special status amphibians such as the western spadefoot toad.

The FEIR instead completely disclaims any responsibility for mitigating pesticide impacts on special status species, stating that the "Project does not have the legal ability to ban the use of specific pesticides by the residents; the Project must achieve regulatory compliance." (FEIR at 2-96.) This is inaccurate and subverts the purpose of CEQA. The purpose of CEQA is not to ensure compliance with other environmental regulations. Instead, CEQA requires the agency to independently assess the potential direct and indirect impacts of the Project—based upon the species present and the surrounding habitats and environmental resources. Given the Project's unique location which encompasses sensitive riparian habitat for special status species,

the County cannot just point to regulations of general applicability and claim impacts are mitigated. Site specific analysis of pesticide impacts and targeted mitigation measures are required.

The FEIR states that MM 5.8-1 and the Integrated Pest Management Plan is sufficient to mitigate against pesticides and rodenticides and that it is illegal to ban the use of pesticides by residents (FEIR Response to Comments 16.23, Page 2-96). The FEIR's reliance upon "Integrated Pest Management" or "IPM" remains vague, deferred, and ineffective. In response to this concerned raised by the Center, the FEIR includes a number of links describing various IPM programs. This does not take the place of site-specific analysis assessing the effectiveness of IPM techniques. Notably, the diversity of the links listed in the FEIR demonstrates that there is no agreed-upon "IPM" set of measures with specific performance criteria. CEQA requires far more than the agency merely agree to abide by a set of ideas that are differently laid out by other parties. CEQA requires that specific, binding and enforceable mitigation measures be disclosed and discussed in the FEIR, and then adopted as conditions of project approval. The FEIR is deficient in this regard. The FEIR should also require that the Home Owners Association or similar entity provide up-to-date information regarding the impacts of rodenticides and pesticides on nearby wildlife.

Indirect Effects on Wilderness and Open Space

Large-scale development near existing conservation areas carries special risks and requires extra measures to ensure that conservation areas are not impacted by development. For instance, residents of the Project may develop unofficial walking, hiking, biking, or off-road vehicle trails in conservation areas, resulting to impacts to wildlife and ecosystem functions. Such impacts are well documented at other conservation areas in Southern California adjacent to development.[6] Unfortunately, the FEIR fails to adequately analyze, disclose, or mitigate this foreseeable effect of siting thousands of people next to the Angeles National Forest and in close proximity to the Los Padres National Forest.

VI. The EIR Does Not Adequately Analyze or Mitigate the Air Quality Impacts of the Project.

A. Air pollution is a public health crisis that requires the County to focus development in existing cities.

Air quality is a significant environmental and public health concern as unhealthy, polluted air contributes to, and exacerbates many diseases and mortality rates. In the U.S., government estimates indicate that between 10-12 percent of total health costs can be attributed to air pollution. (VCAQR 2003) Many plants and trees, including agricultural crops, are injured by air pollutants. This damage ranges from decreases in productivity, a weakened ability to survive drought and pests, to direct mortality. (VCAQR) Wildlife is also impacted by air pollution as the plants and trees that comprise their habitats are weakened or killed (yet the FEIR contains no analysis of the impacts of air pollution on wildlife). Aquatic species and habitats are

[6] David Garrick, "Trials Proposed for Del Mar Mesa Area," *San Diego Union Tribune* (July 20, 2015); Dryw Keltz, "Fish and Wildlife Squeeze Bikers from Carlsbad's Lake Calavera," *San Diego Reader* (June 5, 2017); Steven Bartholow, "Recreationists React to Crack Down on Authorized Trials Near Santee," *Santee Patch* (Nov. 16, 2013).

impacted by air pollution through the formation of acid rain that raises the pH level in oceans, rivers and lakes. (EPA 2016) Greenhouse gases, such as the air pollutant carbon dioxide which is released by fossil fuel combustion, contribute directly to human-induced climate change. (EPA 2016) In this feedback loop, poor air quality that contributed to climate change will in turn worsen the impacts of climate change and attendant air pollution problems. (BAAQMD 2016)

Some of the nation's most polluted counties are in Southern California with LA County continually topping the list. (ALA 2016) Air pollution and its impacts are felt most heavily by young children, the elderly, pregnant women and people with existing heart and lung disease. People living in poverty are also more susceptible to air pollution as they are less able to relocate to less polluted areas, and their homes and places of work are more likely to be located near sources of pollution, such as freeways or ports, as there areas are more affordable. (BAAQMD 2016; ALA 2016) Pollution sources include transportation, industry and manufacturing, construction, the importation and movement of goods, and energy development. Transportation presents one of the most significant sources of pollution in urban areas, where large segments of the population are constantly exposed to roads and traffic. (BAAQMD 2016; Newman)

Although there are many different types of air pollution, Ozone, Fine Particulate Matter and Toxic Air Contaminants are of greatest concern in urban areas, particularly in Southern California. These three air pollutants have been linked to an increased incidence and risk of cancer, birth defects, low birth weights and premature death, in addition to a variety of cardiac and lung diseases such as asthma, COPD, stroke and heart attack. (Laurent 2016; ALA 2016) Ozone, also commonly referred to as smog, is created by the atmospheric mixing of gases resulting fossil fuel combustion and other volatile organic compounds and sunlight. Although it is invisible, ozone poses one of the greatest health risks, prompting the EPA to strengthen its National Ambient Air Quality Standard for Ozone in 2015. (ALA 2016) Fine Particulate Matter is generally found in urban areas as a result of vehicle exhaust emissions, and these microscopic particles are what contribute to visible air pollution. These tiny participles are dangerous because they are small enough to escape our body's natural defenses and enter the blood stream. Fugitive dust is a term used for fine particulate matter that results from disturbance by human activity such as construction and road-building operations. (VCAQR 2003) Fine Particulate Matter can also result from ash caused by forest fires, which will continue to impact those living in the urban-wildland interface and increasingly beyond as climate change exacerbates the risk of forest fires. (BAAQMD 2016) Toxic Air Contaminants are released from vehicle fuels, especially diesel, which accounts for over 50% of the cancer risk from TACs. (BAAQMB 2016) This is especially relevant for Southern California with its abundance of diesel shipping traffic. (Bailey; Betancourt 2012)

Urban infill is an effective plan for reducing the air pollution and greenhouse gas emission resulting from heavy reliance on vehicles. Centrally locating housing, shopping and places of employment reduces vehicle miles travelled and new road construction. With fewer roads and less traffic, it will be less likely that housing will be located near busy, polluting roads, which is a large source of exposure. (BAAQMD 2016) Infill planning also allows for realistic promotion of alternative transportation such as walking or biking.

B. The County must conduct a health risk assessment prior to project approval.

The EIR must adequately analyze the potential health risks—including cumulative impacts—arising from air pollution generated directly or indirectly by the Project. The Guidelines require EIRs to discuss health problems caused by proposed projects. (Guidelines § 15126.2.) The EIR must assure that this is a robust health assessment for all criteria pollutants, Mobile Source Air Toxics, such as acrolein, benzene, 1,3-butadiene, diesel particulate matter, formaldehyde, naphthalene, and polycyclic organic matter, and Toxic Air Contaminants. Simply providing emissions levels or general descriptions of health impacts provides an inadequate context to decisionmakers and the public of the Project's actual effects on public health. In *City of Long Beach v. City of Los Angeles* (2018) 19 Cal.App.5th 465, the court held the agency failed to proceed in a manner required by law because the EIR did not include information on the air pollution impacts of the project on specific areas near the project vicinity, including how frequently and for what length of time the level of particulate air pollution in the surrounding area would exceed standards of significance. (*Id*. at 487-88.) Here, the FEIR does not provide adequate information on how specific pollutants would disperse and impact neighboring jurisdictions or specific areas in the project vicinity.

Instead, the EIR disclaims responsibility for analyzing these types of effects of the Project *now*, claiming such analysis is "speculative" because the exact uses have not yet been finalized. (FEIR at 2-67.) The FEIR also confusingly refers to the Northlake Specific Plan as a "program level specific plan." (*Id*.) While CEQA provides for "program level" EIRs, the Conservation Groups are unaware of any regulatory approval known as a "program level specific plan." In any event, CEQA does not allow an agency to avoid analyzing the effects of the project *prior* to approval by labelling it a "program-level" project.

Moreover, to the extent the exact nature of development is uncertain at this time, the agency must use its best efforts to find out all that it reasonably can, and then disclose any remaining uncertainties after conducting such an investigation and inquiry. (See S*an Diego Citizenry Group v. County of San Diego* (2013) 219 Cal.App.4th 1, 21-24.) For example, the County should have analyzed the health risks and conducted a health assessment based upon the most intensive uses permitted by the Project in order to inform the public and decision-makers of the "worst case" impacts of the Project on people living in the vicinity of the Project. Or it could have analyzed development types it views as "reasonably foreseeable" based upon the proposed zoning designations. In short, the County must use "best efforts to find out and disclose all that it reasonably can…" (Guidelines § 15144; Pub. Res. Code § 21003.1(a).)

All that the EIR proposes in MM 5.1-14 is the preparation of a health risk assessment prior to issuance of building permits for industrial buildings in the Project area. However, this would be a ministerial process that would occur outside of public view. (FEIR at 2-67.) The public and decision-makers would be unable to review the assessment or offer comments on its adequacy (and this applies equally to other types of development that might occur onsite). While CEQA allows for the deferral of developing mitigation measures in very limited contexts, it does not allow for the deferral of analysis regarding potential effects.

C. The County should require much stronger air quality mitigation measures.

CEQA requires that—*prior* to the approval of a project—the lead agency adopt all feasible mitigation measures which will avoid or substantially lessen the significant environmental effects of the project. (Pub. Res. Code § 21002.) In addition, "Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified." (CEQA Guidelines § 15126.4(a)(1)(B).)

The EIR states that construction and operational air pollution impacts would remain significant and unavoidable for a number of different types of air pollution. However, the EIR does not demonstrate that the County considered all potentially feasible mitigation measures for each type of air pollution, or adopted all feasible measures. Indeed, there are a wealth of mitigation measures already proposed by other agencies in technical reports that were not incorporated in the EIR.

Many mitigation measures that should be considered and adopted are described in detail in the documents attached: (1) San Joaquin Valley Air Pollution Control District: Mitigation Measures, (2) Bay Area Air Quality Management District, *California Environmental Quality Act: Air Quality Guidelines* (2011), (3) Sacramento Metropolitan Air Quality Management District, Recommended Guidance for Land Use Emission Reductions Version 3.3 (for Operational Emissions) (2016), (4) San Luis Obispo County Air Pollution Control District, CEQA Air Quality Handbook: A Guide for Assessing the Air Quality Impacts For Projects Subject to CEQA Review (2012), (5) California Air Pollution Control Officers Association (CAPCOA), *CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act* (2008), and (6) California Attorney General's Office, *Addressing Climate Change at the Project Level* (2010). The documents identify existing and potential mitigation measures that could be applied to projects during the CEQA process to reduce a project's air pollution and GHG emissions. These mitigation measures also provide the co-benefit of reducing many criteria emissions that contribute to the significant impacts to air quality from the Project and should be evaluated for their feasibility in reducing both GHGs and criteria pollutants.

Because CEQA requires the adoption of all feasible mitigation measures to reduce significant impacts, the Project must adopt all feasible mitigation measures to reduce air quality and GHG impacts or provide "substantial evidence" as to why the mitigation measures are infeasible. (Guidelines § 15091(b).) Again, even if the Project's impacts are *unavoidable* that does not absolve the County of its obligation to *mitigate* significant impacts to the extent feasible. Conservation Groups therefore suggest the EIR adopt all feasible mitigation measures set forth in the attached. Their feasibility is proven, in many cases, by their actual implementation by cities and counties across California.

D. The EIR needs to disclose the health risks of siting people next to a freeway.

The EIR proposes siting people within close proximity to the I-5 freeway, which is one of the busiest freeways in the region. The EIR claims that no health risk assessment is necessary because a 2005 Land Use Handbook requires such assessments only when there are sensitive uses within 500 feet of a freeway. (DEIR at 5.1-40.) Here, the EIR proposes multifamily homes within 900 feet of the freeway and single family homes within 1,200 feet.

The problem here is that there are in fact serious health risks associated with siting people 900-1200 feet from a freeway. Numerous studies have documented the air pollution and health impacts associated with siting expressways and freeways in close proximity to residential development, particularly upon sensitive receptors such as children and the elderly. (Lin 2000.) A review of 700 studies concluded that pollution causes asthma attacks in children, the onset of childhood asthma, impaired lung function, premature death and death from cardiovascular diseases, and cardiovascular morbidity. (Health Effects Institute 2010[7].)

Quite critically for this project, the Health Effects Institute study concluded that the "exposure zone" was 300 to 500 meters from the highways (984 feet to 1640 feet). (*Id.*) Other studies have reached similar conclusions. (*See* Anderson 2011; Suglia 2008.) Living near expressways also increases the likelihood that residents will suffer from dementia. (Chen 2017.) The University of Southern California's Environmental Health Centers have also collected data and studies showing risks and health impacts to pregnant women, babies, children, teenagers, adults, and seniors of living by a freeway.[8] While the studies are summarized in the footnoted website, most of them have also been enclosed with this letter. In short, the EIR fails to address the overwhelming body of peer-reviewed scientific evidence demonstrating that siting development next to a freeway or expressway will lead to significant health effects on the residents.

If the County does decide to move forward with siting people in such close proximity to a freeway despite the strong evidence that it may make people sick, it should require the developer to notify potential residents of the health risks of living by an expressway or freeway.[9] And it should disclose all the types of health impacts of such development in the EIR.

Instead, the County discounts the findings of its own Department of Public Health, claiming that "these freeway siting recommendations are based on studies from the early 2000s, and since then, diesel particulate emissions from heavy trucks have substantially declined; therefore, the siting guidelines are even more conservative." (DEIR at 5.1-40.) This ignores the scientific research conducted since the early 2000s (some of which is included as references) showing that living near a freeway is actually *more* dangerous than scientists initially concluded. Moreover, the focus solely on diesel particulate matter ("DPM") is a red herring—there are many other types of air pollution emanating from freeways (not to mention the EIR contains no information on whether the *volume* of DPM-generating vehicles has increased over the past 20 years, which it likely has as population and economic activity has increased in California). The EIR also insinuates that the "topographical location" will reduce risks, but does not provide any evidence supporting this. Air pollution can move horizontally or vertically and likely can travel up a small hillside, especially in windy conditions.

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[7] https://www.healtheffects.org/publication/traffic-related-air-pollution-critical-review-literature-emissions-exposure-and-health

[8] *See* http://envhealthcenters.usc.edu/infographics/infographic-living-near-busy-roads-or-traffic-pollution/references-living-near-busy-roads-or-traffic-pollution (collecting studies); *see also* http://www.latimes.com/projects/la-me-freeway-pollution/.

[9] *See Los Angeles Times,* "L.A. warns homebuilders, but not residents, of traffic pollution health risks," (Aug. 20, 2017) http://beta.latimes.com/local/lanow/la-me-ln-freeway-pollution-warnings-20170804-story.html.

Finally, as discussed later, the Supplemental Memo reveals that the Project now proposes siting people even *closer* to the I-5 than initially proposed, which is likely to lead to more serious health risks and impacts.

VII. The FEIR Fails to Analyze or Mitigate the Project's GHG Impacts.

A. Climate Change is a Catastrophic and Pressing Threat to California

A strong, international scientific consensus has established that human-caused climate change is causing widespread harms to human society and natural systems, and that climate change threats are becoming increasingly dangerous. The Intergovernmental Panel on Climate Change (IPCC), the leading international scientific body for the assessment of climate change, concluded in its 2014 Fifth Assessment Report that: "[w]arming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, and sea level has risen," and further that "[r]ecent climate changes have had widespread impacts on human and natural systems."[10] These findings were echoed in the United States' own 2014 Third National Climate Assessment and 2017 Climate Science Special Report, prepared by scientific experts and reviewed by the National Academy of Sciences and multiple federal agencies. The Third National Climate Assessment concluded that "[m]ultiple lines of independent evidence confirm that human activities are the primary cause of the global warming of the past 50 years"[11] and "[i]mpacts related to climate change are already evident in many regions and are expected to become increasingly disruptive across the nation throughout this century and beyond."[12] The 2017 Climate Science Special Report similarly concluded:

> [B]ased on extensive evidence,…it is extremely likely that human activities, especially emissions of greenhouse gases, are the dominant cause of the observed warming since the mid-20th century. For the warming over the last century, there is no convincing alternative explanation supported by the extent of the observational evidence.
>
> In addition to warming, many other aspects of global climate are changing, primarily in response to human activities. Thousands of studies conducted by researchers around the world have documented changes in surface, atmospheric, and oceanic temperatures; melting glaciers; diminishing snow cover; shrinking sea ice; rising sea levels; ocean acidification; and increasing atmospheric water

[10] IPCC [Intergovernmental Panel on Climate Change], Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, [Core Writing Team, R.K. Pachauri & L.A. Meyer (eds.)], IPCC, Geneva, Switzerland (2014), http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf at 2.

[11] Melillo, Jerry M, Terese (T.C.) Richmond & Gary W. Yohe (eds.), Climate Change Impacts in the United States: The Third National Climate Assessment, U.S. Global Change Research Program (2014), http://nca2014.globalchange.gov/downloads at 7.

[12] Melillo, Jerry M, Terese (T.C.) Richmond & Gary W. Yohe (eds.), Climate Change Impacts in the United States: The Third National Climate Assessment, U.S. Global Change Research Program (2014), http://nca2014.globalchange.gov/downloads at 10.

vapor.[13]

The U.S. National Research Council concluded that "[c]limate change is occurring, is caused largely by human activities, and poses significant risks for—and in many cases is already affecting—a broad range of human and natural systems."[14] Based on observed and expected harms from climate change, in 2009 the U.S. Environmental Protection Agency found that greenhouse gas pollution endangers the health and welfare of current and future generations.[15]

These authoritative climate assessments decisively recognize the dominant role of greenhouse gases in driving climate change. As stated by the Third National Climate Assessment: "observations unequivocally show that climate is changing and that the warming of the past 50 years is primarily due to human-induced emissions of heat-trapping gases."[16] The Assessment makes clear that "reduc[ing] the risks of some of the worst impacts of climate change" will require "aggressive and sustained greenhouse gas emission reductions" over the course of this century.[17]

The impacts of climate change will be felt by humans and wildlife. Climate change is increasing stress on species and ecosystems—causing changes in distribution, phenology, physiology, vital rates, genetics, ecosystem structure and processes—in addition to increasing species extinction risk.[18] Climate-change-related local extinctions are already widespread and have occurred in hundreds of species.[19] Catastrophic levels of species extinctions are projected during this century if climate change continues unabated.[20] In California, climate change will transform our climate, resulting in such impacts as increased temperatures and wildfires, and a reduction in snowpack and precipitation levels and water availability, as we detail below.

Therefore, immediate and aggressive greenhouse gas emissions reductions are necessary to keep warming well below 2°C above pre-industrial levels. The IPCC Fifth Assessment Report and other expert assessments have established global carbon budgets, or the total amount of

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[13] USGCRP [U.S. Global Change Research Program], Climate Science Special Report: Fourth National Climate Assessment, Volume I [Wuebbles, D.J. et al. (eds.)], U.S. Global Change Research Program, Washington, DC (2017), https://science2017.globalchange.gov/ at 10.

[14] NRC [National Research Council], Advancing the Science of Climate Change, National Research Council (2010), www.nap.edu at 2.

[15] U.S. EPA [U.S. Environmental Protection Agency], Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act; Final Rule, 74 Federal Register 66496 (2009).

[16] Melillo, Jerry M, Terese (T.C.) Richmond & Gary W. Yohe (eds.), Climate Change Impacts in the United States: The Third National Climate Assessment, U.S. Global Change Research Program (2014) at 2. *See also* Report Finding 1 at 15: "The global warming of the past 50 years is primarily due to human activities, predominantly the burning of fossil fuels."

[17] Melillo, Jerry M, Terese (T.C.) Richmond & Gary W. Yohe (eds.), Climate Change Impacts in the United States: The Third National Climate Assessment, U.S. Global Change Research Program (2014) at 13, 14, and 649. *See also* Report Finding 3 at 15: "Human-induced climate change is projected to continue, and it will accelerate significantly if global emissions of heat-trapping gases continue to increase."

[18] Warren, Rachel et al., Increasing impacts of climate change upon ecosystems with increasing global mean temperature rise, 106 Climatic Change 141 (2011).

[19] Wiens, John J., Climate-related local extinctions are already widespread among plant and animal species, 14 PLoS Biology e2001104 (2016).

[20] Thomas, Chris. D. et al., Extinction risk from climate change, 427 Nature 145 (2004); Maclean, Ilya M. D. & Robert J. Wilson, Recent ecological responses to climate change support predictions of high extinction risk, 108 PNAS 12337 (2011); Urban, Mark C., Accelerating extinction risk from climate change, 348 Science 571 (2015).

carbon that can be burned while maintaining some probability of staying below a given temperature target. According to the IPCC, total cumulative anthropogenic emissions of CO_2 must remain below about 1,000 $GtCO_2$ from 2011 onward for a 66 percent probability of limiting warming to 2°C above pre-industrial levels, and to 400 $GtCO_2$ from 2011 onward for a 66 percent probability of limiting warming to 1.5°C.[21] These carbon budgets have been reduced to 850 $GtCO_2$ and 240 $GtCO_2$, respectively, from 2015 onward.[22] Given that global CO_2 emissions in 2016 alone totaled 36 $GtCO_2$,[23] humanity is rapidly consuming the remaining carbon budget needed to avoid the worst impacts of climate change. As of early 2018, climate policies by the world's countries would lead to an estimated 3.4°C of warming, and possibly up to 4.7°C of warming, well above the level needed to avoid the worst dangers of climate change.[24]

The United States has contributed more to climate change than any other country. The U.S. is the world's biggest cumulative emitter of greenhouse gas pollution, responsible for 27 percent of cumulative global CO_2 emissions since 1850, and the U.S. is currently the world's second highest emitter on an annual and per capita basis.[25] Nonetheless, U.S. climate policy is wholly inadequate to meet the international climate target to hold global average temperature rise to well below 2°C above pre-industrial levels to avoid the worst dangers of climate change. Current U.S. climate policy has been ranked as "critically insufficient" by an international team of climate policy experts and climate scientists which concluded: "These steps represent a severe backwards move and an abrogation of the United States' responsibility as the world's second largest emitter at a time when more, not less, commitment is needed from all governments to avert the worst impacts of climate change."[26]

In response to inadequate action on the national level, California has taken steps through legislation and regulation to fight climate change and reduce statewide GHG emissions. Enforcement and compliance with these steps is essential to help stabilize the climate and avoid catastrophic impacts to our environment. California has a mandate under AB 32 to reach 1990 levels of GHG emissions by the year 2020, equivalent to approximately a 15 percent reduction from a business-as-usual projection. (Health & Saf. Code § 38550.) Based on the warning of the Intergovernmental panel on Climate Change and leading climate scientists, Governor Brown issued an executive order in April 2015 requiring GHG emission reduction 40 percent below 1990 levels by 2030. (Executive Order B-30-15 (2015).) The Executive Order is line with a

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[21] IPCC [Intergovernmental Panel on Climate Change], 2013: Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F. et al. (eds.)], Cambridge University Press (2013) at 25; IPCC [Intergovernmental Panel on Climate Change], Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)], IPCC, Geneva, Switzerland (2014) at 63-64 & Table 2.2.

[22] Rogelj, Joeri et al., Differences between carbon budget estimates unraveled, 6 Nature Climate Change 245 (2016) at Table 2.

[23] Le Quéré, Corrine, et al., Global Carbon Budget 2017, Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2017-123 (2017), http://www.globalcarbonproject.org/carbonbudget/17/data.htm.

[24] Climate Action Tracker, Improvement in warming outlook at India and China move ahead, but Paris Agreement gap still looms large (November 2017), http://climateactiontracker.org/publications/briefing/288/Improvement-in-warming-outlook-as-India-and-China-move-ahead-but-Paris-Agreement-gap-still-looms-large.html.

[25] World Resources Institute, 6 Graphs Explain the World's Top 10 Emitters (November 25, 2014).

[26] Climate Action Tracker, USA (last updated 6 November 2017), http://climateactiontracker.org/countries/usa.

previous Executive Order mandating the state reduce emission levels to 80 percent below 1990 levels by 2050 in order to minimize significant climate change impacts. (Executive Order S-3-05 (2005).) In enacting SB 375, the state has also recognized the critical role that land use planning plays in achieving greenhouse gas emission reductions in California.[27]

The state Legislature has found that failure to achieve greenhouse gas reduction would be "detrimental" to the state's economy. (Health & Saf. Code § 38501(b).) In his 2015 Inaugural Address, Governor Brown reiterated his commitment to reduce greenhouse gas emissions with three new goals for the next fifteen years:

- Increase electricity derived from renewable sources to 50 percent;
- Reduce today's petroleum use in cars and trucks by 50 percent;
- Double the efficiency of existing buildings and make heating fuels cleaner. (Brown 2015 Address.)

Although some sources of GHG emissions may seem insignificant, climate change is a problem with cumulative impacts and effects. (*Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, (9th Cir. 2008) 538 F.3d 1172, 1217 ("the impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis" that agencies must conduct).) One source or one small project may not appear to have a significant effect on climate change, but the combined impacts of many sources can drastically damage California's climate as a whole. Therefore, project-specific GHG emission disclosure, analysis and mitigation is vital to California meeting its climate goals and maintaining our climate.

B. The FEIR fails to establish consistency with AB 32 and its implementing policies, plans, and executive orders.

The EIR claims that because the Project is purportedly consistent with the Los Angeles County Climate Community Action Plan ("CCAP") and the 2012 Santa Clarita Valley Area Plan ("SCVAP"), the Project will not have a significant effect on climate change. (DEIR at 5.7-44.) As a preliminary matter, the FEIR fails to explain how the CCAP or SCVAP is consistent with CARB's 2017 Climate Change Scoping Plan Update,[28] which identifies a goal of reducing emissions to 1990 levels by 2020. Instead, the FEIR only claims that the CCAP sets a goal of reducing emissions to 11 percent below ***2010*** levels by 2020. (DEIR at 5.7-17.) The CCAP explains that the 11 percent target was based upon a 2013 GHG inventory update that purportedly showed that only a "smaller percent reduction (i.e., a 10% to 11% reduction) from 2005 to 2008 levels is needed to achieve the 2020 target (than anticipated in the AB 32 Scoping Plan)." (CCAP at 3-1.)[29]

However, the CCAP does not account for more ambitious GHG targets of the state that have been implemented since the initial scoping plan was released in 2011. For instance, Governor Brown signed Executive Order B-30-15 on April 29, 2015, which sets a target of reducing GHG emissions to 40 percent below 1990 levels by 2040. Although the EIR states that the CCAP was adopted on October 6, 2015, the CCAP contains no mention of Executive Order B-30-15. The goals in EO B-30-15 are incorporated into the 2017 Scoping Plan, and the Scoping

[27] See http://www.arb.ca.gov/cc/sb375/sb375.htm.
[28] https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf
[29] http://planning.lacounty.gov/assets/upl/project/ccap_final-august2015.pdf

Plan specifically recommends that local governments have a "community-wide goal to achieve emissions of no more than six metric tons CO2e per capita by 2030 and no more than two metric tons CO2e per capita by 2050." (Scoping Plan at 133.) The goals in EO B-30-15 are also incorporated into SB 32, and are therefore state law. (DEIR at 5.7-14.)

Nonetheless, neither the EIR nor the CCAP establish consistency with B-30-15 or the 2017 Scoping Plan. This omission is particularly serious given that the EIR concedes that this executive order—which the EIR characterizes as a statewide interim GHG target—applies to the Project. (DEIR at 5.7-22 & 12.)

The EIR also fails to analyze whether the Project is consistent EO B-16-2012, which (1) directs state agencies to facilitate the rapid commercialization of zero-emission vehicles and (2) establishes a goal of an "80 percent reduction of greenhouse gas emissions from the transportation sector in California by 2050 as compared to 1990 levels." (*Bay Area Citizens v. Association of Bay Area Governments* (2016) 248 Cal. App. 4th 966, 980.) Such large reductions in GHG emissions from the transportation sector requires that local land use authorities (such as the County) decline to approve projects that will lead to outsized transportations and GHG impacts.

To the extent that the County believes that these orders and policies are not specifically applicable to the Project, the Conservation Groups disagree. *Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal. 5th 497, 515 ("*SANDAG*") stated that it is not dispositive whether an earlier GHG executive order (EO S-3-05) is an "adopted GHG reduction plan" or accepted threshold of significance. Instead, *SANDAG* observed that EO S-3-05's "goal of reducing California's greenhouse gas emissions to 80 percent below 1990 levels expresses the pace and magnitude of reduction efforts that the scientific community believes necessary to stabilize the climate. ***This scientific information has important value to policymakers and citizens in considering the emission impacts of a project*** like SANDAG's regional transportation plan." (*Ibid*.) *SANDAG* also approvingly cited a letter from the California Attorney General noting that infrastructure and land use decisions "***may lock in transportation inefficiencies and preclude any realistic possibility of meeting the Executive Order's goal of an 80% reduction in GHG emissions***." (*Id*. at 509, emphasis added.)

The 2017 Scoping Plan further states that "Implementation of this change will rely, in part, on local land use decisions to reduce GHG emissions associated with the transportation sector, both at the project level, and in long-term plans (including general plans, climate action plans, specific plans, and transportation plans) and supporting sustainable community strategies developed under SB 375." (Scoping Plan at 101.) This indicates that mere reliance upon an existing long-term plan is not necessarily sufficient to reduce a project's GHG emissions, particularly when additional policies or standards have been implemented since adoption of the long-term plan.

The Conservation Groups are concerned that this Project—which is located fairly far from existing city centers and services—is exactly the type of project that will lock in transportation inefficiencies and preclude the state's ability to meet its GHG reduction goals. In fact, a recent report confirms this concern. Next10 issued their 2017 California Green

Innovation Index Report, ("CGII Report")[30] which shows that transportation emissions—which are the largest source of GHG emissions in the state—have been increasing. The CGI Report reveals that commute times in California have increased and average freeway speeds have decreased, which results in traffic congestion and additional GHG emissions. The CGI Report further demonstrates that GHG emissions reductions have recently has reached a plateau and are not decreasing at a significant pace anymore. (CGII Report at Figure 5.) The Report indicates that this is due to transportation emissions, which have begun to rise. (CGI Report at Figures 9 and 10.) As perhaps the largest land use authority in California, the County should exercise its authority to reduce transportation emissions instead of approving more large-scale sprawl projects.

Center for Biological Diversity v. Department of Fish & Wildlife (2015) 62 Cal.4th 204, 230 stated that "[l]ocal governments [] bear the primary burden of evaluating a land use project's impact on greenhouse gas emissions. ***Some of this burden*** can be relieved by using geographically specific greenhouse gas emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis." (Emphasis added.) Here, even assuming that the CCAP and SCVAP are valid documents that adequately implemented plans in existence at the time they were adopted, that does not relieve the County of its burden to ensure that future projects are consistent with all ***new*** policies, plans, and the best available data and science about the current emissions levels. Here, it is not clear that the County considered relevant and current data regarding climate change or the impacts of the transportation sector.

C. The FEIR's measures to reduce GHG emissions are vague and unenforceable.

The FEIR identifies some measures designed to reduce the Project's GHG emissions, including a "commitment" to install a certain amount of solar panels and EV chargers. (DEIR at 5.7-22; FEIR at 2-83.) While such measures are steps in the right direction, they do not qualify as enforceable mitigation measures under CEQA, such that there is no assurance that they will be implemented. If the Applicant is truly "committed" to these measures, then these measures should be incorporated as CEQA mitigation measures and/or binding conditions of project approval. Notably, the FEIR relies on these measures in claiming that the Project will reduce its GHG emissions from 66,083 MTCO2e to 56,722 MTCO2e. Accordingly, if the FEIR is going to rely on these measures to reduce GHG emissions, then there must be conditions of approval.

On a related matter, the FEIR lacks detail on the types of EV chargers that will be required. EV chargers in commercial parking lots should have "Level 3" DC fast charging instead of slower Level 2 charging.

Moreover, the FEIR refers to a "transportation demand management" or "TDM" measures, but lacks sufficient detail for the public to ascertain whether these measures will reduce GHG emissions. (FEIR at 5.7-22.) For example, the FEIR does not specify which "major employment center" will receive shuttle service, or how the local transit network will be expanded. (*Id*.) While the Supplemental Memo provides slightly more detail on this topic, it is insufficient to determine whether such measures will actually lead to real reductions in

[30] http://next10.org/sites/default/files/2017-CA-Green-Innovation-Index-2.pdf

automobile trips or GHGs. Given that the Project site is quite far from existing employment centers, the FEIR should provide specific details on how this program will in fact reduce transportation demand. In Appx. G of the DEIR (prepared by the Applicant's consultant), Table 2-13 purports to estimate the reductions in VMT resulting from the TDM measures. However, the CAPCOA Fact Sheet on which the table relies contains differing numerical reductions or "n/a" for the measures identified in the table.[31] Accordingly, it is not clear from the record whether even the small reductions in GHGs claimed are based upon reliable data. The FEIR also should describe how the TDM will be funded (and to what amount) and what entity will administer it.

D. The FEIR should require "zero net energy" as a condition of the Project.

Other projects in the County that have recently been approved include a goal of zero net GHG emissions. Such projects intend to achieve that goal through reducing onsite GHG emissions to the greatest extent practicable, but also by offsetting any other emissions through local emissions reductions projects.[32] Here, the FEIR fails to provide substantial evidence that such additional reductions needed to achieve zero net energy are infeasible—for instance, the FEIR could include more robust EV charging requirements, more onsite renewable energy, and a program to offset the remaining GHG emissions locally.

Any offset program must ensure "Additionality." California law establishes specific standards for greenhouse gas offset credits used in the AB 32 cap-and-trade system. Health and Safety Code section 38562(d) requires, in relevant part, that:

> (1) The greenhouse gas emission reductions achieved are real, permanent, quantifiable, verifiable, and enforceable by the state board.
>
> (2) For regulations pursuant to Part 5 (commencing with Section 38570) [i.e., regulations implementing the market-based cap-and-trade system], the reduction is in addition to any greenhouse gas emission reduction otherwise required by law or regulation, and any other greenhouse gas emission reduction that otherwise would occur.
>
> (3) If applicable, the greenhouse gas emission reduction occurs over the same time period and is equivalent in amount to any direct emission reduction required pursuant to this division.

In particular, the two-part definition of "additional" under subdivision (d)(2) requires not only that credited reductions are not otherwise legally required, but also that credited reductions would not otherwise occur in the absence of the offset project.

This definition of "additional" also applies in the CEQA context, as the regulatory history of the relevant CEQA Guidelines makes clear. The CEQA Guidelines specify that only GHG reductions that are "not otherwise required" may be used to offset project emissions. (CEQA

[31] http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf at Table 6-2.
[32] *See* California Department of Fish and Wildlife, *Newhall Ranch Resource and Development Management and Development Plan, Final Additional Environmental Analysis*, Appendix 2.1, available at http://planning.lacounty.gov/assets/upl/case/tr_53108_appendix-2-0-cdfw-final-aea-excerpts.pdf.

Guidelines, § 15126.4, subd. (c)(3).) However, as the California Resources Agency's Final Statement of Reasons for adopting this Guideline explains, the "not otherwise required" language was intended to make clear that only "additional" emissions reductions—that is, reductions not otherwise required by law or likely to occur anyway—may be used to generate offsets for CEQA mitigation.[33] The Final Statement of Reasons explicitly interprets CEQA's mitigation requirements, including requirements governing use of offsets, as "consistent with the Legislature's directive in AB32 that reductions relied on as part of a market-based compliance mechanism must be 'in addition to any greenhouse gas emission reduction otherwise required by law or regulation, and any other greenhouse gas emission reduction that otherwise would occur.'" (*Ibid*.)

Again, the FEIR has not established how zero net energy is infeasible. (See *Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 600 (whether a project is economically unfeasible "is not measured by increased cost or lost profit, but upon whether the effect of the proposed mitigation is such that the project is rendered impractical.").)

VIII. Many of the Studies Incorporated into the EIR Do Not Reflect the County's Independent Judgment.

Many of the studies that the FEIR cites to (*e.g.*, the Biological Resources Downstream Impacts Assessment [Appx. B], Special Status Plant Species Restoration Plan [Appx. C], Wildlife Crossing Assessment Memo [Appx. D]) indicate on their cover pages that they were prepared for the Applicant by a third party consultant. The FEIR indicates that the County accepted all of the conclusions and analyses prepared by these developer-funded consultants instead of independently preparing its own analyses. This is unlawful under CEQA. (*See California Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173, 194 (a public agency cannot charge a developer with the responsibility to study the impact of a proposed project and the EIR must reflect the independent judgment of the lead agency).)

It is true that the lead agency may receive information "which shall be considered by the public agency, and may be included, in whole or in part, in any report or declaration." (Pub. Res. Code § 21082.1.) To the extent the County can rely upon studies prepared and funded by the developer, this is the only section that would permit the County to do so. However, neither this section nor any of the CEQA Guidelines give the lead agency the discretion to uncritically rely upon the analyses and conclusions in the various developer-funded studies; the County must exercise its own independent judgment and support that judgment with evidence and analyses within the EIR. (*See Eureka Citizens for Responsible Government v. City of Eureka* (2007) 147 Cal. App. 4th 357, 371.) This is especially true when neutral expert authorities—such as CDFW and SMMC—strenuously disagreed with much of the developer-funded analyses and conclusions. Nonetheless, the responses in the FEIR to comments by these agencies (and other agencies) generally fail to do anything more to restate the conclusions of the developer-funded studies. Such reliance on developer-funded studies (especially in the face of disagreement by expert agencies) does not allow for informed and reasoned decision-making, nor is such reliance entitled to deference under the "substantial evidence" standard.

[33] California Natural Resources Agency, Final Statement of Reasons for Regulatory Action: Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97 at 48, 87-90 (December 2009).

In addition, many of these studies were published in the last few weeks, given the public very little time to review and provide comments. This frustrates CEQA's goals of public participation and informed decision-making.

IX. The EIR Needs To Be Recirculated Because The Project Was Significantly Revised on April 5, 2018.

As noted above, the County published a "Supplemental Memo" on April 5, 2018 that disclosed that revisions to the Project were made which removed virtually all of the commercial and industrial uses in favor of more dwelling units. Such revisions effect the traffic analysis, and by extension the air quality analysis and GHG analysis, as well as the studies supporting these analyses.

The EIR should be recirculated with adequate analysis assessing these revisions. Resources Code section 21092.1 provides that "[w]hen significant new information is added to an environmental impact report after notice has been given pursuant to Section 21092 and consultation has occurred pursuant to Sections 21104 and 21153, but prior to certification, the public agency shall give notice again pursuant to Section 21092, and consult again pursuant to Sections 21104 and 21153 before certifying the environmental impact report." CEQA Guideline 15088.5 further clarifies that "As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information."

Significant new information includes "a disclosure that (1) a new significant environmental impact would result from the project or a new mitigation measure; (2) a substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted; (3) a feasible alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the project's significant impacts but the project's proponents decline to adopt it; or (4) the draft EIR 'was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded." (*North Coast Rivers Alliance v. Marin Municipal Water Dist. Bd. of Directors* (2013) 216 Cal.App.4th 614, 654-655.)

At a minimum, either element (1) or (2) could be applicable here. While it is not apparent from the brief analyses in the Supplemental Memo exactly in what location the additional residential uses will be sited, the Memo indicates that "areas that were previously proposed for industrial and commercial would now be developed with residential uses…" (Memo at PDF 14.) However, the industrial and commercial uses were sited closest to I-5, presumably because of the public health risks of siting residential uses immediately adjacent to a highway. Yet, neither the Memo nor the EIR adequately analyze or consider the risks of siting people in such close proximity to a freeway. This is problematic because the scientific literature cited above indicates that the closer people live to a freeway, the more severe and pervasive the potential impacts are upon those persons.

X. The Statement of Overriding Considerations is Conclusory and Factually Incorrect.

The Statement of Overriding Considerations ("SOC") is deficient because it repeats the same factually and legally unsupportable conclusions and analyses set forth in the EIR (which

are outlined in this letter, the Center's previous comments, and in various other comment letters by expert agencies such as CDFW and SMMC). The SOC therefore fails to provide substantial evidence supporting its claims as to the impacts and proposed alternatives and mitigation measures. For example, as discussed above, the EIR does not show that the Creek Avoidance Alternative is not feasible. And the final version of the Project does not even meet all of the project objectives.

The SOC also is factually incorrect in repeatedly claiming that the Project will provide for industrial uses. (Supplemental Memo at PDF 204.) Likewise, the SOC is incorrect in claiming that the Project will be generating more employment opportunities based upon these (now non-existent) industrial uses. (*Id*.) Because of this, the SOC is incorrect in claiming that the "Project will accomplish and be fully consistent with Project Objectives… described in Table 6-1 of the SEIR." (*Id*.) As noted above, the EIR reaches the opposite conclusion when analyzing the No Industrial Development Alternative. (DEIR at 6-21.) At best, the SOC is extremely misleading because it claims economic benefits that are no longer part of the Project. These discrepancies and errors frustrate public participation and informed decision-making.

Moreover, the SOC is replete with bare statements that impacts are outweighed by benefits without adequate supporting analysis. The SOC does not adequately consider the impacts of the Project on other community resources such as the SRA (as discussed above). The SOC contains similarly conclusory claims that all feasible mitigation measures have been adopted. CEQA requires substantial evidence supporting these claims with respect to each area of significant impacts.

Finally, the SOC refers to the EIR as a "Program EIR" even though a program EIR is not appropriate here; the Project is a "specific plan," which is a particular development project, not a program for a regulatory action (e.g., a general plan).

XI. Conclusion.

The Center notes that the County failed to provide any response in the FEIR to the Center's request that—in connection with the administrative record—the County (1) suspend all data destruction policies; and (2) preserve all relevant hardware unless an exact replica of each file is made. The Center again asks that the County confirm that it has complied with these requests.

In light of the many significant, unavoidable environmental impacts that will result from the Project, we strongly urge the Project not be approved in its current form. If the County is intent on moving forward with this unwise project, at a minimum it should be redesigned and downsized to avoid sensitive resources such as Grasshopper Creek and habitat for the western spadefoot toad and burrowing owl.

Sincerely,



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ATTACHMENT C



April 1, 2019

Via Electronic Mail and FedEx (w/attachments)

Los Angeles County Board of Supervisors
c/o Ms. Celia Zavala
Executive Officer
500 West Temple Street
Los Angeles, CA 90012
executiveoffice@bos.lacounty.gov

Re: Northlake Specific Plan

Dear Los Angeles County Board of Supervisors:

These comments are submitted on behalf of the Center for Biological Diversity ("Center") on the proposed Northlake Specific Plan ("Project").

The County just released nearly 400 pages of documents relating to the Project on the evening of March 28, 2019, including a 216-page Findings of Fact and Statement of Overriding Considerations (the "Findings") regarding the Final Supplemental Environmental Impact Report ("FSEIR") for the Project. **The public is unable to review these documents in any meaningful manner over the less than two business days provided before the scheduled April 2 hearing on the Project. The Center strongly objects to the County conducting a hearing on this item on April 2 because there has not been sufficient time for the public to review and comment on these documents.**

The final Findings and final Mitigation, Monitoring and Reporting Program are key components of the CEQA process. For the Board to have a hearing and take an action on these items with virtually no public review or comment contravenes CEQA's mandate of public participation and informed decision-making in environmental matters.

I. Background on the Center

The Center for Biological Diversity is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science,

policy, and environmental law. The Center has over one million members and online activists throughout California and the United Sates. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County.

II. The EIR Must Be Revised and Recirculated In Light of the "New Normal" of Destructive Wildfires in Southern California.

On February 11, 2019, the Center sent a letter to the Board (the "February 11 Letter") requesting it to reconsider its tentative approval of the Centennial Specific Plan in light of the Board's December 2018 resolution acknowledging the "new normal" of more frequent wildfires in Southern California which are fueled by human ignitions from development in wildfire hazard areas. A copy of the February 11 Letter is attached hereto as Exhibit A, and is hereby incorporated by reference. The issues raised in the February 11 Letter are equally applicable to the Northlake Specific Plan and the FSEIR; in short (1) the County's Wildfire Analysis Motion recognizes the "new normal" of destructive wildfires in Southern California; (2) the Board cannot make an informed decision on Northlake until after the completion of the report called for by the Wildfire Analysis Motion; and (3) the County must revise and recirculate the EIR after the completion of the report called for in the Wildfire Analysis Motion.

On November 13, 2018, the Center sent a letter to the San Diego County Board of Supervisors discussing the wildfire impacts of poorly planned development in San Diego County (the "November 13 Letter"). A copy of the November 13 Letter is attached hereto as Exhibit B, and is hereby incorporated by reference. The issues raised in the November 13 Letter are equally applicable to the Northlake Specific Plan and the FSEIR—(1) developments in fire-prone natural areas that have historically burned have the highest chances of burning; (2) development in fire-prone areas will lead to more frequent fire in Southern California scrublands; (3) public safety in developments like Northlake cannot be guaranteed; (4) developments like Northlake contain insufficient fire safety measures and fire protection plans; (5) increased human ignitions will increase unnatural levels of smoke; (6) the direct economic impacts of wildfires are worsening; (7) the devastating environmental, health, social, and economic costs of poorly-planned, leapfrog developments in areas that will burn are too great, such that there is no justification for approving this development. The FSEIR and Findings do not contain sufficient analysis of these issues.

III. The EIR Must Be Revised and Recirculated In Light of Potential Project Impacts to Wildlife Connectivity and Struggling Local Mountain Lion Populations

On March 11, 2019, the Center sent a letter to the Ventura County Board of Supervisors discussing the importance of wildlife corridors and habitat connectivity (the "March 11 Letter"). A copy of the March 11 Letter is attached hereto as Exhibit C, and is hereby incorporated by reference. The issues raised in the March 11 Letter are equally applicable to the Northlake Specific Plan and the FSEIR—(1) habitat connectivity is essential for wildlife movement and biodiversity conservation; (2) corridors and corridor redundancy should be incorporated to retain functional connectivity and resilience to climate change; (3) developing over 3.5 miles of blueline stream will significantly negatively impact wildlife that use streams as corridors and foraging habitat, such as mountain lions; (4) large developments like Northlake and associated

noise and lighting can interfere with the behavior of local wildlife and impact survival of individuals and populations; (5) creating and enhancing wildlife crossing for existing roads is critical to maintaining wildlife movement and health ecosystems; and (6) projects like Northlake should use the best available science to identify important areas for wildlife movement and habitat connectivity. The FSEIR does not contain sufficient analyses and mitigation of these issues.

In addition, in light of recent studies regarding imperiled mountain lion populations in Southern California, the FSEIR fails to sufficiently analyze potential project impacts to local mountain lion populations. Northlake would be situated in an important linkage area for wildlife movement between the Los Padres National Forest, the Santa Susana Mountains, and the Angeles National Forest. The nearby Central Coast South mountain lion population, which includes individuals in the Santa Monica Mountains, Santa Susana Mountains, and Simi Hills, were found to have dangerously low genetic diversity and effective population size, and they are likely to become extinct within 50 years (Benson et al. 2016; Gustafson et al. 2018; Benson et al. 2019). In addition, Gustafson et al. (2018) found that the nearby mountain lion population in the San Gabriel/San Bernardino Mountains also has low genetic diversity and effective population size, which indicates that they too have a high risk of extinction. Other southern California mountain lion populations, such as those in the Santa Ana Mountains, were also found to have high risk of extinction within the next 50 years (Ernest et al. 2014; Benson et al. 2019). Genetic connectivity with other populations is essential for the survival of these Southern California mountain populations (Gustafson et al. 2017; Benson et al. 2019), and the removal of 3.5 miles of streams and riparian corridors could have a significant adverse impact on these populations by impeding movement. The FSEIR fails to sufficiently analyze these issues and must be recirculated with such analysis.

IV. The EIR Must Be Revised and Recirculated In Light of the Additional Units Added to the Project.

The Findings just released on the evening of March 28 disclose that the Project will include 2,295 dwelling units instead of 1,974 units. Adding 324 dwelling units will likely have more potentially significant impacts in terms of traffic and associated air pollution and greenhouse gas emissions. The FSEIR needs to be recirculated with disclosure, analysis, and mitigation of such impacts.

V. Conclusion

In light of the many significant, unavoidable environmental impacts that will result from the Project, we strongly urge the Project not be approved in its current form.

Sincerely,



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EXHIBIT A





February 11, 2019

Sent via email and FedEx

Los Angeles County Board of Supervisors
c/o Ms. Celia Zavala
Executive Officer
500 West Temple Street
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executiveoffice@bos.lacounty.gov

Re: Changed Circumstances Regarding The Centennial Specific Plan

Dear Los Angeles County Board of Supervisors:

These comments are submitted on behalf of the California Native Plant Society ("CNPS") and the Center for Biological Diversity ("Center") on the Centennial Specific Plan ("Centennial"). This letter highlights new information on wildfire risk that is relevant to informed decision-making and public participation regarding Centennial and its Environmental Impact Report ("EIR"). As a result of this new information, we believe that the final approval of Centennial should be delayed and the EIR should be revised and recirculated for additional public comment. As discussed in more detail in section III below, the California Environmental Quality Act ("CEQA") requires that an EIR be recirculated for public comment when new data or information relevant to the decision-making process arises.

The California Native Plant Society ("CNPS") is a non-profit environmental organization with 10,000 members in 35 Chapters across California and Baja California, Mexico. CNPS's mission is to protect California's native plant heritage and preserve it for future generations through the application of science, research, education, and conservation. CNPS works closely with decision-makers, scientists, and local planners to advocate for well-informed policies, regulations, and land management practices.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over one million members and online activists throughout California and the United Sates. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County.

I. The County's Wildfire Analysis Motion Recognizes The "New Normal" Of Destructive Wildfires In Southern California.

The Woolsey Fire started on November 8, 2018, and grew to become the most destructive fire in Los Angeles County history. By the time this blaze was extinguished, more than 2,000 structures were either damaged or destroyed and three people lost their lives. The fire—fanned by winds upwards of 70 mph and fueled by consecutive years of drought—scorched 96,000 acres, including 88% of the Santa Monica Mountains. This tragedy was stacked upon similar recent disasters including the Tubbs and Thomas Fires in 2017, and the Carr and Camp fires of 2018. All told, 16 out of 20 of the most destructive fires in California's history, in terms of structures destroyed and lives lost, have occurred within the past two decades.[1]

The role that land use planning decisions play in placing homes in the path of wildfires has become increasingly clear. In December 2018, now-retired CalFire Chief Ken Pimlott urged local land use authorities to consider prohibiting development in fire hazard areas so that homeowners, firefighters, and communities "don't have to keep going through what we're going through."[2]

On the heels of the Woolsey Fire, on December 18, 2018, the Los Angeles County Board of Supervisors unanimously adopted a Motion called "Analysis of the Woolsey Fire," which is enclosed herein as Attachment 1 (hereinafter referred to as the "Wildfire Analysis Motion"). In adopting the Wildfire Analysis Motion, the Board recognized the role that it and the County must play in ensuring the safety of communities under its jurisdiction. The Wildfire Analysis Motion specifically acknowledges the role that climate change has in creating hotter and drier conditions more conducive to wildfire and that residential development in the urban wildland interface increases the likelihood of wildfire ignitions and the property damage they cause:

> Our success in protecting human life should not disguise the fact that the County has entered a new era of threat from wildfires. Prolonged drought, coupled with other effects of climate change, has created an environment of explosive brush fire development, making firefighting more difficult than ever. **We increasingly see residential housing growth at the urban wild land interface which poses greater danger to firefighters and to the residents who live in these extremely high fire severity zones**.

(Wildfire Analysis Motion at p. 2, emphasis added.) The Wildfire Analysis Motion therefore calls for recognition of a "new normal" given these "new realities and the attendant dangers." (*Id*.)

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[1] Top 20 Most Destructive Fires in California History

[2] Interview with Ken Pimlott; Capitol Public Radio, 11-December-2018

The County therefore must "review existing prevention regulations and emergency notification systems, and look to lessons learned and what we can do better moving forward." (Wildfire Analysis Motion at p. 2.) The Wildfire Analysis Motion calls for a collaborative effort between all stakeholders, including fire departments, local land use jurisdictions, and community organizations.

The goal of the Wildfire Analysis Motion is to "determine[] whether changes are needed in order for the County to be best prepared to respond to another catastrophic event such as a wildfire of Woolsey's magnitude." (*Id*. at p. 4.) The motion further requires the County's Chief Executive Officer to report back to the Board in 90 days and every 90 days thereafter until the report is completed. (*Id*. at p. 3.)

II. The Board Cannot Make An Informed Decision On Centennial Until After Completion Of The Report Called For By The Wildfire Analysis Motion.

While we support the Board's efforts to mitigate the threat of future wildfires in the urban wildland interface and to learn from recent disasters, the Board's stated intention of December 11, 2018 to imminently approve the Centennial development is fundamentally contradictory to the intention announced on December 18, 2018 in the Wildfire Analysis Motion. Indeed, the EIR for Centennial does not acknowledge this "new normal" of more frequent wildfires in Southern California which are fueled by human ignitions from development in wildfire hazard areas, increased drought, and hotter and drier conditions due to climate change.

Located in the far northwest corner of the County, Centennial would place more than 19,000 homes in an area designated by CalFire as either a high or very high fire hazard severity zone. Conditions on this site, including frequent high wind events, vegetation and topography mean that wildfires that are ignited on or adjacent to the site could pose a severe risk to future residents and their property. Centennial is exactly the type of "residential housing growth at the urban wild land interface" that the Wildfire Analysis Motion concludes is a direct cause of the destructive wildfires that are repeatedly occurring.

In announcing its intent to approve Centennial on December 11, 2018, the Board included a condition that "the fire mitigation strategies associated with the Centennial Specific Plan be peer reviewed by, or in coordination with the California Department of Forestry and Fire Protection." While that is a step in the right direction, the public and applicable agencies have a right under CEQA to review these mitigation strategies *prior* to project approval. (See CEQA Guidelines § 15126.4(a).) Deferring development of such measures until after project approval violates CEQA and undermines informed decision-making and public participation. (See *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 92.) The public is also entitled to review and comment upon such measures because they in themselves might have environmental impacts. (CEQA Guidelines § 15126.4(a)(1)(D).)

In addition, the Board (as the decision-makers) needs to base its decision upon an EIR that accurately describes the clear, present, and future threat of wildfire surrounding the Centennial site, including the risks to residents, the environmental and economic costs to the County, and the potential that development in high fire-prone areas will result in more frequent wildfires caused by humans, which will degrade the surrounding environment. The science is clear that development in wildfire areas causes them to burn more frequently than they would naturally, which can prevent native vegetation from re-growing, thereby leading to erosion, loss of biodiversity, and more wildfires.[3]

Delaying a vote on Centennial is also necessary because the Draft Development Agreement negotiated by Tejon Ranch Company and County staff will "lock in" regulations in existence *at the time of execution*. This means that even if the County develops more robust regulations or plans to combat wildfire in the near future, those regulations or plans will not necessarily apply to Centennial, which is likely the largest development proposed in County history. The Draft Development Agreement also improperly constrains the County's discretionary authority to require further supplemental environmental analysis if circumstances warrant it, such as additional regulations or studies on wildfire risk.

In particular, section 3.2 only allows new or modified laws to apply to Tejon or future entitlement holders if such laws do "not delay, modify, prevent, or impede development or operation of the Project on the Property or conflict with any of the vested rights granted to Property Owner under this Agreement." (Development Agreement at page 17.)

Section 3.2 further suggests that even future state or federal laws or regulations will not apply to Centennial unless the County undergoes a burdensome "meet and confer" process with Tejon. Even then, section 3.2 states that Tejon still gets to decide whether to comply with such rules: "A Property Owner may, in its sole and absolute discretion, consent to the application to the Project of any Future Rules." (Development Agreement at page 17.)

Section 3.12 also contains an "override" provision that states that if there are inconsistencies between "Applicable Rules" and the Development Agreement, then the Development Agreement shall control. (Development Agreement at page 22.)[4] Likewise, the County's ability to conduct further environmental review or require further mitigation will be constrained or be subject to claims of "breach of contract" from Tejon.

[3] Wildfire, Drought, and Climate Change; Los Angeles Times, 12-Jan-2019

[4] This is also explained in the Center and CNPS's comment letter of December 6, 2018 (the "December 6 Letter") on pages 23 & 38-41.

III. The County Must Revise And Recirculate The EIR After Completion Of The Report Called For By The Wildfire Analysis Motion.

Based upon the above, the Board should decline to make a final decision on Centennial until after the report required by the Wildfire Analysis Motion is completed. After this report is completed, County Planning can decide whether to recirculate an EIR that fully apprises the public and the Board of the environmental costs of approving Centennial. Such a revised EIR would be informed by the lessons learned by the collaborative process and report called for by the Wildfire Analysis Motion.

Indeed, state law requires nothing less. An EIR must be recirculated for public comment when new data or information relevant to the decision-making process comes to light. CEQA provides:

> When significant new information is added to an environmental impact report after notice has been given pursuant to Section 21092 and consultation has occurred pursuant to Sections 21104 and 21153, but prior to certification, the public agency shall give notice again pursuant to Section 21092, and consult again pursuant to Sections 21104 and 21153 before certifying the environmental impact report.

(Cal. Pub. Res. Code § 21092.1.) The EIR for Centennial needs to include "a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences." (CEQA Guidelines, § 15151; see also *Berkeley Keep Jets Over the Bay Com. v. Board of Port Cmrs*. (2001) 91 Cal.App.4th 1344, 1356 [the EIR must set forth sufficient information to "foster informed public participation and to enable the decision makers to consider the environmental factors necessary to make a reasoned decision."].)

The Wildfire Analysis Motion acknowledges that the conditions relevant to the approval of Centennial have significantly changed—the Board has now formally recognized the link between residential development in the urban wildland interface, climate change, and the increased frequency of human-ignited wildfires County residents are enduring.

With the backdrop of this "new normal," the Board cannot hold a final vote on Centennial until it takes a hard look at whether the construction of a city in remote wildlands is still in the best interest of the County and whether the environmental review for the project adequately complies with CEQA.

Thank you once again for the opportunity to comment on the Centennial Specific Plan. Please feel free to contact us with any questions.

Sincerely,

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Attachment 1

AGN. NO._____

MOTION BY SUPERVISOR SHEILA KUEHL December 18, 2018

Analysis of the Woolsey Fire

The Woolsey Fire began on November 8, 2018 and burned for thirteen days before it was contained. It was an unprecedented, fast-moving brush fire that was 14 miles wide, with a footprint of 150 square miles, and driven by gusts of up to 70 mph — ultimately moving from the 101 freeway corridor to the ocean in just five hours. 70,000 homes, businesses and other structures lay in the fire's path. A quarter of a million people were evacuated, approximately 2,000 residential and commercial buildings, and other structures were damaged or destroyed. This was the most destructive fire Los Angeles County ("County") has ever seen.

Habitat and open space were also affected. Approximately 88% of the land in the Santa Monica National Recreation Area, owned by the National Park Service, burned, blackening more acres within that National Recreation Area than any other fire in recorded history.

As first responders fought the blaze, their first priority was to protect life through evacuations. County Departments worked together to constantly assess the trajectory of

MOTION

Solis	_____
Ridley-Thomas	_____
Kuehl	_____
Barger	_____
Hahn	_____

the fire, weather conditions, and topography in order to identify threatened areas in order to effectively fight the fire, ensure the safety of residents, and provide for structure defense where possible. As a result of their strategic deployment of resources, there was minimal loss of life and thousands of homes were saved. Nonetheless, the public has many questions about the procedures used for evacuations, firefighting processes and the decisions made regarding repopulation.

Our success in protecting human life should not disguise the fact that the County has entered a new era of threat from wildfires. Prolonged drought, coupled with other effects of climate change, has created an environment of explosive brush fire development, making firefighting more difficult than ever. We increasingly see residential housing growth at the urban wild land interface which poses greater danger to firefighters and to the residents who live in these extremely high fire severity zones.

Given these new realities and the attendant dangers, the County must prepare for a “new normal." The County needs to review existing prevention regulations and emergency notification systems, and look to lessons learned and what we can do better moving forward. All entities must be involved in this planning process including local law enforcement agencies, fire departments, emergency management agencies, city, state and federal agencies involved in emergency response efforts, residents, city officials and community organizations.

I, THEREFORE, MOVE that the Board of Supervisors direct the Chief Executive Officer to convene a Working Group to review the response to and recovery from the Woolsey fire and to identify best practices for evacuation and repopulation procedures, including the need for a uniform mass notification system for use throughout the Santa

Monica Mountains and the County of Los Angeles. The task force shall be comprised of all County Departments and other agencies involved in the Woolsey fire and its aftermath, including but not limited to County representatives from emergency response agencies, such as the Los Angeles County Sheriff's Department, the Los Angeles County Fire Department, Animal Care and Control, Public Health, Public Works, as well as the Los Angeles Police Department, the California Highway Patrol, Ventura County Fire, the Ventura County Sheriff's Department, Cal-OES, Cal-Fire, the National Parks, as well as representatives from the unincorporated Santa Monica Mountains, the City of Los Angeles, the cities of Calabasas, Agoura Hills, Hidden Hills, Malibu, and Westlake Village and the County of Ventura. The Working Group shall provide a progress report back to the Board in 90 days and every 90 days thereafter until such time as a final report is prepared and presented to the Board of Supervisors.

I FURTHER MOVE that the Board of Supervisors direct the Chief Executive Officer to engage the Working Group referenced above, and to retain a consultant with subject matter expertise, to review the County, City, State and other involved agencies efforts in responding to the Woolsey fire, and prepare and present a progress report back to the Board in 90 days, and every 90 days thereafter until completed, with an emphasis on the following:

1. The cause and origin of the Woolsey fire;
2. The deployment of firefighting resources as the fire progressed;
3. The distribution and adequacy of firefighting resources, including the availability of mutual aid resources;

4. Evacuation notification and procedures, including the implementation of public alert procedures and the use of mass notification systems;
5. Strategic communications during the fire and its aftermath between first responders, law enforcement, and municipal governments and the communities impacted by the fire; and
6. Community repopulation notification and procedures, including any conflicts in information between and among fire and law enforcement agencies.

The consultant's report shall detail lessons learned and the strengths of the response and recovery efforts and shall also identify areas of improvement to assist the Board in determining whether changes are needed in order for the County to be best prepared to respond to another catastrophic event such as a wildfire of Woolsey's magnitude.

S: LM/Analysis of the Woolsey Fire

18. Analysis of the Woolsey Fire

Recommendation as submitted by Supervisor Kuehl: Direct the Chief Executive Officer to convene a working group to review the response to and recovery from the Woolsey fire and identify best practices for evacuation and repopulation procedures, including the need for a uniform mass notification system for use throughout the Santa Monica Mountains and the County, comprised of all County Departments and other agencies involved in the Woolsey fire and its aftermath, including, but not limited to, County representatives from emergency response agencies such as the Sheriff's Department, the Fire Department, Departments of Animal Care and Control, Public Health, Public Works, as well as the Los Angeles Police Department, the California Highway Patrol, Ventura County Fire, the Ventura County Sheriff's Department, California Office of Emergency Services, California Fire Department, the National Parks, as well as representatives from the unincorporated Santa Monica Mountains, the Cities of Los Angeles, Calabasas, Agoura Hills, Hidden Hills, Malibu and Westlake Village and the County of Ventura, and provide a progress report back to the Board in 90 days, and every 90 days thereafter, until such time as a final report is prepared and presented to the Board; direct the Chief Executive Officer to engage the working group and retain a consultant, with subject matter expertise to review the County, City, State and other involved agencies efforts in responding to the Woolsey fire and prepare and present a progress report back to the Board in 90 days and every 90 days thereafter until completed, detailing lessons learned and the strengths of the response and recovery efforts and shall also identify areas of improvement to assist the Board in determining whether changes are needed in order for the County to be best prepared to respond to another catastrophic event such as a wildfire of Woolsey's magnitude, with an emphasis on the following:

The cause and origin of the Woolsey fire;

The deployment of firefighting resources as the fire progressed;

The distribution and adequacy of firefighting resources, including the availability of mutual aid resources;

Evacuation notification and procedures, including the implementation of public alert procedures and the use of mass notification systems;

Strategic communications during the fire and its aftermath between first responders, law enforcement and municipal governments and the communities impacted by the fire; and

Community repopulation notification and procedures, including any conflicts

in information between and among fire and law enforcement agencies. (18-7650)

Victor Trujillo addressed the Board.

On motion of Supervisor Ridley-Thomas, seconded by Supervisor Barger, this item was approved.

Ayes: 5 - Supervisor Solis, Supervisor Ridley-Thomas, Supervisor Kuehl, Supervisor Barger and Supervisor Hahn

Attachments: Motion by Supervisor Kuehl
Report
Video

19. Employee Relations Commission Hearing Officer Services Master Agreement

Executive Officer of the Board's recommendation: Authorize the Executive Officer of the Board to execute a new non-exclusive Master Agreement (MA) for Employee Relations Commission (ERCOM) Hearing Officer Services with 22 qualified contractors effective February 1, 2019 for a three-year term with two one-year and six month-to-month extension options; execute agreements for ERCOM Hearing Officer Services with additional contractors throughout the MA term upon the recommendation of the Executive Director of ERCOM, provided these contractors meet the minimum requirements and qualifications as outlined in the initial Request for Statement of Qualifications dated August 10, 2018 and Addendum dated September 11, 2018; and execute amendments to the MA for ERCOM Hearing Officer Services, as long as the amendments do not exceed the maximum contract term or the rates approved by the Board. (18-7845)

On motion of Supervisor Kuehl, seconded by Supervisor Ridley-Thomas, this item was approved.

Ayes: 5 - Supervisor Solis, Supervisor Ridley-Thomas, Supervisor Kuehl, Supervisor Barger and Supervisor Hahn

Attachments: Board Letter

EXHIBIT B

November 13, 2018

Via Electronic Mail and Hand Delivery (with references)

San Diego County Board of Supervisors
Attn: David Hall
Clerk of the Board of Supervisors
1600 Pacific Highway, Room 335
San Diego, CA 92101
David.hall@sdcounty.ca.gov

Re: Wildfire Impacts of Poorly-planned Development in San Diego County

Dear Supervisors:

These comments are submitted on behalf of the Center for Biological Diversity (Center) regarding the approval or pending approval of the following Projects:

1. Warner Ranch
2. Lilac Hills
3. Newland Sierra
4. Valiano
5. Harmony Grove Village South
6. Otay Ranch Village 14, 16, 19
7. Otay Ranch Village 13
8. Otay 250 Sunroad
9. Project Specific Requests (PSRs)

While the Center has many concerns regarding the environmental impacts and inadequate analyses provided in the Environmental Impact Reports of the proposed Projects, the purpose of this letter is to voice our concern regarding the public safety impacts of these poorly-planned, sprawl developments in fire-prone chaparral ecosystems in San Diego County. The Center reviewed the Environmental Impact Report of each Project to determine the cumulative impacts of these developments on wildfire risk and analyze the adequacy of proposed mitigation measures. Project footprints were compared to the fire history and fire threat of the region, as identified by state agencies (the Department of Forestry and Fire Protection [Cal Fire] and the California Public Utilities Commission [CPUC]), and the total number of housing units and potential residents for all the developments were calculated.

The proposed developments would be placed in natural landscapes dominated by fire-prone native chaparral and coastal sage scrub habitats that rely on wildfires to persist. Exurban developments like those proposed – with low to intermediate housing densities extending into chaparral and scrublands – have been shown to lead to frequent human-caused ignitions and fire

frequencies that exceed historical, natural levels in Southern California (Syphard et al. 2018). When fires occur too frequently, chaparral and sage scrub ecosystems are replaced by highly flammable non-native grasses, ultimately eliminating native habitats and increasing fire risks to communities.

By approving these sprawl Projects, the County will allow for the construction of almost 15,000 homes in natural areas dominated by chaparral and sage scrub habitat that regularly experience fire. The U.S. Census Bureau estimates that there are 2.87 persons per household in San Diego County, so together the developments would put more than 40,000 potential residents at risk. Placing more than 40,000 potential residents in fire-prone natural areas that are anticipated to burn without thoroughly considering the severe environmental, health, social, and economic consequences or requiring appropriate, science-based analyses regarding wildfire risk is reckless and a dereliction of your duty to the public. The developments will increase wildfire risks that could cause residents to lose their homes and the lives of loved ones and first responders. The increased fire risk could also worsen public health, destroy native ecosystems, and reduce biodiversity. These poorly-planned developments are not a solution to current housing needs; they will only lead to increased risk of harm and expenses for the County's residents.

Wildland fires are inevitable, natural processes in Southern California that are necessary and beneficial for chaparral and scrub ecosystems. The Center urges the County to protect human lives, property, and native biodiversity, by reforming growth strategies to focus on avoiding the placement of developments in high fire threat areas. Existing homes in fire-risk areas should be incentivized to complete retrofits with fire-resistant construction, appropriate defensible space, and homeowner fire safety education. Urban planning and design should focus on infill development in urban core areas, where wildfire threat is lower and people have access to jobs, public transit, and community. We can no longer dismiss California's natural fire regime and the direct relationship between urban sprawl and deadly wildfires. The County needs to stop approving development in high wildfire threat areas to keep its residents healthy and safe and to protect native biodiversity.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 1 million members and online activists throughout California and the United Sates. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life in Southern California, including San Diego County.

I. Developments in Fire-prone Natural Areas That Have Historically Burned Have the Highest Chances of Burning

Approving these Projects will allow for the construction of almost 15,000 homes in areas that Cal Fire has identified as having extreme fire threat to people and the CPUC has determined to have elevated and/or extreme fire threat. Almost all the proposed Projects are located in or adjacent to natural areas that have evolved with fire historically and have burned multiple times in the last 140 years. In fact, 20 fires have burned in areas of the Otay Ranch Villages since

1910, with the most recent and largest fire in the area occurring in 2007 (the Harris 2 Fire, ~91,000 acres burned).

Between the years 2000 and 2011, nearly 1,000 homes per year were destroyed by wildfires in Southern California (Syphard et al. 2012), and those numbers appear to be rising, considering last year's fires burned over 10,000 structures and this year's Camp Fire in Butte County and Woolsey Fire in Ventura County have destroyed almost 7,000 homes. Multiple studies indicate that developments with low/intermediate-density clusters surrounded by fire-dependent vegetation (*i.e.,* chaparral) in areas with a history of fires – like those proposed by the County – have the highest chances of burning (Syphard et al. 2012; Syphard et al. 2013). By approving these Projects, the San Diego Board of Supervisors will be directly endangering the lives of more than 40,000 people by placing homes in the exact arrangement and placement for maximum fire susceptibility in areas where fires will inevitably burn.

II. Development in Fire-prone Areas Will Lead to More Human Ignitions and Too Frequent Fire in Southern California Shrublands

In Southern California, sprawl developments with low/intermediate densities extending into chaparral and sage scrub habitats that are prone to fire have led to more frequent wildfires caused by human ignitions, like arson, improperly disposed cigarette butts, debris burning, fireworks, campfires, or sparks from cars or equipment (Keeley et al. 1999; Keeley and Fotheringham 2003; Syphard et al. 2007; Syphard et al. 2012; Bistinas et al. 2013; Balch et al. 2017; Radeloff et al. 2018). Human-caused fires account for 95% of all fires in Southern California (Syphard et al. 2013), and homes filled with petroleum-based products, such as wood interiors, paint, and furniture, provide additional fuel for the fires to burn longer and spread farther (Keeley et al. 2007). The most numerous and largest fires in San Diego County have been caused by equipment and powerlines in the wildland-urban interface, where housing density is low to intermediate (Syphard and Keeley 2015), and leapfrog developments have been found to have the highest predicted fire risk in the County (Syphard et al. 2013). With the increased ignition risk that comes with these poorly planned developments in high fire-prone areas, the County will only be fueling more frequent, larger, and more destructive wildfires.

The proposed developments would lead to a dangerous feedback loop of deadly fires and habitat destruction. Most would be placed in areas dominated by chaparral and sage scrub, native California habitats that rely on wildfires to persist. These habitats are adapted to infrequent (every 30 to 150 years), large, high-intensity crown fire regimes (Pyne et al. 1996; Keeley and Fotheringham 2001), and if these regimes are disrupted, the habitats become degraded (Keeley 2005, 2006a,b; Syphard et al. 2018). When fires occur too frequently, type conversion occurs and the native shrublands are replaced by non-native grasses and forbs that burn more frequently and more easily, ultimately eliminating native habitats and biodiversity while increasing fire threat over time (Keeley 2005, 2006a,b; Syphard et al. 2009; Safford and Van de Water 2014; Syphard et al. 2018). Thus, placing developments in these high fire-prone areas will lead to more frequent fires that will threaten the lives of more than 40,000 people who will live in or near these areas while degrading the health and biodiversity of Southern California's special ecosystems.

III. Public Safety in These New Development Areas Cannot be Guaranteed

Public safety issues are exacerbated by unreliable infrastructure to accommodate the consequences of more fires. Evacuating from wildfires can be life-threatening and having safety plans in place beforehand is not always enough. For example, while having warning systems and evacuation routes in place are important for fire preparedness and fire safety (e.g., County of San Diego, 2018, Lilac Hills Ranch App J Fire Protection Plan) their functionality when a fire occurs is not guaranteed. Wildfires may ignite with little or no notice, and warning systems can be slow and ineffective at reaching all residents in harm's way. This was the case in last year's Tubbs Fire in Sonoma County and Thomas Fire in Santa Barbara and Ventura Counties, which led to more than 40 deaths and almost $12 billion in property damage (St. John 2017; Lundstrom et al. 2017).

Instead of placing people and homes in places where residents will have to rely on potentially faulty warning systems and evacuation routes to escape from fires, the County should build homes in areas where fire is least likely to occur, such as in infill development in urban core areas. By avoiding placing developments in fire prone natural areas, the County could reduce the risk of fire and more effectively protect lives, property, and the natural environment.

IV. The Developments Contain Insufficient Fire Safety Measures and Fire Protection Plans

Despite the glaring wildfire issues of placing developments in fire-prone ecosystems, the County remains complacent with the developers' fire protection plans that rely on fuel modification zones that are counterproductive and guidelines that are inadequate (*e.g.*, County of San Diego, 2018, Harmony Grove Village South FEIR Appendix L Fire Protection Plan). Reliance on general guidelines and firesafe building/planning codes without sufficiently analyzing site-specific conditions or strategically implementing precautionary fire safety measures can lead to a false sense of safety and preparedness. Wildfire risk cannot be addressed with a one-size-fits-all solution.

Large fires in Southern California landscapes dominated by chaparral and shrublands are often associated with foehn winds (strong, warm, dry, and often downslope winds), such as the Santa Ana winds (Keeley 2006b). The region's largest fires have historically occurred in known wind corridors (Moritz et al. 2010). And in severe weather conditions, wind-driven fires can spread quickly – they can cover 10,000 hectares in one to two days (that's an area the size of Escondido, CA), as embers are blown ahead of the fires and towards adjacent fuels (*e.g.*, flammable vegetation, structures) (Syphard et al. 2011).

The primary approach to mitigating fire risk is through home safety measures to make structures less flammable and vegetation reduction in the defensible space immediately surrounding homes. However, a common misconception regarding defensible space in chaparral and scrub habitats immediately surrounding structures is that the wider the fuel modification zone the more protected the structures are from wildfires. For example, the Newland Sierra Project states that they plan to implement a 250-foot fuel modification zone to reduce fire risk, which is more than double the 100-foot fuel modification zone required by state law (County of

San Diego, 2018 Newland Sierra FEIR, Appendix N Fire Protection Plan). In the September 26, 2018 public hearing, the Board of Supervisors was satisfied that the project was doing as much as they could to mitigate the threat of fire. In addition, some local ordinances require homeowners to clear 300 feet or more of defensible space, and there have been reports of some people being unable to obtain fire insurance without that 300-foot zone (Syphard et al. 2014). However, these actions and guidelines neglect science and may not be appropriate for all regions or habitat types, and they could be dangerously misleading.

In a study conducted in San Diego County, the most effective vegetation treatment distances ranged between 16 to 58 feet from the home (Syphard et al. 2014). Fuel reduction treatments more than 100 feet from structures did not provide additional protection, even for structures situated on steep slopes (Syphard et al. 2014). And because continued disturbance can lead to type conversion from native shrublands to nonnative grasslands that can burn more quickly and easily, extended fuel modification zones could lead to further habitat degradation and increased fire threat (Merriam 2006; Keeley 2006a,b). Thus, asserting that a fuel modification zone beyond the 100-foot requirement provides additional mitigation and improved fire safety in a high fire-prone area gives a false sense of security. The best way to improve fire safety is to proactively reduce exposure to wildfire risk by avoiding the placement of homes in fire-dependent ecosystems (Syphard et al. 2014).

Another critical component of protecting lives and property from wildfires is fire hazard and fire safety education for homeowners in or near fire hazard areas. Structures with fire-resistant features, such as ember-resistant vents, fire-resistant roofs, and surrounding defensible space, have been shown to reduce the risk of destruction due to wildfires (Quarles et al. 2010; Syphard et al. 2014). However, simply stating that the structures are built to fire code does not guarantee that fire threat will be reduced. Proper maintenance and upkeep of the structures themselves as well as the immediate surroundings (*e.g.*, removing leaf litter from gutters and roofing; removing flammable materials like wood fences, overhanging tree branches, or trash cans away from the home) are required to reduce the chances of the structures burning. In addition, external sprinklers with an independent water source would reduce flammability of structures, yet none of the proposed developments include this feature on their structures. And while these fire-resistant structural features are important for fire safety and homeowners should be properly informed, the focus should be on retrofitting existing homes and structures in or near high fire-prone areas with these features, not putting these features on new homes that should not be placed in high fire-prone areas in the first place.

As noted above, the number of homes being destroyed by fires in Southern California are starting to become thousands per year. The arrangement and location of developments have been found to be the main drivers of fire susceptibility, with the highest chances of burning in developments like those proposed by the County – low/intermediate-density clusters surrounded by wildland vegetation in areas with a history of fires (Syphard et al. 2012; Syphard et al. 2013). Thus, the best way to make new construction as fire safe as possible is to avoid placing them in high fire-prone areas (Pincetl et al. 2008; Syphard et al. 2012; Syphard et al. 2013; Moritz et al. 2014). Land-use planning must be reformed to more appropriately consider wildfire risk management.

V. Increased Human Ignitions Will Increase Unnatural Levels of Smoke.

Smoke is a product of the natural and necessary wildfire regime in chaparral and sage scrub ecosystems. However, new leapfrog developments situated in fire-prone chaparral and sage scrub habitats, like those at issue here, will lead to increased human ignitions that will produce increased levels of smoke beyond what is natural. This can lead to harmful public health impacts due to increased air pollution not only from burned vegetation, but also from burned homes, commercial buildings, cars, etc. Buildings and structures often contain plastic materials, metals, and various stored chemicals that release toxic chemicals when burned, such as pesticides, solvents, paints, and cleaning solutions (Weinhold 2011). Thus, human-caused wildfires at the urban wildland interface that burn through developments, as is becoming more common with housing extending into fire-prone chaparral and shrublands, increase the frequency and toxicity of smoke exposure to communities in and downwind of the fires.

Increased fire frequency due to human activity and ill-placed developments will lead to increased occurrences of poor air quality from smoke, which can have public health effects. Hospital visits for respiratory symptoms (*e.g.*, asthma, acute bronchitis, pneumonia, or chronic obstructive pulmonary disease) have been shown to increase during and/or after fire events (Kunzli et al. 2006; Viswanathan et al. 2006; Delfino et al. 2009; Rappold et al. 2012; Liu et al. 2015; Reid et al. 2016). In particular, a study assessing the health impacts of the 2003 Cedar Fire in San Diego County, which burned an area of about 280,000 acres that consisted of chaparral and scrub-dominated landscapes and almost 3,000 structures, there were increases in hospital emergency room visits for asthma, respiratory problems, eye irritation, and smoke inhalation (Viswanathan et al. 2006). The proposed Projects do not thoroughly consider the health impacts that communities will have to suffer if developments are placed in fire-prone shrublands where they will disrupt the natural fire regime and increase fire frequency and smoke exposure. The County needs to consider these public health impacts and refrain from placing poorly-planned, leapfrog developments in landscapes dominated by fire-prone chaparral and shrublands.

VI. The Direct Economic Impacts of Wildfires Are Worsening

The direct economic impacts of human-caused wildfires are staggering. The cost of fire suppression and property damage from wildfires in California is over $18 billion since 2010, which, after adjusting for inflation, is double the cost from the previous three decades combined (Figure 1). Placing more housing in fire-prone natural areas has led to more costly fires, and these patterns will continue should the proposed Projects be approved.

Who shoulders these costs? California and federal residents end up paying in the form of fire insurance premiums and taxes that support Cal Fire and federal government subsidies and grants for homes in high risk areas. And these costs do not include other indirect/hidden costs associated with wildfires, such as the costs of doctors' appointments, medication, sick days taken from places of work, funerals, etc. As the costs of housing in California continues to increase, these costs will also continue to rise, further exacerbating the affordable housing crisis.

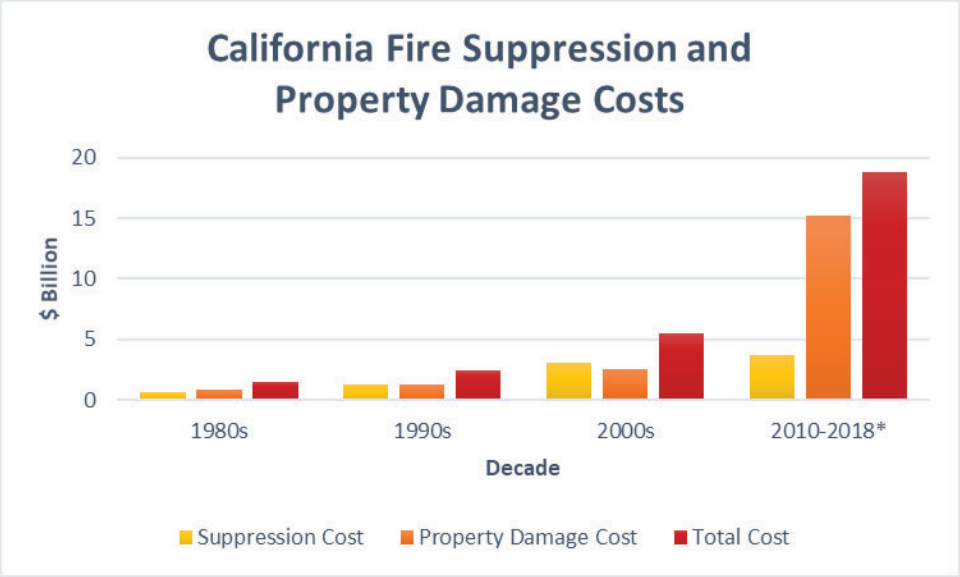

Figure 1. Costs of Fire Suppression and Property Damage by Decade. *Property damage cost data include 2017 insurance claim estimates and no 2018 costs. Data Source: Cal Fire and the Bureau of Labor Statistics.

VII. Conclusion

San Diego County can no longer afford to recklessly neglect the science of wildfires and wildfire risk in Southern California. The devastating environmental, health, social, and economic costs of poorly-planned, leapfrog developments in areas that *will* burn are too great. The Center urges the County to avoid placing developments like Newland Sierra and the Otay Ranch Villages in high fire-prone natural areas. Instead, the County should focus on creating communities in areas with lower wildfire risk, such as in infill development in urban core areas, where people will have access to jobs, public transit, and amenities. In addition, the County should prioritize retrofitting older homes and structures in the wildland-urban interface with fire resistant features, like ember-resistant vents, fire-resistant roofs, external sprinklers, and appropriate defensible space/fuel modification zones. Land-use planning must be reformed to more appropriately consider wildfire risk management and protect human lives, property, and the native biodiversity of Southern California's unique landscape.

Any focus on forest management to address California's fires is profoundly misguided. It makes no sense to complain about, and spend millions of dollars on, logging forests that are far away from communities when the actual fire threat facing thousands of families results primarily from poor planning in the interface adjacent to homes and businesses. Moreover, most of 2018's most extensive fires in California were not even in forests, and instead primarily burned grasslands and chaparral. We must also be honest about the conditions that are actually driving the fires – human ignitions, high winds, drought, and climate-change leading to hotter, drier conditions. Forest management is simply a scapegoat to ignore the difficult problems that need to be addressed, like poor land-use planning and climate change. California needs to stop allowing the building of flammable homes in flammable terrain, and fight climate change, instead of blaming the condition of California's forests for these fires.

Thank you for the opportunity to submit comments on these proposed Projects. We look forward to working to assure that the County forges responsible, fire safe planning to safeguard the health and safety of its residents and the natural environment. Please do not hesitate to contact the Center with any questions at the email listed below.

Sincerely,



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(Attached on CD)

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EXHIBIT C

March 11, 2019

Sent via email and FedEx

Ventura County Board of Supervisors
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Re: Proposed Habitat Connectivity and Wildlife Corridor Ordinance and Planning Commission Recommendations

Dear Ventura County Board of Supervisors:

These comments are submitted on behalf of the Center for Biological Diversity (the "Center") regarding the proposed Habitat Connectivity and Wildlife Corridor Ordinance ("Ordinance") and the Planning Commission Recommendations. The Center appreciates the work of the Board of Supervisors, Planning Commission, and Planning Division Staff in developing the Ordinance. The Ordinance as originally proposed would be a major step forward in maintaining and enhancing wildlife connectivity within Ventura County and the region; however, some of the proposed revisions and recommendations based on discussions from the January 31, 2019 Planning Commission meeting substantially weaken the Ordinance.

The Center strongly supports the objectives of the Ordinance and the County's efforts to preserve functional connectivity by establishing designated habitat connectivity and wildlife corridors (HCWC) and critical wildlife passage areas (CPWA). Limiting development and associated noise and lighting in these important corridor areas, enhancing wildlife crossing infrastructure where barriers already exist (*i.e.*, roads), and incorporating corridor redundancy will help to preserve habitat connectivity and foster the County's expansive biodiversity through current and future climate regimes. However, the Center is concerned about exemptions that would allow for excessive lighting, wildlife impermeable fencing, and surface mining and oil and gas exploration activities in these areas. Furthermore, recommendations from the Planning Commission do not take into account the best available science and instead aim to reduce the designated corridor areas to appease unknown agricultural concerns. The Center urges the Board to strengthen the Ordinance by applying the best available science to identify critical areas for wildlife movement and habitat connectivity, minimizing exemptions that undermine the Ordinance's goals, and requiring larger development buffers from surface water features (*i.e.*,

intermittent and perennial streams and wetlands) to effectively preserve functional connectivity for wildlife and vegetation throughout the County.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 1.4 million members and online activists throughout California and the United States. The Center and its members have worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Ventura County.

I. Habitat Connectivity Is Essential for Wildlife Movement and Biodiversity Conservation.

Habitat connectivity is vital for wildlife movement and biodiversity conservation. Limiting movement and dispersal with barriers (*e.g*., development, roads, or fenced-off croplands) can affect animals' behavior, movement patterns, reproductive success, and physiological state, which can lead to significant impacts on individual wildlife, populations, communities, and landscapes (Trombulak and Frissell 2000; Tewksbury et al. 2002Cushman 2006; van der Ree et al. 2011; Haddad et al. 2015; Ceia-Hasse et al. 2018). Individuals can die off, populations can become isolated, sensitive species can become locally extinct, and important ecological processes like plant pollination and nutrient cycling can be lost. In addition, connectivity between high quality habitat areas in heterogeneous landscapes is important to allow for range shifts and species migrations as climate changes (Heller and Zavaleta 2009, Cushman et al. 2013). Lack of wildlife connectivity results in decreased biodiversity and degraded ecosystems. Thus, preserving and maintaining natural and created corridors is critical for species and habitat conservation in fragmented landscapes (Gilbert-Norton et al., 2010).

Wildlife connectivity and migration corridors are important at the local, regional, and continental scale. Local connectivity that links aquatic and terrestrial habitats would allow various sensitive species to persist, including state- and federally-protected California red-legged frogs (*Rana draytonii*), arroyo toads (*Anaxyrus californicus*), and other species. At a regional scale, medium- and large-sized mammals that occur in Ventura County, such as mountain lions (*Puma concolor*), bobcats (*Lynx rufus*), gray foxes (*Urocyon cinereoargenteus*), ring-tailed cats (*Bassariscus astutus*), and mule deer (*Odocoileus hemionus*), require large patches of heterogeneous habitat to forage, seek shelter/refuge, and find mates. In addition, anadromous fish, such as steelhead trout (*Oncorhynchus mykiss*), are born in some of Ventura's waterways, spend several years in the Pacific Ocean, and return to Ventura to spawn. Ventura is an important hub for local and global biodiversity; wildlife movement and habitat connectivity must be maintained throughout the Ventura County.

II. Climate Change Is Likely to Significantly Alter Wildlife Behavior and Movement.

A strong, international scientific consensus has established that human-caused climate change is causing widespread harms to human society and natural systems, and climate change threats are becoming increasingly dangerous. In a 2018 *Special Report on Global Warming of*

1.5°C from the Intergovernmental Panel on Climate Change (IPCC), the leading international scientific body for the assessment of climate change describes the devastating harms that would occur at 2°C warming, highlighting the necessity of limiting warming to 1.5°C to avoid catastrophic impacts to people and life on Earth (IPCC 2018). In addition to warming, many other aspects of global climate are changing. Thousands of studies conducted by researchers around the world have documented changes in surface, atmospheric, and oceanic temperatures; melting glaciers; diminishing snow cover; shrinking sea ice; rising sea levels; ocean acidification; and increasing atmospheric water vapor (USGCRP, 2017).

Climate change is increasing stress on species and ecosystems, causing changes in distribution, phenology, physiology, vital rates, genetics, ecosystem structure and processes, and increasing species extinction risk (Warren et al., 2011). A 2016 analysis found that climate-related local extinctions are already widespread and have occurred in hundreds of species, including almost half of the 976 species surveyed (Wiens 2016). A separate study estimated that nearly half of terrestrial non-flying threatened mammals and nearly one-quarter of threatened birds may have already been negatively impacted by climate change in at least part of their distribution (Pacifici et al. 2017). A 2016 meta-analysis reported that climate change is already impacting 82 percent of key ecological processes that form the foundation of healthy ecosystems and on which humans depend for basic needs (Scheffers et al. 2016). Genes are changing, species' physiology and physical features such as body size are changing, species are moving to try to keep pace with suitable climate space, species are shifting their timing of breeding and migration, and entire ecosystems are under stress (Cahill et al., 2012; Chen et al., 2011; Maclean & Wilson, 2011; Parmesan, 2006; Parmesan & Yohe, 2003; Root et al., 2003; Warren et al., 2011). As such, it is imperative that current and future land use planning consider the impacts of climate change on wildlife movement. In order to further this goal, any development within the overlay zones should be reviewed to ensure functional connectivity in light of potential climate change impacts.

III. Corridor Redundancy Helps Retain Functional Connectivity and Resilience.

Corridor redundancy (*i.e*. the availability of alternative pathways for movement) is important in regional connectivity plans because it allows for improved functional connectivity and resilience. Compared to a single pathway, multiple connections between habitat patches increase the probability of movement across landscapes by a wider variety of species, and they provide more habitat for low-mobility species while still allowing for their dispersal (Mcrae et al., 2012; Olson & Burnett, 2008; Pinto & Keitt, 2008). In addition, corridor redundancy provides resilience to uncertainty, impacts of climate change, and extreme events, like flooding or wildfires, by providing alternate escape routes or refugia for animals seeking safety (Cushman et al., 2013; Mcrae et al., 2008; Mcrae et al., 2012; Olson & Burnett, 2008; Pinto & Keitt, 2008). Thus, the Center supports efforts that account for corridor redundancy and functional connectivity to facilitate wildlife movement throughout the County.

IV. Human Development and Associated Noise and Lighting Can Interfere with the Behavior of Local Wildlife Such as Mountain Lions.

Human development and associated noise can degrade adjacent wildlife habitat and behavior. (*See, e.g.,* Slabbekoorn 2008.) For instance, field observations and controlled laboratory experiments have shown that traffic noise can significantly degrade habitat value for migrating songbirds. (Ware et al. 2015.) This finding followed lab results indicating that subjects exposed to 55 and 61 dBA simulated traffic noise exhibited decreased feeding behavior and duration, as well as increased vigilance behavior. (*Id*.) Such behavioral shifts increase the risk of starvation, thus decreasing survival rates. A recent study also highlighted the detrimental impacts of siting development near areas protected for wildlife. The study noted that "Anthropogenic noise 3 and 10 dB above natural sound levels . . . has documented effects on wildlife species richness, abundance, reproductive success, behavior, and physiology." (Buxton, et al.) The study further noted that "there is evidence of impacts across a wide range of species [] regardless of hearing sensitivity, including direct effects on invertebrates that lack ears and indirect effects on plants and entire ecological communities (e.g., reduced seedling recruitment due to altered behavior of seed distributors)." (*Ibid*.) Moreover, human transportation networks and development resulted in high noise exceedances in protected areas. (*Ibid*.)

There also is strong evidence documenting the effects of human activity specifically on mountain lions. One study found that mountain lions are so fearful of humans and noise generated by humans that they will abandon the carcass of a deer and forgo the feeding opportunity just to avoid humans. (Smith 2017.)[1] The study concluded that even "non-consumptive forms of human disturbance may alter the ecological role of large carnivores by affecting the link between these top predators and their prey." (Smith 2017.) In addition, the study found that mountain lions respond fearfully upon hearing human vocalizations. Another study demonstrates that mountain lions exposed to other evidence of human presence (lighting, vehicles, dogs) will impact mountain lion behavior. (Wilmers 2013.) Other studies documented diet shifts in mountain lions near human development, and recommended minimizing any development in mountain lion habitat. (Smith 2016; *see also* Smith 2015.)

Additional studies similarly documented that mountain lions avoid "urban, agricultural areas, and roads and prefer[] riparian areas and more rugged terrain." (Zeller 2017; *see also* Vickers 2015.) One study found that over half (55 percent) of radio collared mountain lions in urban areas did not survive, and the majority were killed by humans either by vehicle strikes or using depredation permits. (Vickers 2015.) Given that human activities can interfere with natural behavior and movement of local wildlife, the Center supports the County's efforts to limit development and associated noise and lighting in corridor areas.

[1] *See also* Sean Greene, "How a fear of humans affects the lives of California's mountain lions," *Los Angeles Times* (June 27, 2017), available at http://beta.latimes.com/science/sciencenow/la-sci-sn-pumas-human-noise-20170627-story.html.

V. Creating and Enhancing Wildlife Crossings for Existing Roads Is Critical to Maintaining Healthy Ecosystems.

The Center supports the objective of the Ordinance to enhance wildlife connectivity on existing roads through the use of increased setbacks. Enhanced connectivity helps sustain functional ecosystems and ensure public safety. Although natural, existing corridors in fragmented landscapes have been shown to have more wildlife movement compared to created corridors (Gilbert-Norton et al., 2010), crossing structures combined with setbacks at the entrances and exits are useful as retroactive restoration in areas where existing roads have high incidence of wildlife vehicle conflict or where species movement has been severely impacted. When appropriately implemented, wildlife crossing infrastructure has been shown to improve wildlife permeability and reduce wildlife vehicle collisions (Bissonette & Rosa, 2012; Dodd Jr. et al., 2004; Dodd et al., 2012; Kintsch et al., 2018; Sawaya et al., 2014; Sawyer et al., 2012). Thus, by maintaining and restoring habitat connectivity that facilitates movement required for current and future species ranges and behaviors, the County would improve driver safety while promoting local biodiversity.

Outside of California many other states and jurisdictions have been proactively addressing wildlife connectivity issues. For example, Arizona, Colorado, and Wyoming have seen 80-96% reductions in wildlife vehicle collisions while gradually increasing the level of wildlife permeability over time (it appears that some species take more time than others to adapt to crossings) on sections of highways where they have implemented wildlife crossing infrastructure, such as underpasses, culverts, overpasses, wildlife fencing, and escape ramps (Dodd et al., 2012; Kintsch et al., 2017; Kintsch et al., 2018; Sawyer et al., 2012). Utah just completed the state's largest wildlife overpass at Parleys Canyon for moose, elk, and deer. Washington State is about to complete its largest wildlife overpass on I-90, which is anticipated to provide habitat connectivity for a wide variety of species between the North and South Cascade Mountains. The overpass cost $6.2 million as part of a larger $900 million expansion project that will include multiple wildlife crossings along a 15-mile stretch of highway. Savings from less hospital bills, damage costs, and road closures from fewer wildlife vehicle collisions will make up those costs in a few years (Valdes 2018). State transportation departments are actively pursuing these types of projects because of the benefits for wildlife connectivity, public safety, and the economy. The Center supports Ventura County's efforts to actively invest in preserving habitat connectivity where there are no roads or development while also enhancing or restoring connectivity where roads or other transportation infrastructure already exist.

VI. The Ordinance Should Require Stronger Development Buffers for Streams and Wetlands.

Based on recommendations from the Planning Commission, the Ordinance's surface water feature setbacks were reduced from 200 feet to 100 feet. The revision was based on concerns regarding potential impediments on agricultural operations. However, in a letter to the Board of Supervisors, Planning Division staff stated that it was not clear "what specific agricultural operations were of concern" given that there are already various exemptions for commercial agricultural activity (March 12, 2019 Planning Division Letter at 11). This change does not support one of the main objectives of the Ordinance to "[p]reserve the functional

connectivity and habitat quality of surface water features" (Section 8104-7.7(b)). Streams are important corridors for wildlife movement and habitat connectivity; the Ordinance should consider the best available science and require a minimum 200-foot setback from all perennial and intermittent streams, with special attention given to streams that are located within designated critical habitat or support or have the potential to support special-status, sensitive, or rare species.

Streams and wetlands throughout the County support numerous special-status flora and fauna, including steelhead trout (*Oncorhyncus mykiss*), least Bell's vireo (*Vireo bellii pusillus*), and California red-legged frogs (*Rana draytonii*). Many species that rely on these aquatic habitats also rely on the adjacent upland habitats (*e.g.*, riparian areas along streams, and grassland habitat adjacent to wetlands). In fact, 60% of amphibian species, 16% of reptiles, 34% of birds and 12% of mammals in the Pacific Coast ecoregion (which includes Ventura County) depend on riparian-stream systems for survival (Kelsey and West 1998). Many other species, including mountain lions and bobcats, often use riparian areas and natural ridgelines as migration corridors or foraging habitat (Dickson et al, 2005; Hilty & Merenlender, 2004; Jennings & Lewison, 2013; Jennings & Zeller, 2017). Additionally, fish rely on healthy upland areas to influence suitable spawning habitat (Lohse et al. 2008), and encroachment on these habitats and over-aggressive removal of riparian areas have been identified as major drivers of declines in freshwater and anadromous fish (*e.g.*, Stillwater Sciences 2002; Lohse et al. 2008; Moyle et al. 2011).

A literature review found that recommended buffers for wildlife often far exceeded 100 meters (~325 feet), well beyond the largest buffers implemented in practice (Robins 2002). For example, Kilgo et al. (1998) recommend more than 1,600 feet of riparian buffer to sustain bird diversity. In addition, amphibians, which are considered environmental health indicators, have been found to migrate over 1,000 feet between aquatic and terrestrial habitats through multiple life stages (Semlitsch and Bodie 2003; Trenham and Shaffer 2005; Cushman 2006; Fellers and Kleeman 2007). Specifically, the California red-legged frog, a threatened species that occurs and has designated critical habitat within Ventura County, was found to migrate about 600 feet between breeding ponds and non-breeding upland habitat and streams, with some individuals roaming over 4,500 feet from the water (Fellers and Kleeman 2007). Other sensitive species known to occur in Ventura County, such as western pond turtles (*Actinemys marmorata*, a candidate species under the Endangered Species Act) and California newts (*Taricha torosa*), have been found to migrate over 1,300 feet and 10,000 feet respectively from breeding ponds and streams (Trenham 1998; Semlitsch and Bodie 2003). Accommodating the more long-range dispersers is vital for continued survival of species populations and/or recolonization following a local extinction (Semlitsch and Bodie 2003; Cushman 2006). In addition, more extensive buffers provide resilience in the face of climate change-driven alterations to these habitats, which will cause shifts in species ranges and distributions (Cushman et al., 2013; Heller & Zavaleta, 2009; Warren et al., 2011). This emphasizes the need for sizeable riparian and upland buffers around streams and wetlands in Ventura County, as well as connectivity corridors between heterogeneous habitats. The Ordinance should not be weakened to 100-foot stream setbacks.

In addition, maintaining a minimum 200-foot development buffer from streams would facilitate essential ecosystem services that humans rely on. Larger buffer zones than those

proposed in the weakened Ordinance along streams would provide more stream bank stabilization, water quality protection, groundwater recharge, and flood control both locally and throughout the watershed (Nieswand et al. 1990; Norris 1993; Whipple Jr. 1993; Sabater et al. 2000; Lovell and Sullivan 2006). They would also protect communities from impacts due to climate change by buffering them from storms, minimizing impacts of floods, and providing water storage during drought (Environmental Law Institute 2008). Thus, the County should require a minimum 200-foot buffer around streams.

VII. Some of the Proposed Exemptions to the Critical Wildlife Passage Areas Overlay Zone Undermine the Objectives of the Ordinance.

The Center wholeheartedly supports the objectives of the Ordinance, which are outlined in the staff report to include (1) regulating the siting of structures, uses and activities within individual lots so as to avoid key habitat areas used by wildlife; (2) consolidating development to provide open areas as a means to facilitate wildlife passage within and between individual lots; and (3) providing access to, and movement between, surrounding protected habitat areas on a regional geographic scale.

In furtherance of those objectives, the Center again recommends that certain exemptions be removed from the Ordinance. In particular, section 8109-4.9 establishes the Critical Wildlife Passage Areas Overlay Zone ("CWPA"), which provides requirements and procedures for development in this zone. (Exh. 14 at 21.) However, the next section provides that these requirements and procedures do not apply to some types of development, including "[a]ny development on a lot zoned Commercial (CO, C1, CPD)....aboveground pipelines or transmission lines...construction and maintenance of driveways and roads internal to a lot." (*Id*. at 21.) Commercial development, pipelines, and internal roads can all impede wildlife connectivity and disturb animal behavior. As such, it is unclear why these uses are exempt from the CWPA requirements and procedures. Instead, these exemptions undermine the objectives of the Ordinance.

In addition, it appears that some uses are partially exempt from the CWPA requirements and procedures, including golf courses, wildlife impermeable fencing used to enclose commercially grown agricultural crops or products (Section 8109-4.929(c)), and drilling for geologic testing. Golf courses can fragment and degrade wildlife habitat while causing groundwater and surface water pollution arising from pesticides and fertilizers. And as stated in Section 8104-7.7, wildlife impermeable fencing "can create barriers to food and water, shelter, and breeding access to unrelated members of the same species needed to maintain genetic diversity." Exempting wildlife impermeable fencing that encloses vast areas of land undermines the goals of the Ordinance to "preserve functional connectivity for wildlife and vegetation" and"[m]inimize wildlife impermeable fencing" (*Id*). These types of development/land use should not be exempt from the CWPA requirements and procedures.

VIII. The Lighting Exemptions for Surface Mining and Oil and Gas Exploration Undermine the Objectives of the Ordinance.

Light pollution can confuse migratory birds and otherwise disturb and disrupt wildlife foraging and breeding. Light pollution can seriously threaten the continual survival of numerous species: "[t]he cumulative effects of behavioral changes induced by artificial night lighting on competition and predation have the potential to disrupt key ecosystem functions." (Rich and Longcore 2013). Species known to be impacted include mammals, birds (both migrating and non-migrating), reptiles, amphibians, invertebrates, fishes and plants. The impacts are wide ranging. Impacts include utilization of artificial lights, such as streetlights to forage underneath for food, which increases predation risk. (Rich and Longcore 2013). Bird species can also become "entrapped" within lighted areas, refusing to move for the night, and thus increasing their risk of predation. (*Id*.) Furthermore, light pollution need not be highly extensive to have a major impact on nearby plants and wildlife. For instance, one study found that desert rodents reduced foraging activity when exposed to the light of a single camp lantern. (Rich and Longcore 2013).

As such, any exemptions for outdoor lighting standards set forth in section 8109-4.8.2.1 should be narrowly drawn. (See Exh 14 at 8). While some of these exemptions described in section 8109-4.8.2.2 appear warranted, it is unclear why this section exempts "temporary or intermittent outdoor night lighting used for surface mining operations or oil and gas exploration and production." (*Id*.) Notably, the term "intermittent" is defined as a period of between "31 and 90 calendar days within any 12-month period." This exemption would allow surface mining or oil and gas exploration operations to use outdoor night lighting—often in remote or rural areas—for up to three months out of any given year. This exemption is likely to undermine the objective of the Ordinance to provide for movement between protected habitat areas on a regional geographic scale.

Further exemptions are provided in a post-Planning Commission revision in Section 8109-4.8.2.4(b)(11), which states that "lighting utilized for oil and gas exploration and production and surface mining operations may deviate the above-stated standards and requirements and shall be specified in a lighting plan approved by the County during the discretionary permitting process for the subject facility or operation." This weakens the Ordinance by allowing for increased light pollution that would further degrade wildlife corridors and deter animals from using them for movement and migration. Additional exemptions for lighting standards and requirements should not be afforded to surface mining and oil and gas exploration.

IX. The Ordinance Should Use the Best Available Science to Identify Important Areas for Wildlife Movement and Habitat Connectivity.

The Planning Commission Recommendations include the removal of Lockwood Valley from the Habitat Connectivity and Wildlife Corridor ("HCWC") overlay zone. As detailed in the March 12, 2019 Planning Division Letter to the Board of Supervisors, the wildlife connectivity mapping is a result of a collaborative research effort spanning several years and involving "scientists, regulatory agencies, academics, land managers, private property owners, businesses,

and non-profits throughout California." This mapping is the best available science that delineates habitat linkages with "the best potential movement routes" to support animal and plant species that were collectively selected to "represent a diversity of habitat needs and movement patterns" (*Id*.). As such, important habitat linkages identified through this process, including Lockwood Valley, should remain in the HCWC overlay zone.

The Planning Commission Recommendations also include the removal of Tierra Rejada Valley from the Critical Wildlife Passage Areas ("CWPA") overlay zone. This is one of three areas that were identified as "critically important wildlife passage areas" because they have the "highest risk of functional connectivity loss" (*Id*.) Again, this area was designated as a priority corridor area based on the best available science and should not be dismissed. The idea is to encourage clustering of development to minimize impacts of human activities (*e.g*., habitat degradation and removal; increased frequency of wildfire ignitions; edge effects caused by irrigation, artificial night-lighting, introduction of invasive species). To facilitate the general purpose of the Ordinance stated in Section 8104-7.7 "to preserve functional connectivity for wildlife and vegetation throughout the overlay zone by minimizing direct and indirect barriers, minimizing loss of vegetation and habitat fragmentation and minimizing impacts to those areas that are narrow, impacted or otherwise tenuous with respect to wildlife movement," the Tierra Rejada Valley should remain designated in the CWPA overlay zone.

The Center is encouraged by and supports the Planning Commission's recommendation to include the entire lot of the Santa Susana Field Lab in the HCWC and CWPA overlay zones, as the Save Open Space, Santa Monica Mountains ("SOS") identified this area as important habitat for mountain lions and other wildlife. (See Exh. 23 at PDF 189.) In addition, the SOS requested that the Lake Sherwood/Hidden Valley area be considered for inclusion in the HCWC and CWPA overlay zones because multiple mountain lions have been known to use the undeveloped areas of Lake Sherwood (*Id*.). The Center joins SOS in requesting that this area be considered for inclusion in the overlay zone. Ventura County should implement the best available scientific information regarding wildlife movement and habitat connectivity in the Ordinance. Furthermore, the Center urges the County to monitor existing corridors and identify other priority wildlife movement and habitat connectivity areas in collaboration with local experts, agencies, and organizations.

XI. Conclusion

Thank you for the opportunity to submit comments on the Ordinance and Planning Commission Recommendations. The Center strongly supports the objectives of the Ordinance and appreciates Ventura County's effort to use its local land use authority to develop an ordinance that promotes regional wildlife movement and habitat connectivity. Please do not hesitate to contact the Center with any questions at the number or email listed below.

Sincerely,





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ATTACHMENT D





December 22, 2020

Sent via email

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Re: Supplemental EIR for the Northlake Specific Plan

Dear Supervisors Mitchell, Kuehl, Solis, Hahn, and Barger:

We are writing to urge you to direct staff at the Los Angeles County Department of Regional Planning to prepare a supplemental environmental impact report ("EIR") for the Northlake Specific Plan ("Northlake Development"). The Northlake Development is a 1,300-acre housing development proposed on fire-prone wildlands adjacent to Castaic Lake State Recreation Area approved by the Board in April 2019. Even though the Northlake Development sits within a wildlife connectivity linkage known as the Sierra Madre-Castaic Connection, County staff did not require enforceable or adequate measures to address wildlife connectivity because the project proponent claimed mountain lions do not use the crossings in the area. **We are submitting evidence showing these claims are incorrect: the Mountains Recreation and Conservation Authority recently captured photographic evidence of a mountain lion using the crossing immediately adjacent to the development site.**

Background on the Conservation Groups

The Center for Biological Diversity ("Center") is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 1.7 million members and online activists throughout California and the United States. The Center and its members have

worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles.

Endangered Habitats League (EHL) is a non-profit, public interest conservation group for Southern California. It is dedicated to ecosystem protection and sustainable land use for all the region's inhabitants. EHL is and has been a stakeholder in several County of Los Angeles planning and environmental initiatives.

Photographic Evidence from the Mountains Recreation and Conservation Authority Confirms that Mountain Lions Use the Crossing Adjacent to the Northlake Development Site

We are submitting photos to you which were taken by staff at the Mountains Recreation and Conservation Authority ("MRCA") which demonstrate that mountain lions use the culverts under the I-5 freeway immediately next to the Project site. In particular, the attached photos (which we received from MRCA and are authenticated by the attached declaration from Chad Christensen) depict a mountain lion crossing from the east side of the southbound direction of the separated I-5 freeway from Grasshopper Canyon and westerly into the Marple Canyon on November 5, 2020 approximately between 2:49 a.m. and 2:59 a.m. (the "Mountain Lion Photos"). The single-lane box culvert for the Marple Canyon access road that crosses under this southbound section of I-5 is identified as "Tunnel 2" and "Underpass 2" in Santa Monica Mountains Conservancy's April 17, 2018 letter on the Northlake Development. Underpass 2 is one of two freeway crossing structures along a ten-mile section of I-5 between Templin Highway and Castaic Creek. The MRCA owns 245 acres of Marple Canyon west of Underpass 2 between the separated north-/southbound sections of I-5 and six acres east of Underpass 2 that connect with Grasshopper Canyon. The Mountain Lion Photos were taken by a camera placed on MRCA conservation lands by Mr. Christensen for the MRCA's Marple Canyon I-5 Wildlife Crossing Enhancement Project.

While the EIR for the Northlake Project does generally acknowledge that mountain lions may use the Project area (Final EIR at 2-136), County counsel joined the project proponents (which include Northlake Associates, LLC, which is controlled by NLDP Associates, LLC, Castaic Development Partners, LLC, and Michael Rosenfeld of Woodridge Capital Partners, LLC) in representing in court proceedings that "mountain lions will not be impacted by the Project" and "mountain lions are not using Project site crossings as confirmed by expert studies, including a wildlife camera study . . . ." (Respondents' and Real Parties in Interest's Joint Opposition Trial Brief at pp. 8 & 16-17.) **The Mountain Lion Photos demonstrate that these claims (which were based on a developer-commissioned study) are incorrect.**[1]

We further note that the County's own staff biologist, Joseph Decruyenaere, urged the developer's EIR drafters not to minimize the connectivity value of the existing culverts under the

[1] On December 17, 2020, the Conservation Groups requested judicial notice of these photos in Los Angeles County Superior Court case *Center for Biological Diversity et al. v. County of Los Angeles et al*., Case No. 19STCP01610, and the County and developer submitted a brief opposing the request for judicial notice.

I-5, which are far from perfect but are the only available means for mountain lions to cross the I-5 in the area. Mr. Decruyenaere wrote that the EIR language prepared by the developer's consultant:

> unduly minimizes the value of compromised movement opportunities. Nowhere else in biological conservation would you want to argue that because a resource is rare it's less than valuable. The fact that the use of a highly constrained opportunity for movement between natural areas might be made more difficult should always be considered a potentially significant impact unless there simply aren't any wildlife around to use the crossing. If a movement opportunity lacks a vegetated approach or some other feature that would seem to make it work better, that doesn't mean it doesn't pose an opportunity for movement. It just suggests that an animal might be less inclined to use it in the imaginary scenario that they have a better alternative. **However, in the real world, and in the highly fragmented, difficult to navigate landscapes that wildlife are consigned to, compromised movement opportunities may be the only opportunities available.** Revise the discussion to acknowledge the value of the crossings and instead of devaluing them, talk about how the project might change the potential for their use.[2]

Mr. Decruyenaere also wrote that the developer's consultant relies "chiefly on the idea that existing crossing features are not ideal but [they] neglect[] to provide conclusions as to how overall wildlife movement on the site and through the crossing features may actually change with buildout of the project."[3]

The Mountain Lion Photos confirm that mountain lions are using the culverts adjacent to the Project site even if they could be enhanced to be more friendly for wildlife. If built as proposed, the Northlake Development would permanently block these crossings and further constrain the already-limited movement opportunities for mountain lions.

We are submitting this evidence to the Board so the County can prepare an EIR for the Project that accurately discloses the impacts of this Project on the Central Coast South mountain lions. With an accurate EIR the Board can determine whether to reconsider the Project or require mitigation measures or project modifications to ensure the Northlake Development does not harm these mountain lions.

The County Must Prepare A Supplemental EIR for the Northlake Development

Relevant authorities require preparation of a subsequent or supplemental EIR in these circumstances. The California Environmental Quality Act ("CEQA") states that a subsequent or supplemental EIR may be required when either (1) substantial changes occur with respect to the

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[2] Mr. Decruyenaere's comments were attached to an email sent by County Planner Jodie Sackett on February 18, 2018 and are accessible in the administrative record ("AR") of the Los Angeles County Superior Court case *Center for Biological Diversity et al. v. County of Los Angeles et al*., Case No. 19STCP01610 at AR025874 (and Mr. Sackett's email is located at AR025825-26).
[3] Mr. Decruyenaere's comments are included in an email sent on February 12, 2018, and is available at AR025822-23.

circumstances under which the project is being undertaken which will require major revisions in the environmental impact report or (2) new information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available. (Pub. Res. Code § 21166.)

The Mountain Lion Photos qualify as either (or both) of these two categories. Mountain lions in the Project area are part of the Central Coast South population, which were granted "candidacy status" under the California Endangered Species Act ("CESA") in April 2020, such that they are afforded the same protections as other CESA-listed species. CEQA requires a "mandatory finding of significance" when a project has the potential to impact a CESA-listed species. (CEQA Guidelines § 15065(a)(1); *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 792 fn. 12.) And such a finding triggers a duty to consider and adopt all feasible alternatives or mitigation measures to reduce such impacts. (Pub. Res. Code § 21002.)

We Urge The Board Not To Drive Struggling Mountain Lions Closer to Local Extinction

Prior to the Board's approval of the Northlake Development last year, we submitted a letter to the Board on April 1, 2019 which included multiple peer-reviewed studies showing that Southern California's mountain lions are facing an extinction vortex due primarily to a loss of habitat connectivity. The Central Coast South population is particularly at risk with studies noting that a subset of the Central Coast South population in the Santa Monica mountains has "extremely low genetic diversity" while diversity of broader Central Coast South population is only "slightly higher."[4]

As currently proposed, the Northlake Development would permanently block connectivity over a significant portion of the Sierra Madre-Castaic Connection, which is a linkage critical to the survival of the Central Coast South mountain lions. Numerous expert agencies including the Santa Monica Mountains Conservancy ("SMMC") and California Department of Fish and Wildlife have raised serious concerns about the Northlake Development's permanent impacts on wildlife connectivity, with SMMC even filing an administrative appeal asking the Board to reconsider the Planning Commission's approval of the Project.

[4] Gustafson KD, Gagne RB, Vickers TW, Riley SPD, Wilmers CC, Bleich VC, Pierce BM, Kenyon M, Drazenovich TL, Sikich JA, Boyce WM, Ernest HB (2018) Genetic source–sink dynamics among naturally structured and anthropogenically fragmented puma populations. Conserv Genet 1–13 . doi: 10.1007/s10592-018-1125-0

Ensuring regional wildlife connectivity and protecting local mountain lions will require cooperation from conservation groups and state and local officials. We ask the Board to be part of the solution – and not part of the problem – by re-assessing the impacts of this development proposal.

Sincerely,

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Declaration of Chad Christensen

I, Chad Christensen, hereby declare as follows:

1. The facts set forth in this declaration are based on my personal knowledge. If called as a witness, I could and would testify competently to these facts. As to those matters which reflect an opinion, they reflect my personal opinion and judgment on the matter.

2. I am the Deputy Chief of Natural Resources and Planning for the Mountains Recreation and Conservation Authority (MRCA) and have been in this position since April 2020. Previously I was a Project Analyst hired in February 2017.

3. Attached are true and correct copies of photos taken on November 5, 2020 approximately between 2:49 a.m. and 2:59 a.m. of a mountain lion crossing from the east side of the southbound direction of the separated I-5 freeway from Grasshopper Canyon and westerly into the Marple Canyon. The single-lane box culvert for the Marple Canyon access road that crosses under this southbound section of I-5 is identified as "Tunnel 2" and "Underpass 2" in Santa Monica Mountains Conservancy's April 17, 2018 letter on the Northlake Project (AR010051-59). Underpass 2 is one of two freeway crossing structures along a ten-mile section of I-5 between Templin Highway and Castaic Creek. The MRCA owns 245 acres of Marple Canyon west of Underpass 2 between the separated north-/southbound sections of I-5 and six acres east of Underpass 2 that connect with Grasshopper Canyon.

4. These photos were taken by a wildlife camera that I placed on MRCA conservation lands on June 9, 2020 in my official capacity as Deputy Chief of Natural Resources and Planning and as Project Manager for the MRCA's Marple Canyon I-5 Wildlife Crossing Enhancement Project (Project).

5. The Project was awarded Wildlife Conservation Board (WCB) funding in 2020 to enhance 2.75 acres of habitat on the west and east approaches to Underpass 2 in order to promote wildlife movement between Marple and Grasshopper Canyons. On March 27, 2020, I received a Caltrans Encroachment Permit No. 07-20-N-SV-0894 to install the wildlife cameras within the freeway right-of-way as an MRCA in-kind contribution towards the Project. The

Project Area and Underpass 2 are part of the South Coast Wildland's *Castaic – Sierra Madre Connection.*

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 15th of December 2020,



Chad Christensen

Ventura, California


28.32 inHg - 68°F 11/05/2020 02:49AM MARPLE1


28.32 inHg - 68°F 11/05/2020 02:49AM MARPLE1


28.32 inHg - 68°F 11/05/2020 02:49AM MARPLE1


28.38 inHg - 73°F 11/05/2020 02:59AM MARPLE2


28.38 inHg - 73°F 11/05/2020 02:59AM MARPLE2


28.38 inHg - 73°F 11/05/2020 02:59AM MARPLE2

ATTACHMENT E

Electronically FILED by Superior Court of California, County of Los Angeles on 12/17/2020 12:28 PM Sherri R. Carter, Executive Officer/Clerk of Court, by M. Mariano, Deputy Clerk

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Attorneys for Center for Biological Diversity and Endangered Habitats League

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

CENTER FOR BIOLOGICAL DIVERSITY and ENDANGERED HABITATS LEAGUE,

Petitioners,

v.

COUNTY OF LOS ANGELES; BOARD OF SUPERVISORS OF THE COUNTY OF LOS ANGELES; PLANNING COMMISSION OF THE COUNTY OF LOS ANGELES; and LOS ANGELES COUNTY DEPARTMENT OF REGIONAL PLANNING,

Respondents.

NORTHLAKE ASSOCIATES, LLC; NLDP ASSOCIATES, LLC; CASTAIC DEVELOPMENT PARTNERS, LLC; WOODRIDGE CAPITAL PARTNERS, LLC; and MICHAEL ROSENFELD, an individual,

Real Parties in Interest.

Case No. 19STCP01610

PETITIONERS' THIRD SUPPLEMENTAL REQUEST FOR JUDICIAL NOTICE

Action Filed: May 1, 2019

Assigned for all purposes to the Honorable Richard L. Fruin

Department: 15

TO THE COURT AND ALL PARTIES:

PLEASE TAKE NOTICE that Petitioners Center for Biological Diversity and Endangered Habitats League ("Petitioners") hereby request that, in accordance with California Evidence Code sections 452(c) and 453, the Court take judicial notice of the photos of a mountain lion crossing one of the culverts adjacent to the Northlake development site (the "Mountain Lion Photos"), true and correct copies of which are attached to the attached Declaration of Chad Christensen ("Christensen Dec."):

I. Background on the Mountain Lion Photos

The Mountain Lion Photos depict a mountain lion crossing from the east side of the southbound direction of the separated I-5 freeway from Grasshopper Canyon and westerly into the Marple Canyon on November 5, 2020 approximately between 2:49 a.m. and 2:59 a.m. (Christensen Dec. ¶ 3.) The single-lane box culvert for the Marple Canyon access road that crosses under this southbound section of I-5 is identified as "Tunnel 2" and "Underpass 2" in Santa Monica Mountains Conservancy's April 17, 2018 letter on the Northlake Project (AR010051-59). (Christensen Dec. ¶ 3.) Underpass 2 is one of two freeway crossing structures along a ten-mile section of I-5 between Templin Highway and Castaic Creek. (AR010053; Christensen Dec. ¶ 3.) The Mountains Recreation and Conservation Authority ("MRCA")[1] owns 245 acres of Marple Canyon west of Underpass 2 between the separated north-/southbound sections of I-5 and six acres east of Underpass 2 that connect with Grasshopper Canyon. (Christensen Dec. ¶ 3.)

II. Judicial Notice of the Mountain Photos Is Proper

Petitioners acknowledge that extra-record evidence may not be submitted to contradict evidence in the administrative record. (See *Western States Petroleum Assn. v. Superior Court* (1995) 9 Cal.4th 559, 579 ["extra-record evidence can never be admitted merely to contradict the evidence the administrative agency relied on in making a quasi-legislative decision . . . ."].) However, here Petitioners request judicial notice of the Mountain Lion Photos to confirm what the EIR had already acknowledged in other sections—namely that "mountain lions may occur on the Project site" (AR007642; 7635) and

[1] MRCA is a local government public entity established pursuant to Joint Powers Act and is a partnership between the Santa Monica Mountains Conservancy, a state agency established by the legislature and two local park agencies. See https://mrca.ca.gov/about/.

"are expected to move between the Angeles National Forest through the study area to Castaic Lake in search of water in the summer . . ." (AR 3641.) (See Petitioners' Reply Brief at p. 8.)

More specifically, Petitioners are seeking judicial notice of the Mountain Lion Photos because Respondents argued in their Opposition Brief (and during the hearing on September 24, 2020) that the existing crossings adjacent to Project site are not currently used by mountain lions and are of no value to mountain lions. In particular, Respondents allege "mountain lions are not using Project site crossings as confirmed by expert studies, including a wildlife camera study" and "there is no evidence that mountain lions are using the off-site undercrossings adjacent to or crossing the Project Site." (Joint Opposition Brief at p. 8 & 17.) Petitioners are seeing judicial notice of the Mountain Lion Photos to show that the ***absence of evidence*** claimed by Respondents does not demonstrate an ***absence*** of mountain lions from the area. (See Petitioners' Reply Brief at p. 8.) Indeed, the Mountain Lion Photos confirm recent use of the area and the crossing adjacent to the Project site by a mountain lion.

Judicial notice of the Mountain Lion Photos also is proper because they qualify as an official act of a department of a public agency. (Cal. Evid. Code § 452(c); see also *Cooke v. Superior Court* (1989) 213 Cal.App.3d 401, 416 [overruled on other grounds in *County of San Diego v. State of California* (1997) 15 Cal.4th 68] [Evidence Code section 452(c) applies to legal subdivisions of the state].) In particular, the Mountain Lion Photos were taken by a wildlife camera that Mr. Christensen placed on MRCA conservation lands on June 9, 2020 in his official capacity as Deputy Chief of Natural Resources and Planning and as Project Manager for the MRCA's Marple Canyon I-5 Wildlife Crossing Enhancement Project (the "Wildlife Crossing Enhancement Project"). (Christensen Dec. ¶ 4.)

Courts may also allow judicial notice of post-approval documents in CEQA cases when they are helpful to an understanding of the issues. In Tu*olumne County Citizens for Responsible Growth, Inc. v. City of Sonora* (2007) 155 Cal.App.4th 1214 ["*Tuolumne County*"], the Court of Appeal granted Real Parties' request for judicial notice of a county transportation council resolution, even though the resolution "did not exist at the time [the] City approved" the project. (*Id.* at 1221.) The Court of Appeal granted the request "so that we have a better picture of the issues that will confront the superior court on remand," and noted that the trial court had also taken judicial notice of the resolution. (*Id.* & fn. 3.)

Other authorities support judicial notice of post-approval documents in some circumstances. Petitioners brought this action under Code of Civil Procedure section 1094.5 (see Verified Petition at ¶ 20), and CEQA specifically provides that challenges should be brought via this section. (See Pub. Res. Code § 21168 [any action or proceeding to set aside a decision of a public agency on the grounds of non-compliance with CEQA "shall be in accordance with the provisions of Section 1094.5 of the Code of Civil Procedure."].) In turn, section 1094.5 provides that extra-record evidence may be admissible "if the evidence was unavailable at the time of the hearing 'in the exercise of reasonable diligence'. . . ." (*Eureka Citizens for Responsible Government v. City of Eureka* (2007) 147 Cal.App.4th 357, 367, citing Code Civ. Proc. § 1094.5, subd. (e).) Here, Petitioners could not have requested judicial notice of the Mountain Lions Photos prior to the hearing on the Project because the Mountain Lion Photos did not yet exist.

III. Judicial Notice of the Mountain Lion Photos is Timely

Judicial notice of the Mountain Lion Photos is timely because Respondents have sufficient notice of this request and ample time to respond, given that the Court has taken the case under consideration and not yet issued any final rulings.

IV. Conclusion

Petitioners respectfully request that this Court take judicial notice of the Mountain Lion Photos.

DATED: December 17, 2020

CENTER FOR BIOLOGICAL DIVERSITY

By: _____

John Rose
Ross Middlemiss
Aruna Prabhala
John Buse

Attorneys for Petitioners CENTER FOR BIOLOGICAL DIVERSITY and ENDANGERED HABITATS LEAGUE

Attachment

Declaration of Chad Christensen

I, Chad Christensen, hereby declare as follows:

1. The facts set forth in this declaration are based on my personal knowledge. If called as a witness, I could and would testify competently to these facts. As to those matters which reflect an opinion, they reflect my personal opinion and judgment on the matter.

2. I am the Deputy Chief of Natural Resources and Planning for the Mountains Recreation and Conservation Authority (MRCA) and have been in this position since April 2020. Previously I was a Project Analyst hired in February 2017.

3. Attached are true and correct copies of photos taken on November 5, 2020 approximately between 2:49 a.m. and 2:59 a.m. of a mountain lion crossing from the east side of the southbound direction of the separated I-5 freeway from Grasshopper Canyon and westerly into the Marple Canyon. The single-lane box culvert for the Marple Canyon access road that crosses under this southbound section of I-5 is identified as "Tunnel 2" and "Underpass 2" in Santa Monica Mountains Conservancy's April 17, 2018 letter on the Northlake Project (AR010051-59). Underpass 2 is one of two freeway crossing structures along a ten-mile section of I-5 between Templin Highway and Castaic Creek. The MRCA owns 245 acres of Marple Canyon west of Underpass 2 between the separated north-/southbound sections of I-5 and six acres east of Underpass 2 that connect with Grasshopper Canyon.

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Project Area and Underpass 2 are part of the South Coast Wildland's *Castaic – Sierra Madre Connection.*

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 15th of December 2020,



Chad Christensen

Ventura, California

Response to Comment Letter B.4

Francis Tinney and Tiffany Yap
Center for Biological Diversity
May 29, 2025

Response B.4-1

Commenter provides an introduction to its comment letter. Regarding comments on sections of the RPDSEIR, specific comments are addressed below. With respect to the portions of the SEIR that were not recirculated, the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of those issues. See *Ione Valley Land, Air, and Water Defense Alliance, LLC v. County of Amador* (2019) 33 Cal.App.5th 165, 171 ("Res judicata bars all of LAWDA's objections to the partially recirculated EIR certification and project approval, except for those issues arising from the partially recirculated EIR concerning traffic impacts, because the remaining issues were litigated and resolved, or could have been litigated and resolved, in connection with the first petition, and the writ of mandate did not require the County to revisit issues other than traffic impacts."); *Sierra Club v. County of Fresno* (2020) 57 Cal.App.5th 979, 990 ("[A]n order of partial decertification is not necessary to protect Developer from relitigating the CEQA compliance of parts of the EIR not affected by the errors relating to air quality impacts. Instead, Developer is protected by res judicata, collateral estoppel and the requirement for the exhaustion of administrative remedies."); *Citizens for Open Government v. City of Lodi* (2015) 205 Cal.App.4th 296, 325-327 (res judicata barred claim that EIR failed to disclose cumulative water supply impacts as that claim was based on the same conditions and facts in existence when the original action was filed.); *San Franciscans for Reasonable Growth v. City and County of San Francisco* (1989) 209 Cal.App.3d 1502, 1517–1518 (rejected a challenge to an EIR's impacts analysis after the issuance of a peremptory writ of mandate as beyond the scope of the additional environmental review ordered in the writ); *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 481 ("Because those challenges asserted in the new petition could have been asserted before the entry of judgment in the prior proceeding and the material facts have not changed, BEEP's challenges to the project description and to the finding on land use consistency asserted in its latest petition for writ of mandate are barred by res judicata."); *Town of Atherton v. California High-Speed Rail Authority* (2014) 228 Cal.App.4th 314, 354 ("Collateral estoppel precludes relitigation of issues argued and decided in prior proceedings."). The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Response B.4-2

This is an introductory comment that is acknowledged. The comment does not address the content or adequacy of the RPDSEIR under CEQA or the State CEQA Guidelines; no additional response is required. The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Response B.4-3

The commenter is incorrect that the County cannot limit public comment to only those issues required for recirculation. The Los Angeles Superior Court's ruling in *Center for Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al*, Case No. 19STCP01610, dated January 11, 2021(Court Ruling; RPDSEIR Appendix A) granted in part and denied in part the petitioner's Petition for Writ of Mandate. Specifically, the Court Ruling held that the SEIR for the Northlake Project failed to comply with CEQA because it contained: (1) inadequate alternatives analysis (for failing to fully analyze a creek avoidance alternative); (2) inadequate Western Spadefoot Toad (WST) baseline assessment and, therefore, inadequate mitigation (to recreate baseline conditions; mitigation inadequate in detail and commitment); and

(3) improper deferred mitigation as to rare plants (measure lacked sufficient detail). The Court denied the Petition for Writ of Mandate regarding (1) impacts to mountain lions/wildlife crossings, (2) aesthetics, (3) air quality/public health, (4) wildfire impacts, and (5) recirculation.

CEQA Guidelines Section 15088.5(c) provides:

> If the revision is limited to a few chapters or portions of the EIR, the lead agency need only recirculate the chapters or portions that have been modified.

The RPDSEIR does not revise the 2019 SEIR in any respect other than as directed by the Court. As the RPDSEIR is limited to a few portions of the 2019 SEIR, pursuant to CEQA Guidelines Section 15088.5(c), the County elected not to recirculate the 2019 Draft SEIR or the 2019 FSEIR for public review and comment.

CEQA Guidelines Section 15088.5(f)(2) provides:

> When the EIR is revised only in part and the lead agency is recirculating only the revised chapters or portions of the EIR, the lead agency may request that reviewers limit their comments to the revised chapters or portions of the recirculated EIR. ***The lead agency need only respond*** to (i) comments received during the initial circulation period that relate to chapters or portions of the document that were not revised and recirculated, and (ii) ***comments received during the recirculation period that relate to the chapters or portions of the earlier EIR that were revised and recirculated***. The lead agency's request that reviewers limit the scope of their comments shall be included either within the text of the revised EIR or by an attachment to the revised EIR. (Emphasis added.)

Consistent with CEQA Guidelines Section 15088.5(f)(2), page 1-1 of the RPDSEIR states:

> This document has been made available for public review and comment in accordance with the procedures contained in the Notice of Availability. Written comments may be submitted to Mr. Jodie Sackett, Los Angeles County Department of Regional Planning, 320 West Temple Street, Los Angeles, California 90012. ***As CEQA Guidelines Section 15088.5, subdivision (f)(2) permits, the County requests reviewers to limit the scope of their comments to that material which is addressed within the text of the revised portions and the appendices included in this RPDSEIR. The County also requests that reviewers not make new comments on matters not included in this RPDSEIR.*** (Emphasis added.)

Therefore, pursuant to CEQA Guidelines Section 15088.5(f)(2), the County will not respond to comments related to the chapters or portions of the SEIR that were not modified and were not revised and recirculated in the RPSDEIR. Moreover, as set forth in Response B.4-1, the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of issues there were or could have been raised in the prior proceeding.

Commenter is correct that the County will need to recertify the SEIR (which will be comprised of the 2019 SEIR (Draft and Final), the RPDSEIR and the RPFSEIR); however, that recertification does not open up chapters and sections of the 2019 SEIR that were not recirculated for public comment or litigation challenge as the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of those issues. None of the cases cited by the commenter reach a different conclusion. In *Woodward Park Homeowners Assn., Inc. v. City of Fresno* (2007) 150 Cal.App.4th 683, the Court of Appeal ordered the trial court to issue a writ of mandate to the city to reverse its certification of the EIR; this case did not involve recirculation of only portions of the EIR and thus is inapplicable. The same is true regarding *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814 – it did not involve a challenge to recirculated sections of an

EIR. And while *Ukiah Citizens for Safety First v. City of Ukiah* required recirculation, it was limited to only one section of the EIR; it did not require recirculation of the entire EIR nor allow for public comment on the sections not recirculated: "Because the EIR certified in this case was inadequate in its analysis of energy impacts of the project, recirculation and consideration of public comments concerning the energy analysis will be necessary before the EIR may be certified and the project approved." *Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 Cal.App.4th 256, 266–267. In fact, in response to the Court of Appeal's decision in *Ukiah Citizens for Safety First v. City of Ukiah*, the City of Ukiah prepared and recirculated a "Recirculated Partial Draft Environmental Impact Report" for the project (SCH No. 2011112025),[1] which only revised the energy section and did not revise and recirculate any other portion of the final EIR that the court ordered the city to set aside. The City of Ukiah's project (a Costco Wholesale warehouse) was subsequently approved and the Costco in Ukiah opened its doors in July 2018.[2] The County here took the exact same corrective action that the City of Ukiah did – it revised and recirculated the portions of the 2019 SEIR that the Court ruled did not comply with CEQA. Contrary to the commenter's incorrect legal opinion, recertification of an EIR based on limited recirculation does not open up non-recirculated sections to public comment or legal challenge. The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Response B.4-4

The RPDSEIR complies with the Court Ruling as to those issues that had to be recirculated. As set forth in Response B.4-1, above, the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of issues there were raised or could have been raised in the prior proceeding. As set forth in Response B.4-3, CEQA Guidelines Section 15088.5(f)(2) expressly permits the County to limit comments to the material included in the RPDSEIR and only provide responses to those comments. Commenter's prior comments letters were responded to as part of the prior administrative proceeding. No additional response is required.

Response B.4-5

The RPDSEIR complies with CEQA Guidelines Section 15088.5 (c) as the RPDSEIR recirculated those sections of the 2019 SEIR that were required to be revised by the Court Ruling. New information has not been added to sections or chapters of the SEIR that were not recirculated. Moreover, Section 15088.5 does not trump the principles of res judicata and collateral estoppel. (See Response B.4-1.) To the extent that the commenter tries to revive its claim that additional sections of the 2019 SEIR need to be recirculated, that claim is barred by collateral estoppel as that claim was litigated as Cause of Action Two in *Center for Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al*, Case No. 19STCP01610 and the Court denied that claim. (RPDSEIR Appendix A (Court Decision) at pages 8 through 11.) No additional response is required.

Response B.4-6

As set forth in Response B.4-5, above, the RPDSEIR complies with CEQA Guidelines Section 15088.5 (c) as the RPDSEIR recirculated those sections of the SEIR that were required to be revised by the Court Ruling. New information has not been added to sections or chapters of the 2019 SEIR that were not recirculated including climate change impacts and water supply.

[1] The City of Ukiah's Recirculated Partial Draft EIR is available at https://cityofukiah.com/wp-content/uploads/2021/12/RevisedEnergyAnalysisCostco020917.pdf. The City of Ukiah's final Recirculated Partial Environmental Impact Report for the project is available at https://cityofukiah.com/wp-content/uploads/2021/12/FEIR_COSTCO_04272017.pdf.

[2] See https://cityofukiah.com/costco-in-ukiah/.

Moreover, Section 15088.5 does not trump the principles of res judicata and collateral estoppel. Wildfire impacts were included in RPDSEIR. No additional response is required.

Response B.4-7

See Responses B.4-1, B.4-3, B.4-5 and B.4-6. In addition, commenter raised claims of inadequate GHG/climate change impacts in its Petition for Writ of Mandate, but chose not to present those claims to the Superior Court. Res judicata bars that claim now. No additional response is required.

Response B.4-8

See Responses B.4-1, B.4-3, B.4-5, B.4-6 and B.4-7.

Response B.4-9

See Responses B.4-1, B.4-3, B.4-5, B.4-6 and B.4-7.

Response B.4-10

See Responses B.4-1, B.4-3, B.4-5, and B.4-6. In addition, the commenter raised claims of inadequate water supply in its Petition for Writ of Mandate, but chose not to present that claim to the Superior Court. Res judicata bars that claim now. No additional response is required.

Response B.4-11

Collateral estoppel bars relitigation of the mountain/wildlife movement and connectivity issues. See Responses B.4-1, B.4-3, B.4-5, and B.4-6. The Court Ruling denied all of the commenter's claims regarding mountain lions and wildlife crossings finding that "The use of the undercrossings by large animals was thoroughly discussed in the SEIR … The County had the best available information on the topic when it approved the Project in April 2019. The County's implied determination that the Project will not interfere with mountain lion crossings of the I-5 is supported by substantial evidence." (RPDSEIR Appendix A (Court Ruling), pages 19 through 21.) No additional response is required.

Response B.4-12

See Responses B.4-1, B.4-3, B.4-5, and B.4-6. In addition, CBD raised claims of inadequate analysis of impacts to the burrowing owl in its Petition for Writ of Mandate, but chose not to present that claim to the Superior Court. Res judicata bars that claim now. The commenter is correct regarding the changed status for the burrowing owl as of October 10, 2024; however, the change in status to State Candidate does not affect the adequacy of the previous SEIR's determination of significance. The burrowing owl was a California Species of Concern at the time of the significance determination and there is no need to change this determination or to update the mitigation measures. All the burrowing owl detections were of "wintering" owls and no breeding owls were detected. (See 2019 Draft SEIR Table 5.2-4 (Special Status Wildlife Species Known To Occur In The Project Region), page 5.2-23.) Thus, it may be possible for project construction in burrowing owl habitat to take place outside the winter season such that an Incidental Take Permit (ITP) would not be required as no owls would be impacted or otherwise harmed. As stated in the 2019 Draft SEIR:

> The burrowing owl winters on the Project site. This is an unusual wintering location for this species, since it is located in the foothills rather than on the valley floor. The focused surveys determined that the Project site is only used by the burrowing owls for wintering and not breeding. Breeding or wintering populations of burrowing owl have been almost

completely extirpated from the coastal slope of southern California; therefore, impacts to this wintering population would be considered potentially significant. Implementation of MM 5.2-12, MM 5.2-13, and MM 5.2-14[3] would reduce impacts to less than significant. These mitigation measures require pre-construction wintering owl surveys, and if active wintering burrows are detected within the Project impact boundary, artificial burrows outside the impact boundary within suitable habitat would be constructed at a 1:1 ratio, ensuring a substantial reduction in potential impacts during and after Project implementation." (2019 Draft SEIR, page 5.2-39.)

Nevertheless, the Applicant will consult with CDFW and should CDFW determine that an ITP would be warranted, an ITP will be obtained. In any event, the proposed 2:1 Mitigation for all areas of suitable habitat fully mitigates the impact in accordance with CEQA.

Response B.4-13

See Responses B.4-1, B.4-3, B.4-5, B.4-6 and B.4-11.

Response B.4-14

See Responses B.4-1, B.4-3, B.4-5, B.4-6 and B.4-11.

Response B.4-15

See Responses B.4-1, B.4-3, B.4-5, B.4-6 and B.4-11.

Response B.4-16

The RPDSEIR, including Appendices D-1 (Wildland Fire Risk Report), D-2 (Northlake Specific Plan Wildland Fire Evacuation Scenarios – Evacuation Time Estimates Memorandum) and K (Wildland Fire Risk Report Northlake Project Addendum #1), complied with all of the mandates of CEQA (Appendix G, Section XX, subsection a, b and c requirements) and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act"* regarding wildfire impact analysis. Commenter provides no credible evidence of a significant wildfire impact.

Response B.4-17

Commenter claims the RPDSEIR does not include substantial evidence supporting the determination that "[n]either construction nor operation of the Project would exacerbate wildfire risks, thereby exposing occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire." The substantial evidence is contained in RPDSEIR Appendices D-1 (Wildland Fire Risk Report), D-2 (Northlake Specific Plan Wildland Fire Evacuation Scenarios – Evacuation Time Estimates Memorandum), and K (Wildland Fire Risk Report Northlake Project Addendum #1). These are expert technical reports, cited in and attached to the RPDSEIR, that provide the substantial evidence for all of the wildfire impact determinations. Commenter is incorrect that the RPDSEIR did not adequately disclose or assess the area's baseline conditions. The Wildland Fire Risk Report (RPDSEIR Appendix D-1) provides an extensive discussion of the baseline environmental conditions, including climate history, vegetation and wind history.

[3] **MM 5.2-14** Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable wintering burrowing owl habitat, the area shall be assessed. If the habitat assessment concludes that the area lacks potentially suitable burrowing owl burrows, no additional action is required. However, if potentially suitable burrows are located in the assessment area, any burrows that may be impacted by the project will be replaced with artificial burrows within on-site or off-site (if applicable) preserved areas with potentially suitable burrowing owl habitat.

(RPDSEIR Appendix D-1, pages 13 through 25; see also Response B.4-18, below.) RPDSEIR Appendix K (Wildland Fire Risk Report Northlake Project Addendum #1) specifically addresses risk from new human presence in high fire-prone areas and the wildlife-urban interface (WUI) and concludes that "the increased wildfire risk from human-ignited wildfire is less than significant." (Appendix K at page 7.) The RPDSEIR, including Appendices D-1, D-2, and K, complied with all of the mandates of CEQA (Appendix G, Section XX, subsection a, b, and c requirements) and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act"* regarding wildfire impact analysis. Commenter provides no credible evidence of a significant wildfire impact.

Response B.4-18

Commenter claims the Wildland Fire Risk Report fails to mention the Hughes Fire in January 2025 and did not account for climate change. Regarding the Hughes Fire, the Wildland Fire Risk Report was prepared in December 2024, a month before the Hughes Fire. As such, it was not included in the fire history section of the report as it had not occurred at the time the report was prepared. The Hughes Fire was predicted by Scenario 6 - LakeSpotsat40, with the origin within the County Recreation Area (RPDSEIR Appendix D-1, page 65, 68), and the Evacuation Report determined that there would be sufficient time to evacuate the previously approved Project with no impediment to all three evacuation points (RPDSEIR Appendix D-1, Table 6; see also RPDSEIR Appendix D-1, page 68). The fact that the Hughes Fire happened, which was predicted, does not change the analysis, conclusions or determinations that the wildfire impacts are less than significant. Regarding climate change, the Wildland Fire Risk Report contains an extensive discussion of weather, temperature, humidity and wind history based on years of reported meteorological data for the Project Site that were added into the extensive modeling of the 10 wildfire scenarios. (RPDSEIR Appendix D-1, pages 25 through 50.) The sources cited by commenter are not Project Site specific. For modeling purposes, local (i.e., Project Site) historical data trends provide the only credible data to predict future change. Thus, the comment that the Wildland Fire Risk Report failed to account for climate change is incorrect. Commenter provides no credible evidence of a significant wildfire impact.

Response B.4-19

Commenter claims the RPDSEIR fails to adequately mitigate the wildfire risk, yet submits no credible evidence of a wildfire significant impact. The RPDSEIR, and the supporting technical appendices (RPDSEIR Appendix D-1, D-2 and K), provide substantial evidence that the wildfire risk is less than significant. The RPDSEIR, including Appendices D-1, D-2 and K, complies with all of the mandates of CEQA (Appendix G, Section XX, subsection a, b and c requirements) and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act"* regarding wildfire impact analysis. The County is not required to impose mitigation measures where there is a less-than-significant impact. Applicable case law prohibits the imposition of mitigation measures unless they have a nexus to and are proportional to a project's significant impacts. (*Nollan v. California Coastal Comm.* (1987) 483 U.S. 825; *Dolan v. City of Tigard* (1994) 512 U.S. 374.) Commenter's claim that project design features cannot be used to avoid impact analysis citing *Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645 is inapplicable. The Wildland Fire Risk Report sets forth wildland fire protection measures (including regulatory compliance measures) that were previously required or integrated into the previously approved Project and additional fire protection measures or project design features all of which contribute to avoiding or reducing wildfire impacts and were considered in the wildfire impact analysis. (RPDSEIR Appendix D-1, pages 77 – 78.) The RPDSEIR, including Appendices D-1, D-2, and K, contains detailed analysis that is substantial evidence supporting the determination of a less than significant wildfire impact. There is no missing analysis (and the commenter does not identify any missing analysis); thus,

Lotus is inapplicable in this case. In *Lotus*, the issue was adoption of mitigation absent impact analysis or a significance threshold for determining a significant impact that required mitigation. Commenter provides no credible evidence of a significant wildfire impact.

Response B.4-20

Commenter claims the RPDSEIR and its wildfire technical reports fail to mention or discuss the Project area's "historical fire regimes and the role Indigenous communities likely played in shaping the fire ecology of habitats in and adjacent to the Project area," yet identifies no requirement to include such in the technical impact analyses. There is no such requirement. The RPDSEIR, including Appendices D-1, D-2, and K, complies with all of the mandates of CEQA (Appendix G, Section XX, subsection a, b, and c requirements) and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act"* regarding wildfire impact analysis. The Wildland Fire Risk Report (Appendix D-1) provides an extensive discussion of the baseline environmental conditions and reported fire history. Commenter provided no credible evidence of a significant wildfire impact.

Response B.4-21

Commenter states that the proposed project could increase unintentional human-driven wildfires that disrupt natural fire regimes and further degrade ecosystems, yet provides no evidence in support. The RPDSEIR, including Appendices D-1, D-2, and K, complies with all of the mandates of CEQA (Appendix G, Section XX, subsection a, b and c requirements) and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act"* regarding wildfire impact analysis. Appendix K (Wildland Fire Risk Report Northlake Project Addendum #1) specifically addresses risk from new human presence in high fire-prone areas and the wildlife-urban interface (WUI) and concluded that "the increased wildfire risk from human-ignited wildfire is less than significant." (Appendix K at page 7.) Commenter provided no credible evidence of a significant wildfire impact.

Response B.4-22

Commenter raises concerns regarding unintentional wildfires and associated air quality. Addendum #1 to the Wildland Fire Risk Report specifically addresses risk from new human presence in high fire-prone areas and concluded that "the increased wildfire risk from human-ignited wildfire is less than significant." (RPDSEIR Appendix K at page 7.) Moreover, the RPDSEIR concludes that "Neither construction nor operation of the Project would exacerbate wildfire risks, thereby exposing occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire." Commenter speculates that an unintentional wildfire in the Project Area would result in poor air quality; none of the commenter's citations are Project Site specific. CEQA does not require the analysis of speculative impacts. (CEQA Guidelines Section 15145.) Commenter provided no credible evidence of a significant wildfire impact.

Response B.4-23

Commenter states that development in fire-prone areas increases firefighting costs due to unintentional ignitions. RPDSEIR Appendix K provides an assessment of exacerbation of wildfire risk (CEQA Guidelines section 15126.2(a)) from increased human habitation in a wildlife-urban interface and concluded that the increased wildfire risk from human-ignited wildfire associated with the previously approved Project is less than significant. Any increased costs on governmental agencies related to the provision of public services is not considered a project impact. In *City of Hayward v. Board of Trustee of California State University* (2015) 242 Cal. App. 4th 833, the court found that Section 35 of Article XIII of the California Constitution requires local agencies to provide

public safety services, including fire protection and emergency medical services, and that it is reasonable to conclude that the city (here the County) will comply with that provision to ensure that public safety services are provided. The *Hayward* ruling also concluded that "assuming the city continues to perform its obligations, there is no basis to conclude that the project will cause a substantial adverse effect on human beings" and the "need for additional fire protection services is not an environmental impact that CEQA requires a project proponent to mitigate." Commenter provided no credible evidence of a significant wildfire impact.

Response B.4-24

Commenter claims the RPDSEIR (though it cites the SEIR) fails to adequately assess and mitigate the Project's impacts to wildfire risk, yet fails to identify an error or omission in the extensive analysis. Stating that "wildfire impacts disproportionately affect low-income and minority communities," while may be true, is not a critique of the RPDSEIR wildfire impact analysis and in no way undermines the RPDSEIR's analysis. Moreover, commenter fails to cite any guideline or requirement for the wildfire impact analysis to address "the aftermath of a wildfire." The RPDSEIR wildfire analysis and the Wildfire Report comport with the requirements of CEQA and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act*" guidelines. Commenter submitted no credible evidence of a potential significant wildfire impact. See also Response B.4-22.

Response B.4-25

While the commenter claims the WST impact analysis failed to take into account certain factors, the commenter fails to identify anything that was omitted from the WST analysis and does not provide any credible evidence of a potential significant impact that was not already addressed in the WST analysis. GLA prepared a detailed Western Spadefoot Toad (Spea hammondii) Impact Analysis and Habitat Mitigation and Monitoring Plan (HMMP) in coordination with the California Department of Fish and Wildlife (CDFW), which included review by CDFW, with comments provided by CDFW in the WST Plan dated between August 31 and September 30, 2022, with additional comments dated April 28 and May 1, 2023. Upon their final review, following requested revisions on April 28 and May 1, 2023, CDFW provided an email confirming that all requested modifications to the WST Plan had been completed and that CDFW had no additional comments, thus confirming the adequacy of the WST Plan. (See RPDSEIR Appendix B-1 (Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan).) Importantly, CDFW submitted a comment letter on the RPDSEIR (Letter A.1, above) and stated "CDFW has reviewed and approved the Habitat Mitigation and Monitoring Plan for special-status plants (July 2022 [Revised October and December 2022 and February 2023) and western spadefoot toad (July 2022 [Revised March and June 2023])." Commenter provided no credible evidence of a significant WST impact.

Response B.4-26

As referenced by the commenter, WST was not detected in VP6 in 2004/2005 when the species was at the same time observed in two other pools at the site (SP1 and VP1). However, the RPDSEIR determined that VP6 is potentially suitable during above-average rainfall years, meaning that the pool would need to inundate for an adequate duration to allow WST larvae to complete its lifecycle to the metamorph stage. VP6 is a very shallow pond that in some years contains sufficient water for at least the deposition of eggs and the presence of larvae. As referenced from the RPDSEIR by the commenter, western toad larvae were observed in the pool in 2004/2005. However, the pool was not observed in 2004/2005 to pond for sufficient duration to allow larvae to reach sufficient size to emerge as metamorphs. The commenter further questions why the presence of "tadpoles" in VP6 in 2004/2005 is not considered as a detection of WST, or

why the RPDSEIR concluded that VP6 is "potentially suitable" for WST and not "occupied". But the commenter themselves noted that it was western spadefoot larvae (and not WST) that was detected in VP6. As such, VP6 was not occupied by WST in 2004/2005, and therefore, the RPDSEIR did not recognize it as occupied. Therefore, the commenter's statement that the characterization of VP6 as being unoccupied by WST as "unfounded" is incorrect, as the WST was clearly not present in VP6 in 2004/2005 and the determination of presence/absence of any species is based on the year in which surveys are conducted. That WST was detected in other pools at the same time is not a basis for concluding that VP6 was occupied, as WST was clearly not present in VP6 during that season, and that is an important distinction. However, that the pool could support WST in the future, based in part on the detection of the larvae of another toad species (western toad) in the pool, was the basis for the RPDSEIR to conclude that VP6 represents suitable habitat for WST and to conservatively propose mitigation for the pool. This is an accurate depiction of VP6 and does not "downplay the importance of the existing pools to the spadefoot population present on the Project site" as was stated by the commenter. Nevertheless, the commenter is correct that VP6 was included in the ponds for which impacts are considered significant. Thus, impacts are fully mitigated as determined in coordination with CDFW, which reviewed and approved the WST HMMP. (See Response B.4-24.)

Response B.4-27

As noted in Response B.4-25, GLA prepared a detailed Western Spadefoot Toad (*Spea hammondii*) Impact Analysis and Habitat Mitigation and Monitoring Plan in coordination with CDFW. CDFW expressly acknowledged that it approved the WST HMMP. (RPDSEIR Comment Letter A.1, Response A.1-3.) Commenter provides no credible evidence of a potential significant impact not already addressed in the WST analysis or fully mitigated to CDFW's satisfaction.

Response B.4-28

See Response B.4-25 and B.4-27.

Response B.4-29

See Response B.4-25 and B.4-27.

Response B.4-30

See Response B.4-25 and B.4-27. Commenter's claims of inadequate mitigation are incorrect. CDFW approved the WST HMMP. (See RPDSEIR Comment Letter A.1, Response A.1-3.)

Response B.4-31

The mitigation identified in the CDFW-approved HMMP (onsite ponds) is alone sufficient to mitigate the project impacts to WST. The "contingency sites" are identified specifically for that purpose, as contingencies to be utilized as necessary if criteria could not be fulfilled with the onsite pools. However, the contingency sites are not presently needed to create additional artificial pools as part of the proposed mitigation. If the contingency sites are later needed to satisfy mitigation criteria, then activities performed, including additional artificial pool creation, would be undertaken as required under the HMMP which is enforceable mitigation (Mitigation Measure MM 5.2-9). It is speculation to assume that the onsite pools will not be successful and thus additional ponds at different locations will be needed. CEQA does not require the analysis of speculative impacts. (CEQA Guidelines Section 15145.) The HMMP provides detailed performance criteria for both success criteria for the onsite ponds and contingency site criteria should additional pools be required. (See Response B.4-25 and B.4-27.)

Response B.4-32

Commenter requests a higher percentage of affordable units. This is not a comment that addresses impact issues that were required to be recirculated in the RPDSEIR, nor is it a CEQA issue. Moreover, the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of this issue. (See Response B.4-1.) Comment will be forwarded to the decision-makers.

Response B.4-33

Commenter provides background information on VMT but does not provide any credible evidence of a potential VMT impact. The RPSDEIR contains adequate VMT analysis, approved by Public Works. (RPDSEIR pages 2-53 through 2-60, RPDSEIR Appendices C-1 and C-2.)

Response B.4-34

Commenter claims the use of the NLSP is an invalid baseline for the VMT analysis. Commenter is incorrect. The NLSP is the approved specific plan for the Project Site. The approvals are valid, and the plan could be constructed as approved; as it was approved and still valid, it is not hypothetical. As such, the NLSP is the correct baseline to compare the previously approved Project to. The County Department of Public Works expressly approved the VMT analytic approach, including using the NLSP as the baseline. The NLSP VMT per Service Population (27.03) is the baseline for comparison to the previously approved Project VMT per Service Population (25.70) per the methodology required by the County Department of Public Works. Per the County Department of Public Works, this threshold is appropriate because the NLSP approval occurred before SB 743 and modifications are being made after SB 743. Therefore, per the County, the previously approved Project does not need to be evaluated against the County baseline like a brand new project. Because the previously approved Project VMT per Service Population is less than the NLSP, VMT impacts were determined to be less than significant. Public Works approved the VMT Transportation Analysis. (See RPDSEIR Appendix C-2 (Department of Public Works December 2, 2024 Transportation Impact Analysis Approval Letter.)

Response B.4-35

Commenter claims mitigation needs to be adopted to reduce significant VMT impacts, yet the VMT analysis, approved by Public Works, demonstrates that there will be no VMT impact. As such, mitigation is not necessary or required. The County is not required to impose mitigation measures where there is a less-than-significant impact. Applicable case law prohibits the imposition of mitigation measures unless they have a nexus to and are proportional to a project's significant impacts. (*Nollan v. California Coastal Comm.* (1987) 483 U.S. 825; *Dolan v. City of Tigard* (1994) 512 U.S. 374.) Moreover, as set forth in the Northlake Specific Plan Transportation Impact Analysis for CEQA (RPDSEIR Appendix C-1), there are a number of project features of the previously approved Project that tend to reduce VMT, such as constructing a pedestrian network, integrating affordable housing, constructing bicycle trails and expanding the transit network which the previously approved Project is not taking quantitative credit for. Commenter provided no credible evidence of a VMT impact.

Response B.4-36

Commenter repeats its comment that the VMT analysis used the wrong baseline. As set forth in Response B.4-34, that is incorrect; the VMT analysis, approved by Public Works, used the correct baseline. Moreover, as noted in Response B.3-35, there are a number of project features of the previously approved Project that tend to reduce VMT such as constructing a pedestrian network, integrating affordable housing, constructing bicycle trails, and expanding the transit network which

the previously approved Project is not taking quantitative credit for, all of which demonstrates consistency with the General Plan policies to reduce VMT. Commenter provided no credible evidence of a VMT impact.

Response B.4-37

Commenter takes issue with the rejection of Alternative C and refers to financially viable luxury resort. Neither the 2019 SEIR nor the RPDSEIR contain an Alternative C, and a luxury resort is not a proposed project use. The 2019 SEIR identified Alternative 4 (Phase 1 Development) as the environmentally superior alternative. The RPDSEIR identified the Partial Creek Avoidance Alternative (PCAA) (RPDSEIR Alternative 2) as the environmentally superior alternative. The Court Ruling only required recirculation of the Creek Avoidance Alternative (CAA) as a fully analyzed alternative. The RPDSEIR alternatives analysis of the CAA and the PCAA complies with the Court Ruling and CEQA's requirements.

Response B.4-38

Commenter claims that the rejection of the CAA needed to include cost information as to why it is infeasible. Not so. Rejection of an alternative can be based on economic, legal, social, or other considerations. (CEQA Guidelines Section 15091 (a) (3).) And only a single basis for rejection, supported by substantial evidence, is required. (See *Save Panoche Valley v. San Benito Cnty.* (2013) 217 Cal.App.4th 503, 523 [upholding rejection of alternative as one finding of infeasibility was supported by substantial evidence; court did not review the other infeasibility findings as only one supported finding was needed].) Here, the RPDSEIR determined that the CAA was infeasible due to its "engineering geologic, geotechnical and hydrologic issues." (RPDSEIR, page 2-80.) That determination was supported by the Geotechnical/Hydrologic Review of the Creek Avoidance Alternative (RPDSEIR Appendix F-2) which provided expert substantial evidence:

> Our review found that the CAA configuration results in significant increased geotechnical, engineering hydrogeologic, and safety / critical access risks to the development. The CAA was also found to seriously impact Grasshopper Creek as well. It is our opinion that the CAA approach, in an attempt to "save" the creek, would likely result in the ultimate degradation and destruction of the creek and canyon habitat. We also conclude that the engineering geologic /geotechnical adversities that would develop as a result of implementing the CAA approach would result in unacceptable increases in risk and, as a result, would not be feasible.

Commenter also claims that the RPDSEIR states that the CAA is not feasible "without elaboration." The RPDSEIR and the Geotechnical/Hydrologic Review of the Creek Avoidance Alternative (RPDSEIR Appendix F-2) provide extensive analysis demonstrating that the CAA is infeasible. Commenter provided no credible evidence to the contrary.

Regarding the PCAA, as set forth in the RPDSEIR,

> The PCAA provides the same number of residential units as the previously approved Project, but on a smaller Phase 2 development area. As such, the PCAA contributes the same as the previously approved Project regarding the County's RHNA allocation as the previously approved Project. As with the previously approved Project, the affordable unit count would be maintained at 315 units. However, the PCAA provides significantly less active recreational and open space area (37 fewer acres). Accordingly, the PCAA does not meet the following objective to the same degree as the previously approved Project:
>
> - Specific Plan 4, Open Space/Recreational Area, Goal i: To improve opportunities for a variety of outdoor recreational experiences

Rejection of an alternative for failing to meet project objectives as compared to the proposed project is legally permissible. (See *Sierra Club v. County of Napa* (2004) 121 Cal.App.4th 1490, 1503; *Save San Francisco Bay Ass'n v. San Francisco Bay Conserv. & Dev. Comm'n* (1992) 10 Cal.App.4th 908, 929.) Commenter provided no credible evidence to the contrary. Both determinations that the CAA and the PCAA are infeasible are supported by substantial evidence and consistent with the mandates of CEQA.

Response B.4-39

Commenter summarized its comments, threatens litigation, and requests notice and document retention. All of Commenter's comments were addressed above. Commenter is on the project notice list. No further response is required.

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May 29, 2025

Jodie Sackett
Los Angeles County Department of Regional Planning
320 West Temple Street
Los Angeles, California 90012

Via Electronic Mail

Comments on Partial Recirculated Draft Supplement EIR
NorthLake Specific Plan - SCH 2015031080

Dear Mr. Sackett:

B.5-1

The Santa Monica Mountains Conservancy offers the following comments on the Partial Recirculated Draft Supplemental Environmental Impact Report (PRDSEIR) for the proposed NorthLake project. All the EIR alternatives to date, after all proposed mitigations, would still result in significant biological impacts to habitat for the State listed mountain lion population, Western spadefoot toad habitat, and habitat connectivity to existing underpasses used by wildlife under the southbound lanes of Interstate 5. One such underpass has protected public land on both sides of the southbound lanes.

B.5-2

The cumulative impacts analysis for biological impacts remains inadequate and free of any facts as demonstrated by this concluding PRDSEIR paragraph:

> *The cumulative impact on biological resources would be considered greater than the Project alone. However, when considering all the proposed and existing projects in the Project area, the previously approved Project contributes a relatively small portion of the impacts in the area due to its relatively small impact acreage, and the location adjacent to existing development. The Project is not expected to contribute a significant impact to the Project area. Incremental impacts would not be cumulatively considerable, and no additional mitigation is required.*

A project with 33 million cubic yards of grading that extends development over three miles into core National Forest and State Park adjacent habitat is none of the above, it is cumulatively significant. It is an avoidable tragedy to wildlands and the viewsheds of many public viewing areas.

The Conservancy urges the County not to certify the PRDSEIR. If the County does certify the PRDSEIR, the Conservancy urges that only the Partial Creek Avoidance Alternative Recirculated Alternative 2 be considered for adoption as the environmentally superior alternative in the PRDSEIR. The County should also trim the northern development footprint boundary of this alternative to include just enough grading to allow just the shown northern access road to Ridge Route but no other northward development shown in the Phase Two project area. The County has the power to shape this and all other alternatives. They are not at all set in stone. The long-term ecological value of this referenced Alternative 2 and of the Phase One Only Alternative is wholly dependent on all open space both to the north and to the periphery of the development being permanently protected by conservation easements recorded as conditions of any map recordation and with substantial monitoring endowments. Expansion of the project would be permanently precluded.

B.5-3

The County has no obligation to approve more development than that immediately above-described footprint of a trimmed down PRDSEIR Alternative 2. The applicant failed to include specific measurable Project Objectives in both the DEIR and all subsequent EIR documents. The official EIR Project Objectives are subjective with no set minimum baseline numbers for **any** development components. In addition, the sum all EIR material to date leading up to the PRDSEIR does not conclude that any specific number of any type of housing is necessary for the County meet its RHNA numbers.

B.5-4

Because the sum of EIR materials and PRDSEIR to date conclude that the project will still result in many unavoidable significant adverse environmental impacts, the County does not have to adopt a Statement of Overriding Conditions if it chooses to negotiate a reduction of any adverse impacts. With this above laid out complete capacity to legally shape the project, the County should balance new housing in the Specific Plan area with the needs of the existing greater public such as--traffic reduction, open space, wildfire prevention, viewshed protection, air pollution avoidance, water supply, landfills, and access to quality nature.

B.5-5

The PRDSEIR environmentally superior alternative (Alternative 2) provides over 1500 mixed housing units. The best argument in the PRDSEIR against this PRDSEIR Alternative 2 is that there would 37 acres less of active recreational and open space area. What short sighted thinking. There instead actually would be hundreds of more acres of open space, and any lost recreational area could simply be integrated into the Alternative 2 footprint. The upper half of Grasshopper Canyon would not need to be filled in with 10 million cubic yards of fill.

Times have changed. Big fires have burned. Home insurance has permanently gone up and become scarce to obtain in Very High Fire Hazard Severity Zones which this project is and will remain in. Ecological resources have more protection. Citizens value viewsheds from freeways and parklands with more expectations of preservation. The physical and biological constraints of the subject property are immense. The proposed project makes a mockery of the County planning policies and objectives to protect open space and sensitive resources. It is

B.5-6

1990s idea in 2025 and must be substantially reduced to respect lessons learned in the January 2025 fires.

B.5-6 cont.

What is going to happen to the oil pipelines that traverse the length of the project on the east side of Grasshopper Canyon?

B.5-7

The PRDSEIR shows land in Marple Canyon owned by the Mountains Recreation and Conservation Authority (MRCA) as potential mitigation areas. The MRCA has not provided any approval or made any arrangement with the applicant.

The Conservancy works with the MRCA on many habitat restoration projects in the Santa Clara River watershed. Temperatures will continue to get hotter as the climate changes, and water will become progressively more expensive and evaporate more rapidly. Habitat restoration is hard and fraught with failure from drought, herbivory, and onslaughts of aggressive non-native weeds. To our staff knowledge, there are no known successful upland restoration projects in the Santa Clara River watershed. Hydroseeded manufactured slopes with v-ditches adjacent to residential subdivisions do not qualify.

B.5-8

The entire PRDSEIR mitigation program for the loss of sensitive plant species depends on upland habitat restoration of plants that are rare. They are rare because they have a tough time growing in very many places. No one knows how viable the seeds of these species are when collected and what percentage if any will germinate when finally sown years later in protected open spaces. With the total absence of proven success doing upland habitat restoration, or creation, the only way to ensure adequate mitigation is hold bonds for each separate required plant species restoration that would be held for 10 years or until proven success. If there is restoration failure after 10 years, the County would keep the bond funding and purchase open space as a second-best mitigation alternative. A sliding scale can be worked out in which for example every quarter-acre of failed restoration, the County would recoup $100,000 of funds. That type of ratio is vital to generate enough funding to purchase properties because of the cost of land now, the pre-acquisition costs to find willing sellers at appraised values, and the increased cost of land 10 years hence.

The Conservancy, the MRCA, and the Desert and Mountain Conservation Authority (DMCA) work extensively together to accept and record conservation easements for mitigation lands. The legal costs of negotiations, title review, title reports, monitoring, reporting, and potential legal defense again violators over decades (all in a hyper-inflation period) are significant given that conservation easements are in perpetuity instruments. A qualified conservation easement holder that accepts conservation easements without substantial funding is doing a disservice to itself and the citizens of California. The MRCA and the DMCA have both learned the hard way.

B.5-9

The bulk of the PRDSEIR biological mitigation measures depend on the recordation of multiple conservation easements potentially spread between watersheds miles apart with marginal access. The Final PRDSEIR should be modified to state that the applicant must be willing to pay all Grantee expenses for the acceptance of conservation easements and provide endowments that will fund adequate oversight in perpetuity with inflation adjustors. The PRDSEIR language must also be enhanced to definitively state that no other uses besides restoration would be allowed in any conservation easement, including any fire department required fuel modification. If necessary to avoid fuel modification requirements, the project must make the conservation easements larger.

B.5-9 cont.

The PRDSEIR requires an endowment for the Incidental Take Permit of Crotch's bubble bee (CBB). There is no CDFW approved mitigation bank for CBB. As a result, the endowment must cover the care and protection of over 1,000 acres of semi-disparate open space, in perpetuity, even if a percentage of the land is within the Specific Plan area. For such onsite habitat, the PRDSEIR fails to address what entity would hold fee title. Would it be a HOA with limited long-term interest in habitat protection? With all the costs of labor in 2025, endowments to cover care of over 1,000 acres of conservation easement protection potentially spread over multiple properties in different sub-watersheds must be well into the seven-figure range. The Final PRDSEIR must include detailed discussion about conservation easement costs because the easements are essential to the document's biological mitigation measures.

B.5-10

Sincerely,

PAUL EDELMAN
Deputy Director
Natural Resources and Planning

Response to Comment Letter B.5

Paul Edelman
Santa Monica Mountains Conservancy
May 29, 2025

Response B.5-1

Commenter claims that all of the EIR alternatives result in significant biological impacts to mountain lion habitat, Western spadefoot toad (WST) habitat, and habitat connectivity to the existing underpasses used by wildlife. Commenter is incorrect. First, the Court Ruling only required recirculation of the CAA, to be a fully analyzed alternative as opposed to a screened out alternative. Second, the Court denied the claims regarding impacts to mountain lions and wildlife crossings; as such, the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of those issues. (See Response B.4-1, B.4-11, and B.4-13 through B.4-15.) Third, the RPDSEIR provides recirculated WST mitigation that demonstrates impacts to WST habitat is less than significant. Finally, the PCAA:

> would eliminate approximately 2,200 feet of development in the northern portion of the site when compared to the previously approved Project, which would enable wildlife movement along multiple paths between the northern I-5 under-crossing and Castaic Lake. Additionally, the PCAA would also enable wildlife movement along the more southerly of the two I-5 undercrossings, connecting wildlife movement to Castaic Lake. The PCAA would also enable wildlife movement along pathways through the southerly part of the Project's development area, consistent with the preliminary Wildlife Connectivity Plan adopted as a condition of approval of the Project. By eliminating development at the northern end of the Project Site, the PCAA would enable enhanced wildlife movement when compared with the previously approved Project, resulting in a less than significant impact related to wildlife movement.

(RPDSEIR pages 2-90 – 2-91.)

Response B.5-2

Commenter claims the previously approved Project's biological impacts are cumulatively significant, but does not provide any credible evidence of a significant cumulative biological impact; rather, the commenter concludes that there must be a cumulative impact because of the 33 million yards of grading. The RPDSEIR provides a fulsome cumulative impact determination that finds that, because the project-specific biological resource impacts are less than significant with mitigation, the "incremental impacts would not be cumulatively considerable." All of the RPDSEIR's impact analyses (as well as the 2019 SEIR impact analyses) took into account the amount of grading as necessary and applicable.

> This cumulative impact analysis considers potential impacts to sensitive biological resources that would result from combined, incremental impacts of the Project when added to other past, present, and reasonably foreseeable future projects having closely related impacts. The following cumulative impact analysis is based on a review of related projects in the vicinity of the Project Site, the Project's direct and indirect impacts with implementation of mitigation measures, existing conditions in the Project vicinity, and an analysis of aerial photographs.
>
> The Project would have potentially significant adverse impacts on biological resources. Several mitigation measures (MM 5.2-1 through MM 5.2-22, including as modified above) would be implemented to reduce these impacts to less than significant levels. Cumulative

> projects in the area are expected to have similar potential impacts to the Project on biological resources in the Project vicinity due to similar development activity and/or similar existing conditions. The cumulative impact on biological resources would be considered greater than the Project alone. However, when considering all the proposed and existing projects in the Project area, the previously approved Project contributes a relatively small portion of the impacts in the area due to its relatively small impact acreage, and the location adjacent to existing development. The Project is not expected to contribute a significant impact to the Project area. Incremental impacts would not be cumulatively considerable, and no additional mitigation is required.

(RPDSEIR Section 2.1.9 Cumulative Impacts, page 2.52.) The cumulative impact determination comports with the mandates of CEQA.

Response B.5-3

Commenter asks that the PCAA be adopted as the environmentally superior alternative. In compliance with Section 15126.6(e)(2) of the State CEQA Guidelines, the PCAA is identified as the environmentally superior alternative in the RPDSEIR:

> Based on the alternatives analysis in this RPDSEIR, in compliance with Section 15126.6(e)(2) of the State CEQA Guidelines, Recirculated Alternative 2, the Partial Creek Avoidance Alternative, would be the environmentally superior alternative among all six Project alternatives summarized in Table 2-12 above as it reduces the development footprint, thus reducing biology impacts and greenhouse gas emissions and would have less construction noise impacts (though construction noise would still be significant and unavoidable). However, the significant and unavoidable impacts to air quality would not be reduced to below a level of significance. All other impacts would be similar to the previously approved Project. On balance, Recirculated Alternative 2 would result in the greatest reduction in impacts compared to the previously approved Project while maintaining the same amount of housing. For these reasons, Recirculated Alternative 2 is the environmentally superior alternative. As compared to project objectives, the PCAA provides significantly less active recreational and open space area (37 fewer acres). Accordingly, the PCAA does not meet the following objective to the same degree as the previously approved Project:
>
> - Specific Plan 4, Open Space/Recreational Area, Goal i: To improve opportunities for a variety of outdoor recreational experiences.

Commenter's support for adoption of the PCAA as the proposed project, instead of the previously approved Project, will be forwarded to the decision-makers.

Regarding commenter's suggested revisions to the PCAA, CEQA does not require analysis of modified versions of the same alternative. (See Response A.1-11 and A.1-12.) Commenter's suggestions will be forwarded to the decision-makers.

Response B.5-4

Commenter claims there needed to be specific measurable Project Objectives, but fails to cite any CEQA requirement that project objectives be measurable. Rather, CEQA Guidelines Section 15124(b) states "[t]he statement of objectives should include the underlying purpose of the project and may discuss the project benefits." (See also *California Oak Found. v. Regents of Univ. Cal.* (2010) 188 Cal.App.4th 227, 276 (a lead agency has broad discretion to formulate project objectives).) In addition, including measurable objectives with minimum baseline numbers for development components would violate the principle that project objectives cannot be too project-

specific. (See *North Coast Rivers Alliance v. Kawamura* (2015) 243 Cal.App.4th 647, 668 (project objective "artificially narrow"); *We Advocate Through Envt'l Review v. County of Siskiyou* (2022) 78 Cal.App.5th 683, 692 (project objectives were so narrowly defined lead agency "dismissively rejected" any alternatives other than the proposed project).) Moreover, a challenge to the Project Objectives is barred by doctrines of res judicata and collateral estoppel. (See Response B.4-1 and B.4-3.)

Response B.5-5

Commenter claims that the County does not need to adopt a Statement of Overriding Considerations "if it chooses to negotiate a reduction of any adverse impacts." Commenter is incorrect. Reduction of significant and unavoidable impacts to less than significant is not a negotiation. In any event, all significant and unavoidable impacts would need to be reduced to less than significant such that a Statement of Overriding Considerations was not required. (See CEQA Guidelines Section 15093.) The County has the discretion to adopt a Statement of Overriding Considerations if it finds that the project benefits outweigh the environmental impacts. (*Id*.) If adopted, the Statement of Overriding Considerations will provide the balancing the commenter requests; the Statement of Overriding Considerations is not required to be included in the RPDSEIR or the RPFSEIR.

Response B.5-6

Commenter is advocating for the adoption of the PCAA. Commenter's support for adoption of the PCAA as the proposed project, instead of the previously approved Project, will be forwarded to the decision-makers.

Response B.5-7

Commenter asks about the oil pipelines located on the Project Site. As set forth in the RPDSEIR Project Description, "an existing crude oil pipeline easement containing two oil pipelines that traverse the entire north-south length of the Project Site would be relocated to an alignment along the eastern boundary of the proposed development area and within the identified grading footprint.) (RPDSEIR, page 1-2.)

Response B.5-8

Commenter is correct that Marple Canyon has been identified as a potential mitigation site for certain habitat. In coordination with Mountains Recreation and Conservancy Authority, the applicant's biologists have evaluated Marple Creek and mapped southwestern spiny rush for purposes of conservation and mitigation. While formal arrangements have not been made, discussions are anticipated to recommence if and when the Project receives its approvals.

Response B.5-9

Commenter provides comments as to potential additions to the Rare Plant mitigation measures (Mitigation Measures MM 5.2-5(a) – MM 5.2-5(c) and MM 5.2-4) in terms of bonds, conservation easement etc. It should be noted that the County and the project Applicant reviewed these mitigation measures with CDFW and incorporated all of their comments and revisions to CDFW's satisfaction and approval. (See Response A.1-3 (CDFW approval of Habitat Mitigation and Monitoring Plan for special-status plants (July 2022 [Revised October and December 2022 and February 2023]).) Commenter speculates that the mitigation measures may be ineffective, but fails to provide any credible evidence in support. The Rare Plant HMMPs, approved by CDFW, contain contingency plans to ensure the performance standards are achieved, which include the

potential for an additional 10-year program at alternative sites. Commenter's suggestions will be forwarded to the decision-makers.

Response B.5-10

Commenter raises questions with the potential need for an endowment for the Incidental Take Permit of Crotch's bubble bee. Both the County and the applicant recognize that this is a standard requirement for mitigation and associated conservation. To this end, the RPDSEIR provided the following:

> If mitigation is not purchased through a mitigation bank, and lands are conserved separately, a cost estimate will be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity. The funding source will be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount will be established following the completion of a project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The Property Analysis Record will consider all management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development.

As noted above, a "qualified natural lands management entity" will be selected to hold the conservation easement(s), and the endowment amount will be established following the completion of a project-specific Property Analysis Record to calculate the costs of in-perpetuity land management, if needed.

SECTION 3.0 CORRECTIONS, CLARIFICATIONS, AND ADDITIONS TO THE RPDSEIR

Any corrections, clarifications and additions to the RPDSEIR text, tables, and figures generated either from responses to comments or independently by the County, are stated in this section. Various corrections regarding figure/table numbers and names, grammatical, punctuation, spelling and typographical errors in the RPDSEIR are not called out separately in this document; however, any substantive changes are individually addressed.

These RPDSEIR corrections, clarifications and additions are provided to clarify and amplify the RPDSEIR. Changes may be corrections or clarifications to the text and tables of the RPDSEIR. Other changes to the RPDSEIR clarify that the analysis is based upon the information and concerns raised by comments during the public review period. None of the information contained in these RPDSEIR revisions constitutes significant new information or changes to the analysis or conclusions of the RPDSEIR.

The information included in these revisions that resulted from the public comment process does not constitute substantial new information that requires recirculation of the RPDSEIR. Section 15088.5 of the State CEQA Guidelines states in part:

(a) A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term "information" can include changes in the Project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the Project or a feasible way to mitigate or avoid such an effect (including a feasible Project alternative) that the Project's proponents have declined to implement. "Significant new information" requiring recirculation includes, for example, a disclosure showing that:

(1) A new significant environmental impact would result from the Project or from a new mitigation measure proposed to be implemented.

(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

(3) A feasible Project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the Project, but the Project's proponents decline to adopt it.

(4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

(b) Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR.

The changes to the RPDSEIR included in this section do not constitute "significant" new information. Therefore, recirculation of the RPDSEIR is not required because the new information added to the RPDSEIR through these revisions only clarify or amplify information already provided or make insignificant modifications to the already adequate RPDSEIR.

Specifically, three mitigation measures were modified and one additional mitigation measure has been added at the request of CDFW. The modifications simply included CDFW as an approving

agency, along with County of Los Angeles Department of Regional Planning, for plant habitat plans called for in mitigation measures MM 5.2-6 through MM 5.2-8. New mitigation measure MM 5.2-22 requires additional Crotch's bumble bee surveys at the mitigation sites called for in mitigation measures MM 5.2-6 through MM 5.2-8. However, impacts to Crotch's bumble bee were fully mitigated with mitigation measures MM 5.2-6 through MM 5.2-8, as required by Cal. Code Regs., tit. 14, § 783.2, subd. (a)(8). There are no changes to impact determinations.

The revisions contained in the following pages are in the same order as the information appears in RPDSEIR. Changes in text are signified by strikeouts (~~strikeouts~~) where text has been removed and by bold underlining (**underline**) where text has been added. The applicable page numbers from the RPDSEIR are also provided where necessary for ease of reference.

RPDSEIR Page 1-2 is revised as follows:

However, 323**1** units would be reallocated from the Phase 2 area of the Project to the Phase 1 area (for a total of 2,297 Phase 1 units).

RPDSEIR Page 2-43 is revised as follows:

MM 5.2-6 The loss of sage scrub habitat within the impact area is considered a significant impact. Sage scrub habitat shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but shall be no less than 2:1 for habitat restoration, enhancement or preservation, or combination thereof. A total of 634.70 acres of sage scrub would be impacted by Project implementation, which includes Purple sage scrub, California sagebrush–California buckwheat scrub, Black sage scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, California sagebrush–California buckwheat scrub/California annual grassland, and the burned sage scrub areas: burned Purple sage scrub, burned California sagebrush–California buckwheat scrub, burned Black sage scrub, and burned California sagebrush–California buckwheat scrub/California annual grassland. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, and preservation shall depend on the initial quality of the habitat area to be restored, enhanced or preserved and would be determined by the Project Applicant and the LACDRP. Sage scrub habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. Where restoration or enhancement is the proposed mitigation, the Project Applicant shall develop a Habitat Mitigation and Monitoring Program (HMMP) and shall submit it to the LACDRP **and the California Department of Fish and Wildlife (CDFW)** for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to the issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants of suitable sage scrub species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), Peirson's morning-glory will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP **and CDFW**

and according to its specified materials, methods, and performance criteria, which shall include the following items:

RPDSEIR page 2-46 is revised as follows:

MM 5.2-7 The loss of California annual grassland/wildflower fields within the impact area is considered to be a significant impact. California annual grassland/wildflower fields shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 24.23 acres of Foothill needlegrass grassland and burned Foothill needle grass grassland would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). California annual grassland/wildflower fields habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP **and the California Department of Fish and Wildlife (CDFW)** for review and approval. The HMMP shall be developed by a qualified restoration ecologist submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for burrowing owls. Habitat restoration/enhancement shall consist of seeding of suitable California annual grassland/wildflower fields plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP **and CDFW** and according to its specified materials, methods, and performance criteria, which shall include the following items:

RPDSEIR page 2-49 is revised as follows:

MM 5.2-8 The loss of foothill needlegrass grassland within the impact area is considered to be a significant impact. Foothill needlegrass grassland shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 342.85 acres of California annual grassland/Wildflower fields would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas

through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). Foothill needlegrass grassland habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP **and the California Department of Fish and Wildlife (CDFW)** for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for the burrowing owl. Habitat restoration/enhancement shall consist of seeding of suitable foothill needlegrass grassland plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP **and CDFW** and according to its specified materials, methods, and performance criteria, which shall include the following items:

RPDSEIR page 2-29 is revised as follows:

MM 5.2-9 A mitigation program for western spadefoot toad (WST) shall be implemented prior to construction, ground disturbance, or vegetation removal that would impact the WST breeding habitat, or areas within 1,000 feet of WST-occupied ponds within the Project Site. The mitigation program would include the components set forth below. A detailed methodology for this effort shall be reviewed by the CDFW and the LACDRP prior to implementation of the mitigation program. Results of the mitigation program shall be provided to the CDFW and the LACDRP.

- Prior to implementing the Spadefoot Relocation Plan, two focused surveys during average or above-average rainfall years will be conducted within the prior appropriate seasons. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e., 2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied pond as well as those identified in recent surveys.
- Suitable sites for seasonal pond creation, within the Project open space, specifically within other NorthLake-owned properties, have been identified and 1.07 acres of seasonal pond habitat will be created. The specific location of the 1.07-acre pool complex is depicted on Exhibit 5 of the *NorthLake Castaic, Los Angeles County, California, Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan July 2022 (Revised March and June 2023)* (HMMP). As described in the WST Mitigation Implementation Plan, three pools would be created based on

current grading plans. The combined size of the three pools (1.07 acres) exceeds the maximum combined size of potential WST habitat currently at the Project Site (0.95 acres, as shown in Table 2-4, above). The WST Mitigation Implementation Plan would address the following issues specific to the site or sites:

- Soil Characteristics and whether clay liners will be necessary
- Pool locations and site access routes for construction
- Types of habitat potentially affected by construction and measures to restore damaged **habitat** subject to temporary impacts
- Watershed size and characteristics
- Grading plan with cross section for each pool to be created
- Specifications for clay liner (i~~n~~**f** needed) including source of clay and installation methods
- Upland habitat characteristics, including soil suitability for burrowing and vegetative buffer, will also be addressed in the plan

RPDSEIR page 2-28 and RPDSEIR Appendix J page 5 are revised as follows:

> Based on areas of suitable habitat, the project would provide 337.55 acres of mitigation within the onsite conservation areas and 156.7 acres of conservation on adjacent NorthLake ownership for a total of ~~492.2~~ **494.25** acres of preservation

RPDSEIR page 2-96 is revised as follows:

> Ability to Avoid or Substantially Lessen the Significant Impacts of the Project Development of the Project Site with the PCAA would decrease the development disturbance area compared to the previously approved Project, although the uses remain the same. Although the degree of impacts for some topics may be less with this alternative, the overall impact conclusions would be consistent with the previously approved Project. Consistent with the previously approved Project, the PCAA would result in significant and unavoidable impacts related to air quality~~,~~ **and** noise~~, and traffic (VMT)~~. No additional significant or more significant impacts would occur with this alternative.

Mitigation Measure MM 5.2-22 will be added to the Mitigation Monitoring and Reporting Program. See Section 4.0, below.

MM 5.2-22 **The project applicant shall retain a qualified biologist with the appropriate handling permits to conduct focused surveys for Crotch's bumble bee within the proposed habitat restoration/enhancement sites prior to implementation of the HMMP as set forth in MM 5.2-6 through MM 5.2-8. Focused surveys shall follow California Department of Fish and Wildlife's (CDFW) Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023). Focused surveys shall also be conducted throughout the entire proposed mitigation areas and during the appropriate flying season to ensure no missed detection of Crotch's bumble bee occurs. Survey results, including negative findings, shall be submitted to CDFW and LACDRP prior to the start of a monitoring program.**

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SECTION 4.0 MITIGATION MONITORING AND REPORTING PLAN

4.1 INTRODUCTION

In accordance with the requirements of Section 21081.6 of the *California Public Resources Code,* and as part of its adoption of the RPFSEIR for the NorthLake Specific Plan Project, the County of Los Angeles adopts this Mitigation Monitoring and Reporting Program (MMRP). The County adopts this MMRP in its capacity as the lead agency for the SEIR and RPSEIR in accordance with the provisions of the California Environmental Quality Act (CEQA) (*California Public Resources Code* Section 21000 et seq.) and the State CEQA Guidelines (*California Code of Regulations,* Title 14, Section 15000 et seq.).

The principal purpose of this MMRP is to ensure that the mitigation measures for the approved Project are reported and monitored to ensure compliance with their requirements. In general, the Los Angeles County Department of Regional Planning is responsible for overseeing implementation and completion of the adopted measures. This includes the review of all monitoring reports, enforcement actions, and document disposition, unless otherwise noted in the attached MMRP table.

4.2 MITIGATION MONITORING AND REPORTING PROGRAM

The MMRP is provided in tabular format to facilitate effective tracking and documentation of the status of mitigation measures. The attached MMRP table provides the following monitoring information:

- **Mitigation Measures.** The text of all adopted mitigation measures (MMs) from the RPDSEIR and all applicable MMs from the 2019 SEIR has been provided in this MMRP.
- **Responsible for Implementation.** This MMRP identifies the party that is responsible for implementing each of the MMs that are specified in the RPDSEIR, RPFSEIR, and 2019 SEIR.
- **Timing.** This MMRP includes information related to when each MM in the RPDSEIR, RPFSEIR, and applicable MMs in the 2019 SEIR will be implemented.
- **Responsibility for Monitoring.** This MMRP identifies the County Department(s) or other public agency(ies) that are responsible for overseeing the implementation and completion of each MM.
- **Completion Date.** The completion date column of this MMRP is used to record the date that each mitigation measure is completed. This column of the MMRP table will be filled in by the County in the future as the Project is implemented and the MMs are completed. Upon completion, the MMRP and associated documentation will be kept on file at the Los Angeles County Department of Regional Planning.

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TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Air Quality (Section 5.1 of the 2019 Draft SEIR)					
MM 5.1-1	Prior to grading permit issuance, applicants shall develop a Construction Traffic Emission Management Plan to minimize emissions from vehicles including, but not limited to, scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes. (SCVAP MM 3.3-1)	Prior to grading permit issuance	Applicant	County of Los Angeles Department of Regional Planning	
MM 5.1-2	Prior to grading permit issuance, applicants shall develop a Construction Dust Emission Management Plan to minimize construction-related dust and particulate emissions. The Construction Emission Management Plan shall require the use of Best Available Control Measures, as specified in Table 1 of SCAQMD's Rule 403. If potentially significant impacts are identified after the implementation of the SCAQMD recommended Best Available Control Measures, the Construction Emission Management Plan shall include the following additional elements: (SCVAP MM 3.3-2 dust measures) • Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. When wind speeds exceed 15 miles per hour the operators shall increase watering frequency. • Active sites shall be watered at least three times daily during dry weather. • Increase watering frequency during construction or use non-toxic chemical stabilizers if it would provide higher control efficiencies. • Suspend grading and excavation activities during windy periods (i.e., surface winds in excess of 25 miles per hour). • Suspend the use of all construction equipment during first-stage smog alerts. • Application of non-toxic chemical soil stabilizers or apply water to form and maintain a crust on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). • Application of non-toxic binders to exposed areas after cut and fill operations and hydroseeded areas. • Cover or application of water or non-toxic chemical suppressants to form and maintain a crust on inactive storage piles. • Planting of vegetative ground cover in disturbed areas as soon as possible and where feasible. • Operate street sweepers that comply with SCAQMD Rules 1186 and 1186.1 on roads adjacent to the construction site so as to minimize dust emissions. Paved parking and staging areas shall be swept daily. • Reduce traffic speeds on all unpaved roads to 15 miles per hour or less. • Pave or apply gravel on roads used to access the construction sites when possible. • Designate personnel to monitor dust control measures to ensure effectiveness in minimizing fugitive dust emissions. • An information sign shall be posted at the entrance to each construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. Any reasonable complaints shall be rectified within 24 hours of their receipt.	Prior to grading permit issuance	Applicant and Future Developers	County of Los Angeles Department of Regional Planning; SCAQMD	
MM 5.1-3	Prior to grading permit issuance, applicants shall develop a Construction Equipment Exhaust Emission Management Plan to minimize construction-related exhaust emissions. The Construction Equipment Exhaust Emission Management Plan shall require the following elements: (SCVAP MM 3.3-2 exhaust emission measures) • Scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes.	Prior to grading permit issuance	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 10:00 AM and 3:00 PM, and between 7:00 PM and 6:00 AM provided that a noise disturbance is not generated across a residential or commercial property line). • Use of diesel-powered construction equipment shall use ultra-low sulfur diesel fuel. • Use electric welders to avoid emissions from gas or diesel welders when such equipment is commercially available. • Use electricity or alternate fuels for on-site mobile equipment instead of diesel equipment when such equipment is commercially available. • Use on-site electricity or alternative fuels rather than diesel-powered or gasoline powered generators when such equipment is commercially available. • Maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations. • Minimize idling time either by shutting equipment when not in use or reducing the time of idling to 5 minutes as a maximum. • Limit, to the extent feasible, the hours of operation of heavy duty equipment and/or the amount of equipment in use. • Retrofit large off-road construction equipment that will be operating for significant periods. Retrofit technologies such as particulate traps, selective catalytic reduction, oxidation catalysts, air enhancement technologies, etc., shall be evaluated. These technologies will be required if they are certified by CARB and/or the US EPA, and are commercially available and can feasibly be retrofitted onto construction equipment. • The project applicant shall require all on-site construction equipment to meet US EPA Tier 4 or higher emissions standards according to the following: o April 2010 through December 31, 2011: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 2 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. o January 1, 2012 through December 31, 2014: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. o Post-January 1, 2015: All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. A copy of each unit's certified tier specification, BACT documentations, and CARB, SCAQMD, or ICAPCD operating permit shall be provided at the time of mobilization of each applicable unit of equipment. • The contractor shall utilize low-VOC content coatings and solvents that are consistent with applicable SCAQMD and ICAPCD rules and regulations.				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	• Consideration shall be given to use of other transportation methods to deliver materials to the construction sites (for example, trains or conveyors) if it would result in a reduction of criteria pollutant emissions.				
MM 5.1-4	The Project Applicant or Construction Manager shall ensure that, during all grading activities, construction grading shall be discontinued on days forecasted for first-stage alerts.	During all grading activities	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-5	Prior to grading permit issuance, applicants shall be required to conduct an LST analysis (SCVAP MM 3.3-3).	Prior to grading permit issuance	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-6	The Project Applicant or Construction Manager shall ensure that, during mass grading activities, mass grading shall not occur within 1,600 feet of the Northlake Hills Elementary School when school is in session to the maximum extent feasible.	Prior to issuance of grading permits for areas within 1,600 feet of the Northlake Hills Elementary School	Construction Contractor, Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-7	Prior to final building inspection, the applicant shall provide preferential parking spaces for carpools and vanpools at major commercial and office locations. The spaces shall be clearly identified on plot plans and may not be pooled in one location (SCVAP MM 3.3-6).	Prior to final building inspection	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-8	New residential developments shall allow only natural gas-fired hearths and shall prohibit the installation of wood-burning hearths and wood-burning stoves (SCVAP MM 3.3-7).	Prior to issuance of each residential building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-9	A commuter computer program shall be developed for the NorthLake residents in an attempt to reduce commuter vehicle trips generated by the proposed projects. (1992 SP EIR MM 4.5-9).	Prior to issuance of the first residential occupancy permit	Applicant	County of Los Angeles Department of Regional Planning	
MM 5.1-10	Prior to the issuance of each non-residential building permit, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the building designs. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits. • For buildings that are greater than 100,000 square feet of building space or with more than ten tenant-occupants, changing/shower facilities shall be provided as specified in Section A5.106.4.3, Nonresidential Voluntary Measures, of the California Green Building Standards (CALGreen) Code. • Facilities shall be installed to support future electric vehicle charging at each non-residential building with 30 or more parking spaces. Installation shall be consistent with Section A5.106.5.3, Nonresidential Voluntary Measures (Tier 1), of the CALGreen Code. • The Project shall install 135 electric vehicle (EV) chargers[4] at non-residential parking spaces within the Project limits and/or the greater Castaic community.	Prior to the issuance of each non-residential building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-11	Prior to the issuance of each residential building permit, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the building designs or specifications. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits • Visitor parking shall include preferentially located parking spaces for alternative-fueled vehicles. • Bicycle parking shall be provided as specified in Section A4.106.9, Residential Voluntary Measures, of the CALGreen Code, or, provide required long-term and short-term bicycle parking for buildings as specified in Section 22.52.1225 of the County Zoning Ordinance, whichever is more stringent. • 100 percent of residences shall be pre-wired for an EV charging station and at least 10 percent of residences shall have an EV charging station.	Prior to the issuance of each residential building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

[4] Assumed to be Level 2 chargers that can provide enough electricity to provide a 25 mile driving range per hour spent charging.

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.1-12	Prior to issuance of each building permit for parking structures and parking lots with 20 or more parking spaces, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the parking facility. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits. • The parking facility shall include a minimum of five percent preferentially located parking spaces for alternative-fueled (electric, natural gas, or similar low-emitting technology) vehicles. • The parking facility shall include at least one electric vehicle charging station. Electrical lines shall be designed and sized to add additional charging stations for up to three percent of the total parking spaces when a demand is demonstrated. The design and installation shall be consistent with Section A4.106.8.2, Residential Voluntary Measures, of the CALGreen Code. • For residential parking facilities, bicycle parking shall be provided as specified in Section A4.106.9, Residential Voluntary Measures, of the CALGreen code.	Prior to issuance of each building permit for parking structures and parking lots with 20 or more parking spaces	Construction Contractor, Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-13	Once constructed, the Applicant shall ensure that the tenants/operators of non-residential uses include the following features and procedures. Proof of compliance shall be provided to the County within one month following the issuance of each occupancy permit. • Post signs requiring that trucks shall not be left idling for prolonged periods (i.e., in excess of 5 minutes, as required by State law). • Post both bus and Metrolink schedules in conspicuous areas. • Configure the employee work schedules around the local bus schedule and provide said schedules as evidence of compliance to Regional Planning upon request.	Within one month following the issuance of each occupancy permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-14	Prior to the issue of occupancy permits for each industrial building, the Permit Applicant/Developer shall demonstrate that ambient air quality concentrations of criteria pollutants at sensitive receptors resulting from the proposed use(s) shall not exceed the following: • Nitrogen dioxide (NO_2) – 0.10 parts per million (ppm), 1 hour average; 0.03 ppm, annual arithmetic mean • Inhalable particulate matter (PM10) – 2.5 micrograms per cubic meter ($\mu g/m^3$), 24-hour average; 1.0 $\mu g/m^3$-annual average • Fine particulate matter (PM2.5) – 2.5 $\mu g/m^3$, 24-hour average The Permit Applicant/Developer shall also demonstrate through preparation of a subsequent health risk assessment that the incremental health risks from toxic air pollutants at sensitive receptors resulting from the proposed use(s) shall not exceed the following: • Maximum incremental cancer risk – 10 in 1 million • Cancer burden – 0.5 excess cancer cases in areas where the cancer risk exceeds 1 in 1 million • Chronic hazard index – 1.0 • Acute hazard index – 1.0	Prior to the issuance of occupancy permits for each industrial building	Applicant and Future Developers	County of Los Angeles Department of Regional Planning and Department of Public Health	
MM 5.1-15	No playgrounds, ball fields, or other facilities that encourage active recreation shall be built west of the Southern California Edison (SCE) easement.	Prior to tract map approval	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-16	Prior to the commencement of brush clearing, grading, or other activity that would generate fugitive dust, the Property Owner/Developer shall employ a Dust-Control Supervisor who will be on the site within 30 minutes of the start of work taking place each morning; will have the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all South Coast Air Quality Management District (SCAQMD) Rule 403 requirements; and will have completed the SCAQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class.	Prior to brush clearing activities, issuance of grading permits, or other construction activities	Construction Contractor	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.1-17	To aid in the prevention of Valley Fever among construction crews on the Project site, the following measures shall be implemented by the Construction Contractor during all construction activities: • Hire crews from local populations where possible, since it is more likely that they have been previously exposed to the fungus and are therefore immune. • Require crews to use NIOSH-approved respiratory protection with particulate filters to restrict inhalation of particulates during Project clearing, grading, and excavation operations in accordance with California Division of Occupational Safety and Health regulations. • Where acceptable to the County of Los Angeles Fire Department, control weed growth by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering. • During rough grading and construction, the access way into the Project site from adjoining paved roadways shall be paved or treated with environmentally safe dust-control agents.	Prior to issuance of grading permits and through duration of construction activities	Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.1-18	Prior to sale, lease, or rental of any residential structure or portion thereof on the NorthLake Project site, the Property Owner/Developer shall provide to each prospective purchaser or tenant a notice and statement of acknowledgment that shall be executed (i.e., read and signed) by the prospective purchaser, lessee, or tenant that the property within NorthLake may present a temporary risk of exposure to Valley Fever spores during construction or other earth-moving activities. The form shall include strategies to reduce potential exposure to Valley Fever spores. The form and method of distribution of said notice and statement of acknowledgment shall be as approved by the County of Los Angeles Department of Regional Planning**.**	Prior to sale, lease, or rental of any residential structure or portion thereof on the NorthLake Project site	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-19	Prior to issuance of each grading and building permit, the applicant/developer shall require in contract specifications, that contractors set goals to limit unnecessary construction equipment idling to 3 minutes and include methods to encourage equipment operators to achieve the 3-minute goal.	Prior to each grading and building permit	Project Applicant and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.1-20	Prior to the issue of the first occupancy permit for commercial or industrial facilities, the master developer shall establish the NorthLake Community Transportation Program that would be established through the creation of Covenants, Codes and Restrictions (CC&Rs) for all commercial and industrial properties within the Specific Plan to establish and coordinate the following programs that would reduce single-vehicle commuting and the associated criteria pollutant and GHG emissions: • Ride share program – The program will establish a system for coordinating ride sharing among employees of on-site commercial and industrial businesses. The program will also work with employers to support vanpools. • Commuter bus program – The program will coordinate with Santa Clarita Valley Transit to (1) extend the existing bus routes into the NorthLake Project area and (2) determine employee demand for express commuter buses to the Project Site and establish commuter bus service in response to demand.	Prior to issuance of the first occupancy permit for commercial or industrial facilities	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
Biological Resources (Section 5.2 of the 2019 Draft EIR, RPDSEIR, RPFSEIR)					
MM 5.2-1	If special-status species may potentially be subject to direct loss through implementation of construction activities, mitigation measures proposed as part of biological site survey reports shall include a requirement for preconstruction special-status species surveys, followed by measures to ensure avoidance, relocation or safe escape of special-status species from construction activity, whichever action is the most appropriate. If special status species are found to be brooding, denning, nesting, etc. on site during the preconstruction survey, construction activity shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate off-site habitat areas. A qualified biologist shall be on site to conduct surveys, to perform or oversee implementation of protective measures, and to determine when construction activity may resume. **(SCVAP 2012 EIR MM 3.7-2)**	Prior to issuance of grading permits	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	
MM 5.2-2	Impacts on sensitive habitats resulting from implementation of the Area Plan shall be compensated for through the acquisition of lands described in Policies CO 10.1.3, CO 10.1.11 and CO 10.1.12. Said acquisition shall prioritize habitat types that are particularly at risk in the region. At risk habitats include but are not limited to waterways, wetlands and vernal pools; alluvial scrub; native grasslands; savannas, woodlands and forests; holly-leaf cherry and Great basin sagebrush associations; and rocklands. **(SCVAP 2012 EIR MM 3.7-2)**	Prior to issuance of grading permit(s) and during construction	Project Applicant, Future Developers, and Construction Contractor	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.2-3	Removal of riparian habitat will require coordination with the California Department of Fish and Wildlife and the U.S. Army Corps of Engineers. Mitigation for riparian habitat lost may include one or a combination of the following measures: 1) project alteration to avoid impacting the onsite riparian habitat; 2) the onsite creation of at least an equal amount of equal quality habitat; 3) enhancement of poor quality onsite habitat, usually greater than 1:1 ratio (habitat lost to habitat enhanced); and 4) creation of offsite habitat where none currently exists. Final mitigation requirements shall be determined through consultation with the appropriate agencies. **(1992 SP EIR MM 4.7-5)**	Prior to issuance of grading permit(s) and during construction	Project Applicant, Future Developers, and Construction Contractor	County of Los Angeles Department of Regional Planning and California Department of Fish and Wildlife and U.S. Army Corps of Engineers	
MM 5.2-4	Mitigation for the club-haired mariposa lily and the slender mariposa lily shall consist of transplantation of lilies to a mitigation site and establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*).[5] The *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from lilies that are located within the impact boundaries and bulbs will be subsequently excavated and stored for later transplantation to the translocation site depicted on Exhibit 5 of the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan.* The Mitigation Program in the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the club-haired mariposa lily and the slender mariposa lily: • A pre-grading survey shall be conducted for two seasons following emergence of leaves and during the peak flowering period (approximately March through June) by the Biological Monitor. The Biological Monitor shall clearly identify each lily location within the impact area with a pin flag for later collection. The pre-grading survey shall also document the approximate coverage of native and non-native plants at each lily population to be impacted. • Prior to seed collection, the existing lily locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities. • Individual lily bulbs shall be excavated and collected following the seed collection and once the bulbs have entered their winter dormancy period (approximately September 1). The bulbs shall be stored by a qualified nursery or institution with appropriate storage facilities and all non-target bulbiferous species shall be discarded. • A portion of the collected seeds will be used to grow 500 slender/club-haired mariposa lilies for contingency purposes and stored a native plant nursery until needed as determined by the project biologist. • Receptor site or sites identified in BonTerra's *Feasibility Analysis of NorthLake Biological Mitigation Requirements* and refined by GLA (as shown on Exhibit 5 of the *Special-Status Plants Impact Assessment and Habitat Mitigation and* Monitoring *Plan*) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. • Receptor sites on lands currently owned by NorthLake will be managed by SMMC or other approved entities. Prior to commencing the actions set forth in this plan, the applicant shall submit final agreements to CDFW and the County with the acceptable entities that will hold the Conservation Easement(s) (CE) and provide long-term management. • Funding for this measure shall be suitably established to the County's satisfaction.	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[5] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• Performance criteria have been developed in the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan,* dated February 2023, and pre-approved by the LACDRP and CDFW. The performance criteria shall address (1) native and non-native plant coverage requirements (mitigation site conditions should be consistent with lily populations in the impact area) and (2) percentage of lilies that exhibit emergent leaves that that bloom each year as follows (because the salvaged plantings will be phased over a three-year period as described above, the monitoring period would be ten years for each phase or a minimum of 13 years beginning from the start of phase 1. As set forth in Table 3 of the of the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan*, under the phased translocation, 40-percent of plants would be translocated in year 1, 40-percent in year 2 and 20-percent in year 3): **Year One** • Emergence of leaves of a minimum of 70-percent of the translocated bulbs • Flowering of a minimum of 50-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Two** • Emergence of leaves of a minimum of 60-percent of the translocated bulbs • Flowering of a minimum of 40-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Three** • Emergence of leaves of a minimum of 50-percent of the translocated bulbs • Flowering of a minimum of 30-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Four** • Emergence of leaves of a minimum of 50-percent of the translocated bulbs • Flowering of a minimum of 30-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Five** • Emergence of leaves of a minimum of 60-percent of the translocated bulbs • Flowering of a minimum of 40-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• No evidence of herbivory **Year Six** • Emergence of leaves of a minimum of 70-percent of the translocated bulbs • Flowering of a minimum of 50-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Seven** • Emergence of leaves of a minimum of 70-percent of the translocated bulbs • Flowering of a minimum of 50-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Eight** • Emergence of leaves of a minimum of 80-percent of the translocated bulbs • Flowering of a minimum of 60-percent of the translocated bulbs **Year Nine** • Emergence of leaves of a minimum of 90-percent of the translocated bulbs • Flowering of a minimum of 70-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Ten** • Emergence of leaves of a minimum of 100-percent of the translocated bulbs • Flowering of a minimum of 70-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory • Potential seed sources from additional donor sites shall also be identified in case it becomes necessary to collect additional seed for use on the site following performance of remedial measures. The monitoring shall be conducted for ten years (for each phase) from installation of the translocated bulbs or from installation of container plants. As noted, this could result in two separate and unrelated ten-year monitoring efforts, including one that originates with bulb installation and a subsequent effort that begins with container stock installation. If the performance standards are not being met during the first year, additional measures may be suggested as determined appropriate by the Project Biologist as set forth in the Contingency				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Plan set forth in the Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan as set follows: • If any of the translocation/receptor sites are observed to be failing significantly to achieve the performance standard during the ten-year monitoring period, the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be stored at a nursery for the first year of the program. • If the receptor sites appear on track to meet the performance standards no sooner than year seven of the monitoring and maintenance period, the remaining plant material may be planted at the receptor sites (if space allows) or additional acceptable receptor sites will be identified. • Seeds and/or bulbs will continue to be harvested from lilies maintained in the nursery and installed in the receptor sites on an as-needed basis to ensure receptor sites are progressing toward final performance. • If the receptor sites fail to achieve the performance standards by the tenth year of the program, the monitoring period may be extended if the Project Biologist in consultation with LACDRP and CDFW, determines that the site is continuing to progress and can ultimately achieve the performance standards. Alternatively, if it is determined that a particular receptor site is not able to meet performance standards, then additional receptor sites will be identified to make up the difference. Thus, for example, if a receptor site received 500 bulbs, at the 80-percent success criteria it must have 400 emergent plants or 300 flowering plants to be successful. If the site only exhibits 40-percent emergent plants and 30-percent of flowering Mariposa lilies, then the site would be credited with the partial success achieved and an additional site where the shortfall could be made up would be identified. • Potential seed sources from additional donor sites shall also be identified in case it becomes necessary to collect additional seed for use on the site following performance of remedial measures.				
MM 5.2-5a Mitigation for the round-leaved filaree shall consist of transplantation of round-leaved filaree to a mitigation site and establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*).[6] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from round-leaved filaree that are located within the impact boundaries and stored for propagation of container plants to provide for introduction of propagated plants to the translocation site depicted on Exhibit 4A of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the round-leaved filaree: • A pre-grading survey shall be conducted for two seasons, prior to grading of the occupied area, during the peak flowering period (approximately March through May) by the Biological Monitor. The Biological Monitor shall clearly identify the extent of the round-leaved filaree location within the impact area with pin flags and record the extent of the population using sub-meter GPS for later collection. The pre-grading surveys shall also document the approximate coverage of native and non-native plants at the location of the population to be impacted. • Prior to seed collection, the existing round-leaved filaree locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities.	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[6] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• Collected seeds, up to one half, will be used to grow a minimum of 300 plants and the remaining half will be stored to allow for contingency purposes all of which would be planted at the receptor site once performance standards are achieved. • Receptor site or sites identified by GLA during site assessments in 2021 (see Exhibit 4A in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[7]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP and CDFW. In developing the performance standards for the round-leaved filaree, it is important to consider the primary goal of the plan referenced above, which is to establish a self-sustaining population of this plant consisting of the number of individuals/population size determined during pre-construction surveys. With replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors: • The number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe the translocated populations over a period of years to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track emergent plants along with flowering individuals which in combination provides the best and easiest indicators to track that the translocation is succeeding. • Various threats to the plants must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of recruited individuals, with seed set, leading to future germination/successful reproduction. • Habitat characteristics, including non-native grasses and herbaceous weeds, are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory. Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the variability in the number of flowering individuals from year-to-year, the performance standards will have been achieved during at least three years of the ten-year monitoring program. Thus, the standards provide specific criteria showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction. **Year One Through Year Ten** • Flowering of a minimum of 100-percent of the total number of flowering plants counted during pre-construction surveys originating from container stock or seed bank. As noted, the number of container stock individuals planted or plants originating from seed following the initial establishment will equal or exceed the number impacted as determined during pre-construction surveys during at least three years of the ten-year monitoring period; and • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial planting (30-percent).				

[7] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

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MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Contingency Plan In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards: • If the receptor site is observed to be failing significantly to achieve the performance standards during the ten-year monitoring period (e.g., flowering of 100-percent is not achieved after three years with normal or above-normal rainfall), the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be propagated from the contingency seed supply held at the nursery for contingency purposes (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials. The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, the container stock would be propagated from the contingency seed and the plants would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance, would be initiated as set forth above.				
MM 5.2-5b Mitigation for the paniculate tarplant shall consist of transplantation of paniculate tarplant by means of seed broadcasting to a mitigation site with establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*).[8] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from paniculate tarplant that are located within the impact boundaries and stored for introduction to the receptor site depicted on Exhibit 4A of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the paniculate tarplant: • A pre-grading survey shall be conducted for two seasons during the peak flowering period (approximately June through August) by the Project Biologist. The Project Biologist shall clearly identify the extent of the paniculate tarplant location within the impact area with perimeter pin flags and sub-meter GPS for later use during seed collection. The pre-grading survey shall also document the approximate coverage of native and non-native plants at the location of the population to be impacted. • Prior to seed collection, the existing paniculate tarplant locations marked during pre-construction surveys shall be monitored every two weeks by the Project Biologist or a qualified Seed Collector under the direction of the Project Biologist to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities. • One third of the collected seeds will be used to broadcast on the receptor site during an initial year and one third would be retained for the second year at the receptor site. The remaining one-third of the seed would be held for contingency purposes until performance standards are achieved. Once they are achieved, the contingency seed would be distributed into the mitigation site. • The receptor site identified by GLA during 2021 (see Exhibit 4A in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[9]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[8] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

[9] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP (and CDFW). In developing the performance standards for the paniculate tarplant, it is important to consider the primary goal of the plan as set forth above, which is to establish a self-sustaining population of this plant consisting of the number of individuals/population size determined during the largest population number of the two years of pre-construction surveys. With replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors: • The number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe the translocated populations over a period of years to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track flowering individuals to confirm that the translocation is succeeding. • Various threats to the plants must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of recruited individuals, with seed set, leading to future germination/successful reproduction. • Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory. Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the variability in the number of flowering individuals from year-to-year, the performance standards will have been achieved during at least three years during the ten-year monitoring program. Thus, the annual standards provide specific criteria showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction. **Year One Through Year Ten** • Flowering of a minimum of 100-percent of the total number of flowering plants counted during the larger of the two years during which pre-construction monitoring was conducted. This would be achieved during at least three years of the ten-year monitoring period); and • Habitat subject to translocation must exhibit same or less cover by non-native grasses; and forbs than during the initial planting (30-percent). **Contingency Plan** In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards: • If the receptor site is observed to be failing significantly to achieve the performance standards during the ten-year monitoring period (e.g., flowering of 100-percent is not achieved after three years with normal or above-normal rainfall), the Biological Monitor will identify an alternate site(s) in which to install the contingency seed held at the nursery for contingencies purposes (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials. • The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, contingency seed would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance would be initiated as set forth above.				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.2-5c	Mitigation for the southwestern spiny rush includes two components to ensure long-term persistence of southwestern spiny rush in northern Los Angeles County. Mitigation includes 1) preservation of streambed habitat within Marple Canyon that contains 523 individuals of the spiny rush, and 2) planting of southwestern spiny rush at a mitigation site with establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan)*.[10] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seed will be collected from southwestern spiny rush plants located within the impact boundaries. The collected seed will be stored for propagation of container plants. Once propagated, the container plants would be introduced to the translocation site depicted on Exhibit 4B of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan.* The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the southwestern spiny rush: • A pre-grading survey shall be conducted during a single season during the peak flowering period (approximately March through May) by the Biological Monitor. The Biological Monitor shall identify the extent of the southwestern spiny rush location within the impact area using sub-meter GPS for later seed collection. • Prior to seed collection, the existing southwestern spiny rush locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities. • Collected seeds will be used to grow a minimum of 600 plants to allow for contingency purposes all of which would be planted at the receptor site. Half of the seed collected will be retained by the nursery for additional propagation as a contingency measure. • Receptor site or sites identified by GLA during site assessments in 2021 (see Exhibit 4B in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[11]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP and CDFW. In developing the performance standards for the southwestern spiny rush, it is important to consider the primary goal of the plan as set forth above, which is to provide for a combination of preservation and establishment of a self-sustaining population of this plant consisting of the 300 individuals, which in combination of the preservation in Marple Canyon would mitigate impacts to this species. In order to achieve survival of 200 plants within Grasshopper Creek, 300 individuals will be planted initially to allow for natural attrition. With the combined preservation and replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors: • Southwestern spiny rush is a perennial plant and the number of flowering individuals in any given year does not vary substantially. However, based on environmental conditions, it is not expected that populations change significantly over the period of years needed to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track the existing population within Marple Canyon along with established individuals in Grasshopper Creek to determine progress.	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[10] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

[11] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• Various threats to the plants established within Grasshopper Creek must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of planted and recruited individuals, with seed set, leading to future germination/successful reproduction. • Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory. Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the expected stability in the number of flowering individuals from year-to-year, the performance standards will have been achieved at the end of the ten-year monitoring program. Thus, the annual standards provide a guide showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction. **Marple Canyon Year One Through Year Ten** • Persistence of Marple Canyon population totaling 523 individuals with no more than ten-percent reduction due to such factors such as drought. Thus, there would be a minimum of 471 individuals at the end of the ten-year monitoring period. **Grasshopper Creek Year One** • Survival of 80-percent of the 200 established individuals. • Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year. **Grasshopper Creek Year Two** • Survival of 90-percent of the 200 established individuals. • Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year. **Grasshopper Creek Year Three through Ten** • Survival of 100-percent of the 200 established individuals. • Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year. **Contingency Plan** In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards: • If the Grasshopper Creek receptor site is observed to be failing significantly to achieve the performance standard during the ten-year monitoring period (e.g., survival of 100-percent of 200 established individuals is not achieved by the end of ten years), the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be propagated from the contingency seed supply held at the nursery for the (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials. The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, the container stock would be propagated from the				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	contingency seed and the plants would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance, would be initiated as set forth above.				
MM 5.2-6	The loss of sage scrub habitat within the impact area is considered a significant impact. Sage scrub habitat shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but shall be no less than 2:1 for habitat restoration, enhancement or preservation, or combination thereof. A total of 634.70 acres of sage scrub would be impacted by Project implementation, which includes Purple sage scrub, California sagebrush–California buckwheat scrub, Black sage scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, California sagebrush–California buckwheat scrub/California annual grassland, and the burned sage scrub areas: burned Purple sage scrub, burned California sagebrush–California buckwheat scrub, burned Black sage scrub, and burned California sagebrush–California buckwheat scrub/California annual grassland. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, and preservation shall depend on the initial quality of the habitat area to be restored, enhanced or preserved and would be determined by the Project Applicant and the LACDRP. Sage scrub habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. Where restoration or enhancement is the proposed mitigation, the Project Applicant shall develop a Habitat Mitigation and Monitoring Program (HMMP) and shall submit it to the LACDRP and the California Department of Fish and Wildlife (CDFW) for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to the issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants of suitable sage scrub species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), Peirson's morning-glory will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria, which shall include the following items: **Responsibilities and Qualifications**. The responsibilities and qualifications of the Project Applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures and/or State or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency. b. **Performance Criteria**. Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The HMMP shall state that the use of the mitigation site by special status wildlife species (e.g., coastal California gnatcatcher), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off. c. **Site Selection.** The mitigation sites shall be determined in coordination with the Project Applicant and the LACDRP. The site(s) shall be located in dedicated open space areas (or areas available for dedication), and shall be contiguous with other natural open space areas. Mitigation sites include onsite, NorthLake-owned offsite property, and obtaining acres from a CDFW-approved mitigation bank or through purchase and long-term conservation of suitable habitat, including areas where restoration or enhancement is needed, or a combination of the two options to account for the remainder. The Project Applicant shall demonstrate acquisition of suitable lands for restoration, enhancement, or preservation prior to issuance of the Project grading permit.	Prior to issuance of grading permits, and HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	County of Los Angeles Department of Regional Planning/California Department of Fish and Wildlife	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
d. **Native Plant and Seed Materials Procurement**. For restoration or enhancement, at least three years prior to mitigation implementation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin: i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. All container plants shall be propagated from seed of local origin as defined above. No plant or seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the' following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. e. **Wildlife Surveys and Protection.** The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., coastal California gnatcatcher]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. The HMMP shall also describe potential restrictions on these management tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). f. **Site Preparation and Plant Materials Installation.** For restoration or enhancement, mitigation site preparation shall include, as necessary (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, decompacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photodegradable'] fiber roll); (f) application of salvaged native plant materials (i.e., duff) as available, and supervised by a biological monitor, (g) temporary irrigation installation; (h) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials including specification of approved herbicides); (i) planting of container species; and (j) seed mix application. g. **Schedule.** An implementation schedule shall be developed for restoration or enhancement, that includes planting and seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). h. **Maintenance Program**. The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal-including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) replacement of dead container plants (as needed); (g) application of remedial seed mixes (as needed); (h) herbivory control; and (i) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. The mitigation site shall be maintained for a period of five years to ensure the successful sage scrub habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria. i. **Monitoring Program**. The Monitoring Program for restoration or enhancement shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring (e.g., randomly placed point-intercept transects); (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the Project Applicant has been released from maintenance requirements by the LACDRP. j. **Long-term preservation**. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.2-7	The loss of California annual grassland/wildflower fields within the impact area is considered to be a significant impact. California annual grassland/wildflower fields shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 24.23 acres of Foothill needlegrass grassland and burned Foothill needle grass grassland would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). California annual grassland/wildflower fields habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP and the California Department of Fish and Wildlife (CDFW) for review and approval. The HMMP shall be developed by a qualified restoration ecologist submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for burrowing owls. Habitat restoration/enhancement shall consist of seeding of suitable California annual grassland/wildflower fields plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria, which shall include the following items: • The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration enhancement programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency. • Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program. • The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas or areas available for dedication as open space, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owls and other wildlife species; e.g., opportunities for escape and refuge from stochastic events such as fire, flood, etc.; (3) consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible. soil types and microhabitat conditions suitable for the special status plant species listed above. • At least two years prior to mitigation plant and seed installation associated with restoration of enhancement, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in	Prior to issuance of grading permits, HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	County of Los Angeles Department of Regional Planning/California Department of Fish and Wildlife	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. • The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owls, to determine the species' occupation of the mitigation site(s). The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). • For restoration or enhancement, mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) temporary irrigation installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)--including specification of approved herbicides; and (g) seed mix application. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. • An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). • The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal-including specification of approved herbicides; (d) maintenance of erosion control measures; (e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria for restoration or enhancement. • The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo documentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.					
MM 5.2-8	The loss of foothill needlegrass grassland within the impact area is considered to be a significant impact. Foothill needlegrass grassland shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 342.85 acres of California annual grassland/Wildflower fields would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the	Prior to issuance of grading permits, HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	County of Los Angeles Department of Regional Planning/California Department of Fish and Wildlife	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). Foothill needlegrass grassland habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP and the California Department of Fish and Wildlife (CDFW) for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for the burrowing owl. Habitat restoration/enhancement shall consist of seeding of suitable foothill needlegrass grassland plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria, which shall include the following items: a. **Responsibilities and Qualifications**. The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency. b. **Performance Criteria**. Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for the burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off. c. **Site Selection**. The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas or areas available for dedication, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owls and other wildlife species; e.g., opportunities for escape and refuge from stochastic events such as fire, flood, etc.; (3) consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible, soil types and microhabitat conditions suitable for the special status plant species listed above. d. **Seed Materials Procurement.** At least two years prior to mitigation plant and seed installation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area. in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. e. **Wildlife Surveys and Protection**. The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation,				

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installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owls, to determine the species' occupation of the mitigation site(s). The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). f. **Site Preparation and Plant Materials Installation**. For restoration or enhancement, mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, decompacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photodegradable'] fiber roll); (f) temporary irrigation installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)--including specification of approved herbicides; and (h) seed mix application. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. g. **Schedule**. An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). h. **Maintenance Program**. The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal- including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shalt reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria. i. **Monitoring Program.** The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP. j. **Long-term preservation**. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.				
MM 5.2-9 A mitigation program for western spadefoot toad (WST) shall be implemented prior to construction, ground disturbance, or vegetation removal that would impact the WST breeding habitat, or areas within 1,000 feet of WST-occupied ponds within the Project Site. The mitigation program would include the components set forth below. A detailed methodology for this effort shall be reviewed by the CDFW and the LACDRP prior to implementation of the mitigation program. Results of the mitigation program shall be provided to the CDFW and the LACDRP. • Prior to implementing the Spadefoot Relocation Plan, two focused surveys during average or above-average rainfall years will be conducted within the prior appropriate seasons. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e.,	Prior to construction activities in the spring during the breeding season	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	California Department of Fish and Wildlife and County of Los Angeles Department of Regional Planning	

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2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied pond as well as those identified in recent surveys. • Suitable sites for seasonal pond creation, within the Project open space, specifically within other NorthLake-owned properties, have been identified and 1.07 acres of seasonal pond habitat will be created. The specific location of the 1.07-acre pool complex is depicted on Exhibit 5 of the *NorthLake Castaic, Los Angeles County, California, Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan July 2022 (Revised March and June 2023)* (HMMP). As described in the WST Mitigation Implementation Plan, three pools would be created based on current grading plans. The combined size of the three pools (1.07 acres) exceeds the maximum combined size of potential WST habitat currently at the Project Site (0.95 acres, as shown in Table 2-4, above). The WST Mitigation Implementation Plan would address the following issues specific to the site or sites: o Soil Characteristics and whether clay liners will be necessary o Pool locations and site access routes for construction o Types of habitat potentially affected by construction and measures to restore damaged habitat subject to temporary impacts o Watershed size and characteristics o Grading plan with cross section for each pool to be created o Specifications for clay liner (if needed) including source of clay and installation methods o Upland habitat characteristics, including soil suitability for burrowing and vegetative buffer, will also be addressed in the plan • Following creation of the 1.07-acre pool complex or complexes and prior to grading of the impacted pools, each pool within each complex will be monitored during the rainy season to ensure that the created pools exhibit at least 60 days of ponding during an average or above-average rainfall year. • Following documentation of adequate ponding for each created pool during an average or above-average rainfall year, and prior to grading of the impacted pools, soil inoculum from the impacted pools will be translocated to the created pools to provide a food source for WST. • Following documentation of adequate ponding for each created pool during an average or above-average rainfall year, and prior to grading of the impacted pools, WST egg masses, larvae and metamorphs will be translocated to the created pools for at least two wet seasons where WST egg masses, larvae and metamorphs are present in the impact pools and suitable conditions to receive the WST egg masses, larvae and metamorphs are present in the created pools. In addition, data regarding successful breeding will be submitted to CDFW for concurrence that sufficient reproduction has occurred to allow impacts to the pools in the development area. • During grading of the pools to be impacted, the Project Biologist will be present to rescue any adult WST that would be relocated to the created pool complex. • Following the two seasons of translocation of WST egg masses, larvae and metamorphs, and successful breeding, the created pools will be monitored for ten years as set forth in HMMP Table 6 (Conceptual Schedule for Pond Creation Milestones) to document the progression of the WST toward the performance standards provided in the WST HMMP prepared for the project: o **Hydrological Monitoring Performance Standard.** Ponding duration of at least 60 days must be documented to occur during average or above average rainfall years prior to translocation of egg masses, larvae, metamorphs, or adults. Ponding duration of at least 60 days must also be documented during the 10-year monitoring period. At the end of the ten-year monitoring period, this performance standard will have been achieved if ponding duration equals or exceeds ponding duration of 60 days during average or above-average rainfall years. It is important to note that during below-average rainfall years, depending on the severity of drought conditions that the created ponds will not pond for sufficient duration to allow WST to reach maturity. Thus, during the ten-year monitoring period, it is to be expected that some years will not pond for 60 days. Nevertheless, the performance standard				

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for hydrology will be considered achieved as long a ponding for 60 days occurs during average rainfall years. Finally, hydrology may be augmented at the direction of the Project Biologist, especially once breeding is observed and is threatened by declining water levels in the pools due to lower-than average rainfall. In the event that the Project Biologist determines that additional water should be added to any pond occupied by egg masses or larvae, it will be necessary to ensure protection of the egg masses and larvae by discharging water to the pool(s) in a manner that does not disturb the egg masses or larvae and does not result in the erosion of soil into the pool(s). This could be accomplished through temporary placement of large gravel at the discharge site (at the edge of the pool(s)) underlain by plastic that would allow the water to enter the pool(s) slowly and with no sediment. o **Performance Standard Prior to Grading**. Prior to Project grading that removes the impacted doner pools, during an average or above-average rainfall year, at least two of the three created ponds within the pond complex exhibits emergence of metamorphs in each pond to ensure breeding in subsequent years. Successful breeding would be determined by the presence of egg masses that are not present due to translocation but which occur due to reproduction. Should this occur during a below-average rainfall year, the condition would be satisfied as it would show that the pools are performing as intended. In any case, data regarding successful breeding will be submitted to CDFW for concurrence that sufficient reproduction has occurred to allow impacts to the pools in the development area. o **Performance Standard Post-Grading**. Following Project grading that removes the impacted donor pools, during an average or above-average rainfall year, at least two of the three created ponds within the pond complex will exhibit breeding as indicated by the presence of WST egg masses, tadpoles/larvae/ or metamorphs, to confirm establishment of breeding WST for each pond complex created. Should this occur during a below-average rainfall year, the condition would be satisfied as it would show that the pools are performing as intended.				
MM 5.2-10 A Biological Monitor shall be on site during all vegetation clearing activities and thereafter on an as-needed basis. The Biological Monitor will conduct a clearance sweep prior to clearing activities to minimize potential for special status reptile mortality. If feasible, special status reptiles will be removed from the disturbance area and relocated to suitable habitat in adjacent areas.	Prior to and during all vegetation clearing activities	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	
MM 5.2-11 Riparian vegetation shall be preserved, restored, or enhanced on site or off site at a ratio identified in the USACE and CDFW permits/agreements for the project. The ratio shall be no less than 2:1 for habitat restoration or preservation. Habitat enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. The mitigation ratio for habitat enhancement shall depend on the initial quality of the habitat area to be enhanced, and would be determined by the Project Applicant, the USACE, the CDFW, and the LACDRP. Riparian habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The Project Applicant shall develop a HMMP and shall submit it to the USACE, the CDFW, and the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist and approved by the USACE, the CDFW, and the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants and cuttings of suitable riparian plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), spiny rush will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP and according to its specified materials, methods, and performance criteria, which shall include the following items: a. **Responsibilities and Qualifications.** The responsibilities and qualifications of the Project Applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under USACE and CDFW permit conditions. A successful program shall be defined as one that has been signed off on by the USACE and the CDFW.	Prior to issuance of grading permits, HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and County of Los Angeles Department of Regional Planning	

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b. **Performance Criteria.** Mitigation performance criteria to be specified in the HMMP shall conform to USACE and CDFW permit conditions. The HMMP shall state that the use of the mitigation site by special status wildlife species (e.g., least Bell's vireo), though not a requirement for site success, would be regarded by the USACE, the CDFW, and the LACDRP, as a significant factor in considering eligibility for program sign-off. c. **Site Selection.** The mitigation sites shall be determined in coordination with the Project Applicant, the USACE, the CDFW, and the LACDRP. The site(s) shall be located in dedicated open space areas, and shall be contiguous with other natural open space areas. d. **Seed Materials Procurement.** At least two years prior to mitigation implementation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. e. **Wildlife Surveys and Protection.** The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., least Bell's vireo]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). f. **Site Preparation and Plant Materials Installation.** Mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) application of salvaged native plant materials (i.e., coarse woody debris), as available and supervised by a biological monitor; (g) temporary irrigation installation; (h) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)—including specification of approved herbicides; (i) planting of container plant and cutting species; and (j) seed mix application. g. **Schedule.** An implementation schedule shall be developed that includes planting and seeding to occur in late fall and early winter (i.e., between November 1 and February 15) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). h. **Maintenance Program.** The Maintenance Program shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal—including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) replacement of dead container plant and cuttings (as needed); (g) application of remedial seed mixes (as needed); (h) herbivory control; and (i) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. The mitigation site shall be maintained for a period of five years to ensure the successful sage scrub habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the USACE, the CDFW, and the LACDRP prior to five years if the mitigation program has achieved all performance criteria. i. **Monitoring Program.** The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring (in conformance with the USACE 2015 Guidelines); and (c) annual monitoring reports, which shall be submitted to the USFWS, the CDFW, and the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and				

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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the Project Applicant has been released from maintenance requirements by the USACE, the CDFW, and the LACDRP. j. **Long-term preservation.** Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.				
MM 5.2-12	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of vegetation associated with project implementation, the limits of disturbance shall be clearly defined and marked in the field using lath and flagging or orange snow fencing. The Biological Monitor shall review the limits of disturbance prior to initiation of construction activities. The Biological Monitor shall be on site during the initial vegetation clearing and thereafter on an as-needed basis to assist the Project Applicant with mitigation measure compliance and to provide guidance in avoiding and/or minimizing impacts to biological resources.	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of vegetation associated with project implementation	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	
MM 5.2-13	The Project shall be conducted in compliance with the conditions set forth in the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code with methods approved by USFWS and CDFW to protect active bird//raptor nests. The nature of the Project requires that work would be initiated during the breeding season for nesting birds (March 15-September 15) and nesting raptors (February 1-June 30). LACFCO, in consultation with a qualified biologist, may employ bird exclusionary measures (e.g., mylar flagging) prior to the start of bird breeding season to minimize opportunities for birds to nest within established boundaries of the Project. In order to avoid direct impacts on active nests, a pre-construction survey shall be conducted by a qualified Biologist for nesting birds and/or raptors within 3 days prior to clearing of any vegetation or any work near existing structures (i.e., within 50 feet for nesting birds and within 500 feet for nesting raptors). If the Biologist does not find any active nests within or immediately adjacent to the impact area, the vegetation clearing/construction work shall be allowed to proceed. Results of the surveys will be provided to the CDFW and the LACDRP. CDFW will be consulted for their determination of the need for an Incidental Take Permit, in the event that any listed or candidate species are encountered during pre-construction surveys. If the Biologist finds an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted or breeding activities substantially disrupted, the Biologist shall delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the nature of the construction activity. Typical nest buffers may be approximately 200 feet for song birds and 500 feet for raptors. Any nest found during survey efforts shall be mapped on the construction plans. The active nest shall be protected until nesting activity has ended. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by a qualified Biologist: (1) clearing limits shall be established within a buffer around any occupied nest, unless otherwise determined by a qualified Biologist and (2) access and surveying shall be restricted within the buffer of any occupied nest, unless otherwise determined by a qualified Biologist. Encroachment into the buffer area around a known nest shall only be allowed if the Biologist determined that the proposed activity would not disturb the nest occupants. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest or the nest has failed.	Within 3 days prior to vegetation clearing activities or work near existing structures	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	California Department of Fish and Wildlife and County of Los Angeles Department of Regional Planning	
MM 5.2-14	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable wintering burrowing owl habitat, the area shall be assessed during the appropriate time of year (October 15 to March 31). In the event that wintering owls or burrows are detected, CDFW will be consulted. If the habitat assessment concludes that the area lacks potentially suitable burrowing owl burrows, no additional action is required. However, if potentially suitable burrows are located in the assessment area, any burrows that may be impacted by the project will be replaced with artificial burrows within on-site or off-site (if applicable) preserved areas with potentially suitable burrowing owl habitat, following consultation with CDFW. If a wintering owl is observed during the non-nesting season, the burrow will be monitored by a qualified Biologist and, when the burrowing owl is away from the burrow, the burrow will be removed (or the burrow closed) so the burrowing owl cannot return to the burrow, following consultation with CDFW. The qualified Biologist will supervise the removal of the burrow.	Prior to grading and/or construction related activities involving the disturbance and/or removal of potentially suitable wintering burrowing owl habitat	Project Applicant, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	

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MM 5.2-15	Due to the close proximity of occupied habitat of a federally listed coastal California gnatcatcher, the Project shall not commence without consultation with the USFWS due to the potential for take per the FESA. The consultation will occur within the framework of Section 7 through the USACE regulatory permitting process. If required by the USFWS, a Biological Assessment will be provided to support the Service's Biological Opinion.	Prior to the initiation of any grading and/or construction-related activity	Project Applicant and Future Developers	U.S. Fish and Wildlife Service and County of Los Angeles Department of Regional Planning	
MM 5.2-16	To limit the amount of operational noise (i.e., from residents) to surrounding natural open space areas, a 100-foot buffer within the fuel-modification zone shall be planted along the boundary of developed land uses with plant species to be reviewed and approved by the Los Angeles County Fire Department and the LACDRP Biologist. The vegetation within the transition zone buffer will block sound waves and screen noise from the adjacent development so that the amount of indirect noise reaching the wildlife habitat would be reduced. Landscaping in areas adjacent to natural open space shall use species native to the project region that are considered fire-retardant (e.g., toyon [*Heteromeles arbutifolia*]). The Planting Plan shall be submitted to the Los Angeles County Fire Department and LACDRP Biologist for review and approval prior to issuance of a building permit.	Prior to the initiation of any grading and/or construction-related activity	Project Applicant, Future Developers, and Construction Contractor	Los Angeles County Fire Department and County of Los Angeles Department of Regional Planning	
MM 5.2-17	Prior to the issuance of building permits, a Lighting Plan for the subject tract shall be submitted to the LACDRP for review and approval to demonstrate that lighting from the proposed project shall be directed away from natural open space areas and any proposed biological resources mitigation sites. Land uses with high-intensity lighting shall be relocated within the development to areas away from natural open space.	Prior to the issuance of building permits	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.2-18	To limit the amount of human disturbance to surrounding natural open space areas, a Fencing Plan to deter project occupants from entering the natural areas shall be prepared by the project developer and implemented. The Fencing Plan shall include provisions for signs and wildlife-friendly split-rail fencing to direct residents to keep out of sensitive natural open space and revegetation and/or mitigation areas. In areas bordering natural open space and fuel-modification zones, the Landscape Plan shall reflect a transition zone designed to buffer natural habitats from developed areas and proposed fencing. This transition zone should reduce impacts associated with invasion by introduced species and should help buffer human activity adjacent to the wildlife habitat. Landscaping in areas adjacent to natural open space shall use species native to the project region (e.g., toyon) and be consistent with guidelines from the Los Angeles County Fire Department.	Prior to the initiation of any grading and/or construction-related activity and throughout Project operation	Project Applicant, Future Developers and Construction Contractor	Los Angeles County Fire Department and County of Los Angeles Department of Regional Planning	
MM 5.2-19	Landscaping designs shall be submitted to LACDRP for review and approval by a qualified Biologist. The review shall ensure that no invasive, exotic plant species are used in any proposed landscaping and that suitable substitutes are proposed. Excluded plant species shall be consistent with the California Invasive Plant Council current list at the time of installation. Only native species from the Santa Clarita Valley region shall be used in landscaping along the project boundaries adjacent to open space.	Prior to approval of landscape plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.2-20	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable bat roosting habitat, namely rocky outcrops or trees, a qualified Biologist shall conduct a pre-construction bat habitat assessment of the potential habitat marked for removal. Potential for roosting will be categorized by (1) potential for solitary roost sites and (2) potential for colonial roost sites (i.e., ten bats or more). If the potential for colonial roosting is determined, CDFW will be consulted and those rocky outcrops or trees shall not be removed during the bat maternity roost season (March 1 to July 31). Trees potentially supporting colonial roosts outside the maternity roost season and trees potentially supporting solitary roosts may be removed via a two-step removal process whereby, at the direction of the Biologist, some level of disturbance (such as trimming of lower branches of trees) is applied to the habitat on the day prior to removal to allow bats to escape during the darker hours. In the case of a tree, it shall be removed the following day (i.e., there shall be no less or more than one night between initial disturbance and the grading or tree removal). Rock outcrops potentially supporting colonial roosts outside the maternity roost season and rock outcrops potentially supporting solitary roosts may be fitted with a bat exclusionary device, at the entry location, whereby bats are allowed to leave the structure but unable to return. The structure can be demolished the following day. In addition, the habitat replacement requirements of other Mitigation Measures further reduce the impact to bats through the preservation, enhancement, restoration and/or creation of impacted vegetation, which shall be generally suitable for impacted bat species. Prior to disturbance of any roosting habitat, a Bat Relocation Monitoring Plan (BRMP) shall be submitted and approved by the CDFW and the LACDRP. The BRMP shall include, at a minimum, the following items: (1) species of bats present onsite, (2) habitat uses of the site (i.e., roosting, hibernating, etc.) (3) roosting habitat replacement feature guidelines, (4) construction	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable bat roosting habitat	Project Applicant, Future Developers and Qualified Biologist	California Department of Fish and Wildlife and County of Los Angeles Department of Regional Planning	

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	monitoring guidelines, (5) habitat replacement feature monitoring, and (6) reporting requirements. Reporting shall occur annually to LACDRP and CDFW. The BRMP will be submitted annually for five years.				
MM 5.2-21	Prior to the issuance of a grading permit, the project applicant will apply for coverage under the State Water Resources Control Board's General Permit for Storm Water Discharge Associated with Construction Activity (Construction Activities General NPDES Permit) and will comply with all the provisions of the permit, including the development of a Storm Water Pollution Prevention Plan, which includes provisions for the implementation of Best Management Practices and erosion control measures. Best Management Practices will include both structural and non-structural measures. The purpose of this mitigation measure is to ensure that site runoff does not adversely affect downstream biological resources including Castaic Lake, Castaic Creek, and the Santa Clara River.	Prior to the issuance of a grading permit	Project Applicant	State Water Resources Control Board	
MM 5.2-22	The project applicant shall retain a qualified biologist with the appropriate handling permits to conduct focused surveys for Crotch's bumble bee within the proposed habitat restoration/enhancement sites prior to implementation of the HMMP as set forth in MM 5.2-6 through MM 5.2-8. Focused surveys shall follow California Department of Fish and Wildlife's (CDFW) Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023). Focused surveys shall also be conducted throughout the entire proposed mitigation areas and during the appropriate flying season to ensure no missed detection of Crotch's bumble bee occurs. Survey results, including negative findings, shall be submitted to CDFW and LACDRP prior to the start of a monitoring program.	Prior to the implementation of the HMMP and during the appropriate flying season	Project Applicant	County of Los Angeles Department of Regional Planning	
Cultural Resources (Section 5.3 of the 2019 Draft SEIR)					
MM 5.3-1	If human remains are encountered during a public or private construction activity, other than at a cemetery, State Health and Safety Code 7050.5 states that no further disturbance shall occur until the Los Angeles County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The Los Angeles County Coroner must be notified within 24 hours. If the coroner determines that the burial is not historic, but prehistoric, the Native American Heritage Commission (NAHC) must be contacted to determine the most likely descendent (MLD) for this area. The MLD may become involved with the disposition of the burial following scientific analysis. (**SCVAP 2012 EIR MM 3.8.7)**	During grading and earth disturbance activities	Project Applicant and Construction Contractor	Los Angeles County Coroner and Native American Heritage Commission	
MM 5.3-2	In the unlikely event that artifacts are found during grading within the County's Planning Area or future roadway extensions, an archaeologist will be notified to stabilize, recover, and evaluate such finds. (**SCVAP 2012 EIR MM 3.8.3)**	During grading and earth disturbance activities	Project Applicant, Construction Contractor, and Qualified Archaeologist	County of Los Angeles Department of Regional Planning	
MM 5.3-3	For archeological sites accidentally discovered during future construction, there shall be an immediate evaluation of the find by a qualified archeologist. If the find is determined to be a historical or unique archeological resource, as defined under CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be provided. Construction work may continue on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i). (**SCVAP 2012 EIR MM 3.8.5)**	During grading and earth disturbance activities	Project Applicant, Construction Contractor, and Qualified Archaeologist	County of Los Angeles Department of Regional Planning	
MM 5.3-4	During grading activities. In the unlikely event that artifacts are found during grading within the Project site, a paleontologist will be notified to stabilize, recover, and evaluate such finds. (**SCVAP 2012 EIR MM 3.8.6, modified)**	During grading and earth disturbance activities	Project Applicant, Construction Contractor, and Qualified Paleontologist	County of Los Angeles Department of Regional Planning	
MM 5.3-5	Avoidance is the preferred treatment for cultural resources. Where feasible, project plans shall be developed to allow avoidance of cultural resources. Where avoidance of construction impacts is possible, covering of the cultural resource site with a layer of chemically stable soil and avoidance planting (e.g., planting of prickly pear cactus) shall be employed to ensure that indirect impacts from increased public availability to the site are avoided. Where avoidance is selected, cultural resource sites shall be deeded into permanent conservation easements or dedicated open space. **(SCVAP 2012 EIR MM 3.8.1)**	During grading and earth disturbance activities	Project Applicant	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.3-6	If avoidance and/or preservation of in place cultural resources is not possible, the following mitigation measures shall be initiated for each impacted site: a. A participant-observer, as determined by the Native American Heritage Commission (NAHC), shall be used during archaeological testing or excavation in the project site. Prior to the issuance of a grading permit for the project, the project proponent shall develop a test level research design detailing how the cultural resource investigation shall be executed and providing specific research questions that shall be addressed through the excavation program. In particular, the testing program shall characterize the site constituents, horizontal and vertical extent, and, if possible, period of use. The testing program shall also address the California Register and National Register eligibility of the cultural resource and make recommendations as to the suitability of the resource for listing on either Register. The research design shall be submitted to the County of Los Angeles Regional Park and Open-Space District for review and comment. For sites determined, through the Testing Program, to be ineligible for listing on either the California or National Register, execution of the Testing Program will suffice as mitigation of project impacts to this resource. (**SCVAP 2012 EIR MM 3.8.2)**	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant and Construction Contractors	County of Los Angeles Regional Park and Open Space District and Native American Heritage Commission	
MM 5.3-7	All Project-related ground-disturbing activities in archaeologically sensitive sediments shall be monitored by a qualified Archaeologist to reduce any archaeological resources impacts to a level considered less than significant. The construction monitoring program shall be preceded by a pre-grade meeting in the field in which the Project Archaeologist shall explain the procedures necessary to protect and safely remove potentially significant archaeological resources, and shall establish procedures for monitoring based on the sensitivity of the sediments being graded, schedule, and other information received from the applicant. If potential cultural sites are identified during construction-related ground disturbances, all work in that location shall cease or be immediately diverted until the qualified archaeologist has evaluated the nature and significance of the find. The Project Applicant shall then be notified if the materials are believed to be potentially significant, and the archaeologist may recommend further study and mitigation to the satisfaction of LACDRP.	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant, Construction Contractors, and Qualified Archaeologist	County of Los Angeles Department of Regional Planning	
MM 5.3-8	At such time when the Project Archaeologist is on-site for monitoring activities, a qualified Native American Tribal Monitor shall be notified and invited to observe ground-disturbing activities. The Native American Tribal Monitor shall coordinate with the Project Archaeologist and provide input regarding potential resources or cultural sites. Should any resources be discovered, the procedures set forth in MM 5.3-2 shall be followed.	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant, Construction Contractors	County of Los Angeles Department of Regional Planning and Native American Heritage Commission	
MM 5.3-9	All Project-related ground-disturbing activities in paleontologically sensitive sediments shall be monitored by a qualified Paleontologist to reduce any impacts to non-renewable fossil resources to a level considered less than significant. The construction monitoring program shall be preceded by a pre-grade meeting in the field in which the Project Paleontologist shall explain the procedures necessary to protect and safely remove potentially significant fossil materials for study and curation at the Natural History Museum of Los Angeles County, and shall establish procedures for monitoring based on the sensitivity of the sediments being graded, schedule, and other information received from the applicant. If potential paleontological sites are identified during construction-related ground disturbances, all work in that location shall cease or be immediately diverted until the qualified paleontologist has evaluated the nature and significance of the find. The Project Proponent will then be notified if the materials are believed to be potentially significant, and the paleontologist may recommend further study and mitigation to the satisfaction of LACDRP.	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant, Construction Contractors, and Qualified Paleontologist	County of Los Angeles Department of Regional Planning	
Energy (Section 5.4 of the 2019 Draft SEIR)					
MM 5.4-1	The County shall review all development plans to guarantee that energy conservation and efficiency standards of Title 24 are met and are incorporated into the design of the proposed project prior to approval. (**SCVAP 2012 EIR MM 3.17-7**)	Prior to approval of development plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.4-2	The County shall review all development proposals to guarantee that sufficient energy resources and facilities are available to supply adequate energy to the proposed project and associated uses prior to approval. (**SCVAP 2012 EIR MM 3.17-6)**	Prior to approval of development plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

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MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Greenhouse Gas Emissions (Section 5.7 of the 2019 Draft SEIR)					
MM 5.7-1	Prior to the issuance of building permits, the applicant shall provide evidence of green building practices and design elements that reduce GHG emissions, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-1**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-2	Prior to the issuance of building permits, the applicant shall provide evidence of energy- efficient designs, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards, such as those found in the Leadership in Energy and Environmental Design ("LEED") Green Building Ratings and/or comply with Title 24, Part 11, the California Green Building Standards Code. (**SCVAP MM 3.4-2**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-3	Prior to the issuance of building permits, the applicant shall provide evidence of energy efficient lighting, heating and cooling systems, appliances, equipment, and control systems, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-3**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-4	Prior to the issuance of building permits, the applicant shall provide evidence of light colored "cool" roofs and cool pavements, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-4**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-5	Prior to the issuance of building permits, the applicant shall provide evidence of efficient lighting (including LEDs) for traffic, street, and other outdoor lighting purposes, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-5**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-6	Prior to the issuance of building permits, the applicant shall provide evidence of efficient pumps and motors for pools and spas, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-6**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-7	Prior to the issuance of building permits, the applicant shall provide evidence of the ability to install solar, and solar hot water heaters, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-7**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-8	Prior to the issuance of building permits for, the applicant shall provide evidence of water-efficient landscapes, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-8**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-9	Prior to the issuance of building permits, the applicant shall provide evidence of water efficient irrigation systems and devices, such as soil-based irrigation controls and use water-efficient irrigation methods, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-9**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-10	Prior to the issuance of building permits, the applicant or their contractor shall submit a site construction management plan for the reuse and recycle construction and demolition (including soil, vegetation, concrete, lumber, metal, and cardboard) to the Department of Public Works for review and approval in accordance with the requirements of the ordinances developed pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-10**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-11	Prior to the issuance of building permits, the applicant shall provide evidence of reuse and recycling receptacles in residential, industrial, and commercial projects, in accordance with the requirements of the ordinances developed pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-11**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-12	Prior to the issuance of building permits, the applicant shall provide evidence of consistency with "smart growth" principles to reduce GHG emissions (i.e., ensure mixed- use, infill and higher density projects provide alternatives to individual vehicle travel and promote efficient delivery of goods and services). (SCVAP MM 3.4-12)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.7-13	Prior to implementing project approval, the applicant shall preserve existing trees, to the extent feasible and consistent with mitigation measures, encourage the planting of new trees consistent with the final landscape palettes, and create open space where feasible. (**SCVAP MM 3.4-13**)	Prior to implementing project approval	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-14	Prior to the issuance of each residential occupancy permit, the Applicant or successor developer shall submit for approval to the County the plan for the applicable future homeowners association(s) to provide educational information to each homeowner on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; (5) the use of solar heating, automatic covers, and efficient pumps and motors for pools and spas; and (6) recycling to all homeowners prior to individual purchase of property and again annually.	Prior to the issuance of each residential occupancy permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-15	Prior to the issuance of each nonresidential occupancy permit, the Applicant or successor developer shall submit for approval to the County the plan to provide educational information to each owner or tenant on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; and (5) recycling to all homeowners prior to individual purchase of property and again annually.	Prior to the issuance of each nonresidential occupancy permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-16	Prior to the issuance of each grading and building permit, the applicant/developer shall require in contract specifications, that contractors set goals to limit unnecessary construction equipment idling to 3 minutes and include methods to encourage equipment operators to achieve the 3-minute goal.	Prior to the issuance of each grading and building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-17	Prior to the issue of the occupancy permit for the 1,000th residential unit, the master developer shall provide the County with plans for a weekly farmers' market to be sponsored by the homeowners' association or similar entity.	Prior to the issue of the occupancy permit for the 1,000th residential unit,	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
Hydrology and Water Quality (Section 5.8 of the 2019 Draft SEIR)					
MM 5.8-1	The Project will develop and implement an Integrated Pest Management Plan as a mitigation measure in accordance with the integrated pest management and pesticide and fertilizer application guidelines established by the University of California Division of Agriculture and Natural Resources Statewide Integrated Pest Management Program (http://www.ipm.ucdavis.edu/). The IPM Plan, which will serve to control nutrients and reduce pesticide use, will include the following components: 1. Roles and responsibilities. The IPM Plan will identify the key decision makers in the program, other key roles (such as the person responsible for recordkeeping), and the program funding mechanisms. 2. Pest identification. The IPM Plan will identify plant species and potential pests for these plant species. The Plan shall provide references to resources (e.g., existing field manuals) and identify tools (e.g., hand lens) that can be used to facilitate identification. 3. Practices to prevent pest incidence and reduce pest buildup. The IPM Plan will include a list of acceptable management strategies for each potential pest. For example, effective practices include modifying landscaping to be less conducive to pest survival, using pest-resistant plant varieties, using mulch to suppress weeds, encouraging naturally occurring biological controls, educating the public to be more tolerant of pests, removing pests mechanically or with barriers and traps, developing a list of pesticides that are less toxic to the environment, and developing formulations that will control the pest if other methods are not successful. 4. Monitoring to examine vegetation and surrounding areas for pests to evaluate trends and to identify when controls are needed. The IPM Plan will establish monitoring guidelines for the potential pests and beneficial insects. Monitoring procedures shall include regular visual inspections or checking with traps and methods to quantify observations. The monitoring program shall be used to evaluate when pests may become intolerable and to evaluate the level of effectiveness of controls. 5. Establishment of action thresholds that trigger control actions. The IPM Plan will establish injury levels and action thresholds for each potential pest that is listed in the plan. The injury level is the number of pests	Prior to issuance of occupancy permits and throughout Project operation	Construction Contractor, Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

TABLE 4-1
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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
associated with intolerable damage. Action thresholds are the set of conditions required to trigger a control action, usually pesticide application. 6. Pest control methods. The IPM Plan will describe cultural, mechanical, environmental, and biological pest control methods and shall list pesticides authorized for use and the Safety Data Sheets for each pesticide. The Plan will include specific criteria for selecting pest management methods, for example, those that are least disruptive to natural controls and least damaging to water quality, and procedures for evaluating the effectiveness of the control method. 7. Fertilizer management. The IPM Plan will describe soil assessment techniques, fertilizer types, application methods, and proper storage and handling of fertilizers. 8. Pesticide management. The IPM Plan will discuss pesticide safety (e.g., Material Safety Data Sheets, precautionary statements, and protective equipment); regulatory requirements; spill mitigation; groundwater and surface water protection measures associated with pesticide use; and pesticide applicator certifications, licenses, and training (i.e., all pesticide applicators must be certified by the California Department of Pesticide Regulation). The IPM Plan will include a pesticide application guidelines/checklist. For example, the application equipment must be calibrated correctly and written records must be kept of any pesticide application. 9. Irrigation management. The IPM Plan will describe the low volume water approaches to landscape irrigation, such as drip type and sprinkler systems with SMART controllers, and shall also describe the training to be provided to landscape crews that will focus on applying water only when needed to enhance plant root growth, managing irrigation to avoid conditions conducive to disease development, and minimizing runoff containing pollutants. 10. Record keeping. The IPM Plan will describe the records that will be maintained for program implementation, including pest identification and monitoring results, when and where various pest suppression techniques were implemented, pesticide application records, observed side effects of the treatment on non-target species, and public complaints and positive feedback received. 11. Training. The IPM Plan will describe continuing education of pest management personnel. 12. Effectiveness evaluation. The IPM Plan will describe the methods to be used to evaluate the overall effectiveness of the program and the schedule for reviewing the Plan to incorporate new IPM technology.					
Noise (Section 5.10 of the 2019 Draft SEIR)					
MM 5.10-A	With concurrence from the Castaic Union School District, the Applicant will construction a minimum 3-foot-high sound wall along the eastern edge of the outdoor fields, a 6-foot high wall along the eastern edge of the school parking lot, and a 3-foot high wall along the western edge of Ridge Route Road north of the school parking lot to block noise from project-related traffic to the school playground and school buildings. The location of the proposed sound wall is shown in Figure 1.	Prior to issuance of grading permits and building permits and during construction	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-B	During construction, the Applicant will place a flagman at the campus during school hours to ensure school and construction traffic flow safely in the school vicinity.	Prior to issuance of grading permits and building permits and during construction	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-C	The Applicant will ensure that access to the campus is always preserved during construction.	Prior to issuance of grading permits and building permits and during construction	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-1	Maintain adequate buffer distances from nearby residences to freeways, high traffic volume roads, railroads, airports, manufacturing facilities, industrial facilities, mining centers and other existing processing plants where the public may be affected by noise. **(SCVAP MM 3.18-2)**	Prior to issuance of grading permits and building permits	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-2	Sound barriers should be required of the owners of the proposed sensitive land uses adjacent to high noise sources, to protect the public from significant noise impacts. **(SCVAP MM 3.18-4)**	Prior to issuance of grading permits and building permits	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

TABLE 4-1
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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.10-3	The placement of telecommunication towers and antennas power boxes should comply with noise ordinances. All related equipment should be rated not to exceed 45 dB(A) at any residential property line. **(SCVAP MM 3.18-6)**	Prior to approval of utility plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-4	Prior to the issuance of each permit for clearing, grading, or building within 500 feet of existing residences or the Northlake Elementary School, the Developer shall demonstrate that the construction plans or specifications include the following noise-abatement and control measures. This measure applies to all phases of construction. • All construction equipment, including internal combustion engines and stationary equipment (used for construction purposes) shall be equipped with noise-reducing features such as, but not limited to, improved mufflers, intake silencers, ducts, engine enclosures, and acoustical shields or shrouds. • Stationary sources located within 450 feet of the Northlake elementary School or off-site residences shall have noise abatement, such as engine enclosures or placed behind barriers, to limit the noise level at the sensitive receptor to 60 dBA L_{eq} or less. • Stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers. • On-site and off-site construction haul routes shall be designed to avoid noise-sensitive uses, as feasible. • Equipment and material staging areas and equipment maintenance areas shall be located at least 500 feet from sensitive noise receivers, if feasible.	Prior to the issuance of each permit for clearing, grading, or building within 500 feet of existing residences or the Northlake Elementary School	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-5	To the extent feasible, intensive noise activity (e.g., operation of earth moving equipment) within 750 feet of the Northlake Elementary School shall be scheduled to occur when classroom instruction is not scheduled. If grading or similar construction activity within 150 feet of the school is to occur for longer than one day while school is in session, the Developer shall install a temporary noise barrier between the construction area and the school. The barrier shall be 12 feet high and solid from the ground to the top. The barrier shall be constructed with plywood that is at least ½ inch thick or with another material that creates a noise transmission loss of at least 20 dBA. The barrier shall be located to break the line of sight between the school and the construction area. Where feasible, the barrier shall remain in place until the completion of construction near the school. This measure applies to all phases of construction.	Prior to initiation of any construction activity within 750 feet of Northlake Elementary School	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-6	If grading or similar construction activity within 150 feet of off-site residences is to occur for longer than one day, the Developer shall install a temporary noise barrier between the construction area and the residences. The barrier shall be 12 feet high and solid from the ground to the top. The barrier shall be constructed with plywood that is at least ½ inch thick or with another material that creates a noise transmission loss of at least 20 dBA. The barrier shall be located to break the line of sight between the residences and the construction area. Where feasible, the barrier shall remain in place until the completion of construction near the residences. This measure applies to all phases of construction.	Prior to issuance of a building permit for each industrial and commercial land use	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-7	Prior to issuing of a building permit for each industrial and commercial land use, the Developer shall submit a noise analysis to the County demonstrating that projected noise levels from stationary sources, vehicle activity, loading docks, and similar sources will not exceed the exterior noise standards of Section 12.08.390 of the County Code. For purposes of this MM, school use shall be considered as a residential use (Zone II) in the County Code. The noise analysis shall, to the extent feasible, be cumulative, considering not only the noise generated by the proposed development but also noise generated by adjacent and nearby stationary sources. Where the adjacent properties have not been developed, the analysis should show that the noise level from the proposed development would be far enough below the standard to allow a reasonable increment for future noise sources without exceeding the standard.	Prior to issuance of a building permit for each industrial and commercial land use	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-8	Prior to issuing of a building permit for each multi-family residential use, the Developer shall submit a noise analysis to the County demonstrating that projected air conditioning and refrigeration equipment noise levels would be exceed the standards of Section 12.08.530 of the County Code.	Prior to issuance of a building permit for each multi-family residential use	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

TABLE 4-1
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Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.10-9 Prior to issuing of building permits for single family and duplex residences adjacent to Ridge Route Road, Northlake Boulevard, A Street, B Street, or E Street, and for multi-family residences adjacent to Ridge Route Road and Northlake Boulevard, the Developer shall submit a noise analysis to the County demonstrating that projected exterior noise levels at areas where residents would reasonably be expected to spend more than one hour, such as back yards, would not exceed 60 dBA CNEL for single family and duplex residences and 65 dBA CNEL for multi-family residences. This standard is based on the California Land Use Compatibility Guidelines. Noise abatement may be achieved by setbacks, berms, and walls. The noise analysis shall also demonstrate that interior noise levels in all habitable rooms would of duplexes and multi-family residences would not exceed 45 dBA CNEL, as required by the California Building Code.	Prior to issuance of building permits for single family and duplex residences adjacent to Ridge Route Road, Northlake Boulevard, A Street, B Street, or E Street, and for multi-family residences adjacent to Ridge Route Road and Northlake Boulevard	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-10 Prior to issuing of building permits for commercial land uses adjacent to Ridge Route Road, the Developer shall submit a noise analysis to the County demonstrating that projected exterior noise levels at areas where patrons would reasonably be expected to spend more than one hour, such as outdoor restaurant seating, would not exceed 70 dBA CNEL.	Prior to issuance of building permits for commercial land uses adjacent to Ridge Route Road	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-11 Prior to the issuance of each grading permit, the Developer shall submit plans and/or specifications to the County demonstrating that site preparation and grading within 265 feet of a residence or the NorthLake Elementary School shall be performed with equipment that will not cause a vibration exceeding 0.01 peak particle velocity (ppv) inch per second (in/sec).	Prior to the issuance of each grading permit	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-12 If blasting is required, the Applicant or its contractor shall hire a certified blasting expert to develop a blasting program to be approved by the County Department of Public Works. The program shall include but not be limited to the following elements: • Design the blast to limit noise and vibration at any residence or the NorthLake Elementary School to the limits recommended by the Office of Surface Mining Reclamation and Enforcement or similarly recognized authority. • Based on the blasting locations, define an impact area where noise and vibration impacts are anticipated to be distinctly perceptible. • Inform all homeowners and tenants in the impact area of the Project, the planned blasting program, and the anticipated noise and vibration impacts. In addition to printed literature, have a public meeting. Provide a contact for homeowners for pre- and post-blast questions. • Use blast signals to notify residents prior to each blast. • Monitor blasts to verify noise and vibration levels at the nearest receptor(s).	Prior to commencement of any blasting activities	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
Public Services (Section 5.11 of the 2019 Draft SEIR)				
SCVAP MM 3.15-2 Concurrent with the issuance of building permits, the project applicant shall participate in the Developer Fee Program to the satisfaction of the County of Los Angeles Fire Department.	Concurrent with the issuance of building permits	Applicant	County of Los Angeles Fire Department	
SCVAP MM 3.15-3 Adequate water availability shall be provided to service construction activities of any project to the satisfaction of the County of Los Angeles Fire Department.	Prior to approval of development plans	Applicant	County of Los Angeles Fire Department	
SCVAP MM 3.15-4 Development applicant(s) shall be required to pay the Los Angeles County Sheriff's established law enforcement facility fees for North Los Angeles County prior to issuance of a certificate of occupancy on any structure. The fees are for the acquisition and construction of public facilities to provide adequate service to the residents of the County's Planning Area.	Prior to approval of development application	Applicant	County of Los Angeles Fire Department	
SCVAP MM 3.15-1 Project developers shall pay the current library fee at the time of building permit issuance ($885.00 per residential unit for FY 2016-17) to the County of Los Angeles to offset the demand for library items and building square footage generated by the proposed project. The library mitigation payment shall be made on a building permit by building permit basis by the developer for residential projects.	Prior to issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Traffic, Access, and Circulation (Section 5.11 of the 2019 Draft SEIR)					
MM 5.11-3	Prior to construction activities, the Project Applicant shall prepare and submit a detailed Construction Traffic Control Plan to the County of Los Angeles Department of Public Works for review and approval. The Construction Traffic Control Plan shall describe in detail safe detours and provide temporary traffic control during construction activities for the project. To reduce traffic congestion, the Plan shall include, as necessary, appropriate, and practicable, the following: temporary traffic controls (e.g., a flag person) during all phases of construction to maintain smooth traffic flow; dedicated turn lanes for movement of construction trucks and equipment on and off site; scheduling of construction activities that affect traffic flow on the arterial system to off-peak hours; consolidation of truck deliveries; rerouting of construction trucks away from congested streets or sensitive receptors; and/or signal synchronization to improve traffic flow.	Prior to the issuance of building permit	Project Applicant and Future Developers	County of Los Angeles Department of Public Works	
Utilities (Section 5.12 of the 2019 Draft SEIR)					
MM 5.12-1	The project applicant shall provide all onsite water system improvements and shall contribute to required new or upgraded existing offsite improvements to meet all water supply needs for the proposed development. (**1992 SP EIR MM 4.12.1)**	Prior to the issuance of building permits	Project Applicant and Future Developers	County of Los Angeles Department of Public Works and Newhall County Water District	
MM 5.12-2	All water system improvements shall be sized at the water improvement plan check stage of development. **(1992 SP EIR MM 4.12.2)**	Prior to approval of water improvement plan(s)	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Public Works	
MM 5.12-3	Project connection fees would be deposited into a capital improvement fund to help pay for new facilities and expansion required by the Districts; **(1992 SP EIR MM 4.9.3)**	Prior to connection to Los Angeles Sanitation Districts facilities	Project Applicant	County of Los Angeles Department of Regional Planning and Los Angeles Sanitation Districts	
MM 5.12-4	Payment of the connection fees is required for issuance of a permit to connect the project to surrounding Los Angeles County Sanitation District facilities, if necessary**. (1992 SP EIR MM 4.9.4)**	Prior to issuance of permit to connect the project to surrounding Los Angeles County Sanitation District facilities	Project Applicant	County of Los Angeles Department of Regional Planning and Los Angeles County Sanitation District	
MM 5.12-5	Routine testing of pre-discharge treated effluent should be conducted to monitor compliance with established water quality control limits. (**1992 SP EIR MM 4.9.7)**	During construction activities and Project operation	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-6	Prior to issuance of occupancy permits, the Project Applicant shall provide evidence to the County of payment of connection fees in compliance with the requirements of the Newhall County Water District.	Prior to issuance of occupancy permits	Project Applicant	County of Los Angeles Department of Regional Planning and Newhall County Water District	
MM 5.12-7	Prior to connection to the Los Angeles County Sanitation District's wastewater system, the Project Applicant shall provide evidence of payment of the Santa Clarita Valley Sanitation District's Connection Fee Program.	Prior to connection to the Los Angeles County Sanitation District's wastewater system	Project Applicant	Los Angeles County Sanitation District and Santa Clarita Valley Sanitation District	
MM 5.12-8	Prior to issuance of occupancy permits, the Project Applicant shall coordinate with the Los Angeles County Sanitation Districts to upsize the existing 12-inch VCP Castaic Trunk Sewer in Ridge Route Road (south of the intersection with Lake Hughes Road), as determined necessary by the LA County Sanitation Districts to accommodate future flow volumes.	Prior to the issuance of occupancy permits	Project Applicant	County of Los Angeles Department of Regional Planning and Los Angeles County Sanitation District	
MM 5.12-9	Monitor growth, and coordinate with water districts as needed to ensure that long-range needs for potable and reclaimed water will be met. (**SCVAP 2012 EIR MM 3.13.3)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-10	If water supplies are reduced from projected levels due to drought, emergency, or other unanticipated events, take appropriate steps to limit, reduce, or otherwise modify growth permitted by the Area Plan in consultation with water districts to ensure adequate long-term supply for existing businesses and residents. **(SCVAP 2012 EIR MM 3.13.4)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-11	Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval. (**SCVAP 2012 EIR MM 3.13.5)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.12-12	Require the use of drought tolerant landscaping, native California plant materials, and evapotranspiration (smart) irrigation systems. (**SCVAP 2012 EIR MM 3.13.6)**	Prior to approval of landscape plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-13	In making land use decisions, consider the complex, dynamic, and interrelated ways that natural and human systems interact, such as the interactions between energy demand, water demand, air and water quality, and waste management. (**SCVAP 2012 EIR MM 3.13.8)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-14	In coordination with applicable water suppliers, adopt and implement a water conservation strategy for public and private development. (**SCVAP 2012 EIR MM 3.13.9)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-15	Provide examples of water conservation in landscaping through use of low water use landscaping in public spaces such as parks, landscaped medians and parkways, plazas, and around public buildings. (**SCVAP 2012 EIR MM 3.13.10)**	Prior to approval of landscape plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-16	Require low water use landscaping in new residential subdivisions and other private development projects, including a reduction in the amount of turf-grass. (**SCVAP 2012 EIR MM 3.13.11)**	Prior to approval of landscape plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-17	Provide informational materials to applicants and contractors on the Castaic Lake Water Agency's Landscape Education Program, and/or other information on xeriscape, native California plants, and water conserving irrigation techniques as materials become available. (**SCVAP 2012 EIR MM 3.13.12)**	Prior to commencement of grading or construction activities	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-18	Promote the use of low-flow and/or waterless plumbing fixtures and appliances in all new non-residential development and residential development of five or more dwelling units. (**SCVAP 2012 EIR MM 3.13.13)**	Prior to issuance of occupancy permits	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-19	Support amendments to the County Building Code that would promote upgrades to water and energy efficiency when issuing permits for renovations or additions to existing buildings. (**SCVAP 2012 EIR MM 3.13.14)**	Prior to the issuance of permits for renovations or additions to existing buildings	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-20	Apply water conservation policies to all pending development projects, including approved tentative subdivision maps to the extent permitted by law. Where precluded from adding requirements by vested entitlements, encourage water conservation in construction and landscape design. (**SCVAP 2012 EIR MM 3.13.15)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-21	Upon the availability of non-potable water services, discourage and consider restrictions on the use of potable water for washing outdoor surfaces. (**SCVAP 2012 EIR MM 3.13.16)**	At the time when non-potable water services are available	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-22	In cooperation with the Sanitation District and other affected agencies, expand opportunities for use of recycled water for the purposes of landscape maintenance, construction, water recharge, and other uses as appropriate. (**SCVAP 2012 EIR MM 3.13.17)**	Prior to construction and during Project operation	Project Applicant and County of Los Angeles Department of Regional Planning	County of Los Angeles Department of Regional Planning and Los Angeles County Sanitation District	
MM 5.12-23	Require new development to provide the infrastructure needed for delivery of recycled water to the property for use in irrigation, even if the recycled water main delivery lines have not yet reached the site. (**SCVAP 2012 EIR MM 3.13.18)**	Prior to approval of development plan	Project Applicant and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-24	Participate and cooperate with other agencies to complete, adopt, and implement an Integrated Regional Water Management Plan to build a diversified portfolio of water supply, water quality, and resource stewardship priorities for the Santa Clarita Valley. (**SCVAP 2012 EIR MM 3.13.20)**	Prior to and during Project operation	Project Applicant and County of Los Angeles Department of Regional Planning	County of Los Angeles Department of Regional Planning	
MM 5.12-25	Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval. (**SCVAP 2012 EIR MM 3.13.21)**	Prior to project approval	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-26	Promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel or additions. (**SCVAP 2012 EIR MM 3.13.22)**	Prior to approval of applicable permits for remodel or additions	County of Los Angeles Department of Regional Planning	County of Los Angeles Department of Regional Planning	
MM 5.12-27	Landscaping shall emphasize drought-tolerant vegetation (xeriscaping) where not watered with reclaimed water. Plants of similar water use shall be grouped to reduce over-irrigation of low-water-using plants. Those areas not designed in xeriscape shall be gauged to receive irrigation using the minimal requirements. (**1992 SP EIR MM 4.12.6)**	Prior to approval of landscape plans	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.12-28	Residential occupants shall be informed as to the benefits of low-water-using landscaping and sources of additional assistance in xeriscaping. (**1992 SP EIR MM 4.12.7)**	During operation	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.12-29	The County of Los Angeles shall follow state regulations in implementing the goals, policies, and programs identified in the Los Angeles County Integrated Waste Management Plan in order to achieve and maintain a minimum of 50 percent reduction in solid waste disposal through source reduction, reuse, recycling, and composting. In response to California's 75 Percent Initiative, at least 75 percent of all solid waste will be recycled or reused by 2020. Additionally, the Project Applicant or Construction Manager shall ensure that a minimum of 65 percent of the non-hazardous construction and demolition debris will be recycled and/or salvaged or meet a local construction and demolition waste management ordinance. (**SCVAP 2012 EIR MM 3.17.1)**	During construction activities and Project operation	Project Applicant, Future Developers, and/or Construction Manager	County of Los Angeles Department of Regional Planning	
MM 5.12-30	The County shall require all future commercial, industrial and multifamily residential development to provide adequate areas for the collection and loading of recyclable materials (i.e., paper products, glass, and other recyclables) in compliance with the State Model Ordinance, implemented on September 1, 1994, in accordance with AB 1327, Chapter 18, California Solid Waste Reuse and Recycling Access Act of 1991. (**SCVAP 2012 EIR MM 3.17.2)**	During construction activities and Project operation	Project Applicant and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-31	The County shall require all development projects to coordinate with appropriate County agencies to ensure that there is adequate waste disposal capacity to meet the waste disposal requirements of the County's Planning Area, and the County shall recommend that all development projects incorporate measures to promote waste reduction, reuse, recycling, and composting. (**SCVAP 2012 EIR MM 3.17.3)**	Prior to development plan approval	Project Applicant	County of Los Angeles Department of Regional Planning and Sanitation Districts of Los Angeles County	
MM 5.12-32	All new development in the County's Planning Area will be required to implement existing and future waste reduction programs in conformance with the County's Planning Area SRRE program. (**SCVAP 2012 EIR MM 3.17.4)**	During construction activities and Project operation	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-33	Any hazardous waste that is generated on site, or is found on site during demolition, rehabilitation, or new construction activities shall be remediated, stored, handled, and transported in compliance per appropriate local, state, and federal laws, as well as with the County's SRRE. (**SCVAP 2012 EIR MM 3.17.5)**	During demolition, rehabilitation, or construction activities	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-34	Collection/storage facilities for recyclables shall be incorporated into all building designs and/or a conveniently located recycling area shall be developed on the project site for use by all occupants/users of the commercial/industrial uses. (**1992 SP EIR MM 4.13.1)**	During construction activities and Project operation	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-35	The owner and/or tenants of all onsite commercial and industrial uses shall comply with all applicable federal, state and local requirements for handling hazardous materials. Onsite businesses handling hazardous materials shall submit a Business Plan which will include information or inventories, employee training and emergency response plans and procedures. (**1992 SP EIR MM 4.13.2)**	During Project operation	Applicant, Future Developers, and Onsite commercial and industrial owners and/or tenants	County of Los Angeles Department of Regional Planning	
MM 5.12-36	Removal of hazardous materials, waste from the project site shall be conducted by registered waste hauler in accordance with all applicable rules and regulations. (**1992 SP EIR MM 4.13.3)**	During construction activities and Project operation	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-37	All hazardous materials used in association with future onsite businesses shall be stored in specific locations and clearly marked as to contents. (**1992 SP EIR MM 4.13.4)**	During Project operation	Applicant, Future Developers, and Onsite commercial and industrial owners and/or tenants	County of Los Angeles Department of Regional Planning	

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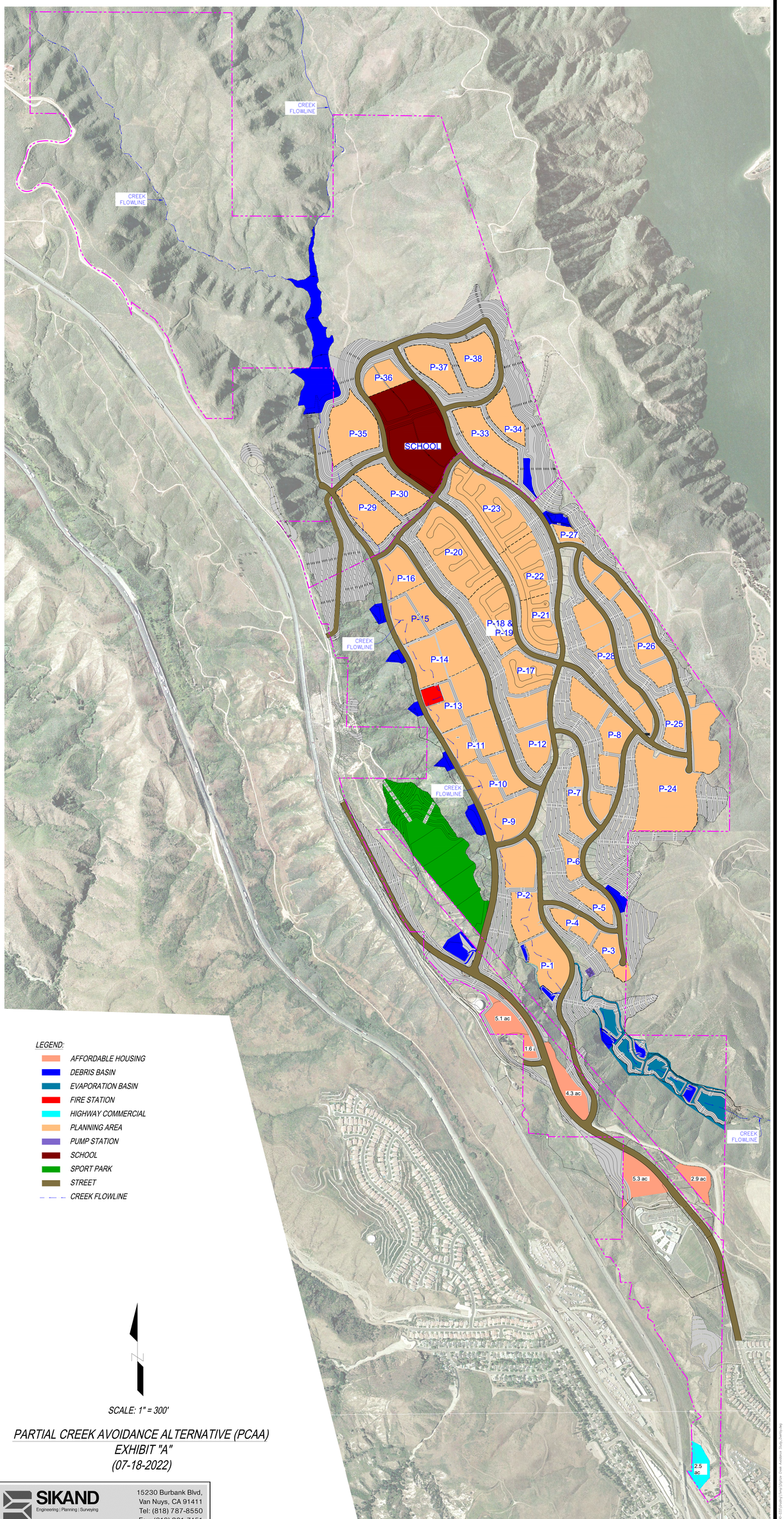

LEGEND:

- AFFORDABLE HOUSING
- DEBRIS BASIN
- EVAPORATION BASIN
- FIRE STATION
- HIGHWAY COMMERCIAL
- PLANNING AREA
- PUMP STATION
- SCHOOL
- SPORT PARK
- STREET
- CREEK FLOWLINE

N

SCALE: 1" = 300'

PARTIAL CREEK AVOIDANCE ALTERNATIVE (PCAA)
EXHIBIT "A"
(07-18-2022)

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NORTHLAKE

PARTIAL CREEK AVOIDANCE ALTERNATIVE

DESIGN GUIDEBOOK

NOVEMBER 2025

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Northlake

DESIGN GUIDEBOOK

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CONCEPTUAL RENDERING OF PROJECT SITE

1

PLANNING CONCEPT

1.1 INTRODUCTION

Nestled between Castaic Lake and the Angeles National Forest, adjacent to the Golden State Freeway, NorthLake is the perfect location for a highly amenitized, recreation-oriented master planned community. Unanimously approved by the Los Angeles County Board of Supervisors in December 1992, the NorthLake Specific Plan encompasses approximately 1,330 acres and includes up to 3,623 homes, 169,884 square feet of commercial space, and 545,589 square feet of industrial use. Project approvals were obtained in 2018 for a development within the envelope of the NorthLake Specific Plan, consisting of development of 3,150 residential units (including 345 market-rate senior multi-family units, 6 market-rate live-work units and 315 affordable units), 38,700 square feet of commercial space and the elimination of the golf course (converted to active and passive open and recreational space) and industrial use. Those approvals were subsequently rescinded as a result of a court ruling. New approvals were sought to maintain the uses contained in the 2018 project approvals, but on a smaller development footprint in the Phase 2 development area, again within the envelope of the 1992 NorthLake Specific Plan.

This community is an integral part of the vision for the future of the Santa Clarita Valley and is consistent with the Los Angeles County General Plan and the Santa Clarita Valley Area Plan "One Valley, One Vision" (OVOV). This document brings fresh vision to the NorthLake Specific Plan, updating the design parameters to include current standards for environmental sustainability and community walkability, and seamless integration of man-made and natural terrain in a seamless transition.

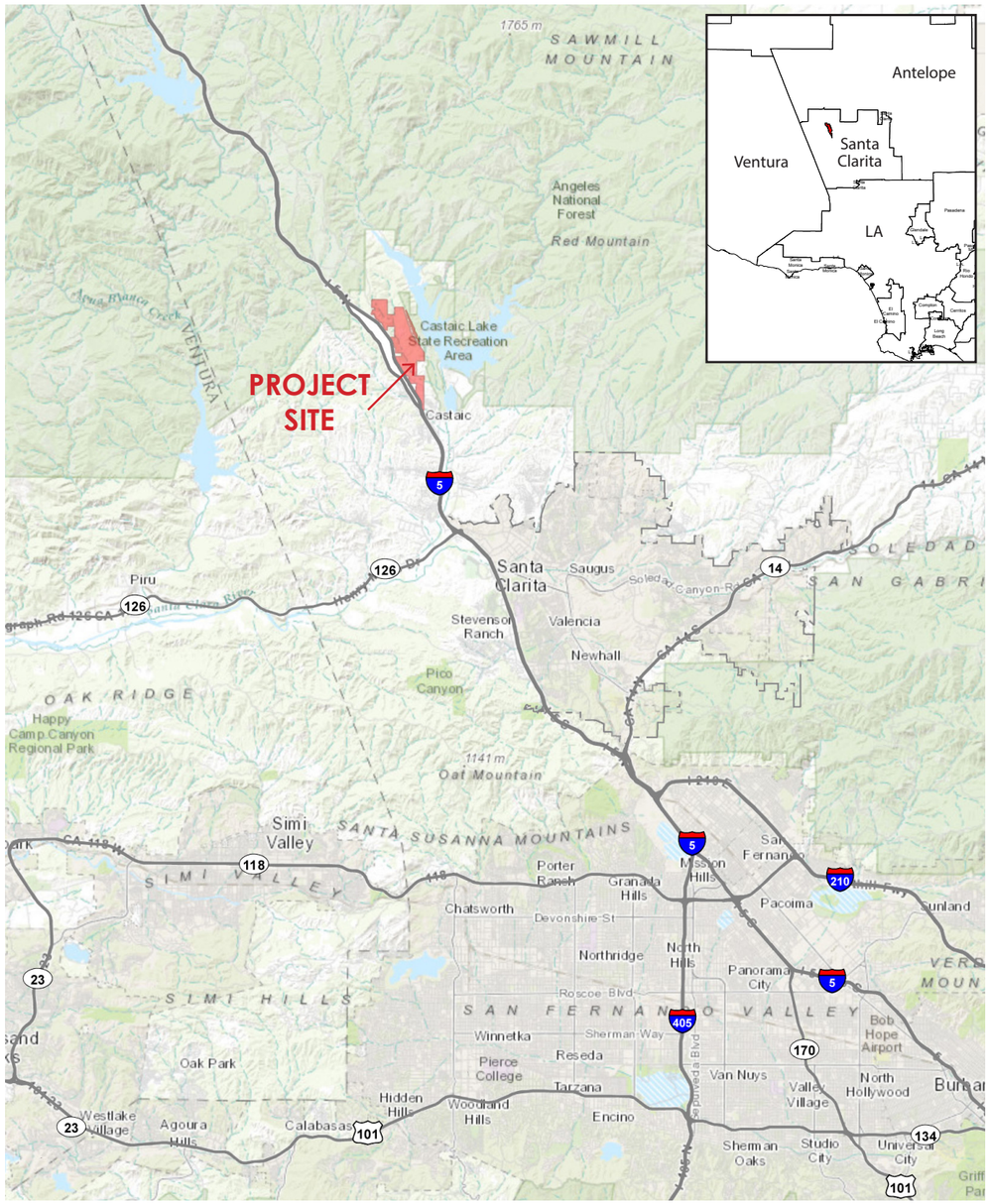


FIGURE 1. REGIONAL LOCATION MAP

The purposes of this document are to demonstrate conformance of the proposed Vesting Tentative Tract Map with the approved Specific Plan and to maintain and further establish the character of the existing NorthLake community. The revised plans and guidelines in this document reflect the needs of today's home buyers and provide inspiration and direction to those who will participate in the design process during the implementation of the NorthLake community.

1.2 VISION

For decades, new communities have been primarily designed for cars instead of people. NorthLake puts people first by making healthy living a priority. Designed in a way that reduces auto dependence by offering safe, convenient options for getting from one place to place, NorthLake supports healthy living for residents and the greater community.

Over the last 50 years, gradual lifestyle changes have removed much physical activity from our lives. As a result, the rates of obesity and chronic disease have risen steadily with serious negative impacts on our health. Emerging research shows that the design of our physical environment is an important determinant of physical activity level. Healthy outcomes are more likely for residents of communities featuring safe bike lanes, trail systems, and readily accessible park areas. Participation in outdoor activity is the cornerstone of a healthy lifestyle, since exercise has been shown to relieve stress, control weight, reduce the risk of disease, strengthen bones and muscles, and boost immunity and balance. Healthy communities give residents multiple options to enjoy an active lifestyle.

The physical design of NorthLake embodies these basic principles by making healthy choices easy. The extensive neighborhood and regional trail system, abundance of public and private parks, and safe routes to school all encourage residents to enjoy longer, more productive, and prosperous lives.







1.3 GUIDING PRINCIPLES

The design aspiration of NorthLake is the creation of a healthy, highly livable, aesthetically pleasing community that blends with the natural beauty of the site. The following principles will guide the implementation of the design vision:

- **Create a healthy Community.** Create an innovative, dynamic community focused on active outdoor recreation. Evoke a pride of place, where people love to live, by encouraging social, civic, and leisurely interaction.
- **Celebrate uniqueness of place.** Reinforce and capitalize on the unique qualities of each neighborhood and the surrounding environment through land planning, architecture, and landscape architecture. Integrate the natural beauty and setting of the site into all land uses.
- **Create connectivity**. Encourage community participation and interaction by providing enhanced connections to recreational amenities, open spaces, and regional destinations.
- **Optimize open space relationships.** Provide a comprehensive public and private park system offering a wide variety of passive and active recreational opportunities. Enrich and support the overall walking and bicycling experience by providing significant destinations. Reduce impacts on natural features, preserving creeks and ridgelines to the greatest extent possible.
- **Encourage diversity.** Encourage physical, social, and economic diversity through the inclusion of a wide range of home sizes and prices, resulting in a richness of experience for all residents.
- **Integrate environmentally responsible practices**. Conservation of land, water, energy, materials, and other natural resources is of critical importance to our continued well-being. Practices minimizing impacts to and use of natural resources shall be adopted, resulting in healthy, safe, and responsible environments.
- **Enhance local economic well-being.** General Commercial and Highway Commercial uses will create jobs for increased population near the Castaic community. It will stabilize and support local businesses and fill available employment opportunities in the area.

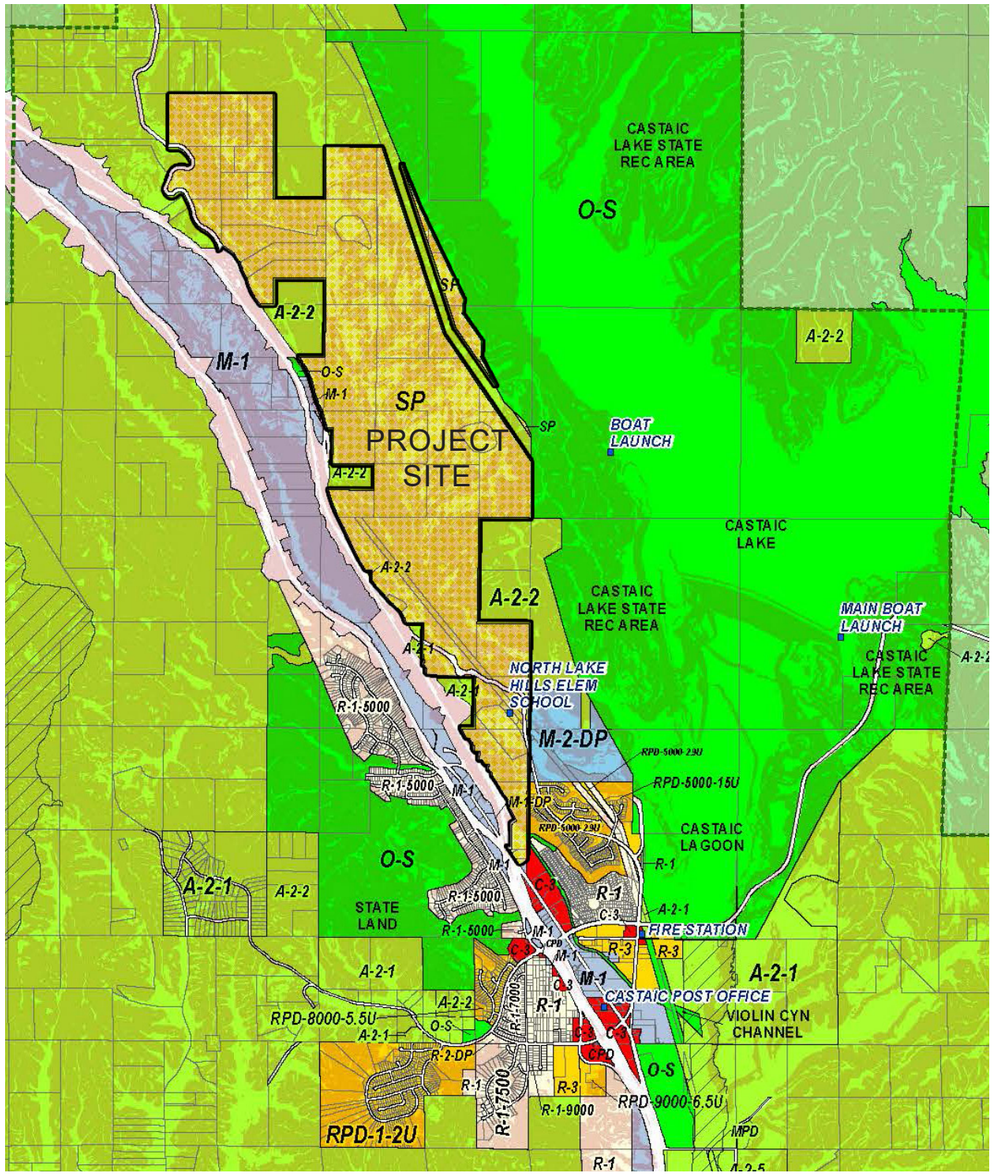


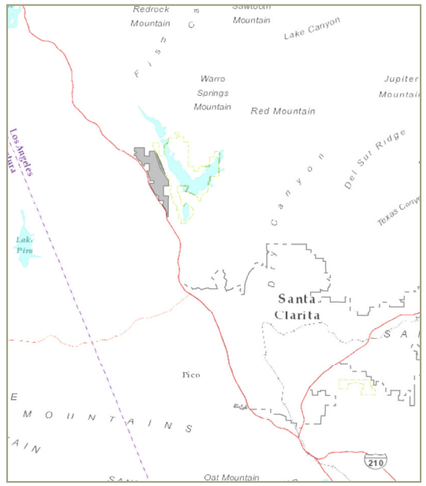
FIGURE 2. ONE VALLEY ONE VISION PLAN

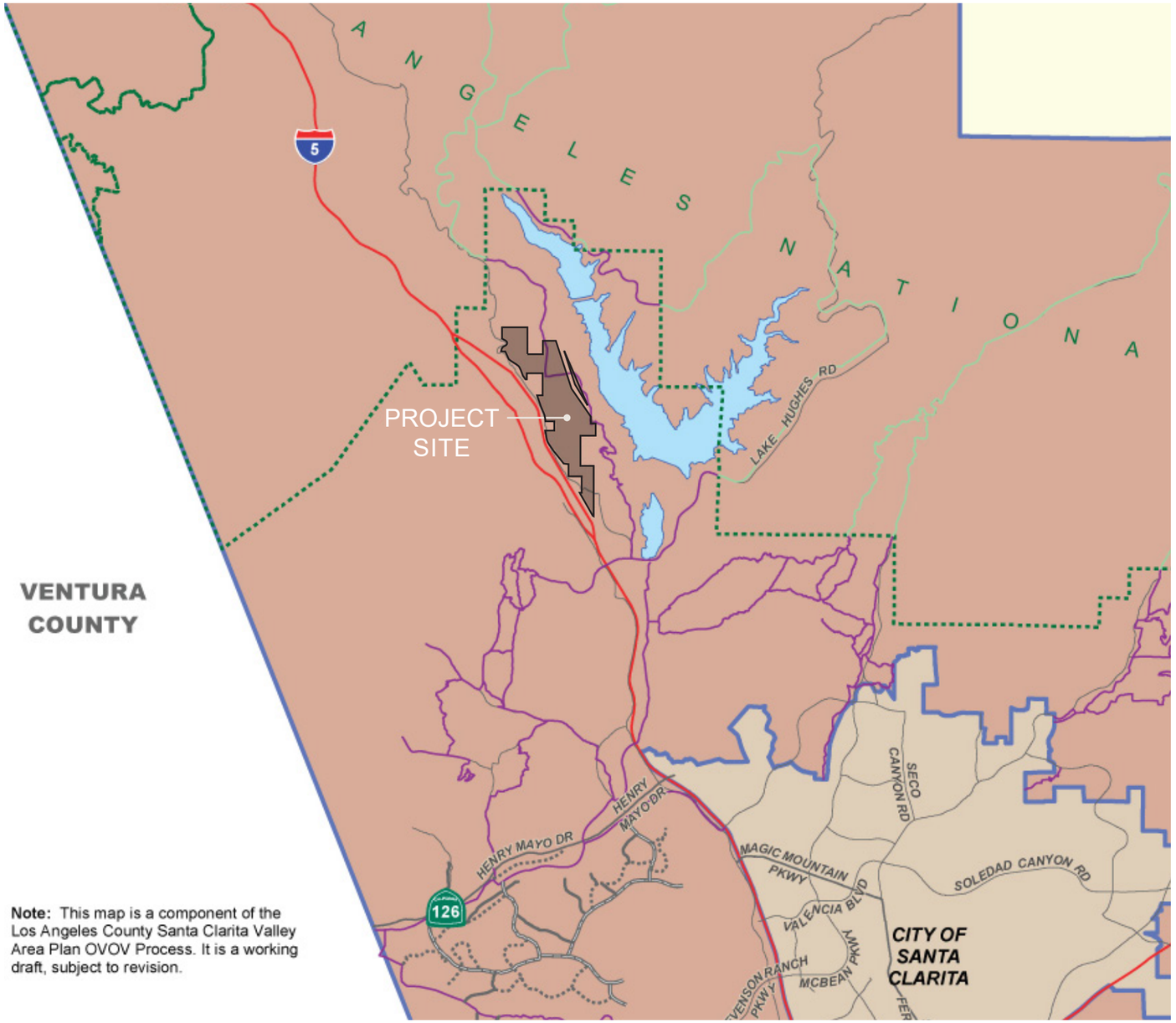
1.4 RELATIONSHIP TO AREA PLAN

The NorthLake Specific Plan area is identified for future growth in the Santa Clarita Valley Area Plan OVOV (2012), the comprehensive long range planning document adopted by the Los Angeles County Board of Supervisors. When complete, NorthLake is envisioned to be a part of the Castaic Village Community, and the Specific Plan calls for up to 3,150 single-family and multi-family residences surrounded by 783 acres of open space and 130 acres of parks and recreational areas. The OVOV document also references pending revisions to the proposed amenities which are currently under review. Figure 2 shows the Castaic Village area of the OVOV Land Use Plan.

The Master Trails Plan in the OVOV (see Figure 3) depicts a regional trail through the eastern portion of NorthLake that connects to the Angeles National Forest in the north and the Castaic Lake recreational area in the south. A central tenet of the vision for the NorthLake community is linkage from every home to the greater region through multi-use trails serving cyclists, pedestrians, and equestrians.

KEY MAP





LEGEND

COUNTY TRAILS SYSTEM
- Adopted County Trail System
- Federal / National Forest Trails

NEWHALL RANCH SP TRAILS
- Community Trail
- Local Trail
- Pathway
- Unimproved Trail
- Project Site

Note: This map is a component of the Los Angeles County Santa Clarita Valley Area Plan OVOV Process. It is a working draft, subject to revision.

FIGURE 3. SANTA CLARITA VALLEY TRAIL PLAN

(Source: OVOV_CO9_Master_Plan_of_Trails, 2012)








1.5 COMMUNITY CHARACTER

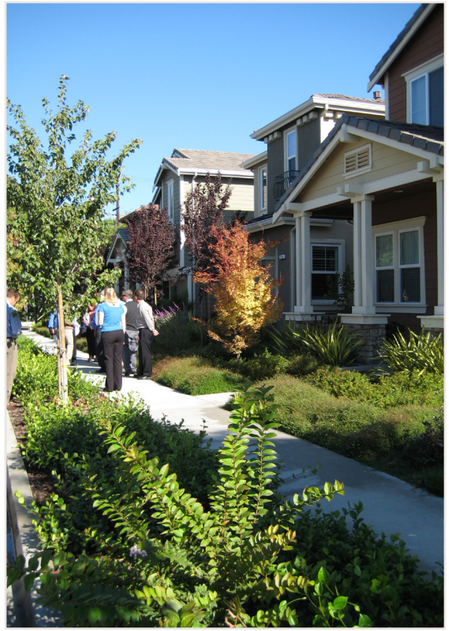
The design character of NorthLake reflects the healthy sense of community inherent in the great small towns of America, while honoring the natural beauty of the surrounding hills. A seamless transition between the natural and the built environments is a central goal, achievable through careful articulation of the master plan, as well as the preservation of key natural features to the extent feasible.

A clear visual identity for NorthLake is to be established in the architectural and landscape design to create a sense of cohesion and uniqueness. At the same time, a specific style should not be dominant, and each neighborhood should have its own unique identity and character within the central, overarching theme.

The pedestrian experience is also an important consideration – tree-lined streets, appropriately scaled elements, distinctive parks, and provision of adequate shade will lead to the creation of a memorable environment to be enjoyed by all.























2 COMMUNITY PLAN

2.1 LAND USE PLAN

A detailed approach to fit the needs and demands of today's market has guided the updated design of the NorthLake Land Use Plan (see Figure 4). Significant changes to the approved 1992 Specific Plan include a 350.3-acre reduction of residential uses, the removal of an industrial component, and a 269.7-acre increase in open space and recreational areas.

The previous land use plan featured a golf course as the central organizing feature; however, the waning popularity of golf and recent drought conditions led to a reconsideration of the previous plan. Golf has given way to more inclusive features that serve a higher percentage of the population and are more sensitive to environmental considerations. A Community Sports Park and the Grasshopper Creek Park along Ridge Route Road offer recreational opportunities to the greater Santa Clarita Valley region, as does the extensive trail network.

The 12 land use designations in the Specific Plan have been simplified and consolidated into 6 main categories: Single Family / Single Family Active Adult, Multi-family, General Commercial (which includes age restricted affordable units and live/work units), School and Public Facilities, Recreation/Park, and Natural Open Space/Slope. The Recreation/Park category has been subdivided into 8 sub-categories: Community Sports Park, Grasshopper Creek Park, Enhanced Parkway, Lower Ridge Route / Class One Bike Trail, Vista Park, Castaic Lagoon Park, Cody Dog Park, and Neighborhood Trails.

The residential portions of NorthLake have been redesigned to fit the existing landforms more closely, minimizing site disturbance, reducing the loss of creek area while maximizing open space. The planning areas have been arranged in smaller scales, creating an opportunity for residents to identify more closely with their individual neighborhoods. The neighborhood and pocket parks are distributed throughout the plan, serving as identifying features for surrounding residences. Additionally, a total of 440 units of age-restricted senior housing have been provided, including 345 market-rate senior units and 95 affordable senior units.

Finally, a total of 315 units of affordable housing have been included. 95 of these units will be the previously mentioned age-restricted senior housing and will be located in the General Commercial land use area. The remaining 220 affordable units are proposed throughout the residential land use planning areas. A conceptual illustration for the NorthLake Master Plan is shown in Figure 4B.

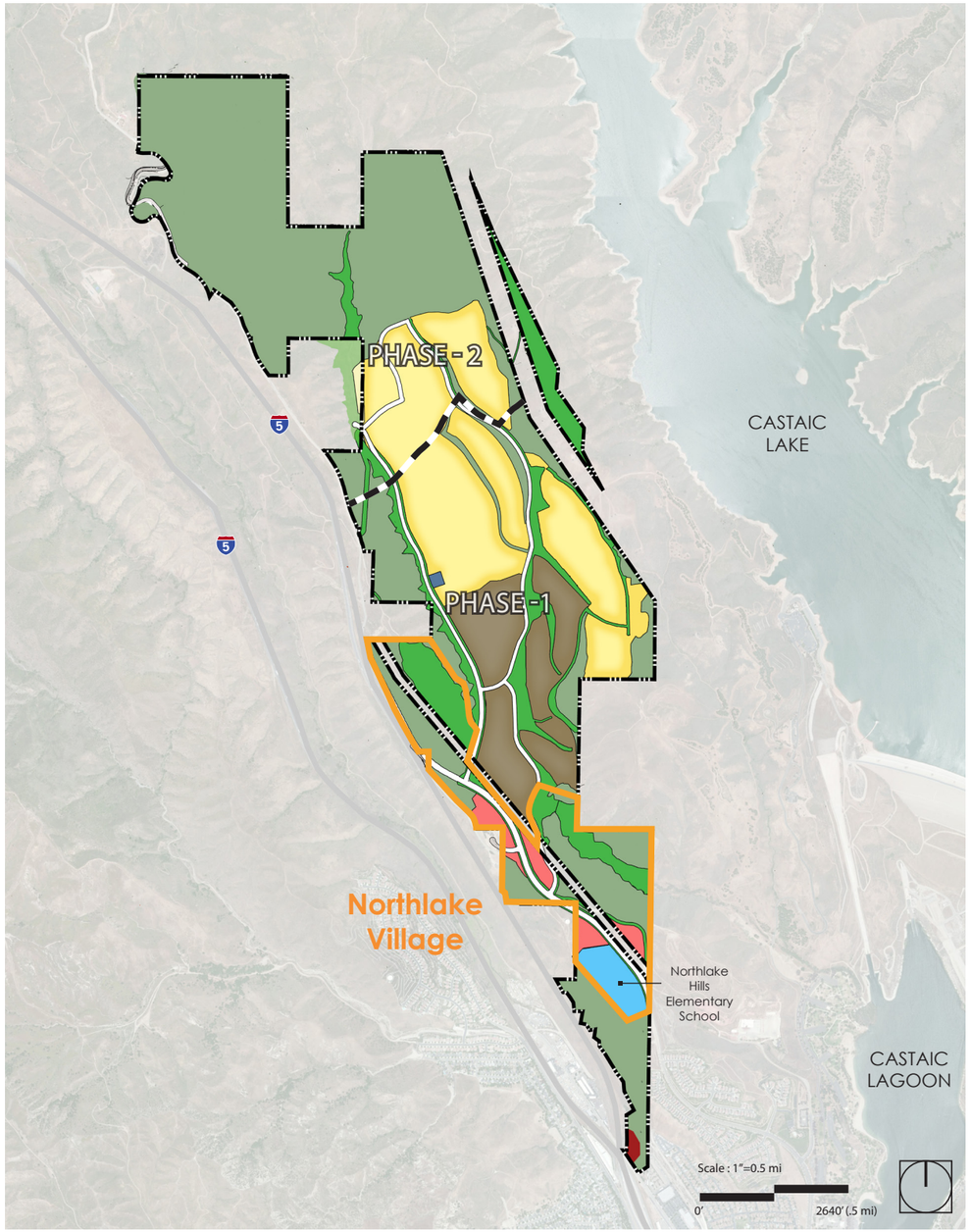


FIGURE 4A. LAND USE PLAN

LAND USE SUMMARY

Land Use Category			Phase 1			Phase 2		
			AC	DU	SQ.FT.	AC	DU	SQ.FT.
LAND USE		Single Family	90	633	--	75	855	--
		Multi-family	107	1,341	--	--	--	--
		General Commercial	20	220 95 [4] 6 [5]	38,700	--	--	--
		Highway Commercial	2	--	32,175	--	--	--
		School [1]	21	--	--	--	--	--
		Fire Station	1	--	--	--	--	--
ROW		Street ROW	86	--	--	14	--	--
OPEN SPACE		Recreation/Park [2]	103	--	--	27	--	--
		Natural Open Space/Slope [3]	309	--	--	474	--	--
		Total	**739**	**2,295**	**70,875**	**590**	**855**	**--**

[1] The existing 20.6-acre Northlake Hills Elementary School is included in the school area.

[2] Grasshopper Creek Park includes 3.2-acre of debris basin.

[3] Manufactured slope area includes 17.0-acre of debris basin, 7.1-acre of water tank, and 0.2-acre of pump station.

[4] 95 housing units in the General Commercial Land Use are designated as age-restricted senior affordable housing.

[5] 6 units in the General Commercial Land Use are designated as market rate live/work units.

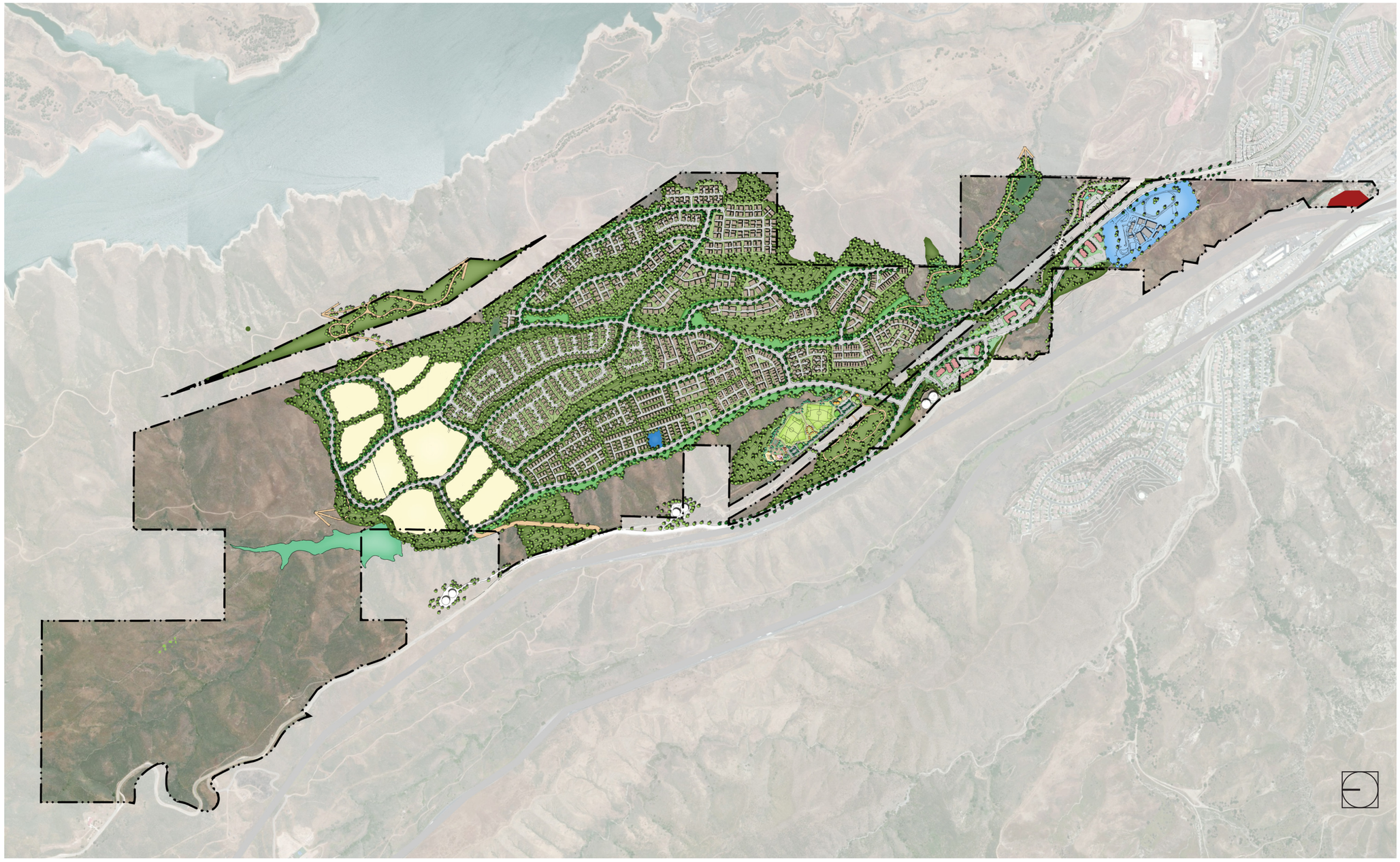


FIGURE 4B. ILLUSTRATIVE SITE PLAN

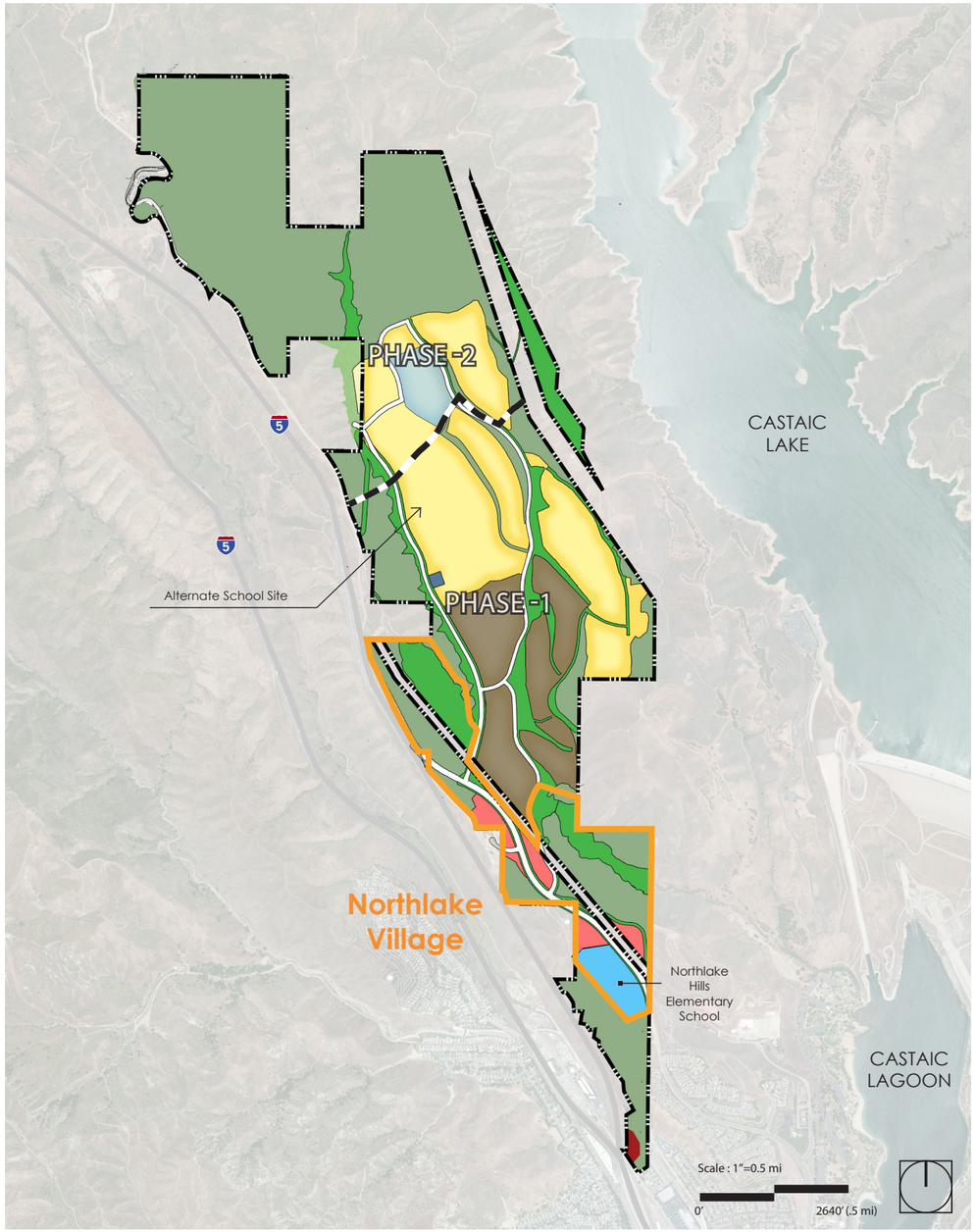


FIGURE 5A. LAND USE PLAN WITH ALTERNATIVE SCHOOL SITE

LAND USE SUMMARY

	Land Use Category		Phase 1			Phase 2		
			AC	DU	SQ.FT.	AC	DU	SQ.FT.
LAND USE		Single Family	90	633	--	53	855	--
		Multi-family	107	1,341	--	--	--	--
		General Commercial	20	220 95 [4] 6 [5]	38,700	--	--	--
		Highway Commercial	2	--	32,175	--	--	--
		School [1]	21	--	--	22	--	--
		Fire Station	1	--	--	--	--	--
ROW		Street ROW	86	--	--	14	--	--
OPEN SPACE		Recreation/ Park [2]	103	--	--	27	--	--
		Natural Open Space/Slope [3]	309	--	--	474	--	--
		Total	**739**	**2,295**	**70,875**	**590**	**855**	**--**

[1] The existing 20.6-acre Northlake Hills Elementary School is included in the school area.

[2] Grasshopper Creek Park includes 3.2-acre of debris basin.

[3] Manufactured slope area includes 17.0-acre of debris basin, 7.1-acre of water tank, and 0.2-acre of pump station.

[4] 95 housing units in the General Commercial Land Use are designated as age-restricted senior affordable housing.

[5] 6 units in the General Commercial Land Use are designated as market rate live/work units.

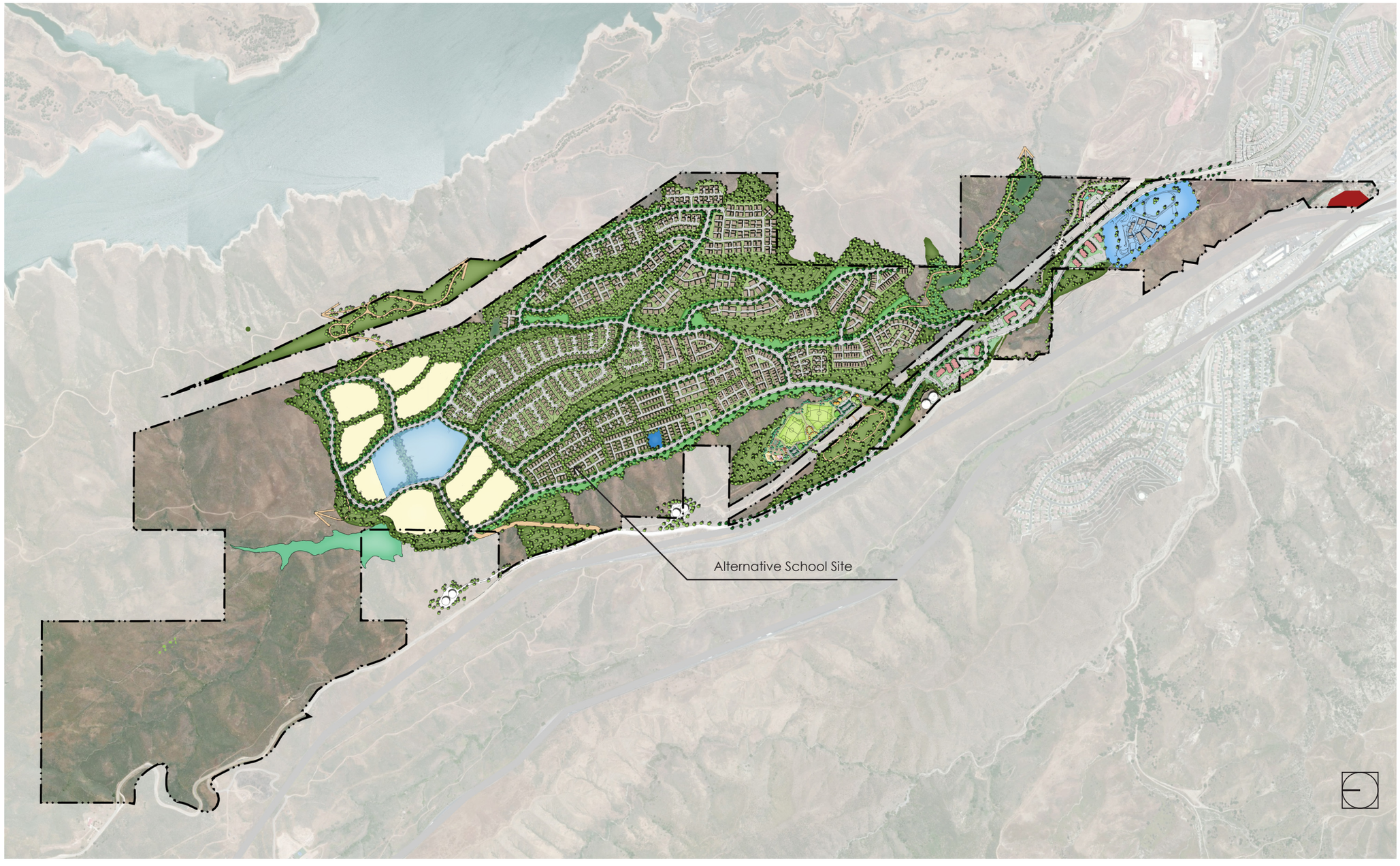


FIGURE 5B. ILLUSTRATIVE SITE PLAN W ALTERNATIVE SCHOOL SITE

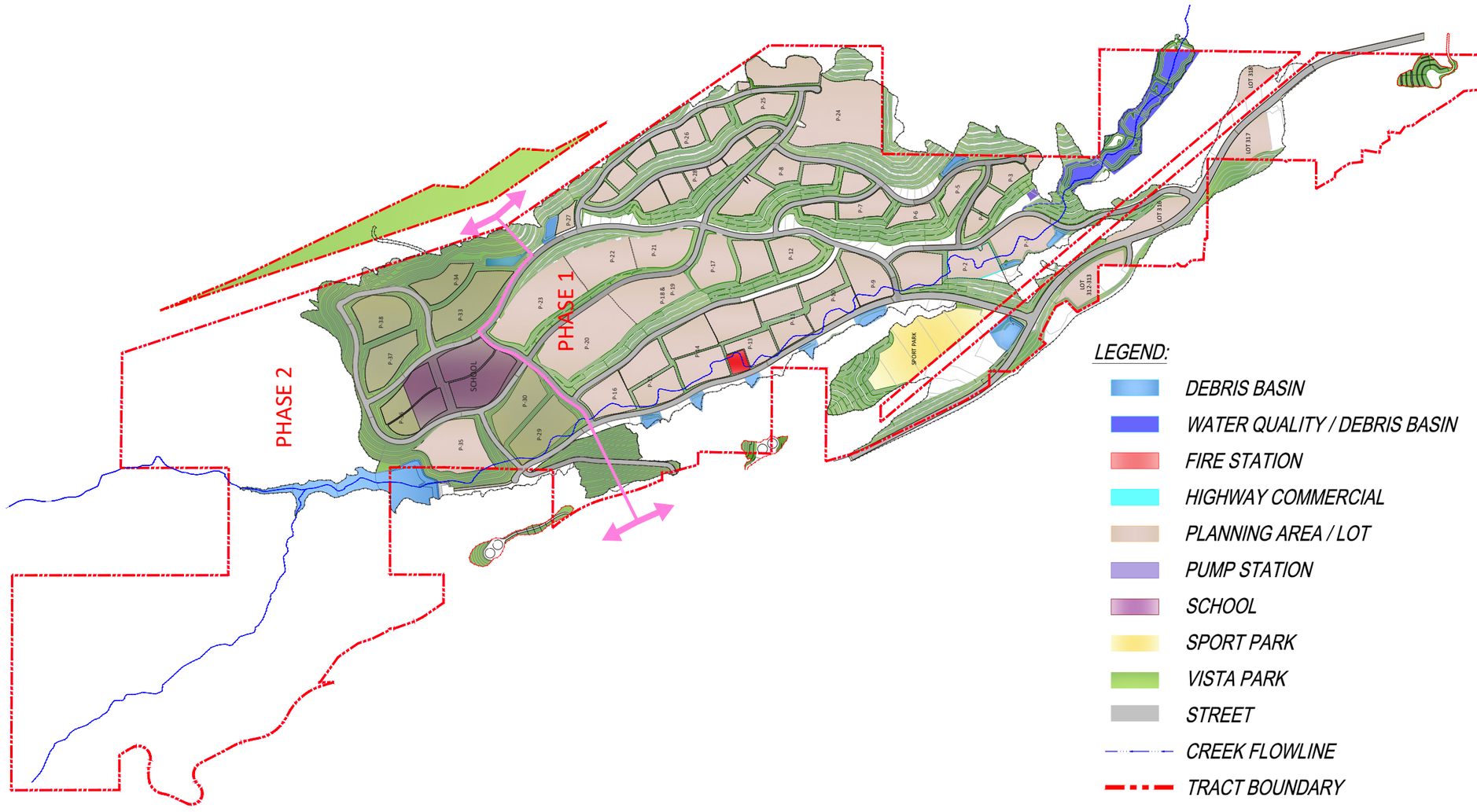


FIGURE 6. COMPOSITE SITE EXHIBIT

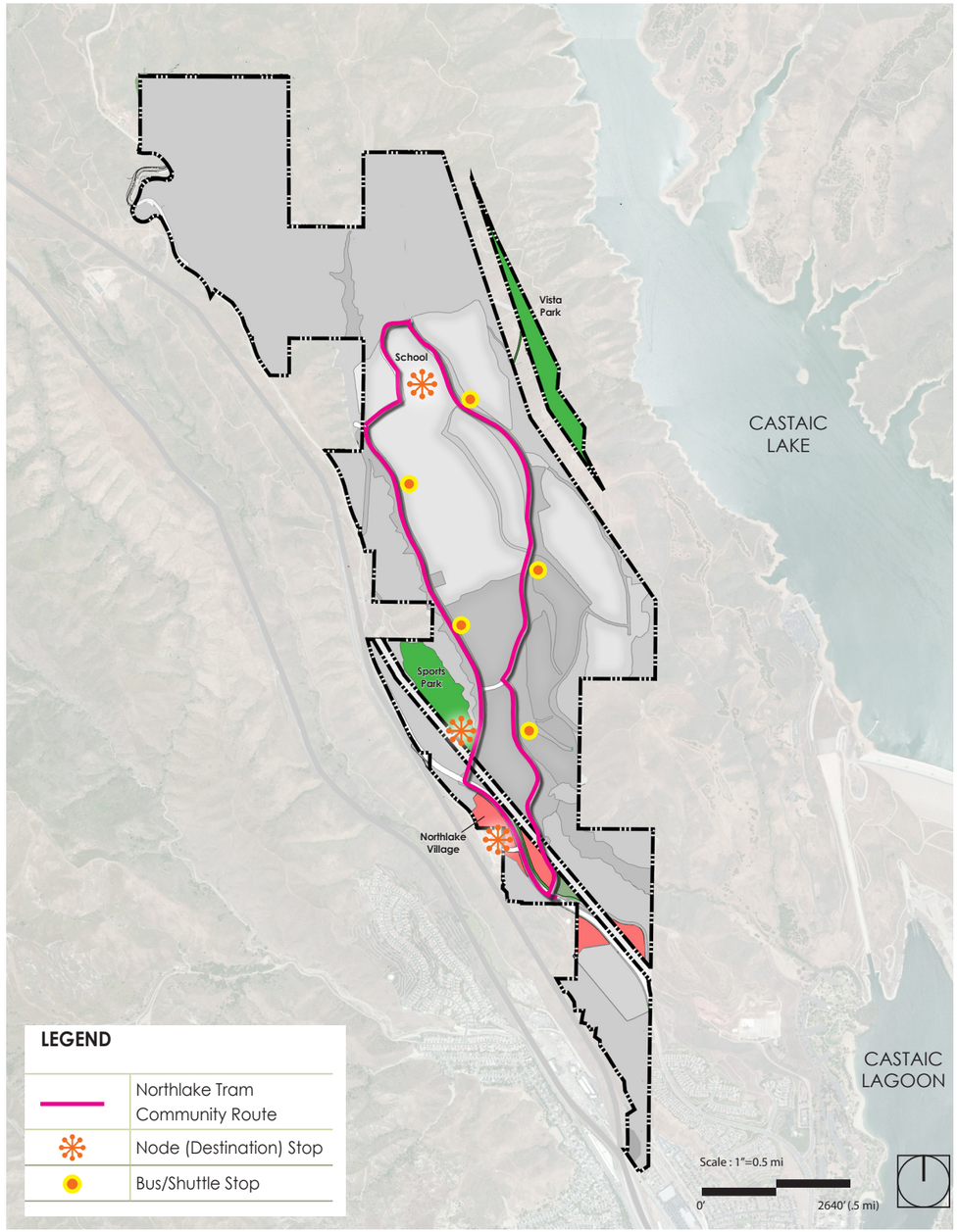


FIGURE 7. NORTHLAKE COMMUNITY LOCAL TRANSIT PLAN

2.2 PUBLIC TRANSIT

Integrating transportation and site planning to provide residents a range of sustainable and efficient transportation choices is the goal in NorthLake. The project site is close to local and regional public transit hubs. Encouraging people to use public transportation will help reduce greenhouse gas emissions and mitigate traffic congestion. Utilizing transit hubs will also give more freedom and mobility to low income families, senior citizens, disabled persons, and others who can't or won't drive.

Figure 7 shows a conceptual diagram of a well-connected public transit route within the NorthLake community. It will provide access to major local destinations such as NorthLake Village, Sports Park, School and recreation areas. The route alignment and stop locations are conceptual and may be adjusted to accommodate site-specific constraints, per county approval.



Source: https://www.flickr.com


Source: http://santaclaritatransit.com





Figure 8 shows local and regional connections for NorthLake residents commuting to work and for access to regional destinations such as Castaic Town Center, Valencia Commerce Centers, Transit Stations and Metrolink Stations. Local transportation services include the proposed NorthLake Tram, providing stops from NorthLake to Valencia Commerce Center; the Santa Clarita Transit (SCT) Route, connecting from Castaic Town Center to McBean Regional Transit Center; and Express Bus Routes and Metrolink, which will bring riders to and from Downtown Los Angeles, the San Fernando Valley and beyond.

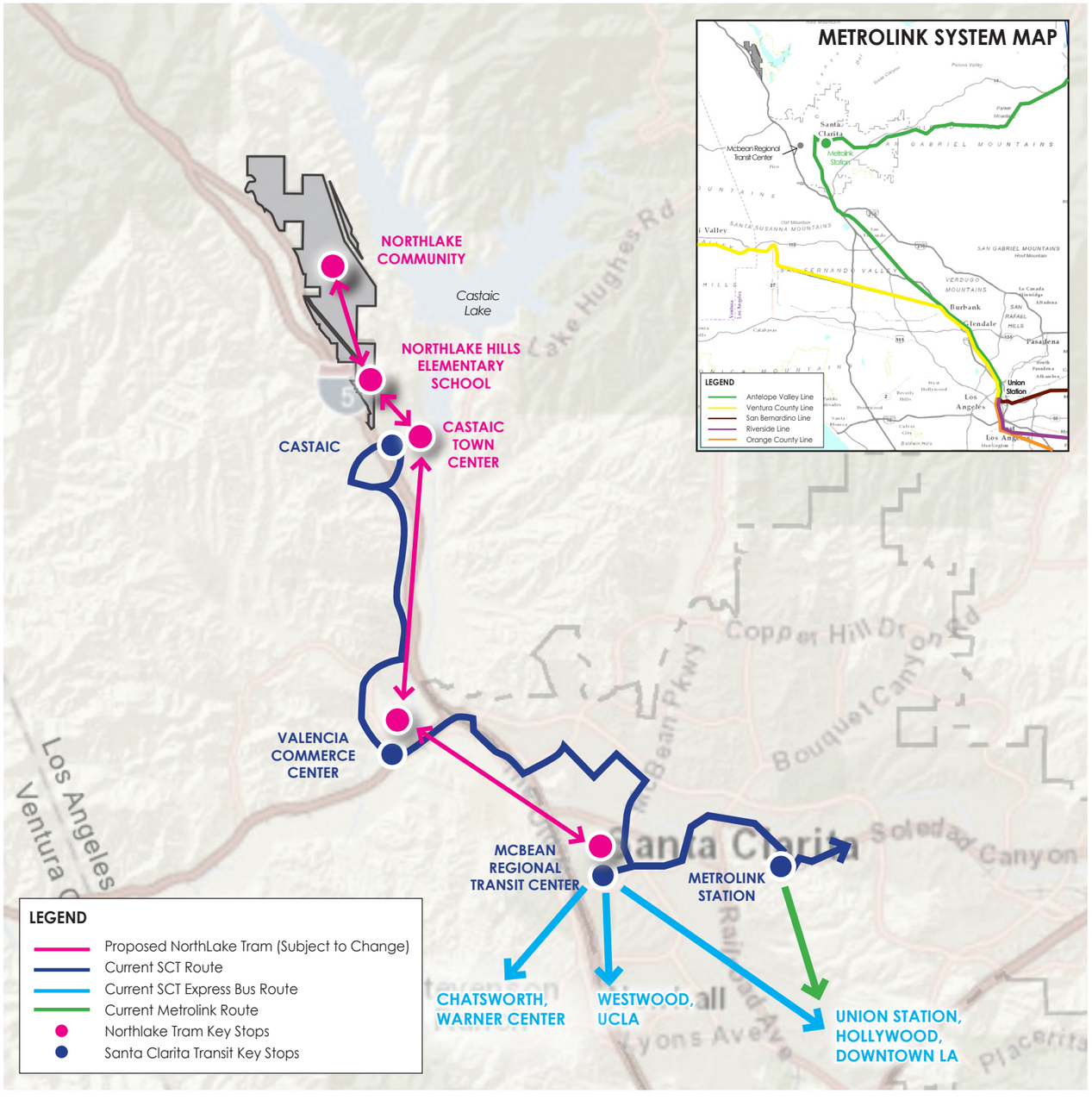


FIGURE 8. REGIONAL TRANSIT CONNECTOR MAP

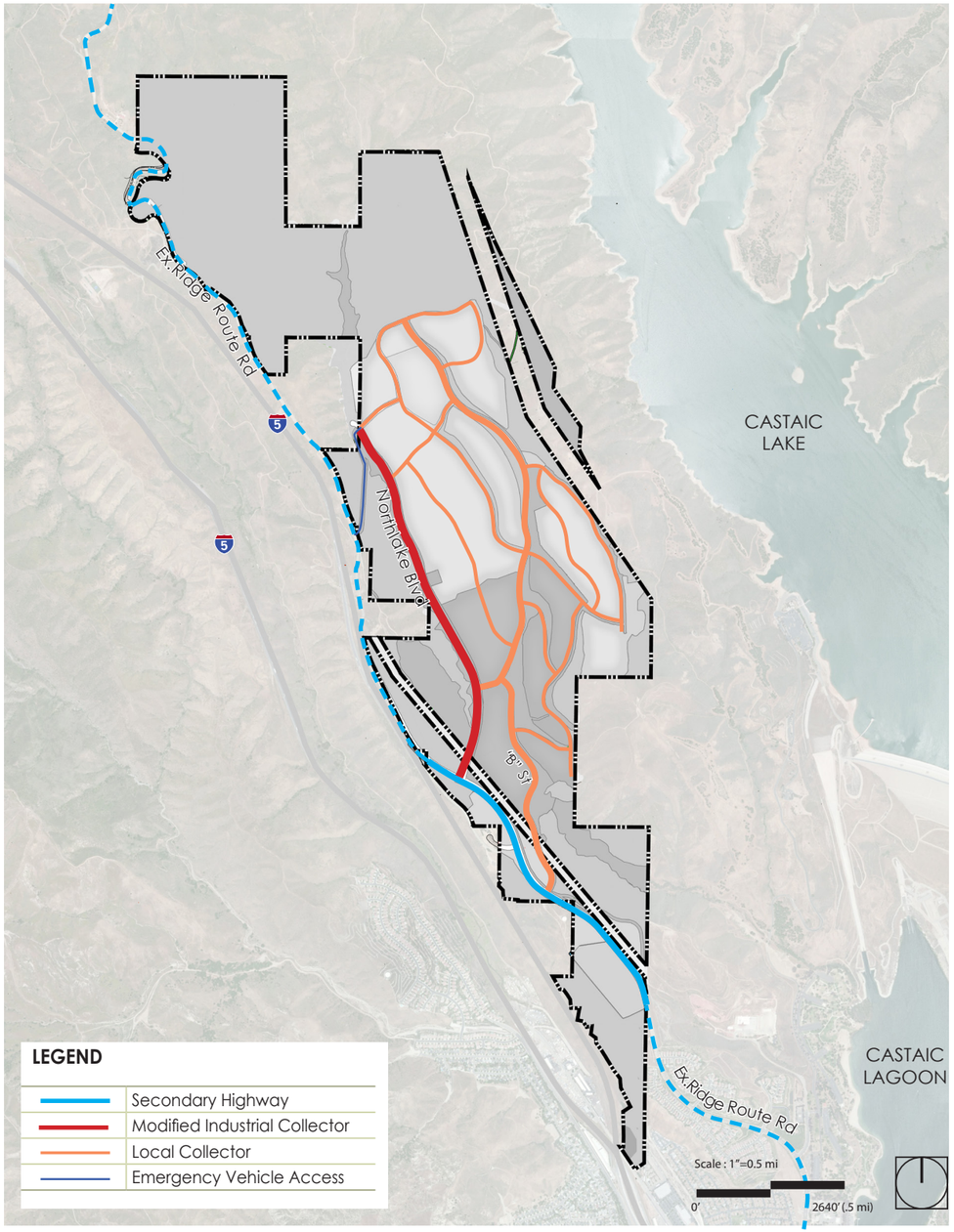


FIGURE 9. MOBILITY PLAN

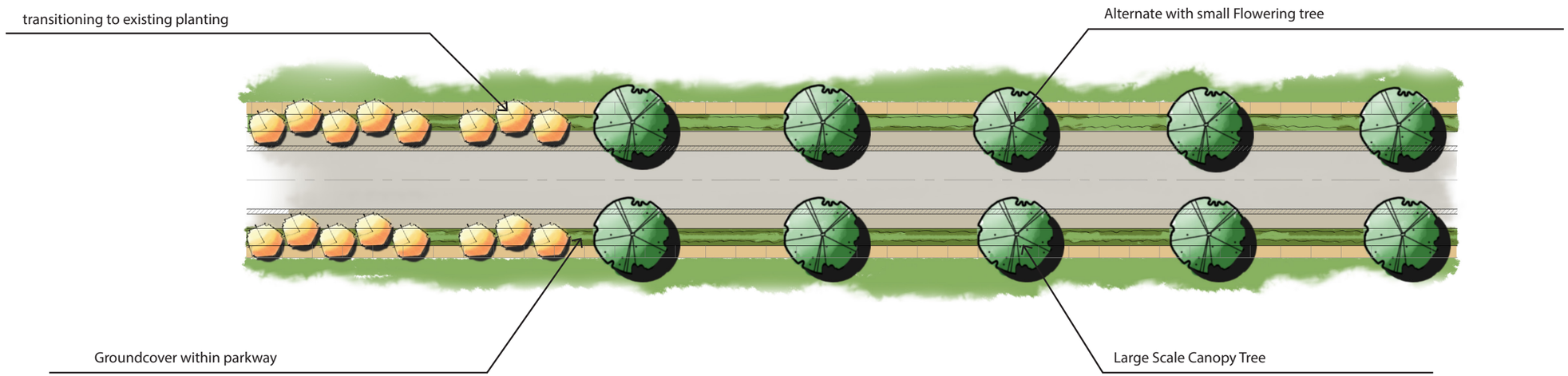
2.3 MOBILITY PLAN

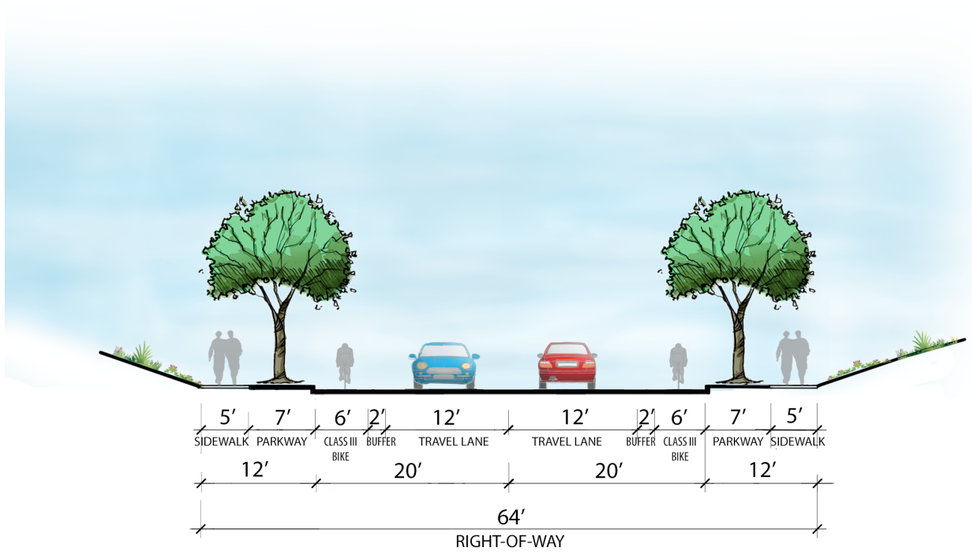
Linkage of land use areas and site elements has been achieved through an intricate multi-modal system that places equal emphasis on vehicular, bicycle, and pedestrian circulation. Street hierarchy is an important wayfinding element, and four categories of streets have been designated, providing efficient vehicular travel into and around the community, as shown in Figure 9. *Mobility Plan*. All streets will include parkways separating curbs from sidewalks, enhancing both the vehicular and pedestrian experiences.

The circulation plan will meet the goals stated in the Specific Plan approved in June 1992 including "preservation or enhancement of aesthetic resources within the Interstate 5 corridor" by including a natural open space and park buffer between Ridge Route Road and the NorthLake major collector. Another stated goal of the approved plan is "meeting the needs of future residents while avoiding traffic conflicts in existing and proposed neighborhoods." This goal has been met through an intricate and comprehensive circulation system. Finally, vehicular streets will be designed in accordance with requirements of the Los Angeles County Department of Public Works.

Along all roads within the plan, a tree will be provided on each side of the road for every 40 linear feet for a total of up to 2,333 trees along roadways. The tree species planted will be consistent with the Los Angeles County Recommended Tree Species List.

FIGURE 10A: SECONDARY HIGHWAY (64' RIDGE ROUTE ROAD)-NORTH OF NORTHLAKE BLVD

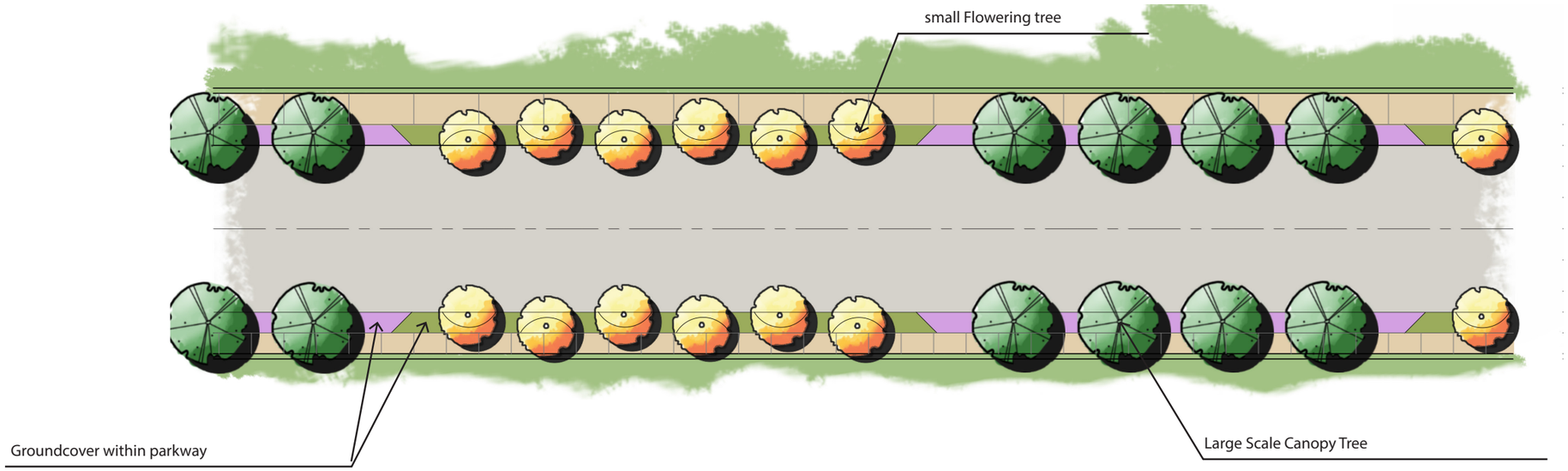


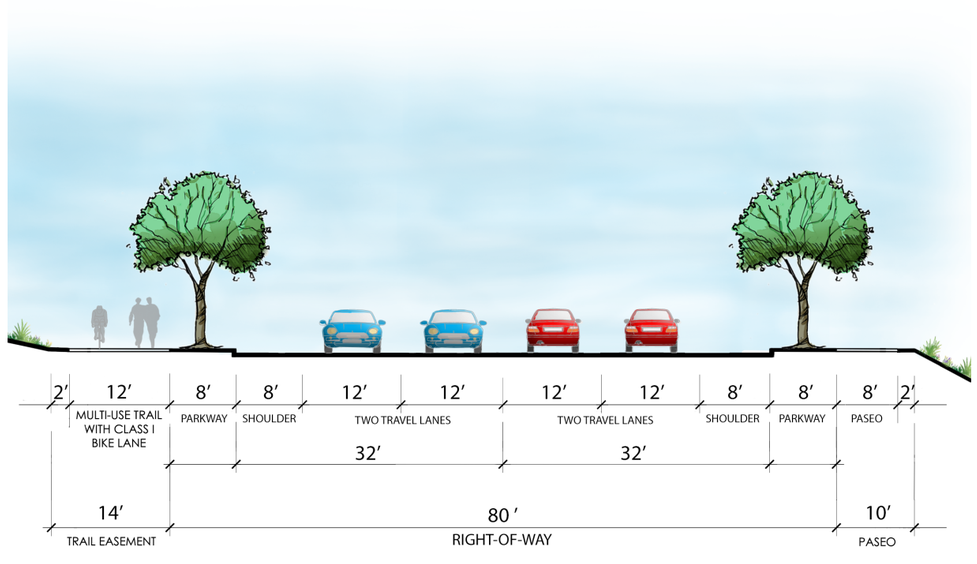


PLANT PALETTE	Scientific Name	Common Name	Water Use	Type	Height	Width
	Large Tree					
	Platanus racemosa	California Sycamore	M	D	40'-100'	40'-70'
	Grevillea robusta	Silk Oak	L	E	60'-115'	20'-30'
	Quercus agrifolia	Coast Live Oak	L	E	40′-80′	30′-45′
	Small Tree					
	Koelreuteria bipinnata	Chinese Flame Tree	M	D	20′-35′	25′-35′
	Pistacia chinensis	Chinese Pistache	M	D	30′	25′
	Gleditsia triacanthos	Honey Locust	L	D	30′-70′	30′-70′
	Shrub/ Groundcover					
	Trachelospermum jasminoides	Star Jasmine	M	SE	6′	4′
	Euryops pectinatus	Euryops/Shrub Daisy	M	E	4'-6'	4'-6'
	Phlomis fruticosa	Jerusalem Sage	L	E	2'-4'	3'-5'

Note: Refer to Section IV-10 of the Specific Plan for related landscape plan guidelines.

FIGURE 10B: SECONDARY HIGHWAY (80' RIDGE ROUTE ROAD)-SOUTH OF NORTHLAKE BLVD



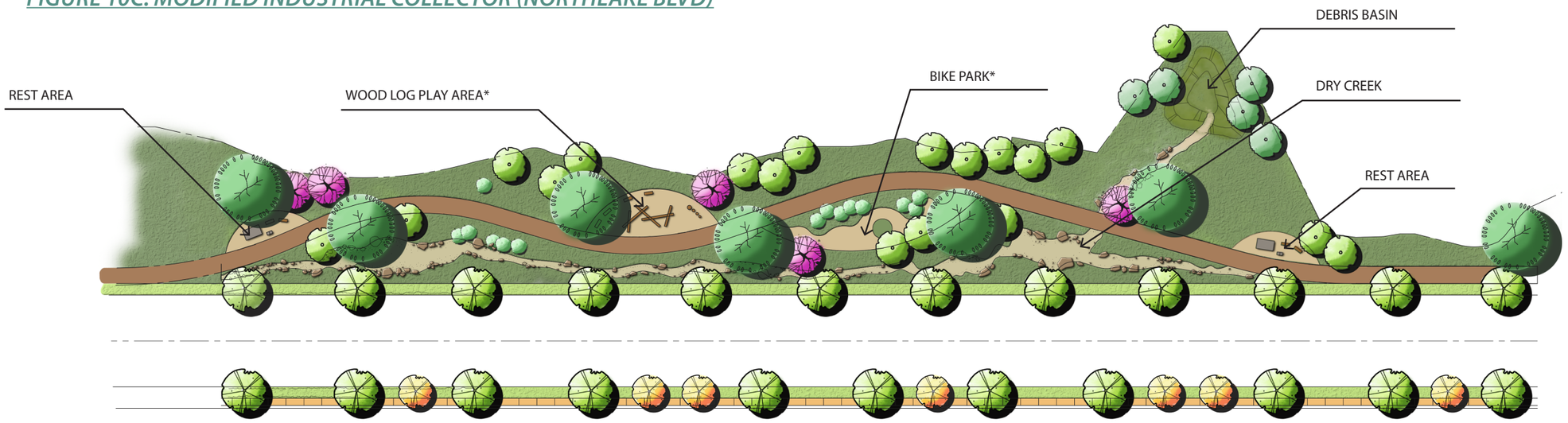


PLANT PALETTE

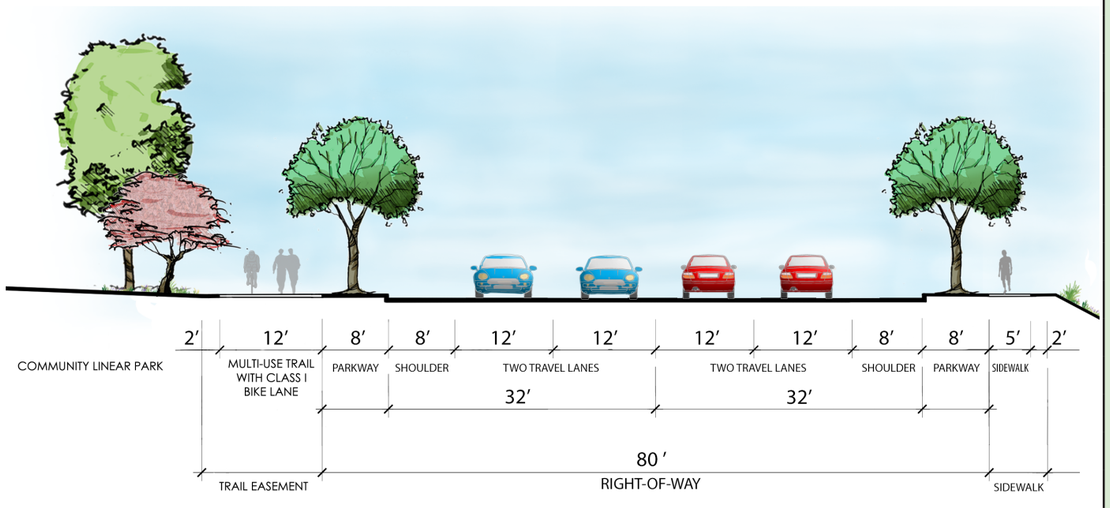
Scientific Name	Common Name	Water Use	Type	Height	Width
Large Tree					
Platanus racemosa	California Sycamore	M	D	40'-100'	40'-70'
Grevillea robusta	Silk Oak	L	E	60'-115'	20'-30'
Quercus agrifolia	Coast Live Oak	L	E	40′-80′	30′-45′
Flowering Tree					
Koelreuteria bipinnata	Chinese Flame Tree	M	D	20′-35′	25′-35′
Pistacia chinensis	Chinese Pistache	M	D	30′	25′
Gleditsia triacanthos	Honey Locust	L	D	30′-70′	30′-70′
Shrub/ Groundcover					
Trachelospermum jasminoides	Star Jasmine	M	SE	6′	4′
Euryops pectinatus	Euryops/Shrub Daisy	M	E	4'-6'	4'-6'
Phlomis fruticosa	Jerusalem Sage	L	E	2'-4'	3'-5'

Note: Refer to Section IV-10 of the Specific Plan for related landscape plan guidelines.

FIGURE 10C: MODIFIED INDUSTRIAL COLLECTOR (NORTHLAKE BLVD)



* CONCEPTUAL TRAIL AMENITY PROGRAM MAY VARY IN FINAL DESIGN.

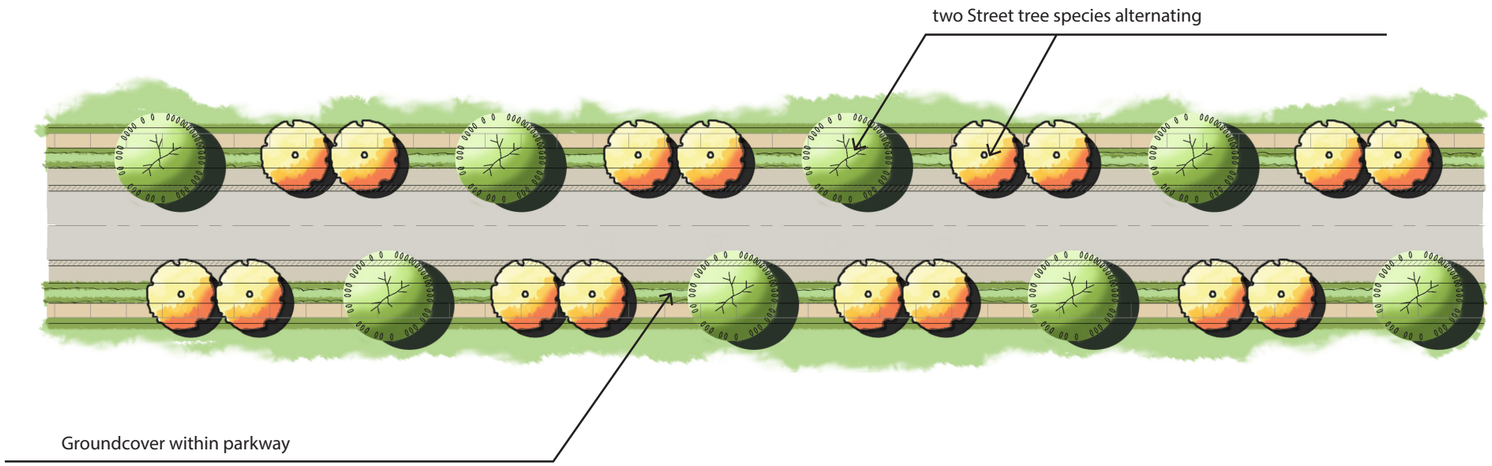


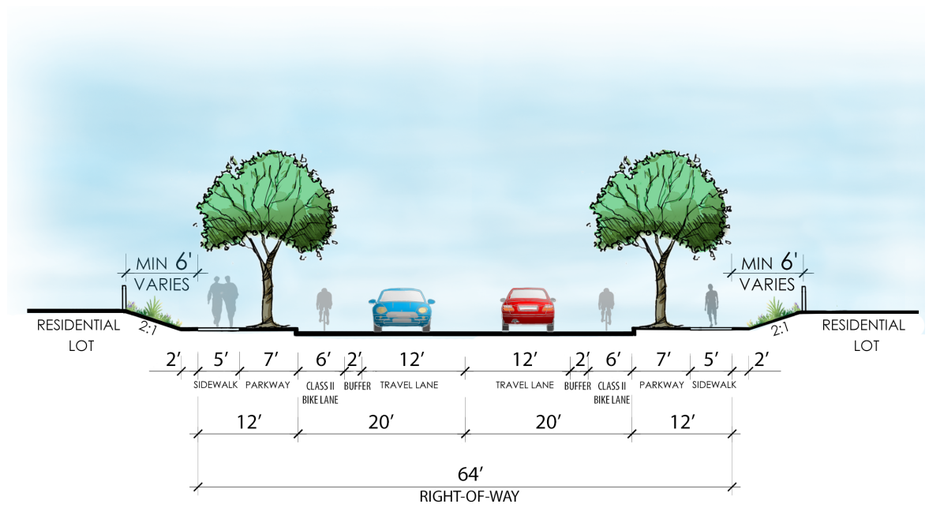
PLANT PALETTE

Scientific Name	Common Name	Water Use	Type	Height	Width
Large Tree					
Platanus racemosa	California Sycamore	M	D	40'-100'	40'-70'
Grevillea robusta	Silk Oak	L	E	60'-115'	20'-30'
Quercus agrifolia	Coast Live Oak	L	E	40′-80′	30′-45′
Small Tree					
Koelreuteria bipinnata	Chinese Flame Tree	M	D	20′-35′	25′-35′
Pistacia chinensis	Chinese Pistache	M	D	30′	25′
Cercis occidentalis	Western Redbud	L	D	12′-20′	12′-20′
Jacaranda mimosifolia	Jacaranda	M	D	40′-50′	40′-50′
Chilopsis linearis	Desert Willow	L	D	15′-40′	15′-25′
Shrub/ Groundcover					
Trachelospermum jasminoides	Star Jasmine	M	SE	6′	4′
Euryops pectinatus	Euryops/Shrub Daisy	M	E	4'-6'	4'-6'
Phlomis fruticosa	Jerusalem Sage	L	E	2'-4'	3'-5'
Leymus arenarius	Blue Grass	M/L	E	1′-3′	1′-3′
Muhlenbergia rigens	Deer Grass	M/L	E	1′-2′	1′-2′
Festuca californica	California Fescue	M/L	E	1′-5′	1′-4′

Note: Refer to Section IV-10 of the Specific Plan for related landscape plan guidelines.

FIGURE 10D: LOCAL COLLECTOR ("A" OR "B" STREET)





PLANT PALETTE

Scientific Name	Common Name	Water Use	Type	Height	Width
Medium Tree					
Gleditsia triacanthos	Honey Locust	L	D	30'-70'	30'-70'
Chionanthus retusus	Chinese Fringe Tree	M	D	15'-20'	20'-25'
Hymenosporum flavum	Sweet Shade	M	E	25'-35'	15'
Shrub/ Groundcover					
Nandina domestica 'Compacta'	Dwarf Heavenly Bamboo	M	E	4'-5'	3'
Trachelospermum jasminoides	Star Jasmine	M	SE	6'	4'

Note: Refer to Section IV-10 of the Specific Plan for related landscape plan guidelines.

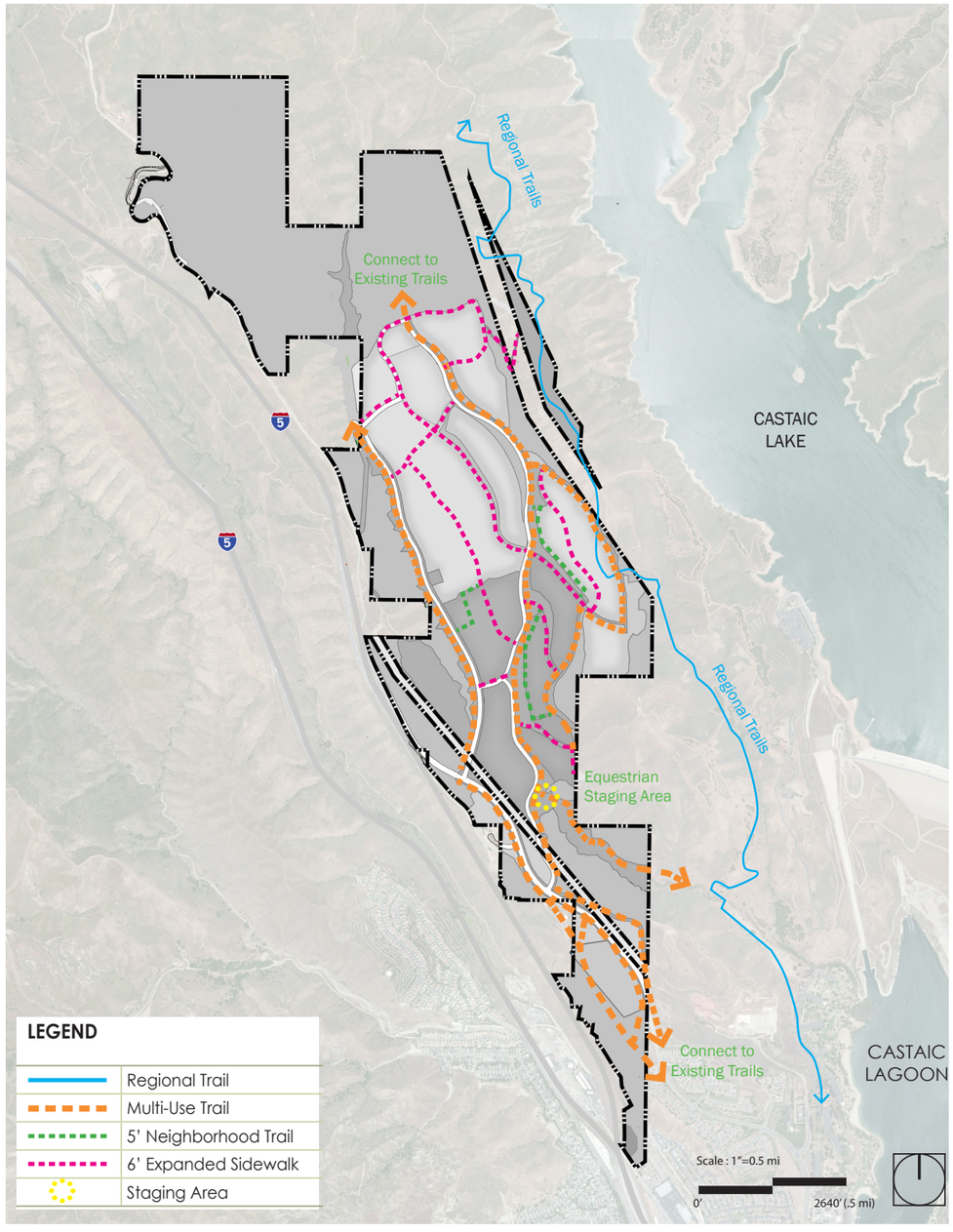


FIGURE 11. TRAIL CIRCULATION PLAN AND TRAIL SECTIONS

2.4 TRAIL CIRCULATION

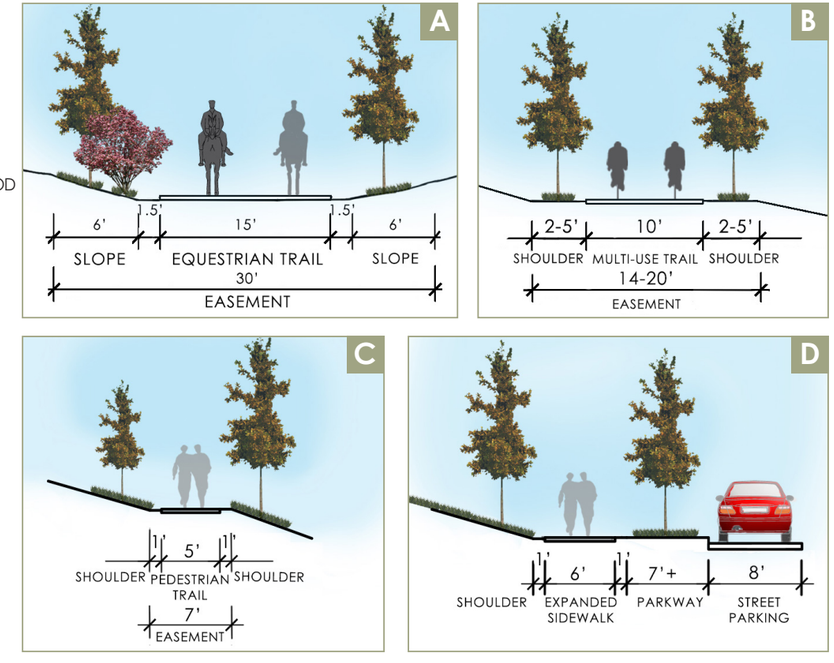
With all the recreational opportunities for residents—both in the community and just east in the Castaic Lake area—one goal for this project is a high level of walkability to provide access to recreational destinations and promote healthy and active lifestyles in the neighborhood. These destinations are readily accessible to hikers, bicyclists, and horseback riders through multiple connections to the existing regional trail system. Pedestrian facilities in the neighborhood include multi-use trails, enhanced parkways, and neighborhood pedestrian trails. Multi-use trails are designed for pedestrians, bicycles, and equestrians and have been included along the Principal Highway leading to NorthLake from Ridge Route Road and along the Primary Collector running north-south in the center of the community. Neighborhood trails connect homes to the larger network, bringing all community amenities within pedestrian, bicycle, or equestrian access and reducing the need for automobiles. The pedestrian and trails system is shown in Figure 11, *Trail Circulation Plan and Trail Sections*.

A REGIONAL EQUESTRIAN / BICYCLE TRAIL

B MULTI-USE TRAIL

C 5' NEIGHBORHOOD TRAIL

D 6' Expanded Sidewalk



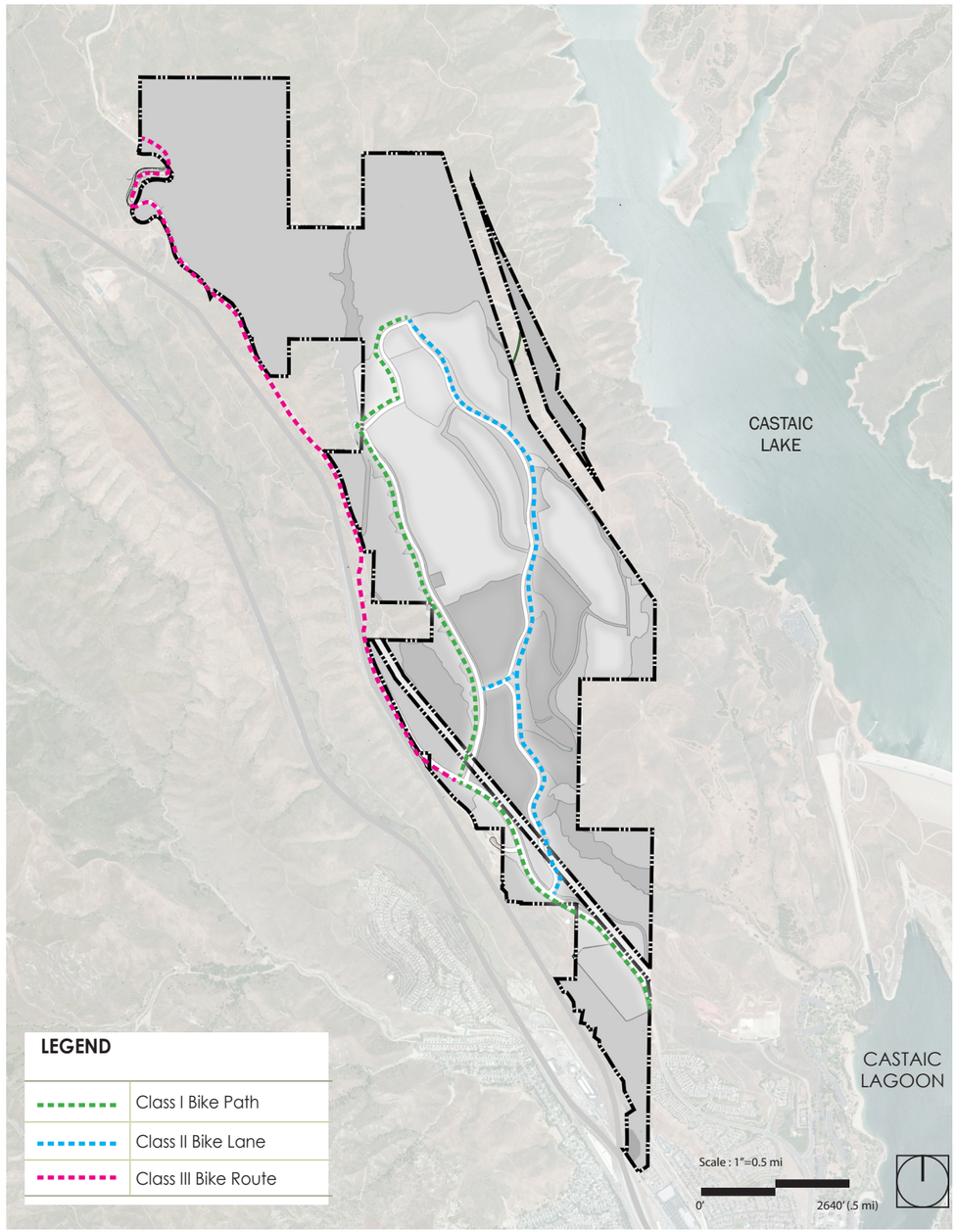


FIGURE 12. BICYCLE TRAILS

2.5 BICYCLE TRAILS

Encouraging non-motorized transportation, such as bicycling and walking, will result in less traffic; provide additional recreational opportunities; reduce noise; and improve public health, air quality, and energy conservation. The Caltrans Highway Design Manual, Chapter 1000, "Bikeway Planning and Design," defines bikeways as Class I bike paths, Class II bike lanes, and Class III bike routes. The bicycle trail plan is shown in Figure 12, *Bicycle Trails* and Figure 13, *Bikeway Sections.*

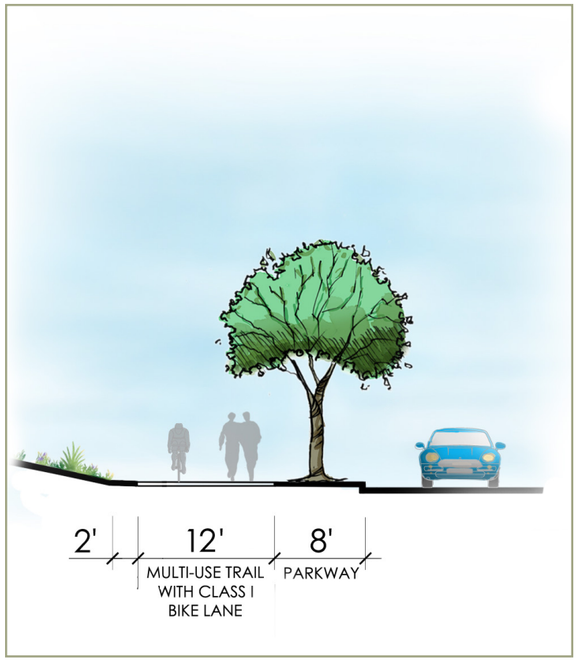
Class I Bike Path. An off-street path or trail for the use of pedestrians and bicyclists. A scenic, 12-foot-wide bike path is planned along NorthLake Blvd and Ridge Route Road south of NorthLake Blvd.

Class II Bike Lane. A separate lane for one-way bike travel on a street. The 6-foot-wide bike lane is planned for both sides of Local Collectors "A" and "B" and Fire Access Road. The lane may be separated from traffic in several ways, including:

- Curbs
- Rubber posts
- Striping

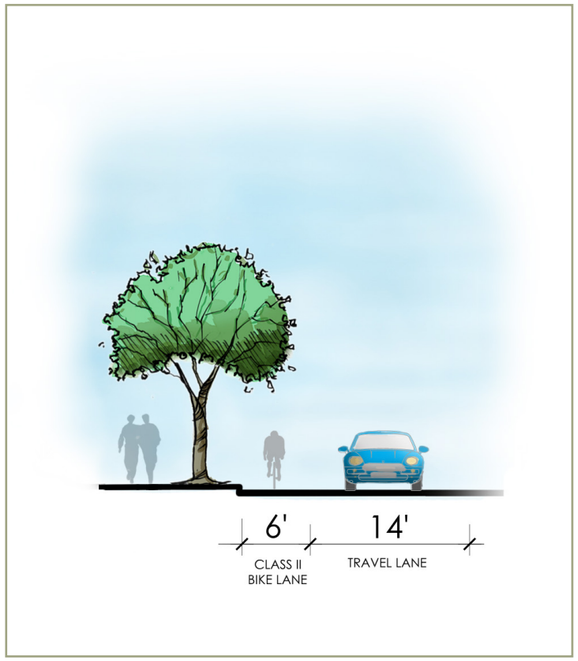
Class III Bike Route. A lane marked with signs or "sharrows" that can be used by bicyclists and cars. A bike route is along Ridge Route Road north of NorthLake Blvd.

FIGURE 13. BIKEWAY SECTIONS



CLASS I BIKE PATH

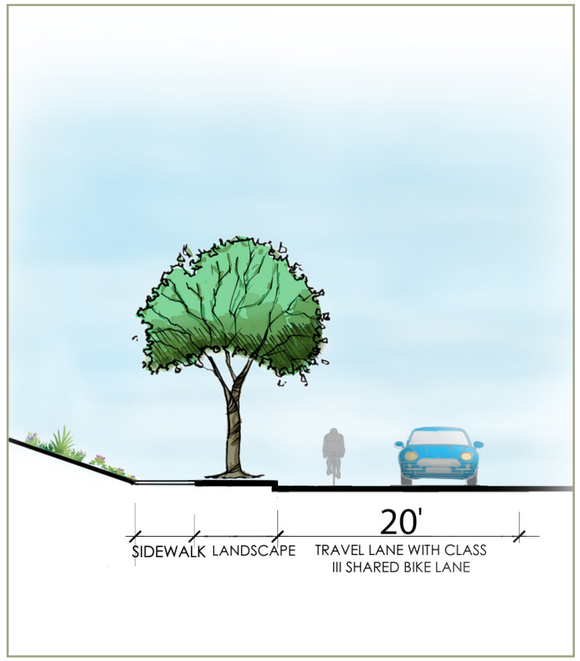
Provides a completely separated right-ofway for the exclusive use of bicycles and pedestrians with cross-traffic minimized. The trails are marked and landscaped.



CLASS II BIKE LANE

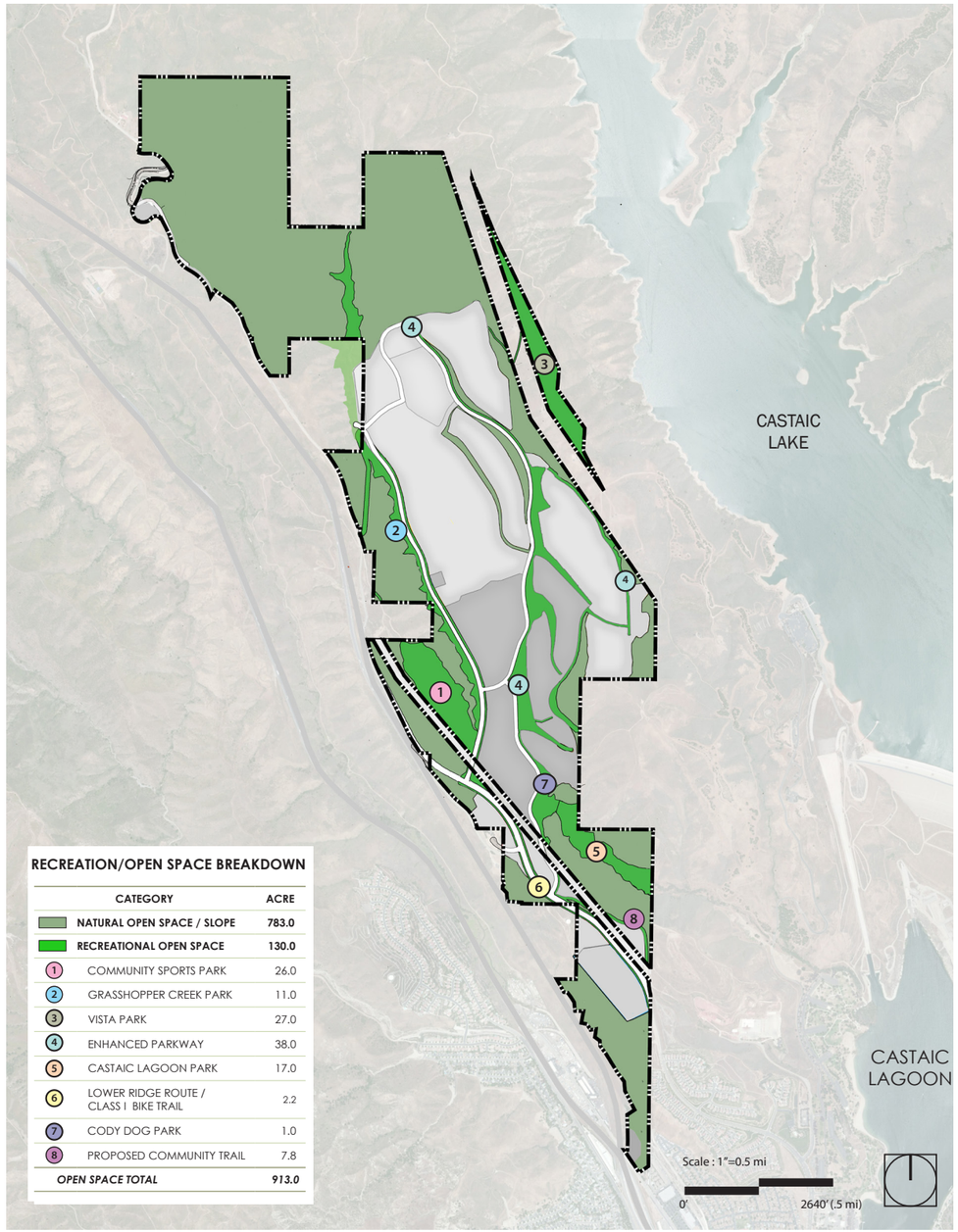
Provides a separate lane for one-way bike travel on a street. Options for buffering may include:

- Curbs
- Rubber posts
- Striping



CLASS III BIKE ROUTE

Provides for shared use with pedestrian or motor vehicle traffic. Bike routes are marked with signs.



RECREATION/OPEN SPACE BREAKDOWN

	CATEGORY	ACRE
	NATURAL OPEN SPACE / SLOPE	783.0
	RECREATIONAL OPEN SPACE	130.0
1	COMMUNITY SPORTS PARK	26.0
2	GRASSHOPPER CREEK PARK	11.0
3	VISTA PARK	27.0
4	ENHANCED PARKWAY	38.0
5	CASTAIC LAGOON PARK	17.0
6	LOWER RIDGE ROUTE / CLASS I BIKE TRAIL	2.2
7	CODY DOG PARK	1.0
8	PROPOSED COMMUNITY TRAIL	7.8
	OPEN SPACE TOTAL	*913.0*

FIGURE 14. OPEN SPACE AND PARKS

2.6 OPEN SPACE AND PARKS

The centerpiece of the updated NorthLake Plan is the preservation of open space, to the extent feasible, combined with a public park system providing programmed activity areas, passive green space, and separation or buffer zones between urbanized areas. The preservation of natural open spaces and planning for a public park system has been organized to allow the NorthLake Plan to act as a conduit for the surrounding open spaces and Castaic Lake. This will provide greater connectivity between existing open spaces in addition to those planned within the community. These connections and spaces will provide a wide range of recreation opportunities to reinforce the intent of designing for healthy communities.

The area of natural open space has been significantly increased from 476.4 acres to 783 acres, benefitting wildlife and working toward the stated goal of encouraging conservation, protection, and enhancement of natural, ecological, scenic, cultural, and open space resources for the benefit and enjoyment of current and future residential population of the region. Of this open space, the amount of undisturbed open space acreage would also be increased from 328 acres to 572 acres.

The 166.9-acre golf course in the approved Specific Plan has been re-programmed for today's residents, replaced with 130 acres of park space and an increased amount open space as described above. Major recreational opportunities include a sports park; a designated overlook area called Vista Park; and Grasshopper Creek Park, a linear open space along the natural drainage way.

WIthin the 130 acres of designated park space, up to 1,950 trees will be planted, each a minimum of 15 gallon trees. The tree species planted will be consistent with the Los Angeles County Recommended Tree Species List.

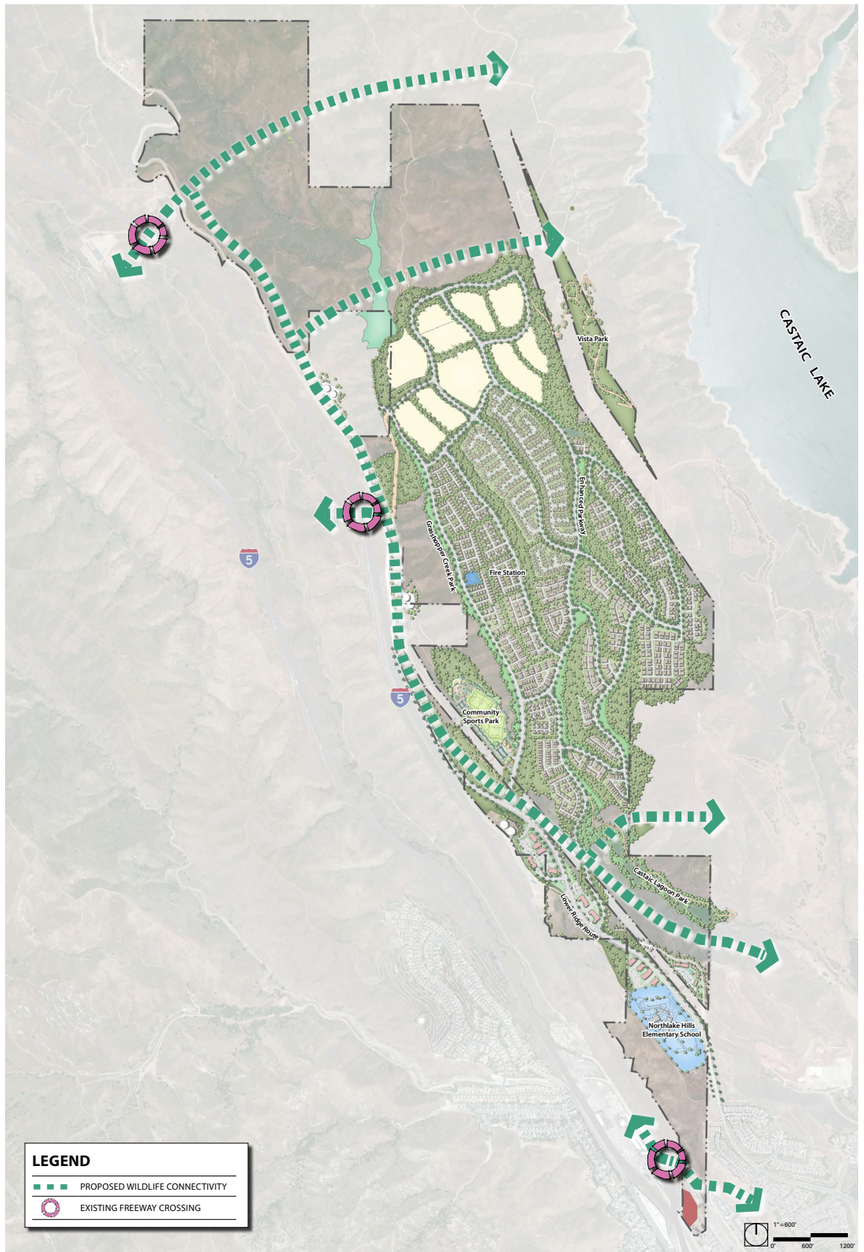


FIGURE 15. WILDLIFE CONNECTIVITY

The NorthLake Plan provides permeability for a suite of wildlife species, including Mountain Lions and Mule Deer. The current NorthLake Plan, as it reduces development at the northern end of the Project Site, avoids areas of permeability, and project encroachment would be entirely outside the areas of highest permeability. The current NorthLake Plan enables wildlife movement along multiple paths between the northern 1-5 under-crossing and Castaic Lake. Additionally, the NorthLake Plan would also enable wildlife movement along the more southerly of the two 1-5 undercrossings, connecting wildlife movement to Castaic Lake, and would also enable wildlife movement along pathways through the southerly part of the development area, as shown in Figure 15, *Wildlife Connectivity*.



VIEW INTO FUTURE CASTAIC LAGOON PARK



CASTAIC LAKE RECREATION AREA



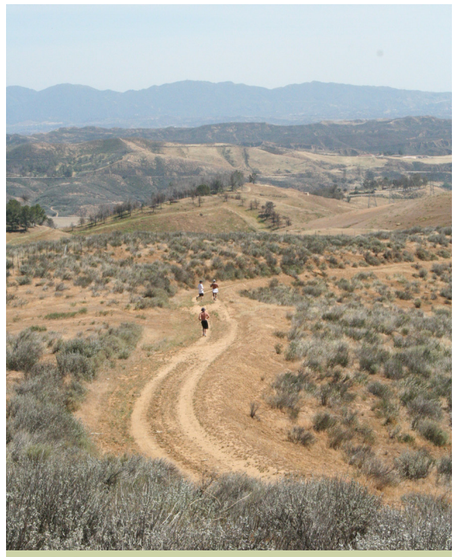
VISTA PARK CONNECTION TO PINE RIDGE FIRE ROAD



CASTAIC LAKE FROM PINE RIDGE FIRE ROAD



SHADED RESPITE AREAS



CONNECTION TO EXISTING TRAILS AT VISTA PARK

SPORTS PARK

Size: 26 Acres

Parking: 160 Stalls

Amenities:

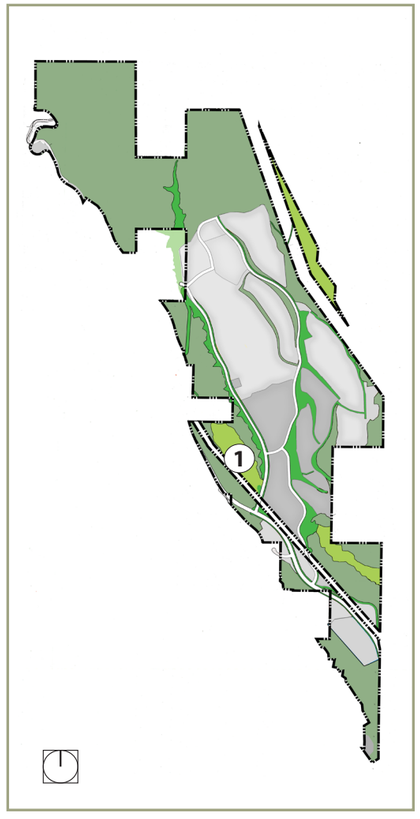
- (2) Softball/Soccer Fields
- (1) Full Basketball Court
- (2) Family Picnic Pavilion
- (5) Individual Picnic Areas
- (4) Park Seating Benches
- (2) Children's Play Areas
- (1) Restroom
- 10' Walking Path

Also Provided:

- (2) Trash Dumpster Enclosure Areas
- Maintenance Yard (east)
- Park Monument Sign
- Seating with Shade per Sections 2.51.1 & 2.51.3

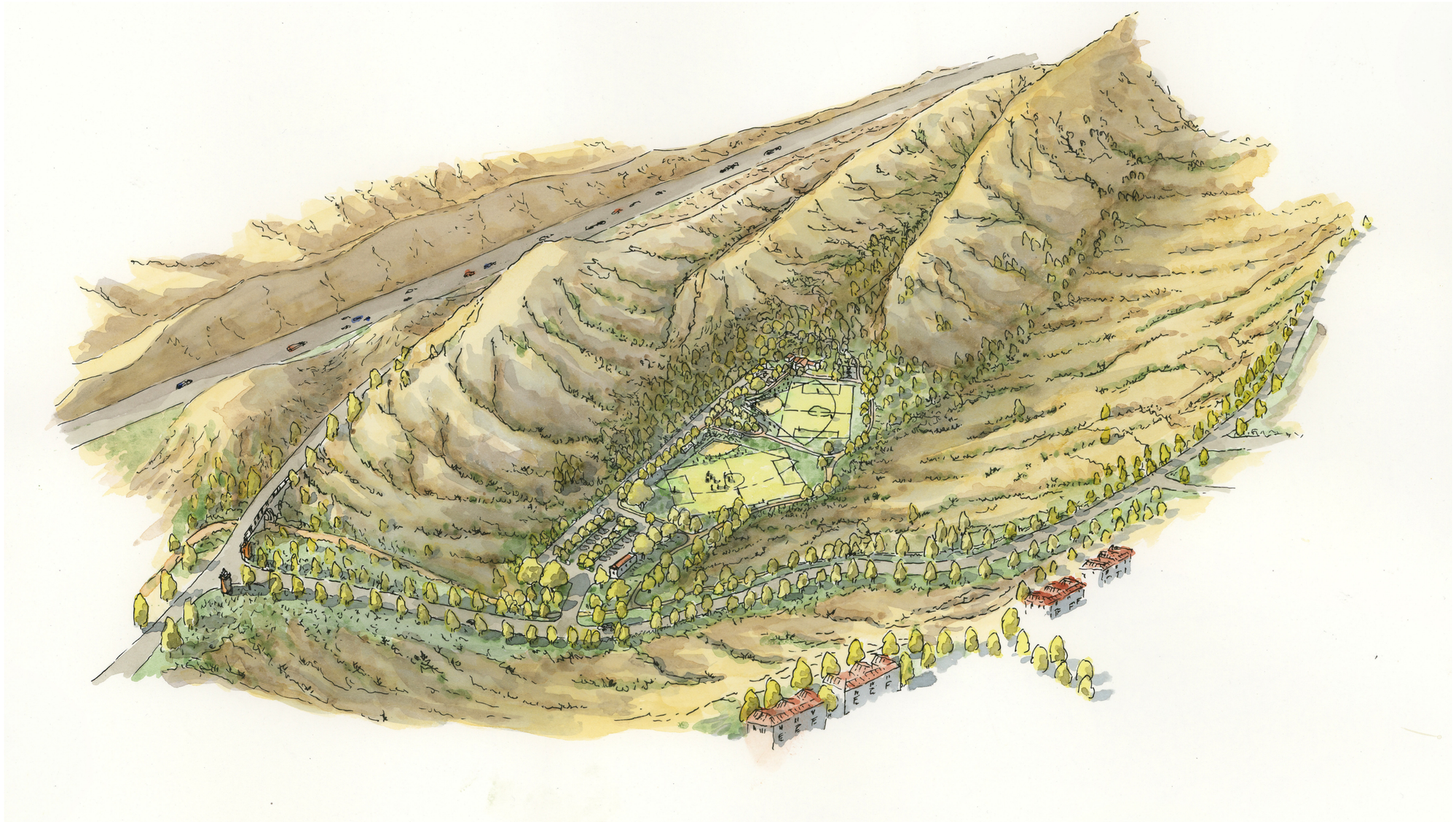


1 SPORTS PARK



KEY MAP

FIGURE 16A. PARK VIGNETTES



CONCEPTUAL RENDERING OF SPORTS PARK

MULTI-FAMILY

Each Multi-family planning area will have a minimum of 1,000 square feet of dedicated common space. Amenities within these spaces may include (but are not limited to):

- Picnic Tables
- Barbecues
- Tot Lot Areas
- Garden Seating
- Outdoor Lounge
- Outdoor Fireplace
- Paseo Connection
- Open Turf Play Areas
- Fountains





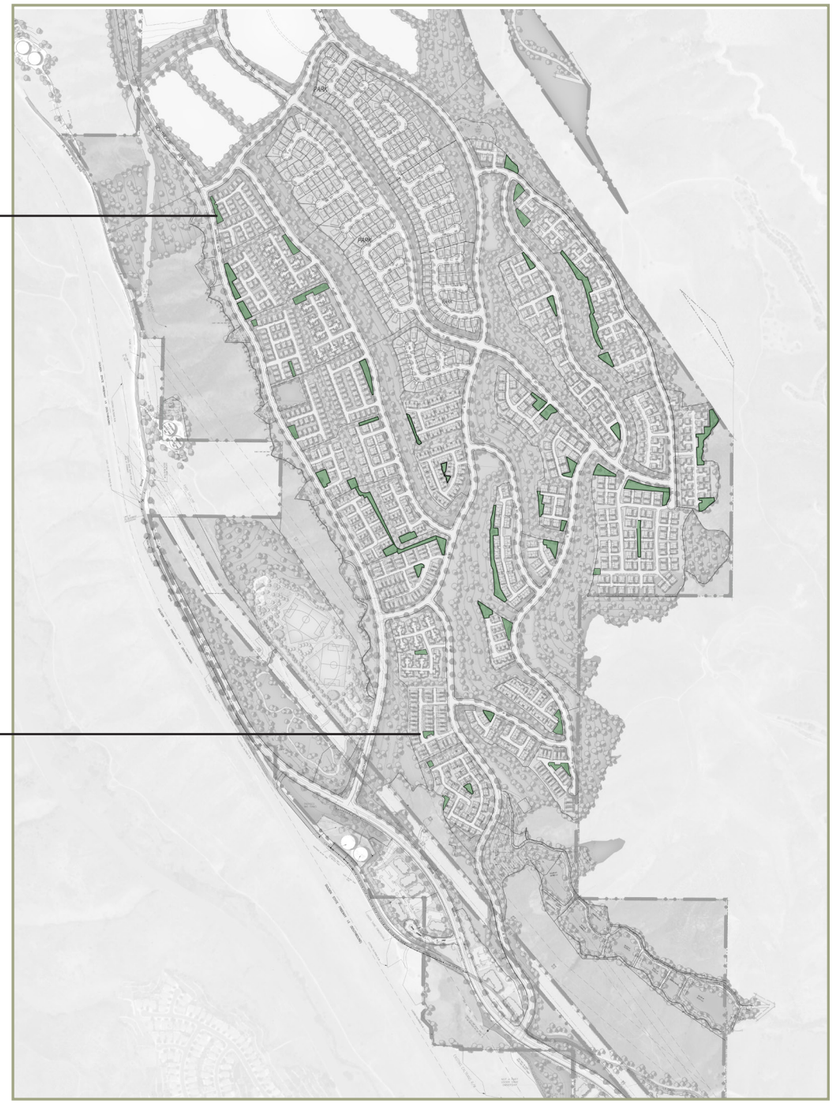
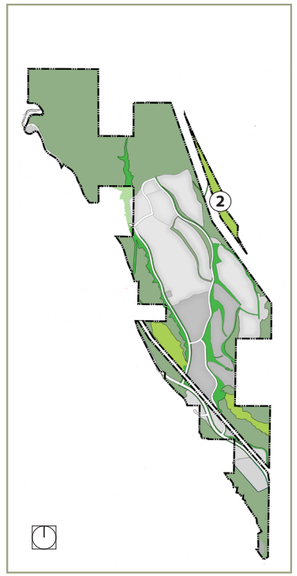
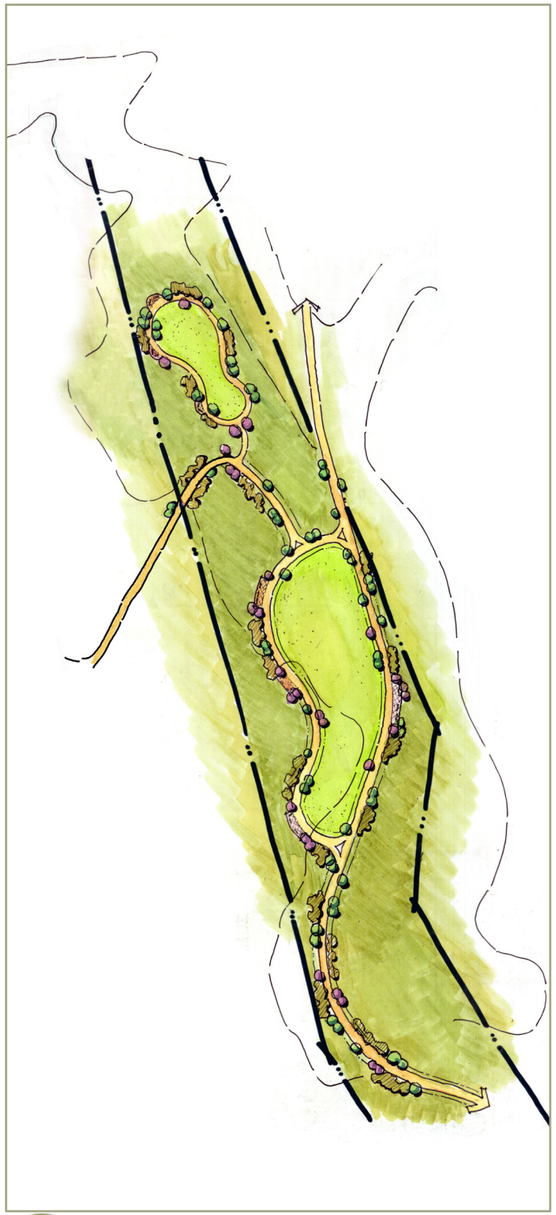


FIGURE 16B. MULTI-FAMILY COMMON AREAS



KEY MAP



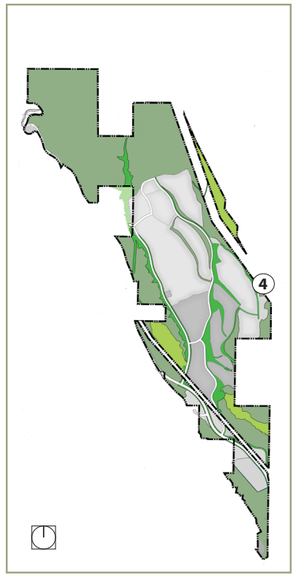
2 VISTA PARK



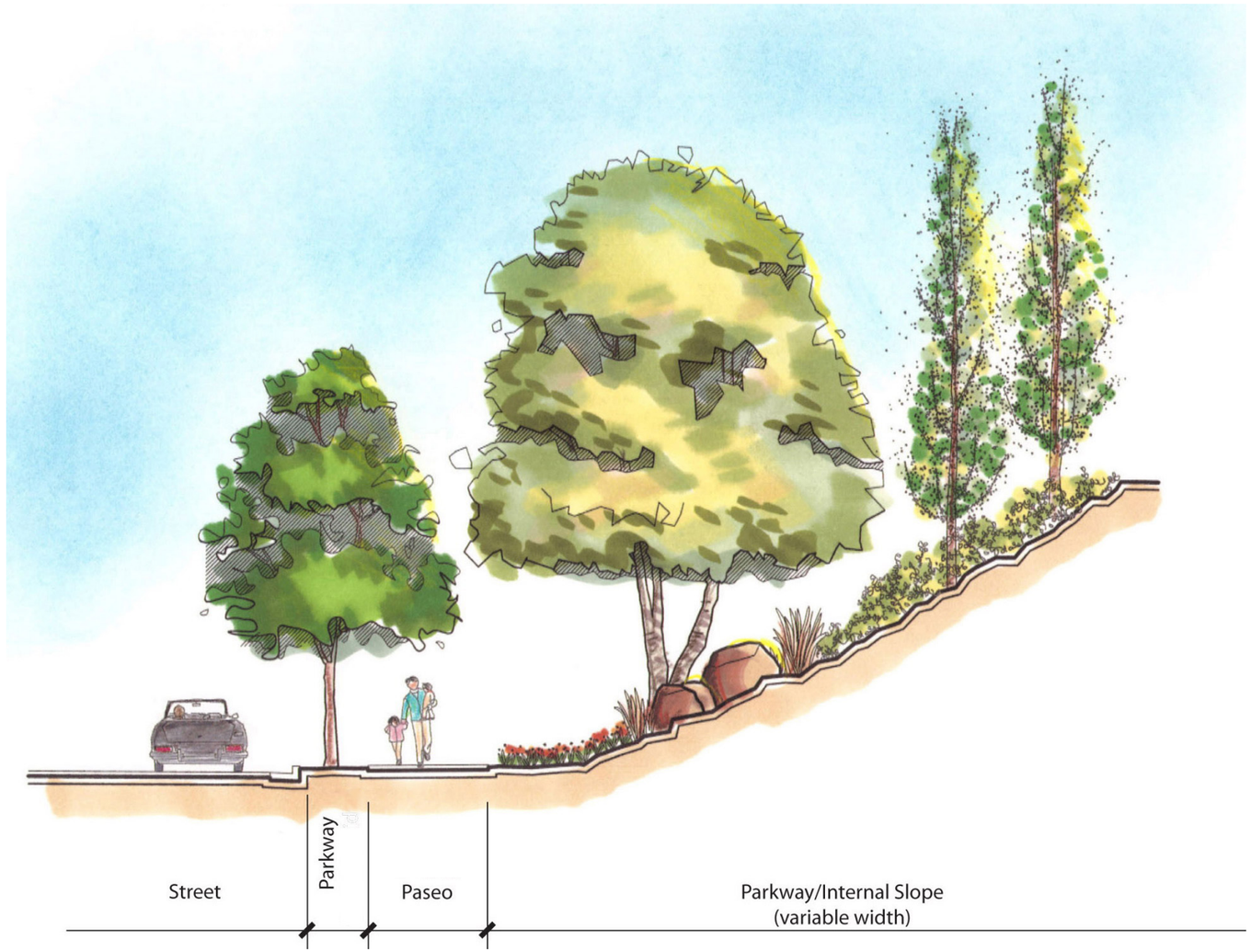
3 POCKET PARKS*

*ONE PER 100 SINGLE FAMILY RESIDENCES PER SP III-15

FIGURE 16C. PARK VIGNETTES



KEY MAP



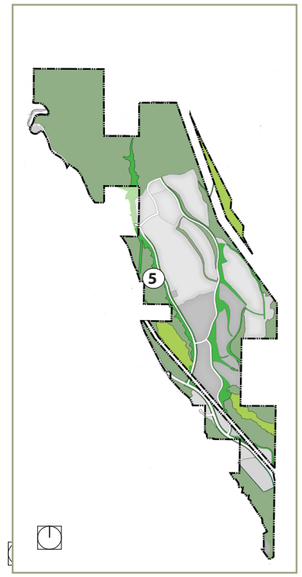
4 TYPICAL SLOPE*

*TRANSITIONAL SLOPES TO OPEN SPACE AREAS WILL CONFORM WITH SPECIFIC PLAN SECTION IV.A.3

FIGURE 16D. PARK VIGNETTES



5 VIEW FROM GRASSHOPPER CREEK PARK



KEY MAP

FIGURE 16E. PARK VIGNETTES

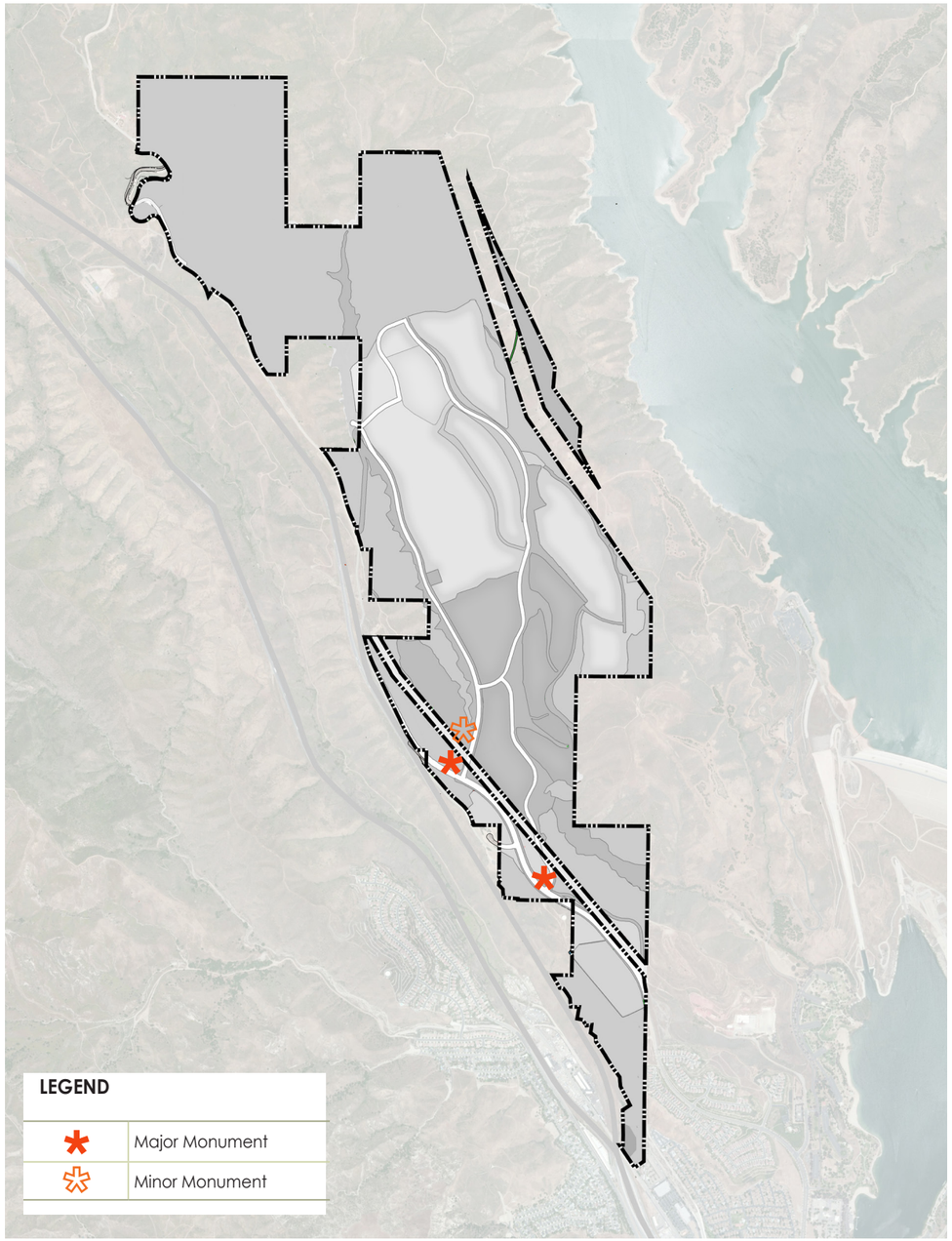


FIGURE 17. COMMUNITY MONUMENT LOCATIONS

2.7 COMMUNITY IDENTIFICATION MONUMENTS

Entry monuments serve as the visual gateway for NorthLake, utilizing a combination of architectural details, signage, lighting, and landscaping. Community identification features anounce major and minor arrival points and present an aesthetic symbol of the community's identity.

The existing NorthLake entry feature (see photo at right) presents a clear direction for the design of the monuments. The proposed entry features shall be utilize similar materials and textures to achieve a harmonious character throughout the community. Figure 17, *Community Monument Locations* depicts the suggested location of major and minor entry features.

Major Entries. Providing the strongest entry statement, major entries are the main portal into the community. As measured from the right-of-way, major entries typically range between 300 and 450 square feet with a dimension between 20 and 30 feet as measured from the corner of the property line. Major entris should incorporate distinctive signage, attractive landscaping, and distinguising elements such as monument style walls.

Minor Entries. Minor entry monuments shall display a consistant character with the existing NorthLake entry feature and the major monuments, but will be less prominent in scale. Minor entries typically range between 100 and 200 sqaure feet with a dimension between 15 and 20 feet as measured from the street corner of the property line. Minor entries should be marked by attractive signage and landscaping consistent with, but smaller in scale than the other entry features.

Neighborhood Markers. Individual neighborhoods may include entry markers that define and unify the character of smaller areas. These markers create a memorable experience for pedestrians and motorists, serving as placemaking elements.


TALEGA
SALUDA SWIM CLUB
TMC MEMBERS ONLY


CARILLON




SPEED LIMIT
50
TURTLE RIDGE

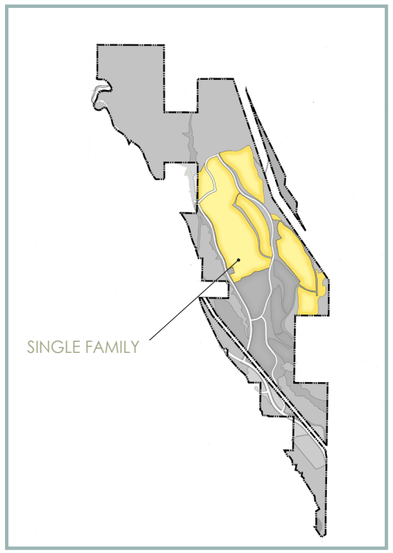


3 RESIDENTIAL DESIGN GUIDELINES

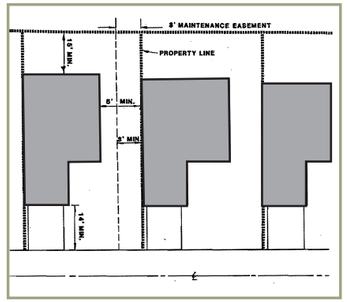
3.1 RESIDENTIAL ZONES

A variety of living styles have been envisioned for NorthLake, and homes will fall within a wide range of prices. Two residential zoning categories have been included, as shown in Figure 4A, *Land Use Plan*. The first category is Single Family, which permits conventional, individually owned fee simple lots as well as courtyard single-family homes on a condominium lot. The second category is Multi-family, which permits single-family or multi-family homes within a condominium lot. Additionally, within these designations, up to 2,593 tress will be provided; all species planted will be consistent with the Los Angeles County Recommended Tree Species List.

Prototypical product types representing a contemporary update of those in the approved Specific Plan have been depicted in this document. Three-dimensional depictions of each prototype are included in this chapter to show examples of home and lot configurations.

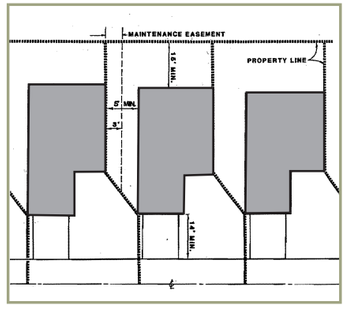


KEY MAP



ZERO SIDE YARD OVERLAY

Northlake Specific Plan (1992), Exhibit III-2



Z-LOT OVERLAY

Northlake Specific Plan (1992), Exhibit III-4

3.2 SINGLE FAMILY DETACHED

The Single Family Detached Zone corresponds to the SF-1 Zone in the approved Specific Plan and has been updated to allow clustering of homes in enclaves surrounded by open space. Homes within this area will be arranged in a variety of configurations, including conventional lots, as shown in Figure 17A, and courtyard homes arranged within a 4 to 6 unit motor court, as shown in Figure 17B and Figure 17C. Optional overlay designations for the single family zone include the "Zero Side Yard," "Z Lot," overlay designations within the approved Specific Plan.









◊ SINGLE FAMILY DETACHED

Single Family Lots

3–5 DU/AC

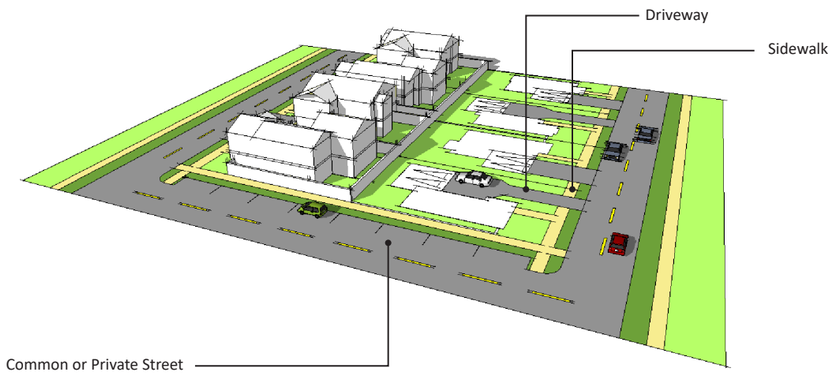
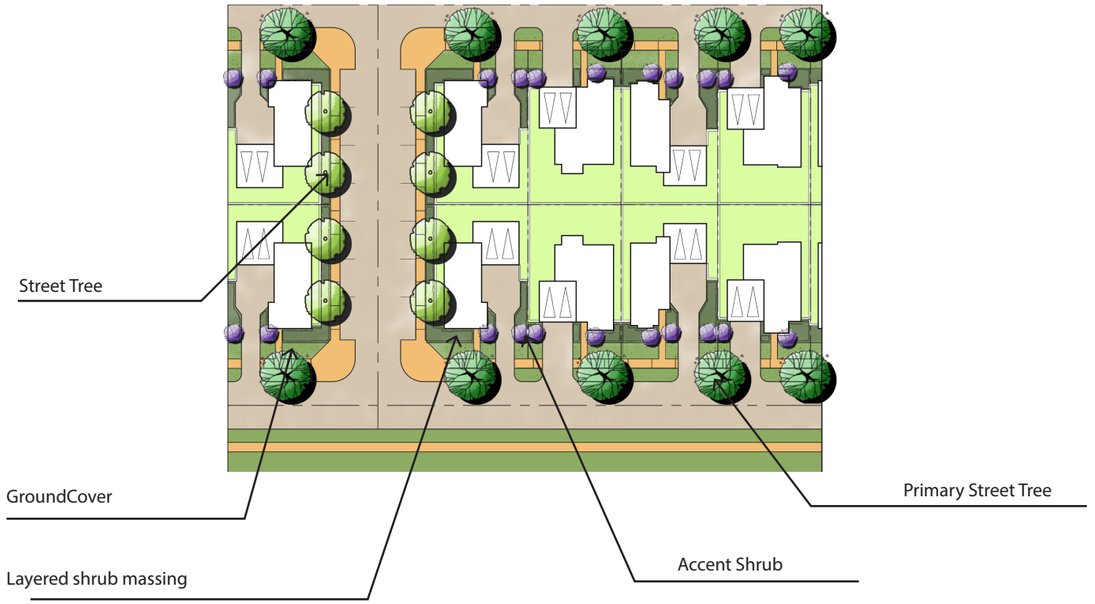






FIGURE 18A. PRODUCT PROTOTYPES: SINGLE FAMILY DETACHED



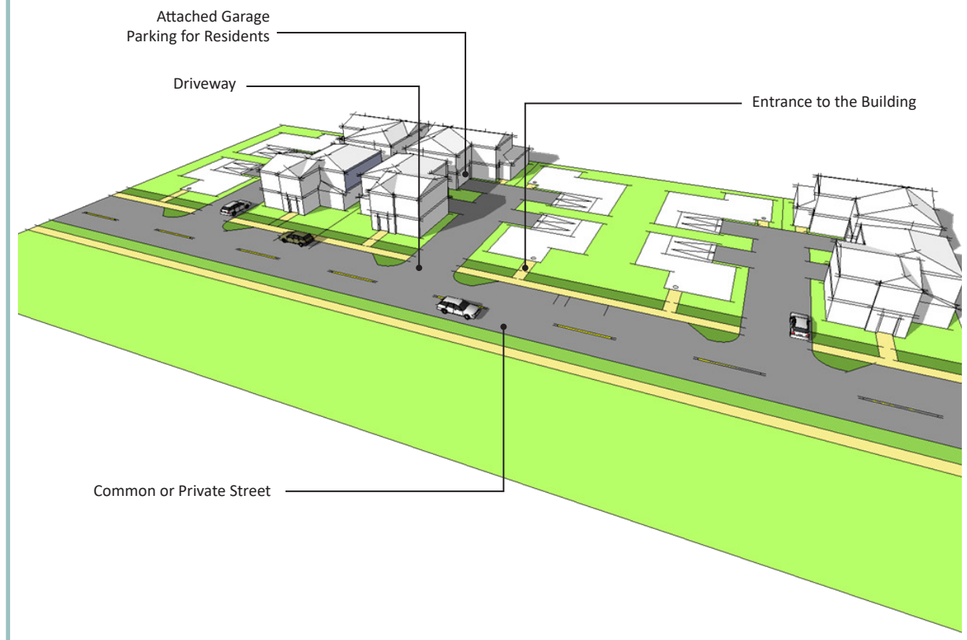
PLANT PALETTE	Scientific Name	Common Name	Water Use	Type	Height	Width
	Medium Tree/Street Tree					
	Gleditsia triacanthos	Honey Locust	L	D	30’-70’	30’-70’
	Chionanthus retusus	Chinese Fringe Tree	M	D	15'-20'	20'-25'
	Hymenosporum flavum	Sweet Shade	M	E	25'-35'	15'
	Shrub/ Groundcover					
	Trachelospermum jasminoides	Star Jasmine	M	SE	6’	4’
	Euonymus japonica	Boxwood	M	E	6’-8’	4’-6’
	Accent Shrub					
	Nandina domestica ‘Compacta’	Dwarf Heavenly Bamboo	M	E	4’-5’	3’
	Phlomis fruticosa	Jerusalem Sage	L	E	2'-4'	3'-5'
	Callistemon citrinus ‘Little John’	Dwarf Bottlebrush	L	E	10’-15’	10’-15’
	Agapanthus	Lily Of The Nile	M	E	2’-3’	1’-2’

Note: Refer to Section IV-10 of the Specific Plan for related landscape plan guidelines.

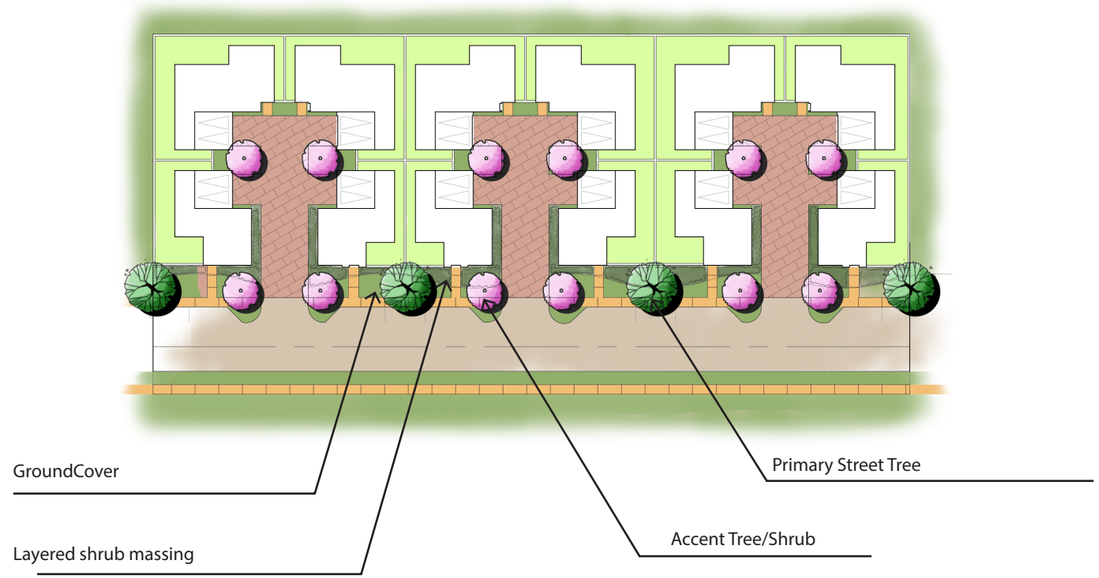
◊ SINGLE FAMILY MOTOR COURT (4 UNITS)

Magnolia

4 Motor Court, 7.5 DU/AC







PLANT PALETTE

Scientific Name	Common Name	Water Use	Type	Height	Width
Medium Tree/Street Tree					
Gleditsia triacanthos	Honey Locust	L	D	30’-70’	30’-70’
Chionanthus retusus	Chinese Fringe Tree	M	D	15'-20'	20'-25'
Hymenosporum flavum	Sweet Shade	M	E	25'-35'	15'
Shrub/ Groundcover					
Trachelospermum jasminoides	Star Jasmine	M	SE	6’	4’
Euonymus japonica	Boxwood	M	E	6’-8’	4’-6’
Accent Shrub					
Nandina domestica ‘Compacta’	Dwarf Heavenly Bamboo	M	E	4’-5’	3’
Phlomis fruticosa	Jerusalem Sage	L	E	2'-4'	3'-5'
Callistemon citrinus ‘Little John’	Dwarf Bottlebrush	L	E	10’-15’	10’-15’
Agapanthus	Lily-Of-The-Nile	M	E	2’-3’	1’-2’

Note: Refer to Section IV-10 of the Specific Plan for related landscape plan guidelines.

FIGURE 18B. PRODUCT PROTOTYPES: SINGLE FAMILY DETACHED (ZERO SIDE LOT OVERLAY)

◊ SINGLE FAMILY MOTOR COURT (6 UNITS)

Knolls

6 Motor Court, 10 DU/AC

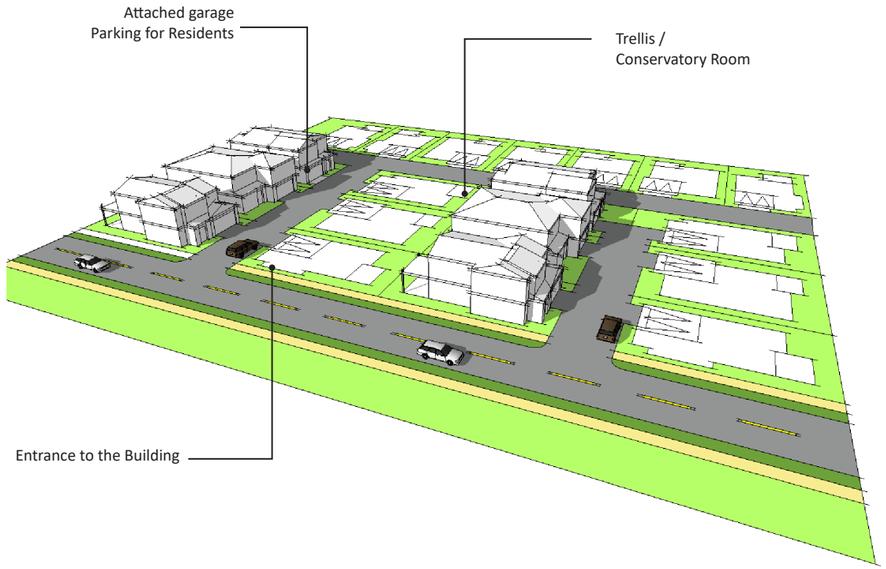
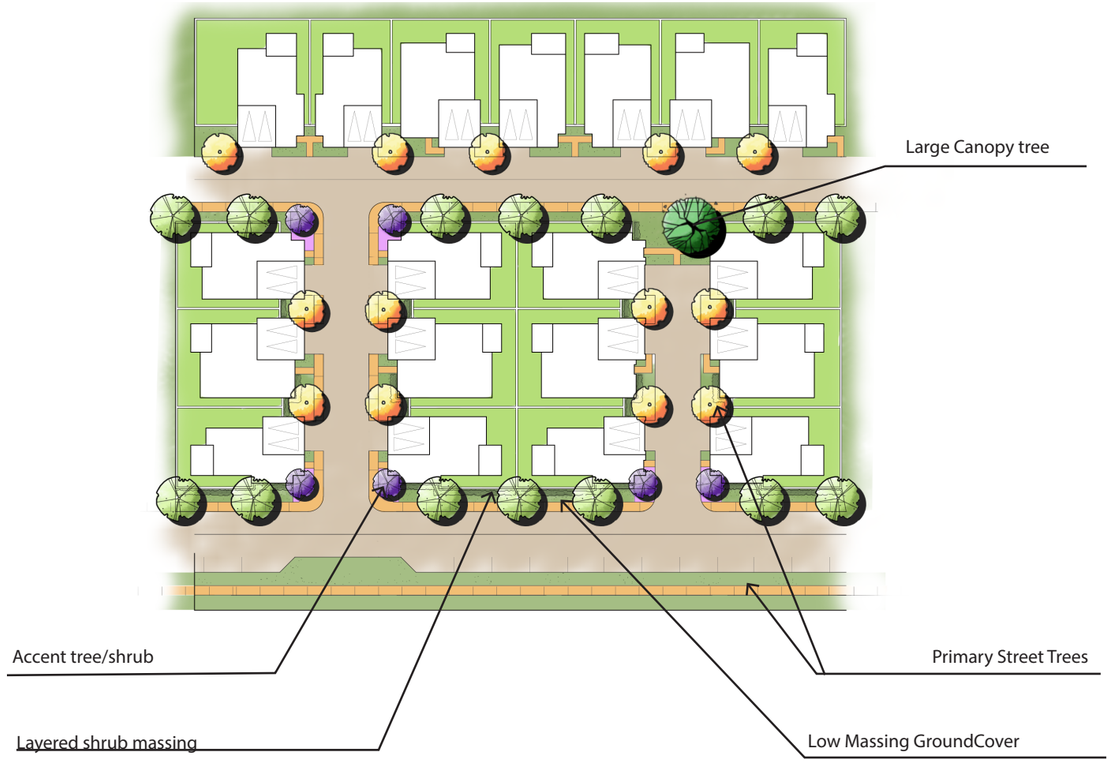




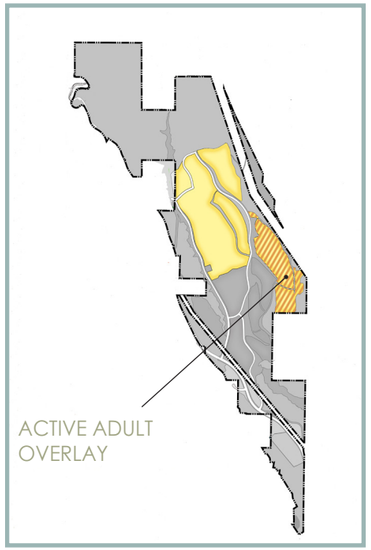


FIGURE 18C. PRODUCT PROTOTYPES: SINGLE FAMILY DETACHED (ZERO SIDE LOT OVERLAY)



PLANT PALETTE	Scientific Name	Common Name	Water Use	Type	Height	Width
	Medium Tree/Street Tree					
	Gleditsia triacanthos	Honey Locust	L	D	30’-70’	30’-70’
	Chionanthus retusus	Chinese Fringe Tree	M	D	15'-20'	20'-25'
	Hymenosporum flavum	Sweet Shade	M	E	25'-35'	15'
	Shrub/ Groundcover					
	Trachelospermum jasminoides	Star Jasmine	M	SE	6’	4’
	Euonymus japonica	Boxwood	M	E	6’-8’	4’-6’
	Accent Shrub					
	Nandina domestica ‘Compacta’	Dwarf Heavenly Bamboo	M	E	4’-5’	3’
	Phlomis fruticosa	Jerusalem Sage	L	E	2'-4'	3'-5'
	Callistemon citrinus ‘Little John’	Dwarf Bottlebrush	L	E	10’-15’	10’-15’
	Agapanthus	Lily Of The Nile	M	E	2’-3’	1’-2’

Note: Refer to Section IV-10 of Specific Plan for related landscape plan guidelines.



KEY MAP

3.3 SINGLE FAMILY DETACHED - ACTIVE ADULT OVERLAY ZONE

The Active Adult Overlay Zone provides flexibility in establishing the location of homes for people over a specific age. Lot sizes and configurations will be similar to those in the Single Family area with the addition of the Paired Single Family Overlay designation as an option. The homes shown in Figures 18D and 18E are two examples of the typical neighborhood configuration within this zone.





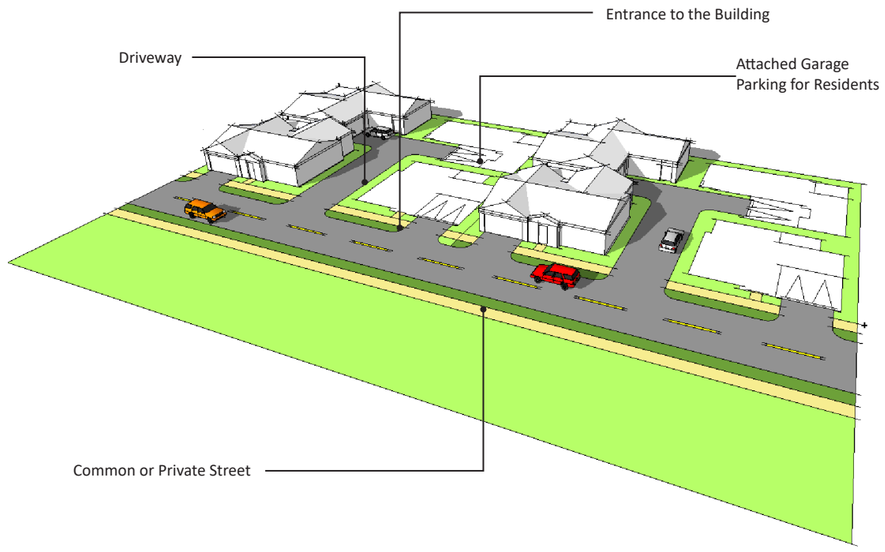




◊ ACTIVE ADULT - SINGLE FAMILY DETACHED

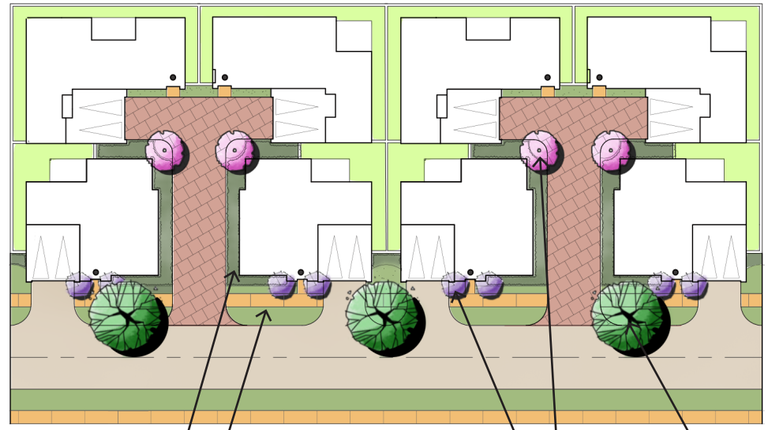
Casitas

4 Motor Court, 7 DU/AC









PLANT PALETTE	Scientific Name	Common Name	Water Use	Type	Height	Width
	Medium Tree/Street Tree					
	Gleditsia triacanthos	Honey locust	L	D	30′-70′	30′-70′
	Chionanthus retusus	Chinese fringe tree	M	D	15'-20'	20'-25'
	Hymenosporum flavum	Sweet shade	M	E	25'-35'	15'
	Shrub/ Groundcover					
	Trachelospermum jasminoides	star jasmine	M	SE	6′	4′
	Trachelospermum jasminoides	star jasmine	M	E	1'-2'	18'-20'
	Euonymus japonica	Boxwood	M	E	6′-8′	4′-6′
	Accent Shrub					
	Nandina domestica 'Compacta'	Dwarf Heavenly Bamboo	M	E	4′-5′	3′
	Phlomis fruticosa	Jerusalem sage	L	E	2'-4'	3'-5'
	Callistemon citrinus 'Little John'	Dwarf Bottlebrush	L	E	10′-15′	10′-15′
	Agapanthus	Lily of the Nile	M		2′-3′	1′-2′

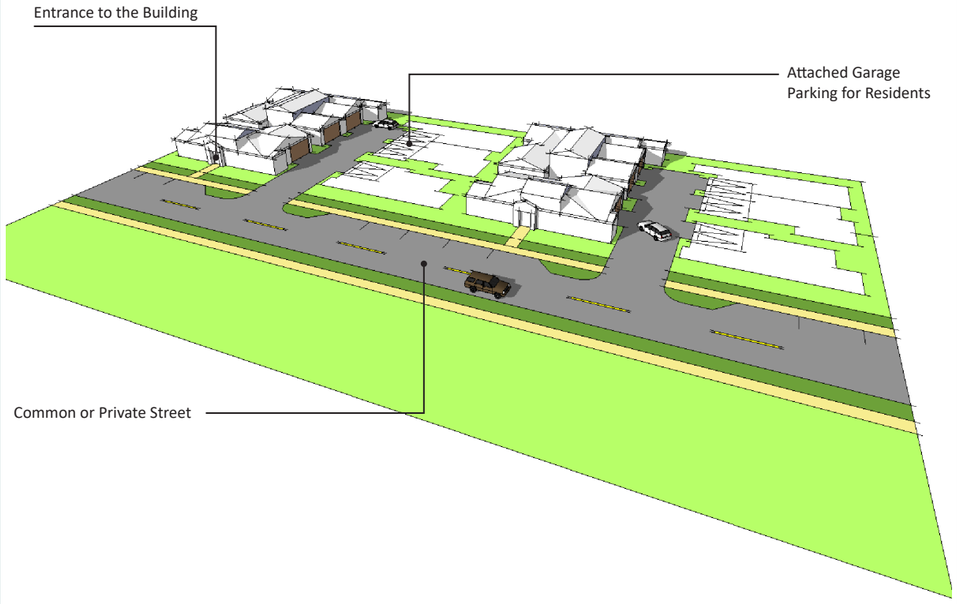
Note: Refer to Section IV-10 of the Specific Plan for related landscape plan guidelines.

FIGURE 18D. PRODUCT PROTOTYPES: ACTIVE ADULT SINGLE FAMILY DETACHED

◊ ACTIVE ADULT - SINGLE FAMILY DETACHED / PAIRED

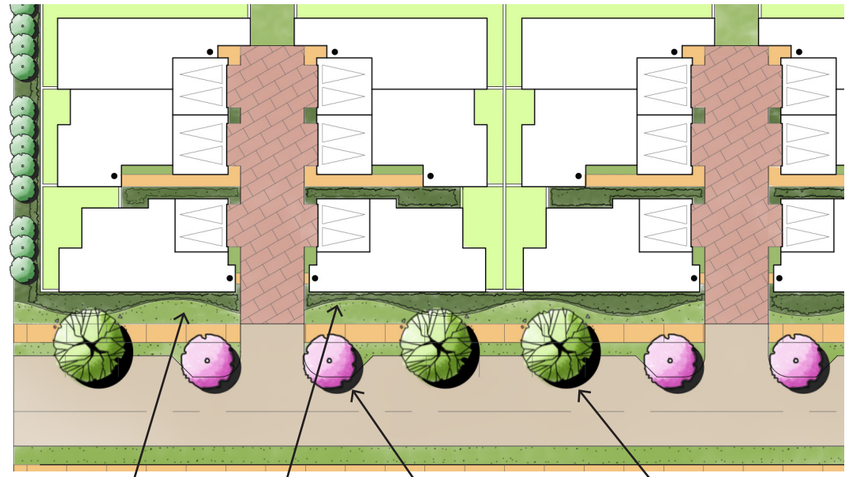
Bungalows

6 Motor Court, 9 DU/AC







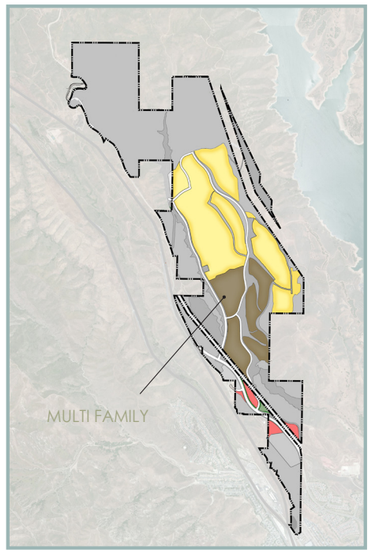


PLANT PALETTE

	Scientific Name	Common Name	Water Use	Type	height	width
	Medium Tree/Street Tree					
	Gleditsia triacanthos	Honey Locust	L	D	30’-70’	30’-70’
	Chionanthus retusus	Chinese Fringe Tree	M	D	15'-20'	20'-25'
	Hymenosporum flavum	Sweet Shade	M	E	25'-35'	15'
	Shrub/ Groundcover					
	Trachelospermum jasminoides	Star Jasmine	M	SE	6’	4’
	Euonymus japonica	Boxwood	M	E	6’-8’	4’-6’
	Accent Shrub					
	Nandina domestica ‘Compacta’	Dwarf Heavenly Bamboo	M	E	4’-5’	3’
	Phlomis fruticosa	Jerusalem Sage	L	E	2'-4'	3'-5'
	Callistemon citrinus ‘Little John’	Dwarf Bottlebrush	L	E	10’-15’	10’-15’
	Agapanthus	Lily Of The Nile	M	E	2’-3’	1’-2’

Note: Refer to Section IV-10 of the Specific Plan for related landscape plan guidelines.

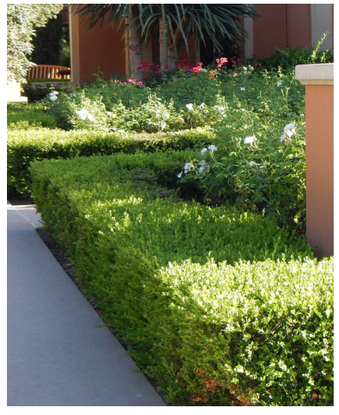
FIGURE 18E. PRODUCT PROTOTYPES: ACTIVE ADULT SINGLE FAMILY DETACHED (PAIRED HOME OVERLAY)



KEY MAP

3.4 MULTI-FAMILY

The second housing designation within NorthLake is Multi-family which accommodates a range of densities, affordability levels, and living styles. This designation was also included in the approved Specific Plan and typical unit types will be townhomes, flats, and carriage units as shown in Figures 19A-E. Each neighborhood will include a pocket park and enjoy direct access to the community trail system.









◊ MULTI-FAMILY TOWNHOMES / CARRIAGE

Caserta

4-plex Townhomes, 15 DU/AC

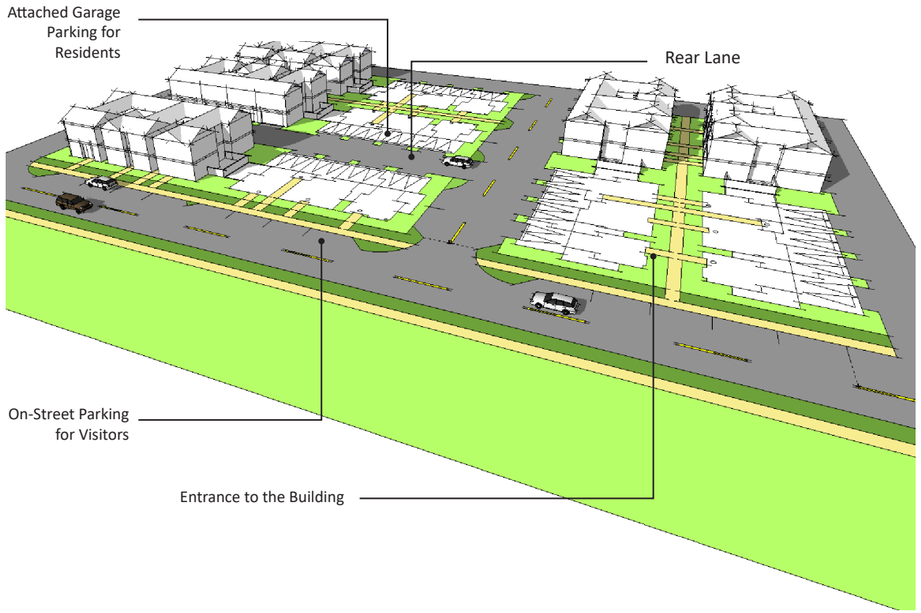








FIGURE 19A. PRODUCT PROTOTYPES: MULTI-FAMILY

◊ MULTI FAMILY TRIPLEX

Meriwether

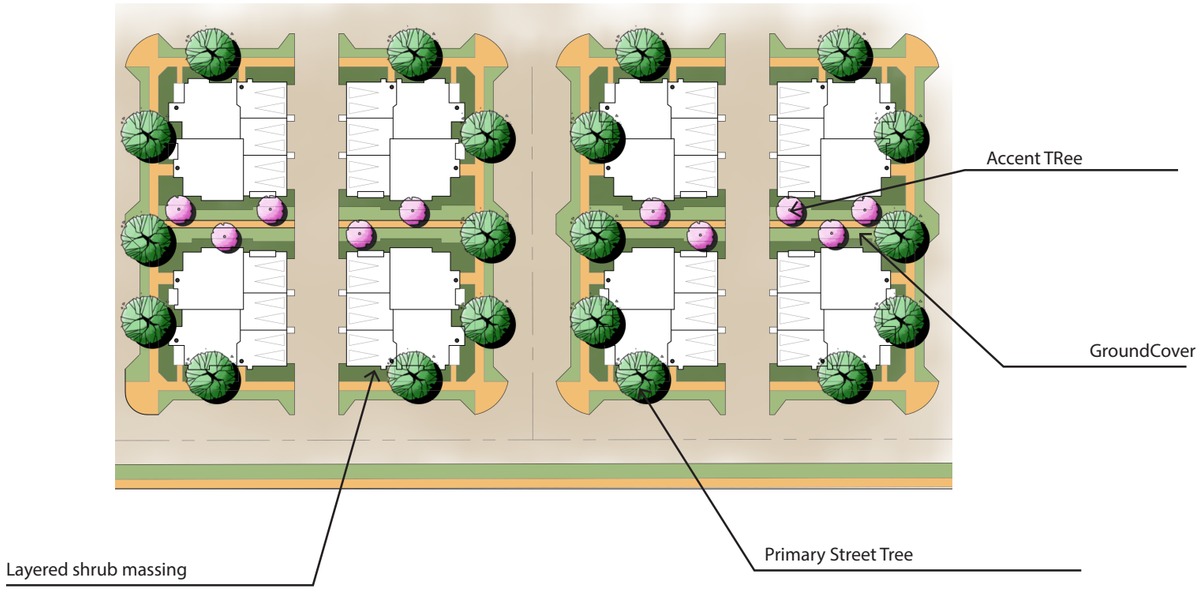
Triplex, 13 DU/AC







FIGURE 19B. PRODUCT PROTOTYPES: MULTI-FAMILY



PLANT PALETTE

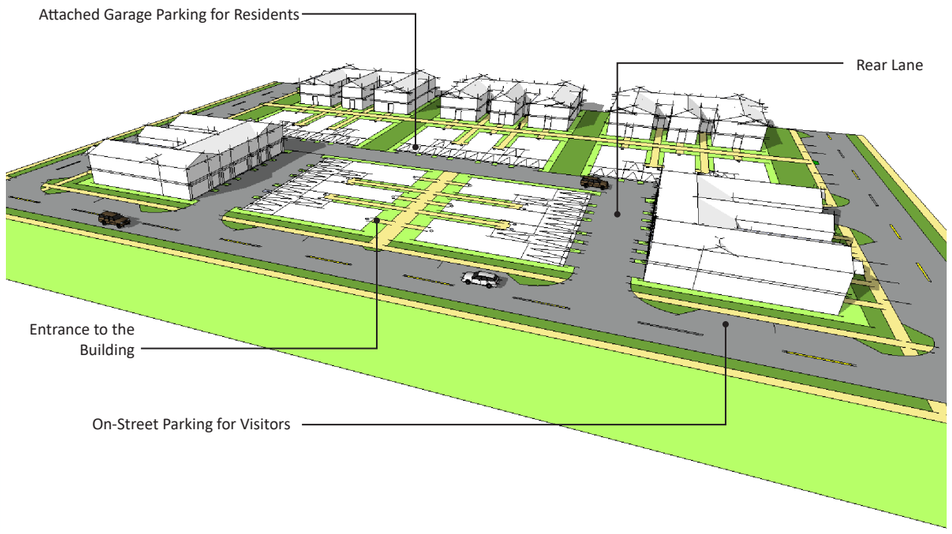
Scientific Name	Common Name	Water Use	Type	Height	Width
Medium Tree/Street Tree					
Gleditsia triacanthos	Honey Locust	L	D	30'-70'	30'-70'
Chionanthus retusus	Chinese Fringe Tree	M	D	15'-20'	20'-25'
Hymenosporum flavum	Sweet Shade	M	E	25'-35'	15'
Accent Tree					
Koelreuteria bipinnata	Chinese Flame Tree	M	D	20'-35'	25'-35'
Pistacia chinensis	Chinese Pistache	M	D	30'	25'
Cercis occidentalis	Western Redbud	L	D	12'-20'	12'-20'
Shrub/ Groundcover					
Trachelospermum jasminoides	Star Jasmine	M	SE	6'	4'
Trachelospermum jasminoides	Star Jasmine	M	E	1'-2'	18'-20'
Euonymus japonica	Boxwood	M	E	6'-8'	4'-6'

Note: Refer to Section IV-10 of the Specific Plan for related landscape plan guidelines.

◊ MULTI FAMILY FLATS

Santa Rosa

7-plex Flats, 18 DU/AC







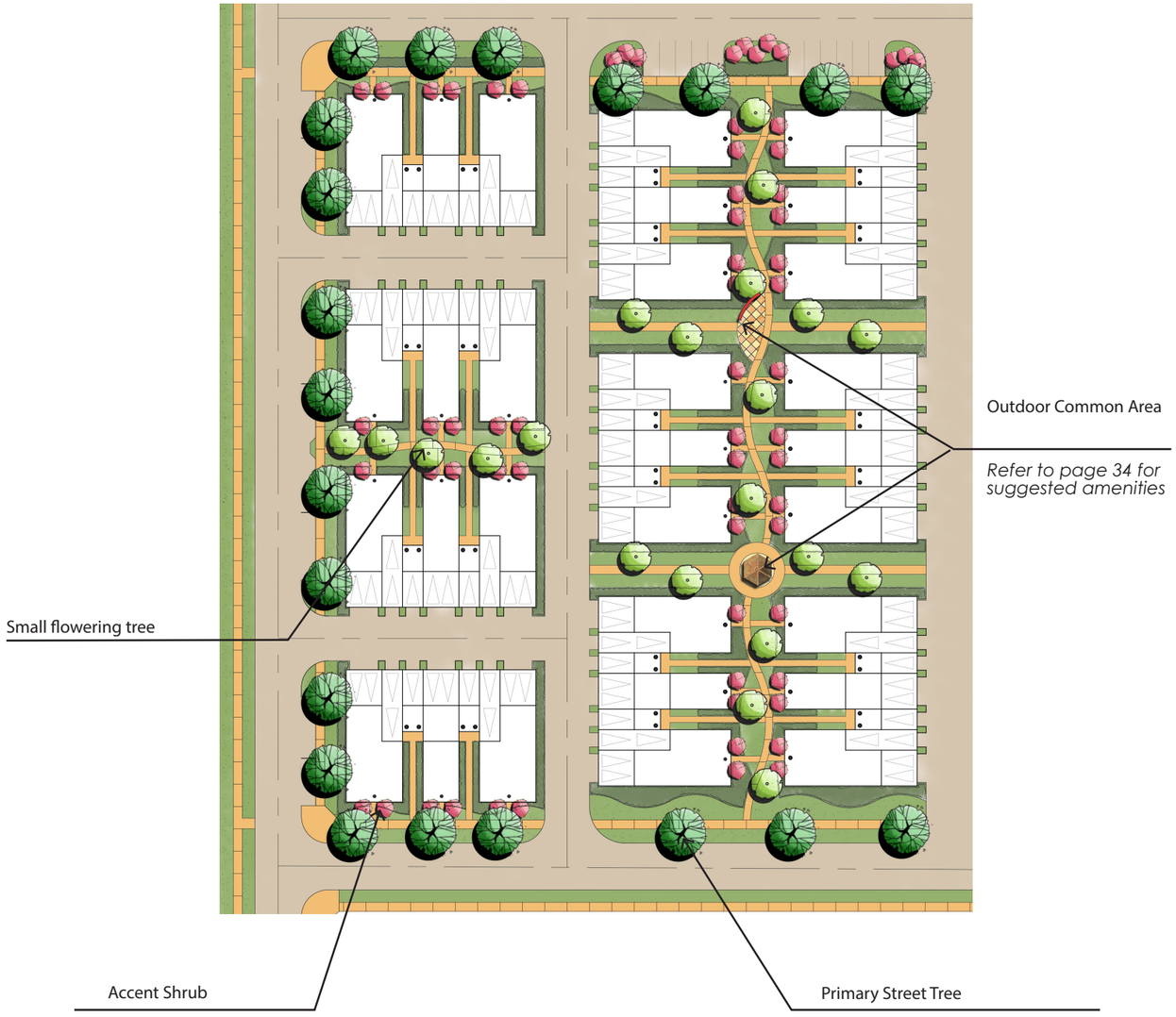
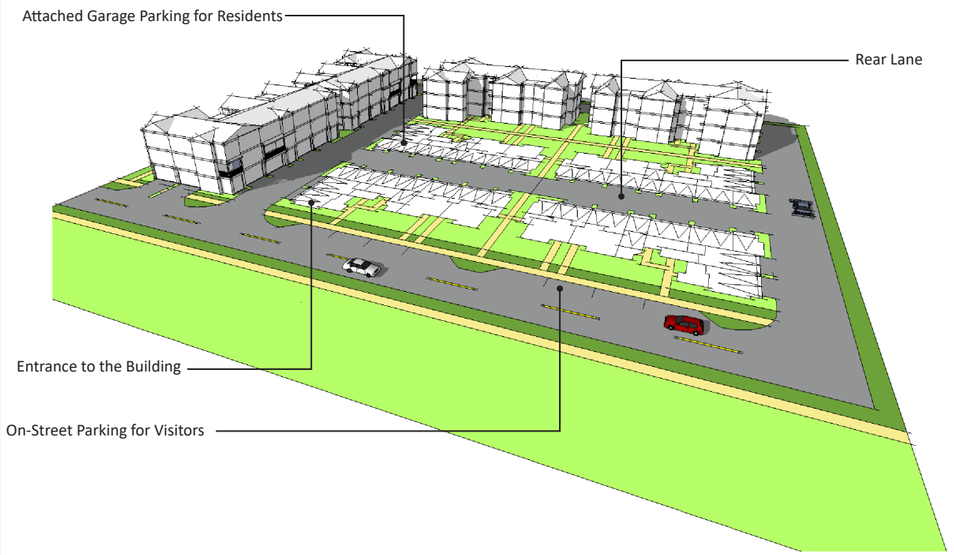


FIGURE 19C. PRODUCT PROTOTYPES: MULTI-FAMILY

◊ MULTI FAMILY TRIPLEX

Valmont

9-plex, 22 DU/AC





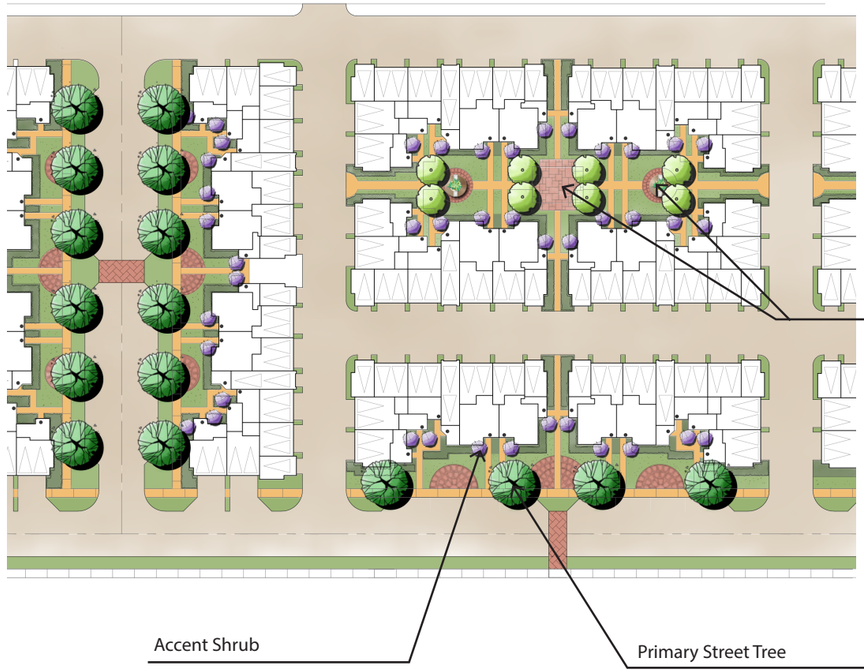
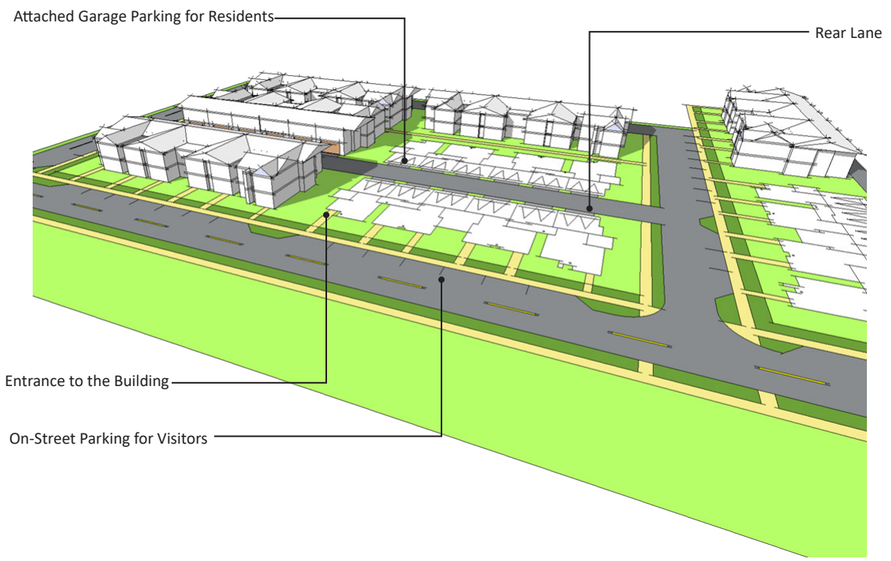


FIGURE 19D. PRODUCT PROTOTYPES: MULTI-FAMILY

◊ MULTI FAMILY FLATS

Brookland

6-plex Flats, 17 DU/AC





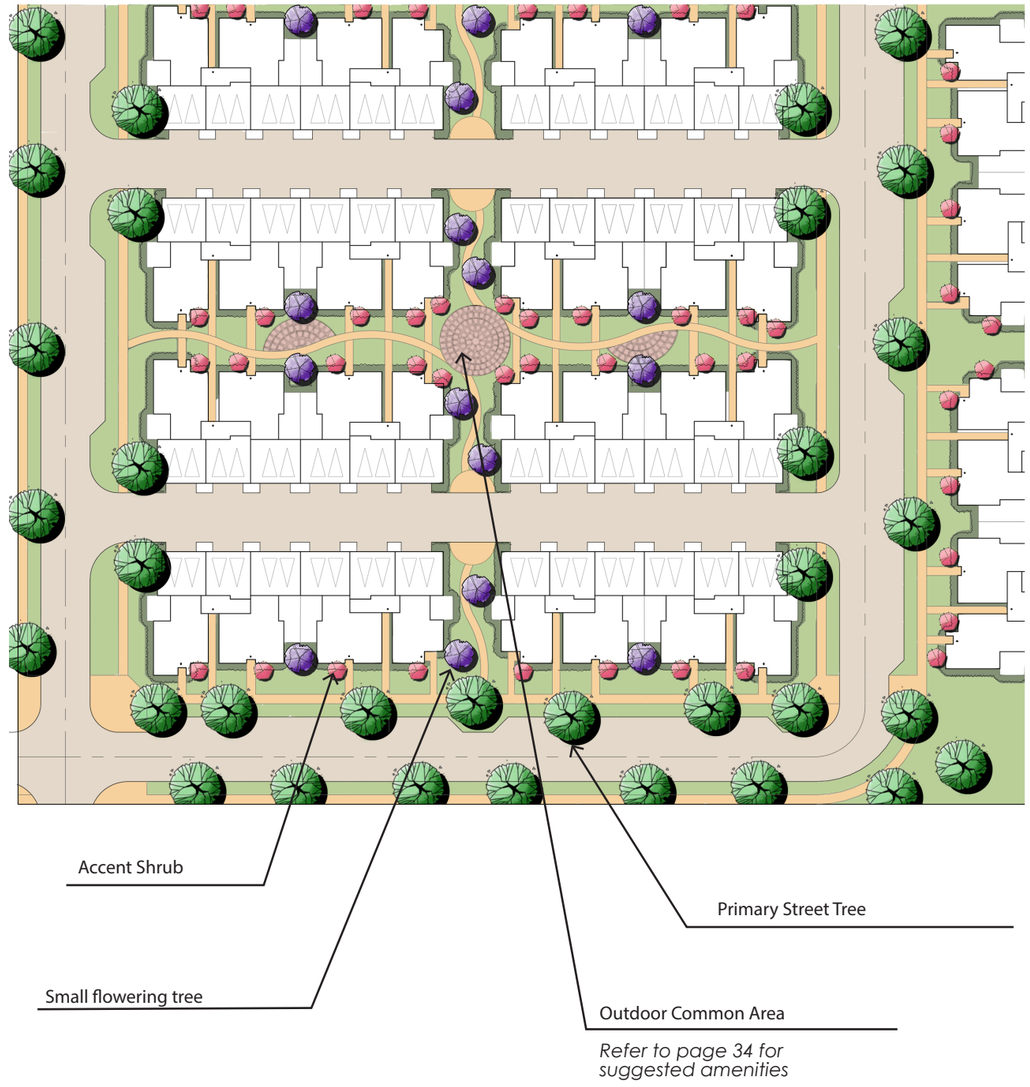


FIGURE 19E. PRODUCT PROTOTYPES: MULTI-FAMILY

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286A

4

COMMERCIAL DESIGN GUIDELINES

4.1 OVERVIEW

In accordance with the approved Specific Plan, several sites within NorthLake have been set aside for general commercial uses. In addition to providing services to the local community, these areas of job creation will sustain a portion of the projected labor force. Residential development is also permitted in these areas, allowing for senior housing, multi-family homes, live/work units, as well as mixed-use development. The proposed general commercial sites are shown in Figure 4A, *Land Use Plan,* as well as Figures 20 and 21, *Commercial Conceptual Plans*.

The general commercial sites have been situated to minimize disturbance to natural landforms, similarly to the previously described portions of the community. These sites are readily accessible to residents without contributing intrusive noise, shadowing, or traffic. Segments of the extensive trail system connect the northern portions of the community to these areas, facilitating pedestrian or bicycle connections. Attractive streetscapes are to be prioritized during the site design process, and parking is to be predominantly located to the side or rear of buildings. Aesthetically pleasing landscape treatments are to be used to screen parking lots, loading docks, and manufacturing processes from the street view.

The commercial component of the NorthLake Specific Plan incorporates residential and employment clusters that are thoughtfully designed and integrated with the overall community. These designated areas are instrumental to the achievement of the goals of the development regulations and design guidelines of the NorthLake Specific Plan.

















4.2 COMMERCIAL CHARACTER

Refer to *Specific Plan* Chapter IV and *Santa Clarita Valley Area Plan OVOV* (2012) Chapter 2

- Recognizing the need for flexibility, the General Commercial Zone allows Multiple family dwellings with a density of 6-18 units per acre (including senior housing).
- Mixed use developments incorporating multiple family dwellings (including live-work units) and commercial uses are also permitted in this designation.
- Buildings will be of a contemporary style and materials, employing appropriate massing, scale, and proportion for design implementation. Designs for individual projects will be submitted as part of the site plan review procedures as set forth in Sections III and IV herein.
- Avoid long, unarticulated building facades. Buildings with varietal front setbacks are strongly encouraged. Additionally, the spaces created between the various buildings provide opportunities for pedestrian plazas, courtyards and other outdoor gathering areas.
- Outdoor pedestrian spaces shall be landscaped and include appropriate street furniture and other elements to facilitate pedestrian activity.
- Plazas, landscaped areas, fountains, public art, textured pavement, and vertical building features should be combined to create focal points and identity.



FIGURE 20: GENERAL COMMERCIAL CONCEPTUAL PLAN

4.3 GENERAL COMMERCIAL

- Total Acreage: 20 acres
- Housing Units: 220 market rate housing units, 95 senior affordable age-restricted housing units, and 6 market rate live/work units, for a total of 321 housing units
- Office / Retail: 38,700 square feet
- Allowed Density: 6-18 units/ac
- Maximum Building Height: 4 stories, 3 stories along the street

Acres, Dwelling Units, and Building Areas in the table below are conceptual, based on Tentative Tract No. 073336.

AREA BREAKDOWN

LOT NUMBER	ACRE	DU	SQ. FT.
LOT 312	5.1	72	--
LOT 313	1.6	6 [1]	7,500
LOT 315	1.2	--	--
LOT 316	4.3	46	31,200
LOT 317	5.3	102	--
LOT 318	2.9	95 [2]	--
SUBTOTAL:	***20.4***	***321***	***38,700***

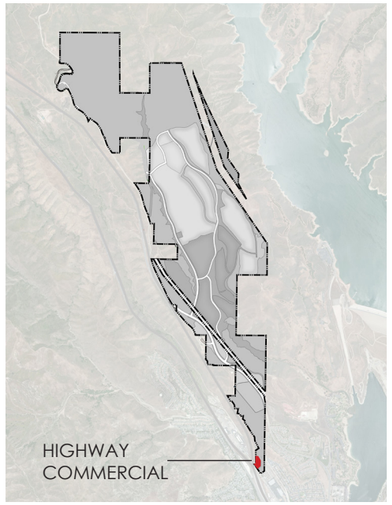
[1] The 6 units on Lot 313 will be market rate live/work units.

[2] The 95 senior-living affordable units on Lot 318 would be available for occupants aged 55 and over and who meet the minimum criteria to qualify for affordable housing.









KEY MAP

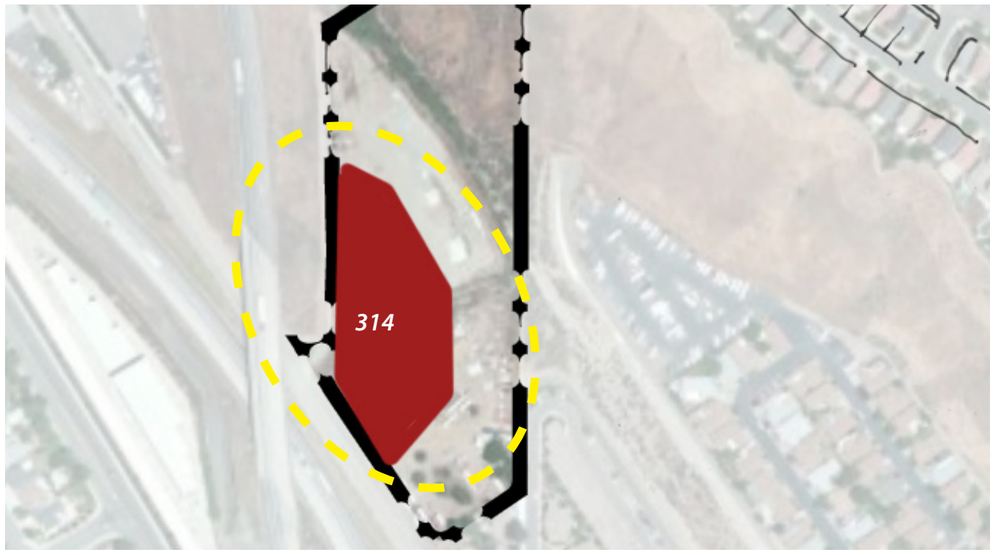


FIGURE 21: HIGHWAY COMMERCIAL CONCEPTUAL PLAN

4.4 HIGHWAY COMMERCIAL

- Total Acreage: 2 acres
- Allowed FAR: 0.50
- Maximum Building Height: 4 stories
- Acres, FAR, and Building Areas in the table below are conceptual, based on Tentative Tract No. 073336.

HIGHWAY COMMERCIAL BREAKDOWN

LOT NUMBER	ACRE	SQUARE FEET
LOT 314	2	32,175

4.5 NORTHLAKE SIGNAGE

Appropriate signage is important in maintaining a cohesive theme for a community, as well as providing a system for wayfinding and offering directional information to residents, shoppers, guests, and visitors. It is important that signs enhance the image of NorthLake and serve to properly identify and market the major destinations and amenities within the community.

General Signage Guidelines

- In order to maintain a higher quality of community character, the following sign types/features are prohibited within the NorthLake development: moving/rotating parts; LED or similar digital lighting/messaging; "lightbox" designs; "pole" signs; flashing/blinking lights or messages. This prohibition extends to hanging window signs located in commercial shop-fronts.

- For permanent signs—sign faces, bases/foundations and structural supports shall be made from a sturdy material, such as wood, metal, resin/plastic, glass, brick, or stone. No fabric, paper, cardboard, or other similar less sturdy materials shall be allowed for permanent sign use.

- For temporary events within the community, temporary signs and banners shall be taken down and removed within 48 hours after the event has fully concluded.

- For newly-built residential, commercial and mixed-use buildings, all signs, flags and banners associated with marketing or advertising a "grand opening" or similar theme shall be removed from the property and public view no later than one year after the initial opening of the building for occupancy.

- Ongoing leasing/sales signs for residential, commercial and mixed-use properties shall be compatible with the overall character of the community.

- All temporary signs and leasing/sales and any advertising signs shall be assiduously monitored by the NorthLake homeowner's and/or building owner's associations so that they do not become eyesores, nuisances or generate enforcement complaints.

- Signs should be compatible with the architectural character of the overall community in terms of color, material, lettering, symbol, and placement. Color schemes should be related to other signs and graphics to achieve a coordinated sense of place.







Community Directional Signage

- Free-standing multi-purpose signage is encouraged to minimize visual clutter. However, designs should generally be compact in size and clear in language and symbolization to remain legible.

- No more than four (4) total directional signs shall be allowed throughout the NorthLake development area to properly identify the location and general direction of major destinations or resources, such as individual neighborhoods, parks, schools, fire station and shopping.

- Each directional sign shall be of a free-standing and/or monument type only.

- The design and location of each directional sign shall be approved by LA County Regional Planning in conjunction with a site plan/revised Exhibit "A" review.

- Freestanding and monument directional signs may be located on public or private property. Depending on the design and location, they may be allowed within the road right-of-way (i.e., next to the street curb) if an encroachment permit is first obtained from LA County Public Works. Directional signs located close to the roadway shall be placed outside of line-of-sight easements unless otherwise deemed acceptable by Public Works.

- The maximum dimension of each directional sign shall be no greater than 12 feet in height by 8 feet in length, but in any case no larger than 48 square feet in total sign surface area, not including the sign base and structural supports.

- Directional signs shall be single-sided only, unless designed for walk-up pedestrian use.





Business Signage

Each business tenant within NorthLake is responsible for keeping their individual signage in good working order, and making sure it complies with the criteria contained within this section. All business signs must be compatible with the overall character of the community and the architectural style of the building. Other criteria include the following:

- Finished signs shall be of high quality and constructed to eliminate dents, cutting edges, and sharp corners.
- Manufacturer's recommended fabrication procedures shall be carefully adhered to regarding expansion / contraction, fastening, and restraining of acrylic plastic.
- Surfaces intended to be flat must be without dents, bulges, gaps, or physical deformities. Painted, polished, and plated surfaces shall be unblemished in the finished work.
- One hanging or blade sign per business is permitted, or two if the building has frontages on two pedestrian-oriented streets. The maximum area of a blade sign shall be 3 square feet. Each blade sign shall maintain a minimum 8-foot clearance from the grade of the sidewalk to the bottom of the sign.
- Painted window signs in character with the community's style and architecture are allowed. Commercial spaces (to include live-work) may include a painted window sign in combination with a façade or blade sign. Painted window signs shall not obstruct more than 10% of the total shopfront window surface area.
- Outdoor Sidewalk signs in character with the community's style and architecture are allowed in combination with other business signs, so long as they are sized and placed so as not to obstruct sidewalk or walkway access for pedestrians. Sidewalk signs shall be no greater than 36 inches in height by 24 inches in width and may contain double-sided advertising. Each business may have up to one single sidewalk sign deployed at any given time.

Business Sign Illumination

- All sign elements must be internally and / or externally illuminated. Hot spots and light leaks are not permitted and must be repaired.
- All signs shall conceal all identification labels and UL labels. All conductors, transformers, cabinets, housings, and other equipment shall be concealed and / or incorporated into storefront and / or sign components.
- Signs should be backlit or downlit to prevent glare and spillover onto adjacent properties.
- Canned signs are prohibited. Interior illuminations channels shall be used.
- Any lighting device shall emit a constant intensity of light, and no sign shall be illuminated by or contain flashing, intermittent, rotating, or moving lighting.
- Lighting is required to be circuited and switched separately from other building fixtures on the leaseholder's panel and controlled by a time clock.
- Leaseholders shall provide a disconnect switch at sign transformer or near the electrical junction box.








NORTH LAKE

5

SPECIFIC PLAN CONSISTENCY

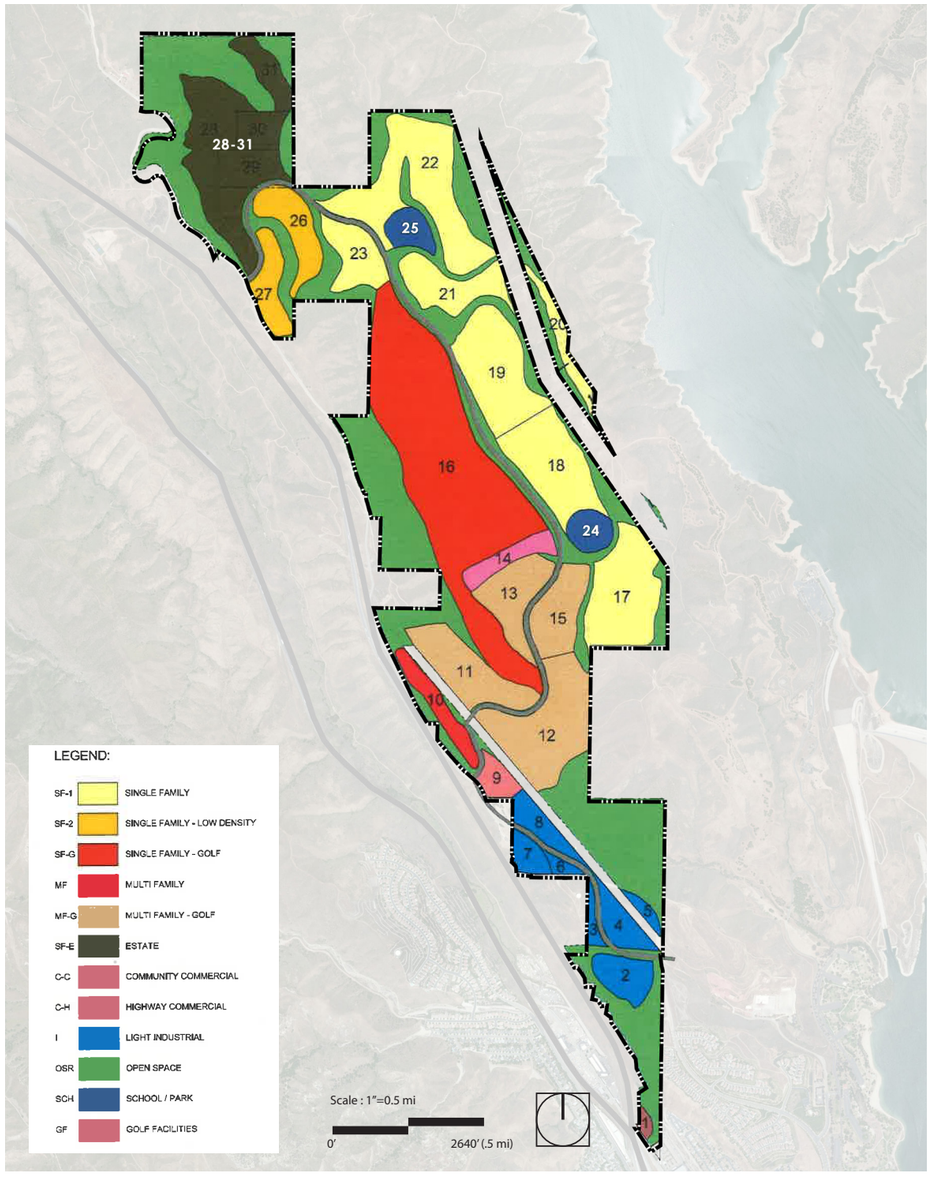
5.1 SPECIFIC PLAN CONSISTENCY

Designed to solve several challenges of the approved Specific Plan, the fresh approach to NorthLake outlined in this document will greatly benefit existing residents in the region and the environment. As shown in Figure 22, *Land Use Comparison*, the adjustments in land areas have resulted in an increase of natural open space and a decrease in residential, commercial, and industrial development.

A comparison of the park and open space areas for the approved and updated plans is shown in Figure 23, *Park and Open Space Comparison*, recreational open space has been converted from a golf course to a regional sports park and a variety of other neighborhood and community parks. An extensive trail system encourages alternative transportation and connects residents and the public to all plan features and the recreational opportunities just beyond. Figure 24, *Residential Comparison* includes a listing of residential zone categories in the approved Specific Plan compared to the updated Land Use Plan. Industrial and Community Commercial will be changed to General Commercial which will allow both commercial and mixed use development in the area. The industrial component of the Specific Plan has been removed entirely. The total amount of commercial space has also been reduced. The comparison plan is shown in Figure 25, *Industrial and Commercial Comparison*.

While meeting the goals and objectives of the approved Specific Plan, the NorthLake site plan outlined in this document represents a thoughtful and ecological approach to the site that will result in a diverse, well-designed, highly livable community that excels in promoting a healthy lifestyle for all residents.

APPROVED LAND USE PLAN



UPDATED LAND USE PLAN

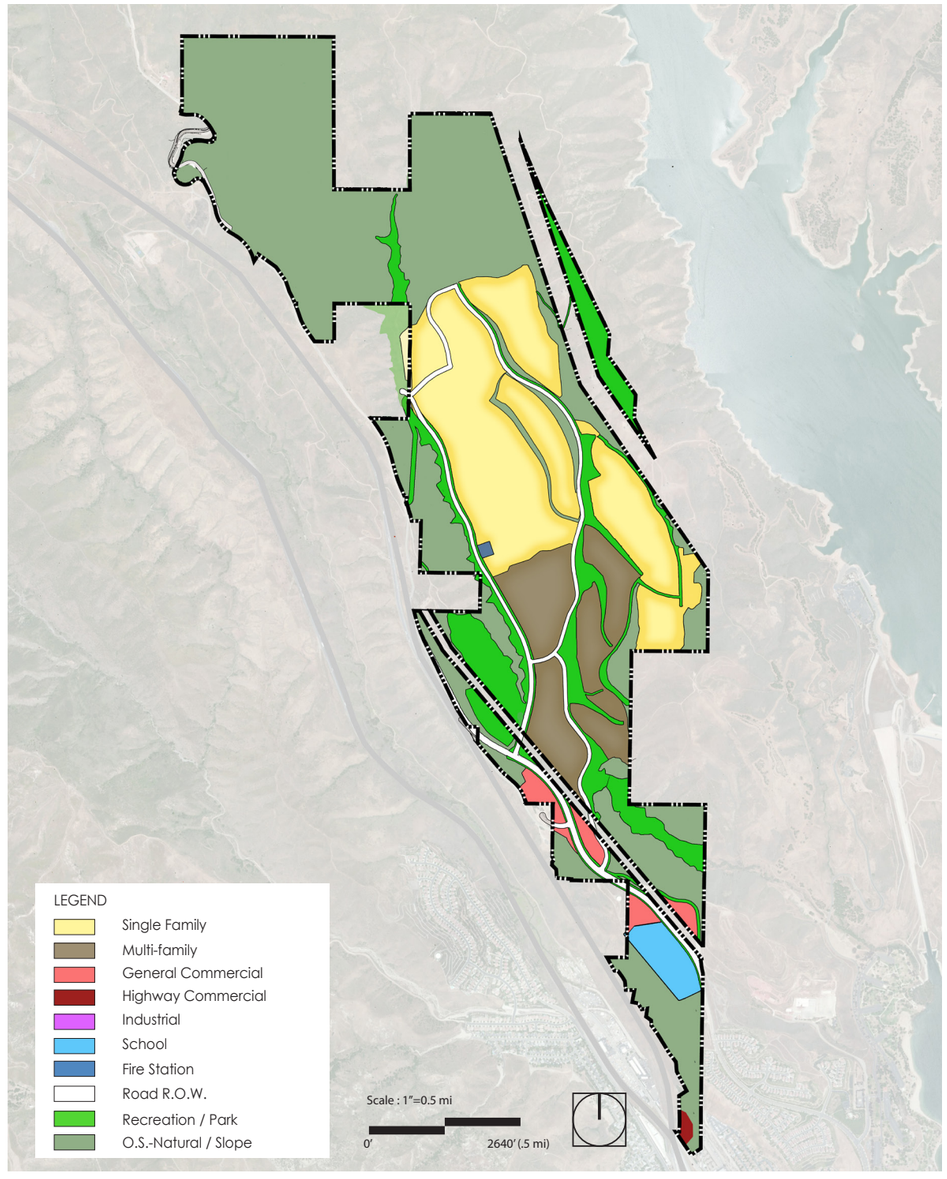


FIGURE 22. LAND USE PLAN COMPARISON

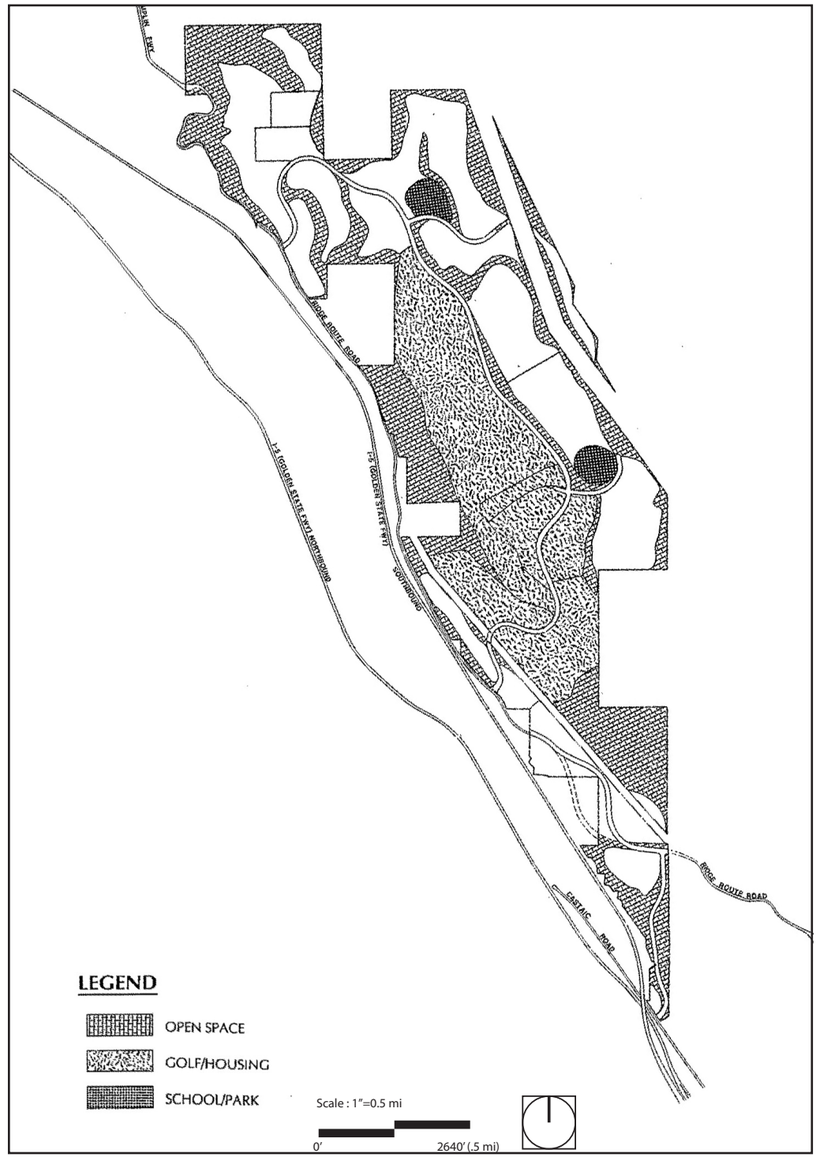
LAND USE SUMMARY	1992 APPROVED SP			UPDATED PLAN			DIFFERENCE		
	(AC)	(DU)	(SQ.FT.)	(AC)	(DU)	(SQ.FT.)	(AC)	(DU)	(SQ.FT.)
RESIDENTIAL	600.3	3,623		250	2,829		-350.3	-794	
SINGLE FAMILY	504.8	2,337		94	1,143		-410.8	-1,194	
MULTI-FAMILY	95.5	1,286		156	1,686		60.5	400	
GENERAL COMMERCIAL	9.2		100,188	20	220 95 [1] 6 [2]	38,700	10.8	321	-61,488
HIGHWAY COMMERCIAL	4.0		69,696	2		32,175	-2		-37,521
INDUSTRIAL	50.1		545,589	0		0	-50.1		-545,589
SCHOOL	23.1			43			19.9		
FIRE STATION	0 [3]			1			1		
R.O.W.	0 [3]			100			100		
RECREATION/PARK	166.9			130			-36.9		
OPEN SPACE/SLOPE	476.4			783			306.6		
TOTAL	**1330.0**	**3,623**	**715,473**	**1329**	**3,150**	**70,875**	**-1**	**-473**	**-644,598**

[1] 95 housing units in the General Commercial Land Use are designated as age-restricted senior affordable housing.

[2] 6 units in the General Commercial Land Use are designated as market rate live/work units.

[3] The acreage of this category is not listed in the approved Specific Plan.

APPROVED PARK AND OPEN SPACE PLAN



UPDATED PARK AND OPEN SPACE PLAN

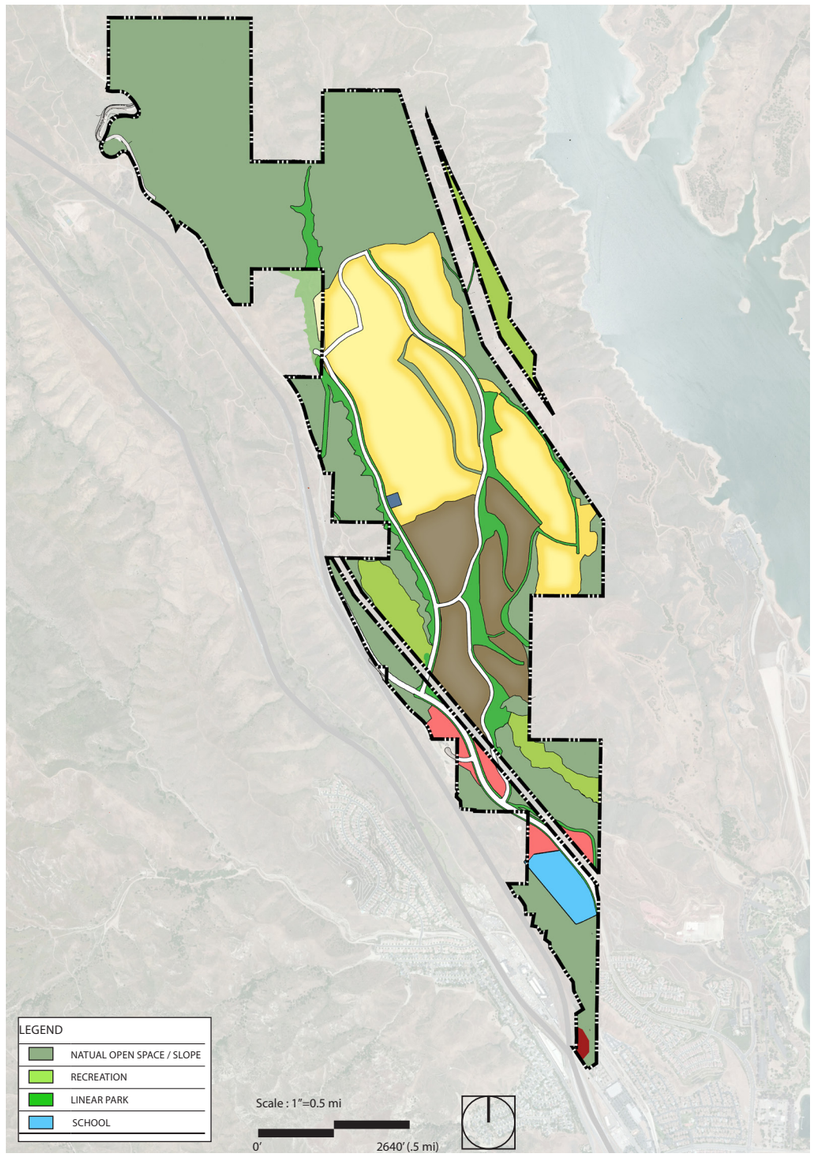


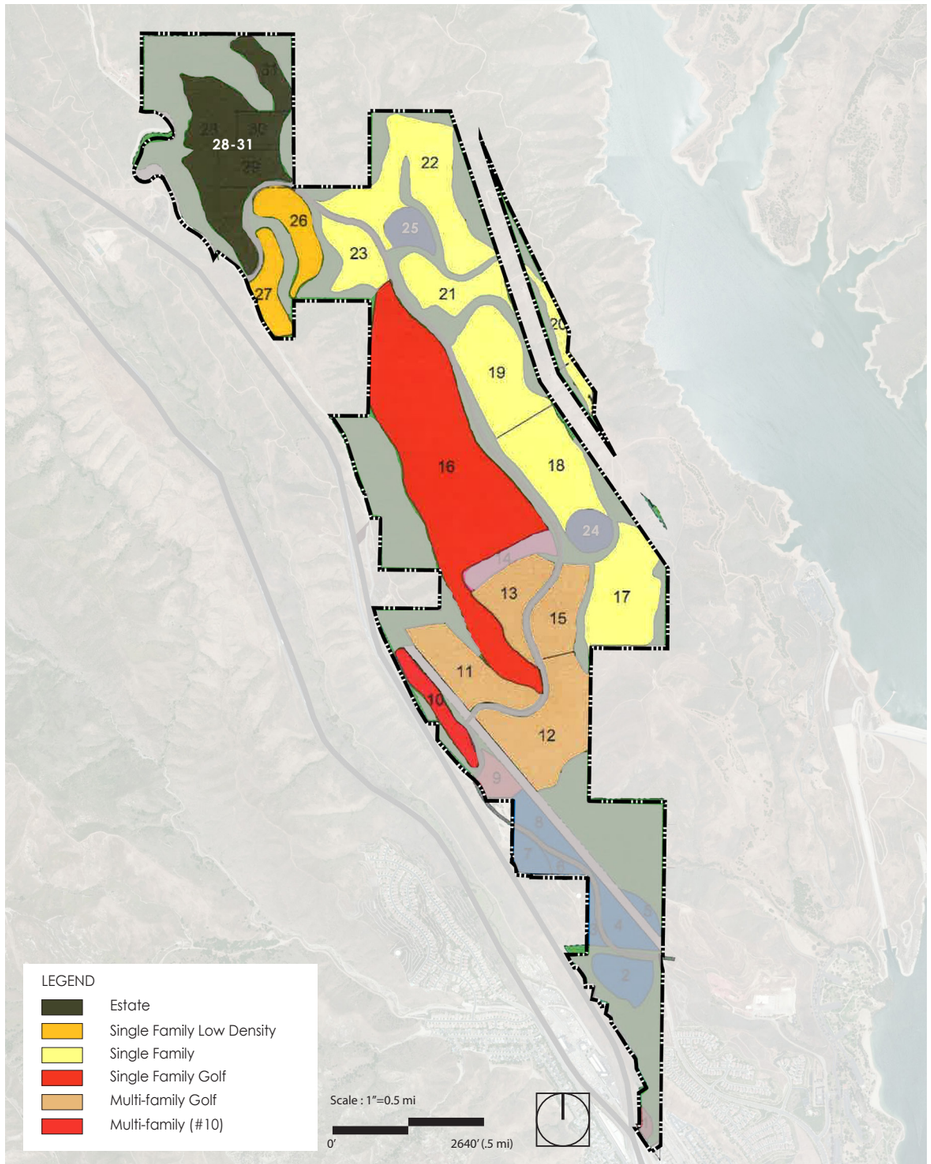
FIGURE 23. PARK AND OPEN SPACE COMPARISON

OPEN SPACE AND RECREATION AREA COMPARISON

	APPROVED SP (AC)	UPDATED PLAN (AC)	DIFFERENCE (AC)
NATURAL OPEN SPACE / SLOPE	**476.4**	**783.0**	**306.6**
RECREATION / PARK	**166.9**	**130.0**	**-36.9**
GOLF	166.9	0	-166.9
COMMUNITY SPORTS PARK	0	26	26
GRASSHOPPER CREEK PARK	0	11	11
VISTA PARK	0	27	27
ENHANCED PARKWAY INCLUDING PARKS ADJACENT TO THE PARKWAY	0	38	38
CASTAIC LAGOON PARK	0	17	17
LOWER RIDGE ROUTE / CLASS I BIKE TRAIL	0	2.2	2.2
CODY DOG PARK	0	1	1
COMMUNITY TRAILS	0	7.8	7.8
SUBTOTAL	***643.3***	***913***	***269.7***
SCHOOL	**23.1**	**43**	**19.9**
TOTAL	***666.4***	***956***	***289.6***

In total, the amount of open space and recreation areas has increased by 269.7 acres compared to the 1992 Specific Plan. The amount of natural open space has increased by 306.6 acres. While the amount of recreational space has been reduced by 36.9 acres, it has been reprogrammed from a golf course to a variety of parks, sports facilities, and trails that serve multiple demographics. In addition, the amount of space reserved for schools has increased by 19.9 acres.

APPROVED RESIDENTIAL PLAN



UPDATED RESIDENTIAL PLAN

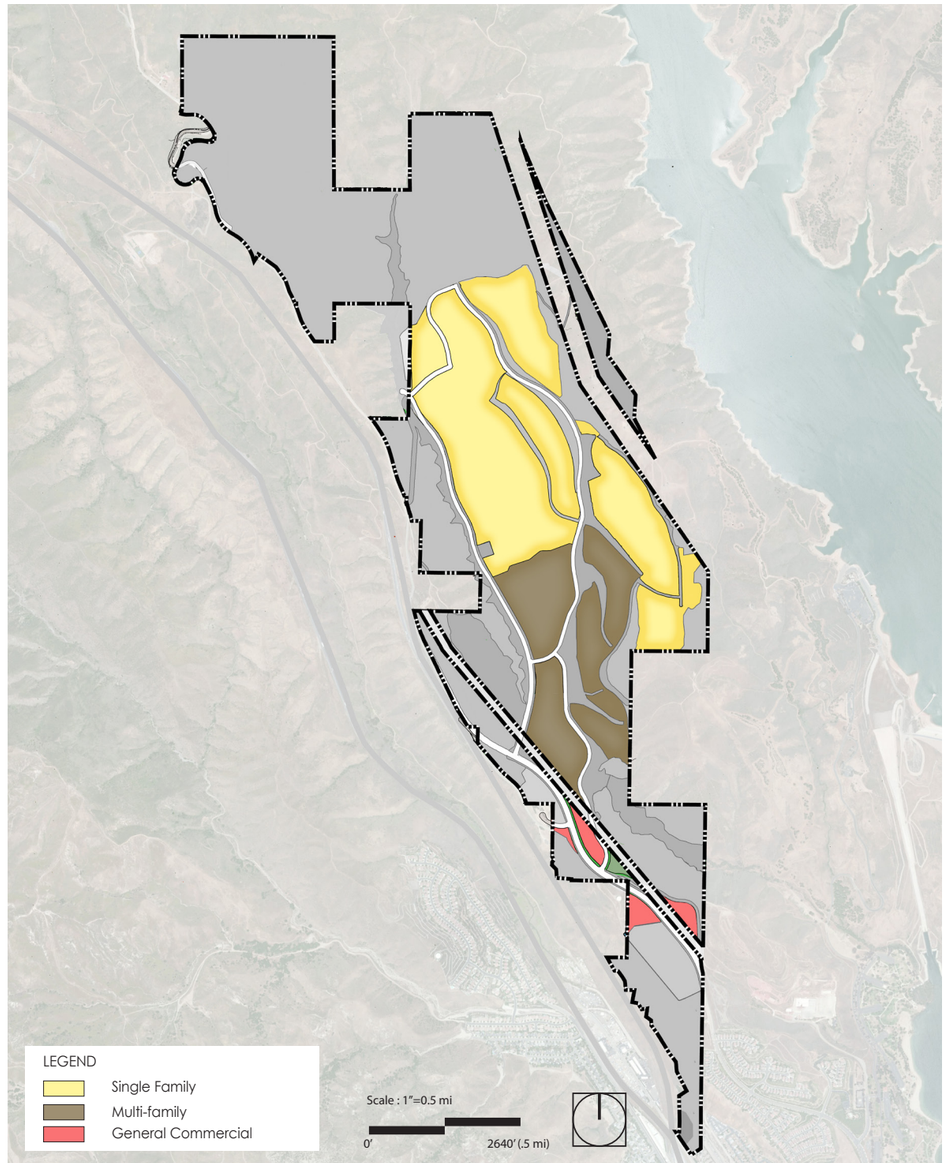
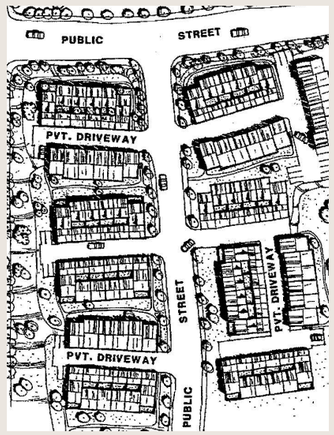
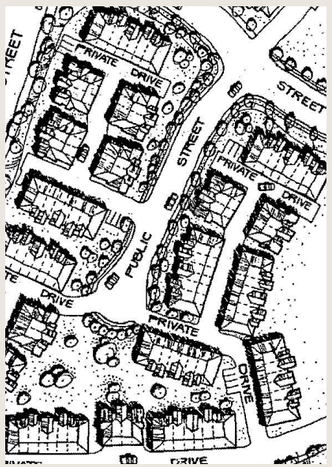


FIGURE 24. RESIDENTIAL COMPARISON

MULTI-FAMILY ZONE EXAMPLES WITHIN EXISTING MF-1 ZONE



TOWNHOME EXAMPLE



APARTMENT EXAMPLE

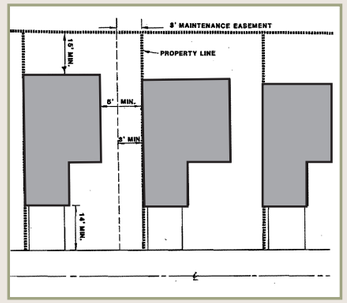
1992 APPROVED SPECIFIC PLAN

Single Family Zone (SF-1)
• Min lot area = 3,500 SF
• Min lot width = 30’
• Setbacks: front 14’, side 5’, rear 15’
• Maximum height: 35’
• Three overlay designations allow alternative standards (60% maximum of the development)
Single Family Low Density Zone (SF-2)
• Min lot area = 8,000 SF
• Min 3 car garage
• Min frontage = 25’
Single Family Estate Zone
• Min lot area = 20,000 SF
• Min frontage = 100’ (along street)
Single Family / Golf
• Min lot area = 4,000 SF
• Expanded SF-1 zone / recreational min Lot Area = 4,000 SF
Multi-family
• 4 stories permitted except along streets
• Convalescent care allowed
Multi-family Golf
• MF-1 zone uses + recreation

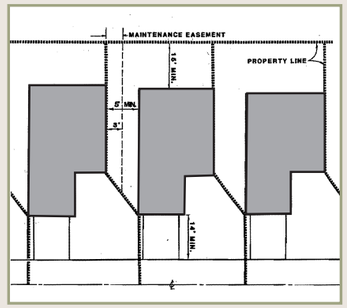
2025 UPDATED LAND USE PLAN

Single Family Zone
• Min lot area = 3,500 SF
• Min lot width = 30’
• Setbacks: front 14’, side 5’, rear 15’
• Maximum height: 35’
• Three overlay designations allow alternative standards (60% maximum of the development)
• Fee simple or condominium lots
Multi-family Zone
• Carriage units, townhomes, flats
• 4 stories permitted except along streets
• Convalescent care allowed
• Rental and for-sale permitted

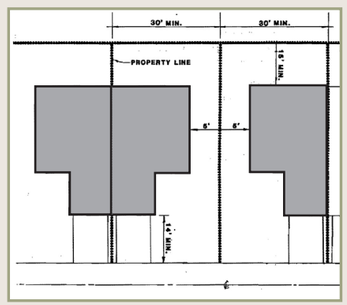
THREE OVERLAY DESIGNATIONS WITHIN EXISTING SF-1 ZONE



ZERO SIDE YARD OVERLAY

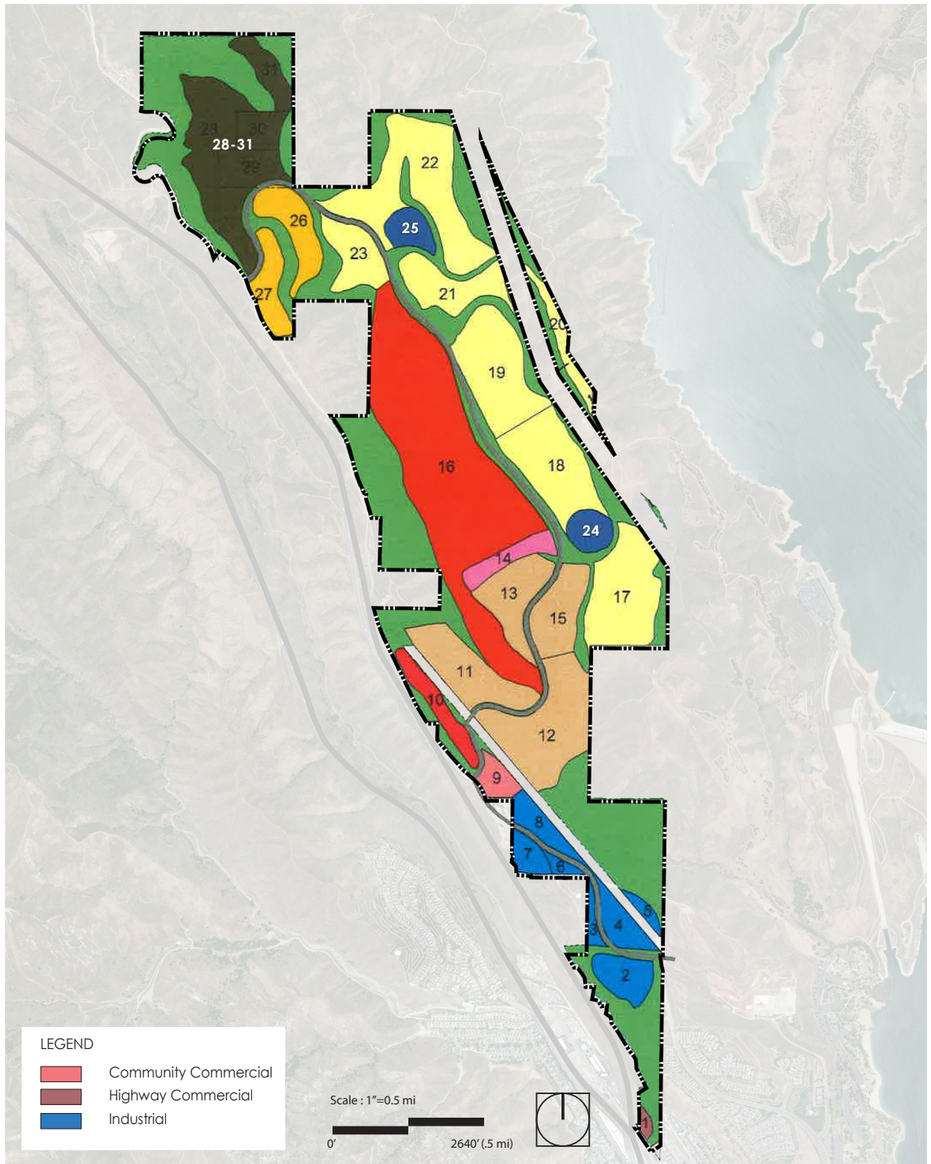


Z-LOT OVERLAY



PAIRED SINGLE FAMILY OVERLAY

APPROVED COMMERCIAL AND INDUSTRIAL PLAN



UPDATED COMMERCIAL PLAN

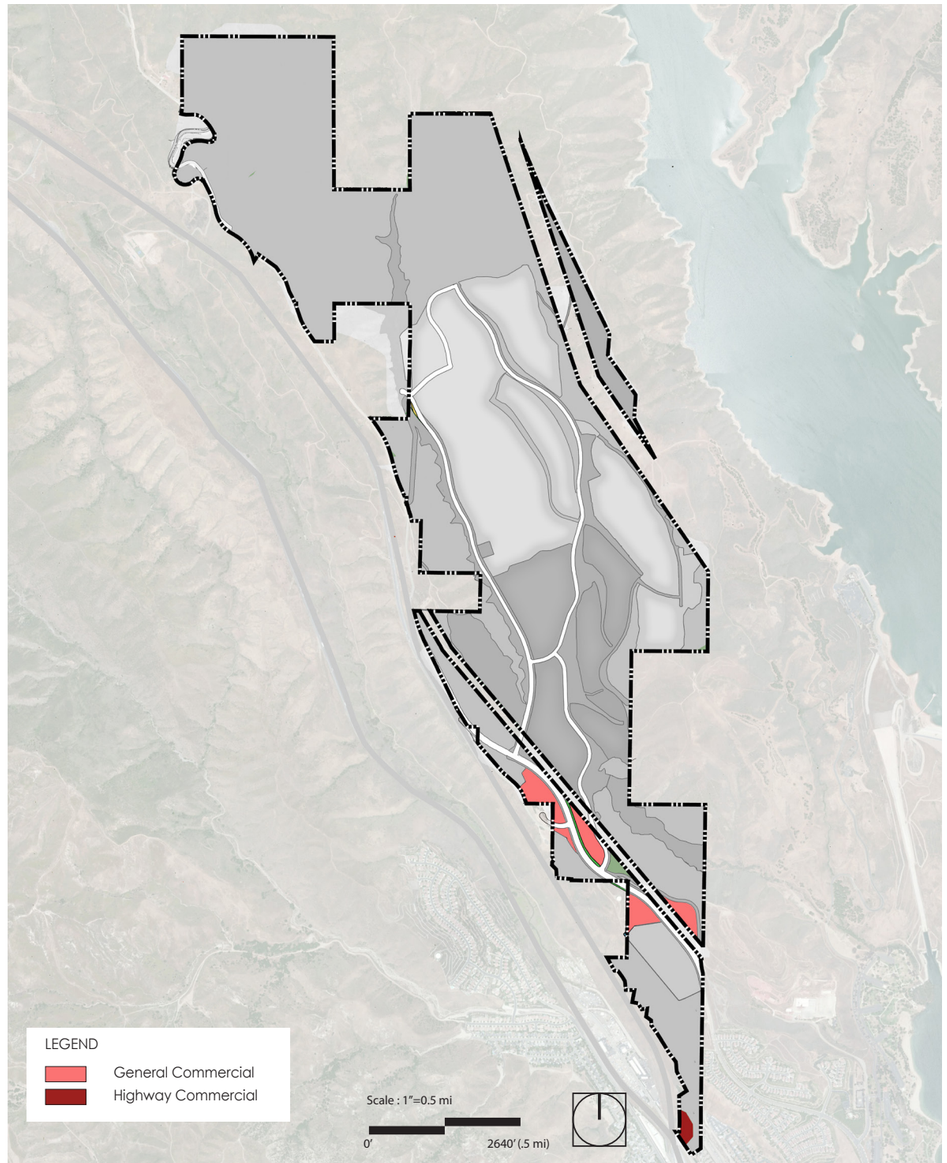


FIGURE 25. INDUSTRIAL /COMMERCIAL COMPARISON

INDUSTRIAL/COMMERCIAL COMPARISON

	APPROVED SPECIFIC PLAN				UPDATED PLAN				DIFFERENCE		
COMMUNITY COMMERCIAL	PLANNING AREA	ACRES	BUILT SQ. FT.	GENERAL COMMERCIAL	PLANNING AREA	ACRES	DU	BUILT SQ. FT.	ACRES	DU	BUILT SQ. FT.
	PLANNING AREA 9	9.2	100,188		LOT 312	5.1	72				
					LOT 313	1.6	6 [1]	7,500			
					LOT 315	1.2					
					LOT 316	4.3	46	31,200			
					LOT 317	5.3	102				
					LOT 318	2.9	95 [2]				
	APPROVED SP TOTAL	***9.2***	***100,188***		***UPDATED PLAN TOTAL***	***20.0***	***321***	***38,700***	***10.8***	***321***	***-61,488***

[1] The 6 units on Lot 313 will be market rate live/work units.

[2] The 95 senior-living affordable units on Lot 318 would be available for occupants aged 55 and over and who meet the minimum criteria to qualify for affordable housing.

	APPROVED SPECIFIC PLAN			UPDATED PLAN			DIFFERENCE	
HIGHWAY COMMERCIAL	PLANNING AREA	ACRES	BUILT SQ. FT.	PLANNING AREA	ACRES	BUILT SQ. FT.	ACRES	BUILT SQ. FT.
	PLANNING AREA 1	4.0	69,696	LOT 314	2.0	32,175		
	APPROVED SP TOTAL	***4.0***	***69,696***	***UPDATED PLAN TOTAL***	***2.0***	***32,175***	***-2.0***	***-37,521***

	APPROVED SPECIFIC PLAN			UPDATED PLAN			DIFFERENCE	
INDUSTRIAL	PLANNING AREA	ACRES	BUILT SQ. FT	PLANNING AREA	ACRES	BUILT SQ. FT.	ACRES	BUILT SQ. FT.
	PLANNING AREA 2-8	50.1	545,589					
	APPROVED SP TOTAL	***50.1***	***545,589***	***UPDATED PLAN TOTAL***	***0***	***0***	***-50.1***	***-545,589***

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LIFESTYLE









COMMUNITY









ENVIRONMENT











NorthLake puts people first by making healthy living a priority.

Jodie Sackett

From: Barger, Kathryn
Sent: Tuesday, December 30, 2025 5:58 PM
To: English, Stephanie; Torres-Socarras, Ariel
Cc: Garcia, Alicia
Subject: Fw: Regarding Castaic development

The following email is being forwarded to you from the 5th District office email inbox for your review and or handling.

Thanks,
Susie Osuna

From: Ashley <ashleyaneese@yahoo.com>
Sent: Tuesday, December 30, 2025 1:40 PM
To: Barger, Kathryn <Kathryn@bos.lacounty.gov>
Subject: Regarding Castaic development



Good afternoon. I am writing in regards to the proposed building of 3,150 homes in the northern Castaic area. As a long time Castaic resident, I am deeply concerned about the danger to public safety this addition will cause in an emergency.

I have been a resident in Castaic long enough to have been involved in many fires, some with mandatory evacuations, as well as countless closures of the 5 freeway due to traffic incidents or weather. With each of these incidents, our very limited access to exit routes has created a significant threat to residents. We are a small town and have already outgrown our roads. In the event of an evacuation or simply freeway closures, emergency services have no way of reaching us due to unbelievable traffic and no shoulders available for them to drive on in most areas. The addition of 3,150 homes will add at least that many more cars, more than likely double as most homes have at least two vehicles.

The fire we had early in 2025 made it very clear we are in a position to easily become the next Paradise in terms of catastrophic outcomes when a fire or other emergency happens. I beg you to reconsider this project. It would be incredibly irresponsible and cause massive anxiety for current residents. Please instead consider making our escape roads wider or carve out alternative routes for us. This has to be priority before any more homes can be added.

Sincerely,

Ashley Funicello

--
Sent from Canary

Jodie Sackett

From: Barger, Kathryn
Sent: Tuesday, December 30, 2025 5:51 PM
To: English, Stephanie; Torres-Socarras, Ariel; Tran, Tiffany
Cc: Garcia, Alicia
Subject: Fw: Housing Project #R2015-00408 (Northlake) Castaic

The following email is being forwarded to you from the 5th District Office inbox. Please confirm who will be handling and responding to this inquiry.

If I've inadvertently missed anyone who should be included on this email, please feel free to loop them in.

Thanks,
Susie Osuna

From: William Kennedy <billybob06@sbcglobal.net>
Sent: Tuesday, December 30, 2025 3:19 PM
To: Barger, Kathryn <Kathryn@bos.lacounty.gov>
Subject: Housing Project #R2015-00408 (Northlake) Castaic

Dear Supervisor Barger,

My wife Virginia and I are retired from L.A. County Sheriff's Department and have been residents of Castaic since 2004. We currently live north of Lake Hughes Road in the CC Ranch community. In the 21 years we have lived here, we have personally experienced unique area challenges including wildfires, road closures, traffic jams, and most recently a ruptured natural gas transmission line that was directly behind our home. The reality of where we live is there is only one way in and one way out of our community which makes emergencies particularly dangerous. As long-time residents, we have learned the area and know of vital shortcuts and alternate routes that help us when these problems arise. However, these alternate routes are not always available, and some are on private property.

This area is not like the San Fernando Valley or the Antelope Valley where there are multiple options for evacuation routes. The newly proposed housing development will be in an area that suffered two major wildfires last year. Our home nearly caught fire in 2019. At least four homes in this community suffered fire damage. Being close to the Castaic Lake helps but it didn't prevent those homes from burning. The new developments' close proximity to the lake will not guarantee a fire will be put out immediately. Also, the last big wildfire in 2024 burned in such a way that prevented aircraft from using most of the lake due to smoke. No Super Scoopers could refill on the lake.

The new development will be further away from the alternate routes and shortcuts that are closer to town. It will also be built on top of the same natural gas transmission line that recently ruptured and could result in a major disaster for that community. In addition to the dangers of fires and gas lines, traffic is already challenging in the area. In the winter, it is common for the Grapevine section of Interstate 5 to be closed down completely for days at times. This will take away the alternate route of Templin Hwy for the new community and create quite a backup in town for those residents and others. Interstate 5 has been under construction since we moved into the community, and this frequently causes delays. Adding 3,000 more vehicles will create even more congestion for daily commutes and emergencies.

Finally, almost everyone in our neighborhood has to use the California Fair Plan for fire insurance. How are the residents in the new development going to afford fire insurance?

In conclusion, this new development will place extreme strains on the existing community and will be a recipe for disaster in the future. Please do not allow this development to be built.

Sincerely,

William C. M. Kennedy
32602 The Old Rd
Castaic, CA. 91384
661-904-4953

LA COUNTY PLANNING

AMY J. BODEK, AICP
Director,
Regional Planning

DENNIS SLAVIN
Chief Deputy Director,
Regional Planning

SUPPLEMENTAL REPORT TO THE REGIONAL PLANNING COMMISSION

DATE ISSUED:	January 22, 2026
HEARING DATE:	January 28, 2026 AGENDA ITEM: 7
PROJECT NUMBER:	R2015-00408
PERMIT NUMBERS:	Vesting Tentative Tract Map ("VTTM") No. 073336 (RPPL2023004336) Vesting Tentative Parcel Map ("VTPM") No. 073335 (RPPL2023004448) Conditional Use Permit ("CUP") No. RPPL2023004316 Environmental Assessment No. RPPL2023004887
SUPERVISORIAL DISTRICT:	5
PROJECT LOCATION:	"Northlake Phase 1 Project", located North of Lake Hughes Road, East of Ridge Route Road and I-5, and West of Castaic Lake and Lagoon
OWNER:	Northlake Associates LLC
APPLICANT:	Northlake Associates LLC
CASE PLANNER:	Jodie Sackett, Senior Planner jsackett@planning.lacounty.gov

The purpose of this supplemental report is to provide the Regional Planning Commission ("Commission") with minor revisions to the hearing materials as well as additional correspondence received after January 15, 2026. The revisions include two minor corrections to the staff report and draft conditions of approval, and one additional condition of approval.

PROJECT DESCRIPTION

Northlake Phase 1: Phase 1 of the adopted Northlake Specific Plan ("Northlake Phase 1") comprises a total of 386 lots and 2,295 dwelling units on 720 gross acres; including 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached affordable dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 owner-

ship, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); one highway commercial lot (2.5 acres), 39 open space lots, 11 park lots, 13 debris basin lots, two water tank lots, one water quality basin lot, one pump station lot, and one fire station lot (1.4 acre building pad). Of the total 2,295 dwelling units in Northlake Phase 1, 1,777 units are proposed to be for-sale and 518 units anticipated for rental.

REVISED HEARING DOCUMENTS

There is a typographical error on page four of the staff report - the last sentence of the first paragraph has two references to "Phase 1." This is incorrect. These references should both be to "Phase 2." The staff report paragraph in question is below with the tracked changes (bold added for emphasis):

> *In 1998, the Applicant filed for additional entitlements (SP Amendment, CUP, DA, VTTM) but all were withdrawn in 2007. In 2015, new tentative maps and a CUP were processed with a Supplemental EIR ("SEIR") for Northlake Phase 1, originally approved by the Commission in 2018 along with a Final Supplemental Environmental Impact Report ("FSEIR") but was then appealed to the County Board of Supervisors ("Board"). After the Board denied the appeal and approved Northlake Phase 1 in 2019, litigation occurred and was ultimately resolved in 2023. As a result of the court decision, the entitlements were set aside, and certain elements of the FSEIR required further clarification, requiring a Recirculated Partial Final SEIR ("RPFSEIR") as detailed below (see "Environmental Analysis"). In 2023, a Partial Creek Avoidance Alternative ("PCAA") was developed to implement the changes to Northlake Phase* ***~~1~~2****, which primarily encompassed a reduction of the Northlake Phase* ***~~1~~2*** *project footprint in the northerly portion of the site.*

Draft VTTM No. 07336 Condition No. 27 also contains a typographical error. This condition should require 50 feet (not 60 feet) of street frontage (bold added for emphasis):

> 27. ***Street Frontage****. The Subdivider shall provide at least* ***~~60~~50*** *feet of street frontage for each lot, except for those lots granted a street frontage waiver; and at least 40 feet of street frontage at the property line and approximately radial lot lines for each lot fronting on cul-de-sacs and knuckles, except for flag lots.*

Staff also has one additional condition of approval for CUP No. RPPL2023004316 in support of LA County's commitment to minimize light pollution and help ensure compliance dark skies. This new condition is added as draft CUP Condition No. 49:

> 49. ***Dark Skies****. All exterior lighting shall be equipped with down-shields and connected to timers with automatic "on/off" lighting systems.*

ADDITIONAL CORRESPONDENCE RECEIVED

Additional correspondence has been received since January 15, 2026, and is attached.

Report Reviewed By: _____

Joshua Huntington, AICP, Supervising Regional Planner

Report Approved By: David J. DeGrazia

David DeGrazia, Deputy Director

Supplemental Attachment A: Seven e-mails of support, one e-mail of opposition, and one support letter from the SCV Chamber of Commerce.

January 22, 2026

Los Angeles County Regional Planning Commission
Hall of Records
320 West Temple Street, Room 150
Los Angeles, CA 90012

RE: Support for the Northlake Project – Project No. R2015-00408 January 28, 2026 Regional Planning Commission Hearing

Honorable Chair and Members of the Commission:

On behalf of the Santa Clarita Valley Chamber of Commerce, I am pleased to submit this letter in strong support of the Northlake Project, scheduled for public hearing before the Los Angeles County Regional Planning Commission on Wednesday, January 28, 2026.

As the region's largest business advocacy organization, the Chamber views housing availability—particularly price-attainable housing for working families—as one of the most pressing economic development issues facing the Santa Clarita Valley and Los Angeles County today. Northlake directly addresses that need in a manner that is policy-consistent, environmentally responsible, and economically essential.

Housing as Economic Infrastructure
Employers throughout the Santa Clarita Valley consistently identify housing costs as a primary barrier to workforce recruitment and retention. Teachers, healthcare workers, first responders, skilled tradespeople, and service-sector employees are increasingly priced out of the communities they serve. Northlake's diversified housing program—including 315 affordable units representing approximately 10 percent of the total project—provides critically needed options for working families and seniors while supporting long-term regional economic stability.
Housing is economic infrastructure. Projects such as Northlake ensure that businesses can grow, expand, and retain talent locally rather than losing workers to longer commutes or other regions entirely.

A Proven, Longstanding Planning Framework
The Northlake Specific Plan was unanimously approved by the Los Angeles County Board of Supervisors in 1992, and the current proposal remains fully within the envelope of that approved plan, while updating the community to reflect modern standards for sustainability, walkability, and environmental performance.

The project is consistent with the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, "One Valley, One Vision" (OVOV), which explicitly identifies this area for future growth and housing opportunity.

Economic and Fiscal Benefits
In addition to meeting housing needs, Northlake will:

- Support local businesses through population growth and consumer demand
- Generate construction and permanent employment opportunities
- Strengthen local school enrollment and funding stability

- Deliver commercial and mixed-use development that supports services closer to where people live and work

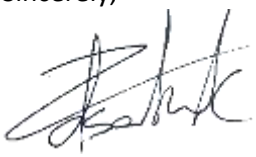
These benefits contribute to a more resilient and balanced regional economy.

Responsible Growth and Environmental Stewardship
The Chamber also recognizes the project's significant environmental and recreational commitments, including expanded open space, enhanced parks, wildlife connectivity, and an integrated trail and active transportation network. This approach demonstrates that economic growth and environmental stewardship are not mutually exclusive, but rather complementary when guided by sound planning.

Northlake represents the type of thoughtful, long-term investment needed to support a healthy regional economy—one that balances housing affordability, job creation, environmental protection, and quality of life.

For these reasons, the Santa Clarita Valley Chamber of Commerce respectfully urges the Regional Planning Commission to support approval of the Northlake Project.
Thank you for your consideration.

Sincerely,



Ivan Volschenk
President & CEO, Santa Clarita Valley Chamber of Commerce

Jodie Sackett

From: Karina Winkler <gm.hixva@excelhotelgroup.com>
Sent: Thursday, January 22, 2026 10:36 AM
To: Jodie Sackett
Subject: Support Northlake – Project No. R2015-00408

CAUTION: External Email. Proceed Responsibly.

Dear Mr. Sackett,

As a local resident, I am writing to express my support for the Northlake project.

Our region is facing a serious shortage of affordable and price-attainable housing, and Northlake helps address that need while also delivering significant parks, open space, trails and recreational amenities that will benefit the entire community.

In addition to housing, the project will provide meaningful economic benefits, including support for local businesses, job creation, and long-term investment in transportation and community infrastructure. New homes mean a stronger local economy and a more complete, sustainable community.

Northlake represents thoughtful planning that balances housing, environmental stewardship, and economic opportunity. I respectfully urge the Commission to support this project.

Thank you for your time and consideration.

Sincerely,

Karina Winkler | General Manager
Holiday Inn Express & Suites Valencia - Santa Clarita
27501 Wayne Mills Pl.Valencia,Ca 91355
Hotel: 661-284-2101 Fax: 661-284-3550

Jodie Sackett

From: Jordin Hopkins <jordin.hopkinss@gmail.com>
Sent: Thursday, January 22, 2026 9:13 AM
To: Jodie Sackett
Subject: Support Northlake – Project No. R2015-00408

CAUTION: External Email. Proceed Responsibly.

Dear Mr. Sackett,

As a local resident, I am writing to express my support for the Northlake project.

Our region is facing a serious shortage of affordable and price-attainable housing, and Northlake helps address that need while also delivering significant parks, open space, trails and recreational amenities that will benefit the entire community.

In addition to housing, the project will provide meaningful economic benefits, including support for local businesses, job creation, and long-term investment in transportation and community infrastructure. New homes mean a stronger local economy and a more complete, sustainable community.

Northlake represents thoughtful planning that balances housing, environmental stewardship, and economic opportunity. I respectfully urge the Commission to support this project.

Thank you for your time and consideration.

Sincerely,
Jordin Hopkins

Jodie Sackett

From: Eric Angle <eangle@pmpmanage.com>
Sent: Thursday, January 22, 2026 8:58 AM
To: Jodie Sackett
Subject: Support Northlake – Project No. R2015-00408

CAUTION: External Email. Proceed Responsibly.

Dear Mr. Sackett,

As a local resident, I am writing to express my support for the Northlake project.

Our region is facing a serious shortage of affordable and price-attainable housing, and Northlake helps address that need while also delivering significant parks, open space, trails and recreational amenities that will benefit the entire community.

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Northlake represents thoughtful planning that balances housing, environmental stewardship, and economic opportunity. I respectfully urge the Commission to support this project.

Thank you for your time and consideration.

Sincerely,

PMP MANAGEMENT
Eric Angle - CMCA, AMS, PCAM
Division Vice President
eangle@pmpmanage.com
www.PMPmanage.com
661.295.4900

TOP WORK PLACES 2022-2023
AAMC ACCREDITED ASSOCIATION MANAGEMENT COMPANY

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by anyone other than the intended recipient(s) is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system. Thank you.

From: Amanda O"Connor
To: Jodie Sackett
Subject: Support Northlake – Project No. R2015-00408
Date: Thursday, January 22, 2026 10:50:26 AM

CAUTION: External Email. Proceed Responsibly.

Dear Mr. Sackett,

As a local resident, I am writing to express my support for the Northlake project.

Our region is facing a serious shortage of affordable and price-attainable housing, and Northlake helps address that need while also delivering significant parks, open space, trails and recreational amenities that will benefit the entire community.

In addition to housing, the project will provide meaningful economic benefits, including support for local businesses, job creation, and long-term investment in transportation and community infrastructure. New homes mean a stronger local economy and a more complete, sustainable community.

Northlake represents thoughtful planning that balances housing, environmental stewardship, and economic opportunity. I respectfully urge the Commission to support this project.

Thank you for your time and consideration.

With sincere appreciation,
Mandy O'Connor
Santa Clarita Valley Resident

Jodie Sackett

From: Dan Silver <dsilverla@me.com>
Sent: Wednesday, January 21, 2026 4:48 PM
To: Jodie Sackett
Subject: Re: NorthLake Specific Plan

CAUTION: External Email. Proceed Responsibly.

Dear Jodie

Also, the inaccuracy in the responses to comments I mentioned is Response B.2.2.

> Regarding Policy LU 1.10, that policy provides: "Prohibit plan amendments that increase density of residential land uses within mapped fire and flood hazard areas unless generally surrounded by existing built development and the County determines the adjoining major highways and street networks can accommodate evacuation as well as safe access for emergency responders under a range of emergency scenarios, as determined by the County." This policy is not applicable as the NLSP was not rescinded, and the proposed Project is not seeking a plan amendment. Additionally, the proposed Project is consistent with this policy in that the Project Site is generally surrounded by existing built development including the 5-freeway to the west, urban development to the south and State recreational areas to the east,

An aerial view shows that the property is generally surrounded by open space. I would not consider the State rec
superfluous sentence can be deleted in an errata.

Wieth best regards
Dan

NOTE NEW MAILING ADDRESS

Dan Silver, Executive Director
Endangered Habitats League
505 S Flower St #71001
PO Box 71001
Los Angeles CA 90071

213-804-2750
dsilverla@me.com
https://ehleague.org

On Jan 21, 2026, at 2:34 PM, Jodie Sackett <jsackett@planning.lacounty.gov> wrote:

LA COUNTY PLANNING

AMY J. BODEK, AICP
Director,
Regional Planning

DENNIS SLAVIN
Chief Deputy Director,
Regional Planning

SUPPLEMENTAL REPORT TO THE REGIONAL PLANNING COMMISSION

DATE ISSUED:	January 27, 2026
HEARING DATE:	January 28, 2026 AGENDA ITEM: 7
PROJECT NUMBER:	R2015-00408
PERMIT NUMBERS:	Vesting Tentative Tract Map ("VTTM") No. 073336 (RPPL2023004336) Vesting Tentative Parcel Map ("VTPM") No. 073335 (RPPL2023004448) Conditional Use Permit ("CUP") No. RPPL2023004316 Environmental Assessment No. RPPL2023004887
SUPERVISORIAL DISTRICT:	5
PROJECT LOCATION:	"Northlake Phase 1 Project", located North of Lake Hughes Road, East of Ridge Route Road and I-5, and West of Castaic Lake and Lagoon
OWNER:	Northlake Associates LLC
APPLICANT:	Northlake Associates LLC
CASE PLANNER:	Jodie Sackett, Senior Planner jsackett@planning.lacounty.gov

The purpose of this supplemental report is to provide the Regional Planning Commission ("Commission") with minor revisions and additions to the hearing materials sent out on January 15, 2026. These revisions include a minor correction to the senior housing counts, providing the Findings of Fact/Statement of Overriding Considerations (FOF/SOC), recently received letters and comments from the public, and a second response to public comments provided by the applicant.

PROJECT DESCRIPTION

Northlake Phase 1: Phase 1 of the adopted Northlake Specific Plan ("Northlake Phase 1") comprises a total of 386 lots and 2,295 dwelling units on 720 gross acres; including 288 single-family residential lots; 17 multi-family lots with 1,341 attached condominium dwelling units in 268 buildings (900 ownership, 441 rental); six senior multi-family lots comprising 345 attached condominium dwellings in 68 buildings (209 ownership, 136 rental); three multi-family lots with 174 detached dwelling units in 55 buildings (132 ownership, 98 rental); one mixed-use commercial lot with 46 attached afford-

able dwelling units and 31,200 square feet ("sf") of commercial space in 8 buildings (34 ownership, 12 rental); one live-work commercial lot with six live-work units comprising 7,500 sf of commercial space in 6 buildings (6 ownership, 0 rental); one senior affordable multi-family lot with 95 attached affordable dwelling units in 95 buildings (all ownership); one highway commercial lot (2.5 acres), 39 open space lots, 11 park lots, 13 debris basin lots, two water tank lots, one water quality basin lot, one pump station lot, and one fire station lot (1.4 acre building pad). Of the total 2,295 dwelling units in Northlake Phase 1, 1,777 units are proposed to be for-sale and 518 units anticipated for rental.

REVISED HEARING DOCUMENTS

There is a typographical error on pages four and 13 of the CUP Findings – the breakdown of the affordable senior units is incorrect. The correct breakdown is 95 senior affordable units, not 46. The CUP Findings in question are below with the tracked changes (bold added for emphasis):

> *(Page 4) Northlake Phase 1 proposes a total of 315 affordable attached rental units for Very Low, Lower, and Moderate-Income households, of which 269 shall be affordable rental and* ~~***46***~~ ***95*** *shall be senior affordable rental units.*
>
> *(Page 13) The Commission finds that Northlake Phase 1 is not subject to the IHO. The Northlake SP was adopted in 1992, prior to the effective date of the IHO. The related CUP filed provides a total of 315 rental affordable housing units (269 affordable and* ~~***46***~~ ***95*** *senior-affordable) at the Very Low, Lower, and Moderate household income levels and which are required per the original 2019 Board approval.*

ADDITIONAL CORRESPONDENCE RECEIVED

Additional correspondence has been received since January 22, 2026, and is attached.

Report Reviewed By: _____
Joshua Huntington, AICP, Supervising Regional Planner

Report Approved By: _____
Susan Tae, AICP, Assistant Administrator

Supplemental Attachment A: 17 letters (10 letter opposed and seven letters in support)
Supplemental Attachment B: Draft FOF/SOC
Supplemental Attachment C: Second response to comments (applicant)

Outlook

Support Northlake – Project No. R2015-00408

From Jordin Hopkins <jordin.hopkinss@gmail.com>
Date Thu 1/22/2026 9:13 AM
To Jodie Sackett <jsackett@planning.lacounty.gov>

CAUTION: External Email. Proceed Responsibly.

Dear Mr. Sackett,

As a local resident, I am writing to express my support for the Northlake project.

Our region is facing a serious shortage of affordable and price-attainable housing, and Northlake helps address that need while also delivering significant parks, open space, trails and recreational amenities that will benefit the entire community.

In addition to housing, the project will provide meaningful economic benefits, including support for local businesses, job creation, and long-term investment in transportation and community infrastructure. New homes mean a stronger local economy and a more complete, sustainable community.

Northlake represents thoughtful planning that balances housing, environmental stewardship, and economic opportunity. I respectfully urge the Commission to support this project.

Thank you for your time and consideration.

Sincerely,
Jordin Hopkins

Outlook

Support for Northlake – Project No. R2015-00408

From Jeff <jeff@tgmi.onmicrosoft.com>
Date Thu 1/22/2026 10:52 AM
To Jodie Sackett <jsackett@planning.lacounty.gov>
Cc John Musella (TMG) <john@musellagroup.com>; Jeff <jeff@tgmi.onmicrosoft.com>

CAUTION: External Email. Proceed Responsibly.

My name is Jeff Preach, and I am a long-time resident of Castaic. I am writing to express my strong support for the Northlake project and to share a perspective that many people in our community rarely get the chance to put on the record—the impact that decades of delay have had on local businesses.

For years, retail centers were built in Castaic and businesses chose to locate here with the expectation that the Northlake community would be developed as approved by Los Angeles County in the early 1990s. Those businesses made long-term investments based on that promise. Unfortunately, Northlake never moved forward, and many of those businesses have been waiting—literally for decades—for the customer base that was supposed to arrive.

As a result, Castaic's local retail and service businesses have struggled. We do not have the population density needed to support restaurants, neighborhood services, and small retailers. Some businesses have closed, others barely get by, and new businesses are hesitant to invest. This is not because of a lack of effort or quality—it is because there simply are not enough rooftops.

Castaic badly needs the economic activity that new homes bring. New residents mean customers who shop locally, eat locally, and support local services. That economic impact is critical if we want our community's retail centers to survive and thrive rather than remain underutilized.

Northlake represents a long-overdue opportunity to finally deliver on what was planned and promised. Allowing this project to move forward is not just about housing—it is about keeping local businesses alive and creating a complete, sustainable community.

I respectfully urge the Los Angeles County Regional Planning Commission to support approval of the Northlake project and allow Castaic to finally realize the economic benefits it has been waiting for.

Thank you for your time and consideration.

Respectfully,

Jeff Preach

Castaic, CA
(661)993-7999
jeff.preach@earthlink.net
jeff@tgmi.onmicrosoft.com

Outlook

Support Northlake – Project No. R2015-00408

From Eric Angle <eangle@pmpmanage.com>
Date Thu 1/22/2026 8:58 AM
To Jodie Sackett <jsackett@planning.lacounty.gov>

CAUTION: External Email. Proceed Responsibly.

Dear Mr. Sackett,

As a local resident, I am writing to express my support for the Northlake project.

Our region is facing a serious shortage of affordable and price-attainable housing, and Northlake helps address that need while also delivering significant parks, open space, trails and recreational amenities that will benefit the entire community.

In addition to housing, the project will provide meaningful economic benefits, including support for local businesses, job creation, and long-term investment in transportation and community infrastructure. New homes mean a stronger local economy and a more complete, sustainable community.

Northlake represents thoughtful planning that balances housing, environmental stewardship, and economic opportunity. I respectfully urge the Commission to support this project.

Thank you for your time and consideration.

Sincerely,

PMP MANAGEMENT
Eric Angle - CMCA, AMS, PCAM
Division Vice President
eangle@pmpmanage.com
www.PMPmanage.com
661.295.4900

TOP WORK PLACES 2022-2023
AAMC ACCREDITED ASSOCIATION MANAGEMENT COMPANY

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SANTA MONICA MOUNTAINS CONSERVANCY
KING GILLETTE RANCH
26800 MULHOLLAND HIGHWAY
CALABASAS, CA 91302
PHONE (310) 589-3200
WWW.SMMC.CA.GOV

January 26, 2026

Planning Commission
Los Angeles County Department of Regional Planning
320 West Temple Street
Los Angeles, California 90012

Comments on Partial Recirculated Final Supplement EIR
NorthLake Project - SCH 2015031080

Dear Planning Commissioners:

The Santa Monica Mountains Conservancy, a trustee CEQA agency, offers the following comments on the Partial Recirculated Final Supplemental Environmental Impact Report (PRFSEIR) for the proposed North Lake project. The PRFSEIR remains inadequate in multiple areas and must again be revised and recirculated. The mass-graded 33 million cubic yard project next to State Park land is an embarrassment to the County's efforts to balance housing development with open space protection. Many options remain for the County to reduce the project impacts without violating any State housing laws and still meet the Project Objectives.

Both the proposed project and the Partial Creek Avoidance Alternative (PCAA) would irreparably and significantly degrade regional wildlife population connectivity across Interstate 5 by virtually blocking all access to a key, large box culvert under the adjacent southbound lanes of Interstate 5. Since the Court ruling on this project, in concert, Caltrans and the California Department of Fish and Wildlife have designated the subject section of Interstate 5 as a Priority Barrier to Statewide wildlife movement. The EIR-shown routes of how wildlife could reach this culvert from the project are a scientific fantasy forcing wildlife to travel a quarter mile on traffic noise and headlight saturated slopes, including Caltrans rights-of-ways, between the freeway and Ridge Route Road before crossing into habitat free of busy roads.

If the County insists on approving a project with this avoidable, regionally significant biological impact, the PCAA is far better for all other environmental impacts and the public welfare; and being the feasible Environmentally Superior Alternative should be the approved project. The upper half of Grasshopper Canyon would not need to be filled in with 10 million cubic yards of fill pulled from ridgelines.

However, with the PCAA footprint remaining intact, a relatively minor adjustment to the northern project access road can avoid this regionally significant biological impact. That access road can be moved to the south such that wildlife crossing Ridge Route Road to and

from the box culvert would no longer have to navigate through a signalized, street lit intersection, a four-lane road, and a 100-foot-tall, manufactured slope with concrete v-ditches. The attached figure shows the problem with the existing access road location and where that new road alignment should go. This adjustment will add some grading and expense, but the Interstate 5 box culvert cannot be moved.

It is disturbing that both this proposed northern access road, commercial pads, and manufactured slopes for pads occur on Los Angeles County fee simple property. Private land use is proposed on public property (see attached figure). How is the County compensated? In addition, the grading for the access road as shown would put Mountains Recreation and Conservation Authority (MRCA) property (APN 3247-017-906) into a manufactured slope with no MRCA permission.

A key deficiency of the CEQA environmental analysis to date is the failure to first analyze and disclose the rarity and regional ecological importance of the large box culvert under the adjacent southbound lanes of Interstate 5 to allow inter-mountain range wildlife movement. The second failure is for both the proposed project and the Partial Creek Avoidance Alternative (PCAA) to adequately avoid eliminating the habitat directly across Ridge Route Road that all wildlife species need to access the wildlife tunnel with enough regularity. The callousness and inadequacy of the analysis to date is reflected in the concluding PRDSEIR paragraph:

> *The cumulative impact on biological resources would be considered greater than the Project alone. However, when considering all the proposed and existing projects in the Project area, the previously approved Project contributes a relatively small portion of the impacts in the area due to its relatively small impact acreage, and the location adjacent to existing development. The Project is not expected to contribute a significant impact to the Project area. Incremental impacts would not be cumulatively considerable, and no additional mitigation is required.*

The CEQA environmental analysis to date makes a mockery of the ecological importance of the project property and Grasshopper Canyon. A key example is that the analysis says it is just possible that mountain lions could occur in the area. That analysis omits the fact that mountain lions use and/or occupy any connected habitat in Southern California including fingers of habitat that protrude into residential and commercial areas. Without any scientific question by any expert, all the project area is prime mountain lion habitat.

The Mountains Recreation and Conservation Authority's (MRCA) 2020 photo capture of a State-listed mountain lion using the large box culvert adjacent to the project site is new substantial evidence supporting the importance of the North Lake property to maintain wildlife movement between the mountain ranges bisected by the freeway. Since 2020 the MRCA has also photographed bobcats, mule deer, coyotes, and long-tailed weasels using this undercrossing.

The MRCA is overseeing a State-funded multi-year study of all the existing and potential wildlife crossings of Interstate 5 between Highways 126 and 138 which includes the subject project site and subject tunnel under Interstate 5. Another ongoing study has documented a lion roadkill and collared lion presence between the proposed development footprint and Interstate 5. That second study also documents extensive radio collared mountain lion movement approximately a mile north of the project site in the same large habitat block which is uninterrupted by a paved or public road. This is substantial new evidence that is growing by the month. It will be submitted into the public project record by other entities prior to the January 28, 2026 Planning Commission hearing.

If a project with 33 million cubic yards of grading that extends development over three miles into core National Forest and State Park adjacent habitat is not cumulatively significant given the breakneck pace of the urban transformation of the Santa Clarita Valley, then what project could possibly be so? It is an avoidable tragedy to wildlands and the viewsheds of many public viewing areas.

The Conservancy urges the County not to certify the PRFSEIR. If the County does certify the PRFSEIR, the Conservancy urges that only the Partial Creek Avoidance Alternative be considered for adoption as the environmentally superior alternative. The County should balance new housing in the Specific Plan area with the needs of the existing greater public such as--traffic reduction, open space, wildfire prevention, viewshed protection, air pollution avoidance, water supply, landfills, and access to quality nature.

The best and completely weak argument in the PRFSEIR against the PCAA is that there would 37 less acres of active recreational area. What short sighted thinking. Instead there actually would be hundreds of more acres of usable natural open space, less onsite residents, and any lost recreational area could simply be integrated into the development footprint of the PCAA. The upper half of Grasshopper Canyon would not need to be filled in with 10 million cubic yards of fill.

New substantial evidence to add to the record is the blow out of a high-pressure gas line at the end of 2025 within a few hundred feet of the proposed project. Human proximity to such a blow out could cause multiple deaths and injury. The EIR to date has failed to address the public safety hazard of adding more development and road traffic next to this fragile high pressure gas line. It has also failed to address the safety hazards of potential similar blow outs of the multiple fragile gas lines that must be relocated on the eastern project boundary as part of the proposed project and the PCAA.

The PRDSEIR shows land in Marple Canyon owned by the Mountains Recreation and Conservation Authority (MRCA) as potential mitigation areas. The MRCA has not provided any approval or made any arrangement with the applicant. Most likely that Marple

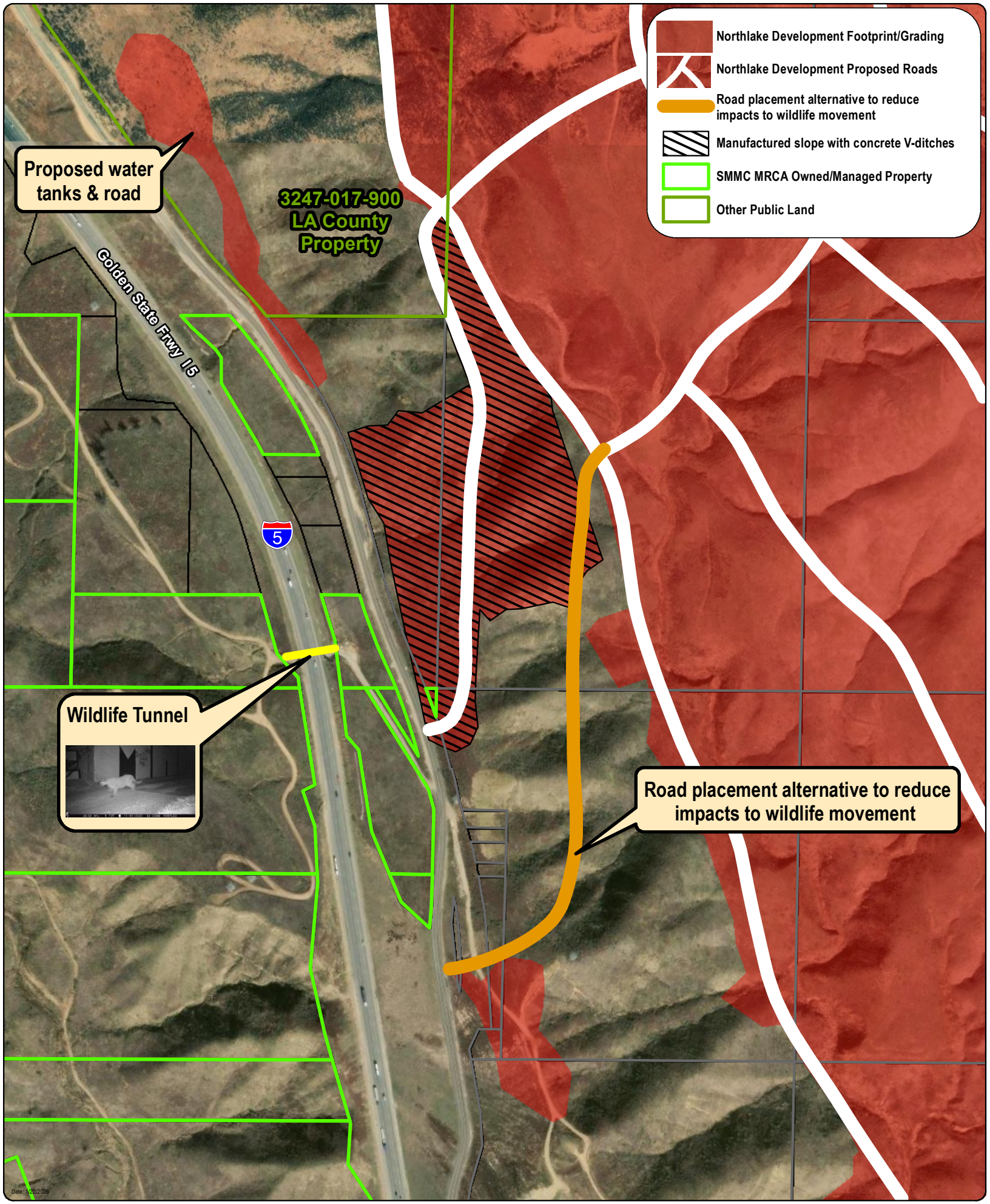
Canyon property is the only feasible location to conduct Spiny Rush mitigation. The EIR is inadequate because most likely no Spiny Rush mitigation area will be available for the project.

Please address any correspondence to Paul Edelman, Deputy Director for Natural Resources and Planning at edelman@smmc.ca.gov or at the above letterhead address.

Sincerely,

Original Signed by

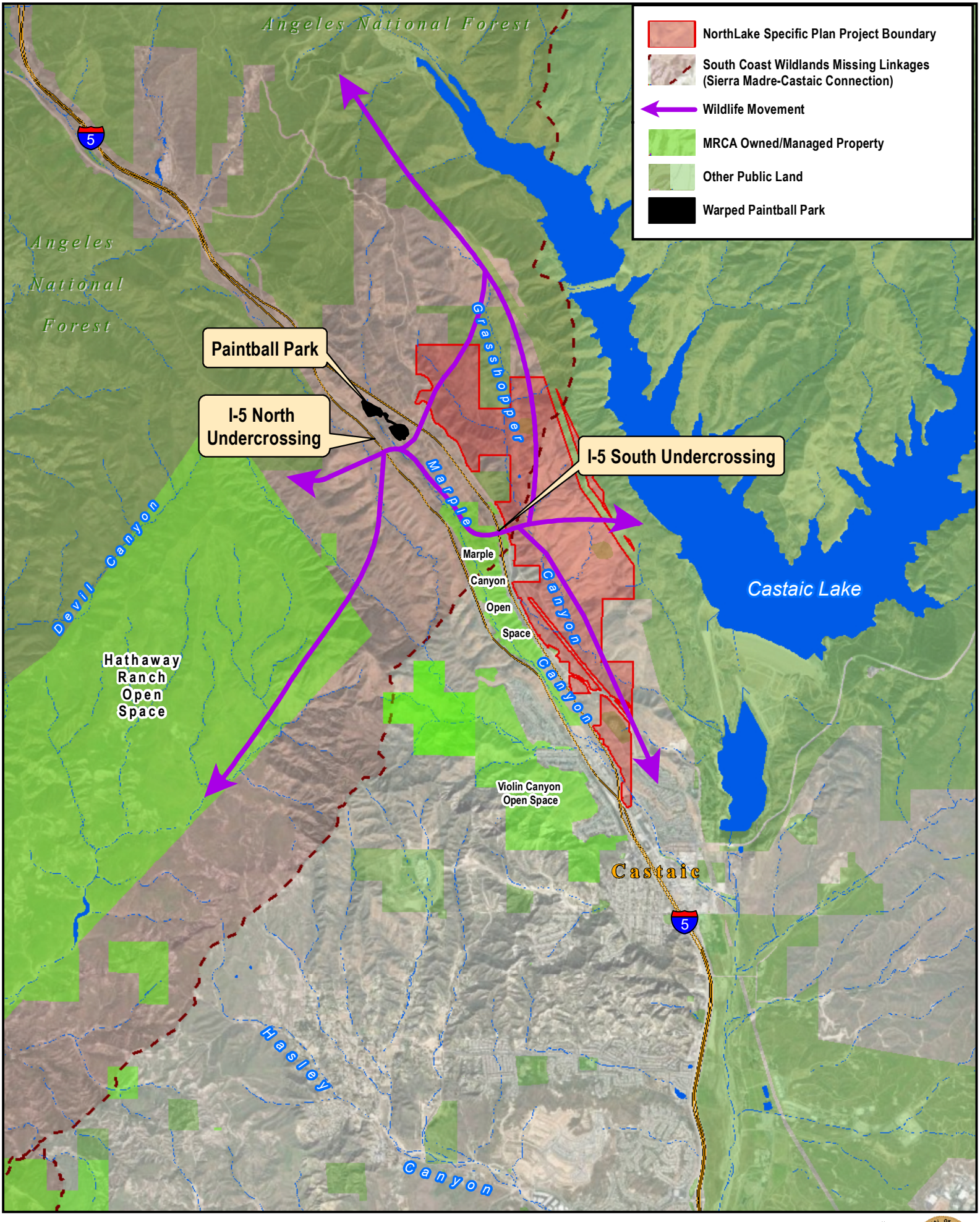
MIGUEL LUNA
Chairperson



NorthLake Specific Plan

Road Alignment Alternative

0 250 500 Feet


NorthLake Specific Plan Project Boundary
South Coast Wildlands Missing Linkages (Sierra Madre-Castaic Connection)
Wildlife Movement
MRCA Owned/Managed Property
Other Public Land
Warped Paintball Park
Angeles National Forest
Angeles National Forest
Paintball Park
I-5 North Undercrossing
I-5 South Undercrossing
Grasshopper
Marple
Canyon
Devil Canyon
Marple Canyon Open Space
Castaic Lake
Hathaway Ranch Open Space
Violin Canyon Open Space
Castaic
Hasley Canyon
5
5
Miles
0 0.25 0.5

January 27th, 2026

Agenda# 26-013 #7
LA County Regional Planning Commission
320 W. Temple Street, Room 150
Los Angeles, CA 90012

In 1909, California was on the cutting edge of the Good Roads movement. $18 million of state bonds were passed to construct the revolutionary new highway system. Stagecoach roads would soon be a thing of the past and the automobile would take center stage.

When they set out to build the Ridge Route, they were entering uncharted territory. Built by a railroad contractor who believed in the future of the automobile, paved later by WW1 veterans with experimental road surfaces and designed with the purpose of uniting a rapidly splitting California. This road changed the course of history and eventually, its successor, the I-5, would become one of the most important trade routes in the country.

We say this to inform you that the Ridge Route isn't just another winding road. It has been a core part of our community since its opening in 1915 and a key part of our local history. Something worth honoring and protecting. While we understand that progress is inevitable, our organization exists to preserve what we can and document and recover what we can't.

The proposed expansion of the Northlake Development will impact the Ridge Route, realigning 1.5 miles of the road and developing alongside nearly 4 miles of this historic corridor. Along the western border of the project site, hidden off to the edges of the road are C Blocks. Concrete markers placed by the California Highway Commission during the surveying and construction of the road (1913-1915) to mark the original right-of-way. The project site also covers the historic locations of "Queen Nell's Castle" - the homestead of Cornelia "Nellie" Martinez Callahan, and the Owl Garage. Both locations are no longer standing but could have artifacts such as bottles, plates and old car parts. Our organization would like to work with your archaeologists to ensure these markers and artifacts are collected and protected.

Of concern for the future, we worry about the impact of relying on one road to be the only exit for an entire community. The Ridge Route is no stranger to fires and the area was referred to as a "historic fire corridor" in the Northlake Environmental Impact Report. Fires reported at Templin Highway and the I-5 are ever prevalent. The project site burned in the 2022 Route Fire and was under evacuation as recently as the 2025 Hughes Fire. With the widening of the road to 4 lanes, there would now be two southbound lanes and one northbound lane available for evacuation and potentially only for 30 minutes in the case of the "Freeway Spot Scenario" (Northlake EIR).

It is out of concern for the future residents that we suggest looking into creating a secondary southern exit route for the community. Not only for evacuations, but to alleviate traffic on Ridge Route Road, which often functions as a bypass for the I-5 when there is an accident north of Castaic. Allowing residents to come and go unaffected by the freeway conditions.

The Ridge Route Preservation Organization hopes to work with your archaeologist to preserve and honor our local history and encourage your developer to take measures to ensure the safety of future residents. Thank you for your time and consideration.

Sydney Croasmun
Ridge Route Preservation Organization
SCroasmun@ridgeroute.org
P.O. Box 803191
Santa Clarita, CA 91380

Jodie Sackett, Senior Planner, North County
County of Los Angeles Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

January 27, 2026

Re: Project No. R2015-00408-(5) (Northlake Specific Plan)
a. Vesting Tentative Tract Map No. 073336 (RPPL2023004336)
b. Vesting Tentative Parcel Map No. 073335 (RPPL2023004448)
c. Conditional Use Permit No. No. (RPPL2023004316)
d. Environmental Assessment No. (RPPL2023004887)

Dear Mr. Sackett & Planning Commissioners,

In light of the ongoing investigation of the SoCalGas high pressure pipeline rupture of Saturday, December 27, 2025 that occurred within the boundaries of the Northlake Specific Plan, the Castaic Area Town Council is requesting a postponement of consideration for approval of this project.

Our community was very lucky that the rupture happened in an area that has not yet been developed (but is slated for homes as part of the specific plan).

We are requesting that the developer and the county identify the location of the SoCalGas transmission pipeline near or within the Northlake development and the location any other pipelines (oil, gas, or other hazardous liquids) near or within the Northlake boundaries. And that a site-specific gas transmission (and any other hazardous liquids) hazard and consequence analysis be prepared with safety revisions circulated for review.

We are also requesting that the Condition Use Permit for the proposed onsite and offsite cut and fill of 34.32 million cubic yards be presented to our town council for review.

Regards

Bob Lewis

Bob Lewis
President
Castaic Area Town Council

cc: Stephanie English - Senior Field Deputy for Supervisor Kathryn Barger

Jodie Sackett

From: Barbara Myler <Barbara@SummitWestPR.com>
Sent: Thursday, January 22, 2026 12:42 PM
To: Jodie Sackett
Subject: SUPPORT Northlake – Project No. R2015-00408

Importance: High

CAUTION: External Email. Proceed Responsibly.

SUPPORT Northlake – Project No. R2015-00408

Dear Mr. Sackett,

As a local resident, I am writing to express my support for the Northlake project.

Our region is facing a serious shortage of affordable and price-attainable housing, and Northlake helps address that need while also delivering significant parks, open space, trails and recreational amenities that will benefit the entire community.

In addition to housing, the project will provide meaningful economic benefits, including support for local businesses, job creation, and long-term investment in transportation and community infrastructure. New homes mean a stronger local economy and a more complete, sustainable community.

Northlake represents thoughtful planning that balances housing, environmental stewardship, and economic opportunity. I respectfully urge the Commission to support this project.

Thank you for your time and consideration.

Sincerely,

Barbara C. Myler
President/CEO
Summit West Public Relations & Marketing
Valencia Jazz & Blues Concert Series
P.O. Box 55133
Valencia, CA 91385
cell: 661.373.8700
email: Barbara@SummitWestPR.com

SUMMIT WEST
PUBLIC RELATIONS & MARKETING



Jodie Sackett

From: Phyllis Grekin <rebyphyllis@gmail.com>
Sent: Friday, January 23, 2026 2:51 PM
To: Jodie Sackett
Subject: Support Northlake

CAUTION: External Email. Proceed Responsibly.

Dear Mr. Sackett,

As a local resident, I am writing to express my support for the Northlake project.

Our region is facing a serious shortage of affordable and price-attainable housing, and Northlake helps address that need while also delivering significant parks, open space, trails and recreational amenities that will benefit the entire community.

In addition to housing, the project will provide meaningful economic benefits, including support for local businesses, job creation, and long-term investment in transportation and community infrastructure. New homes mean a stronger local economy and a more complete, sustainable community.

Northlake represents thoughtful planning that balances housing, environmental stewardship, and economic opportunity. I respectfully urge the Commission to support this project.

Thank you for your time and consideration.

Sincerely,

Phyllis Grekin

Phyllis Grekin DRE #00714238
Realty Executives Valencia
SRAR SCV Council Member 2019
SRAR Member of the Year 2008
24106 Lyons Avenue
Newhall 91321
661-714-3336

Jodie Sackett

From: DRP Public Comment
Sent: Tuesday, January 27, 2026 11:49 AM
To: Jodie Sackett; Joshua Huntington
Cc: DRP Public Comment
Subject: FW: Agenda item 26-013

Please see below public comment for tomorrow's item. Thank you.

ELIDA LUNA (she/her/hers) COMMISSION SECRETARY, Operations & Major Projects (OMP)
Direct: (213) 974-6409
Email: eluna@planning.lacounty.gov

-----Original Message-----
From: Heather Smokler <hsmokler@gmail.com>
Sent: Tuesday, January 27, 2026 11:39 AM
Cc: DRP Public Comment <comment@planning.lacounty.gov>
Subject: Agenda item 26-013

CAUTION: External Email. Proceed Responsibly.

Agenda item 26-013
Agenda #7
Not the Applicant

Heather Smokler
Hsmokler@gmail.com
310-666-0182

Hi

I am writing express my statement against the Northlake Development Expansion. I am a resident at 28628 Cloverleaf Pl and Castaic is my home. As a resident I do not support this development. Not only is Castaic ill equipped to handle that many new residents but I fear the construction will be heavily disruptive to the community. Castaic is such a peaceful haven away from Santa Clarita. I would hate to see it ruined by traffic, noise and overcrowding. I sincerely hope you will consider the needs of the residents here as it would be a shame to drive the current residents out and ruin our peaceful home. I hope you will take this into consideration.

Sincerely,

Heather Smokler

Jodie Sackett

From: DRP Public Comment
Sent: Tuesday, January 27, 2026 11:49 AM
To: Jodie Sackett; Joshua Huntington
Cc: DRP Public Comment
Subject: FW: Northlake development

Please see below public comment Re tomorrow's item. Thank you.

ELIDA LUNA (she/her/hers)
COMMISSION SECRETARY, Operations & Major Projects (OMP)
Direct: (213) 974-6409
Email: eluna@planning.lacounty.gov

From: NationsBest <nationsbestrs@gmail.com>
Sent: Tuesday, January 27, 2026 11:45 AM
To: DRP Public Comment <comment@planning.lacounty.gov>
Subject: Northlake development

CAUTION: External Email. Proceed Responsibly.

Tony Burke,
Nationsbestrs@gmail.com

661-714-4390

Hi,

I'm a homeowner in Castaic and I vehemently oppose this project. I have lived here for 30 years and what makes this area desirable is the peace and small population. The loud construction, the influx of people I'm sure will drive current residents out. Castaic is a haven away from the bustle of Santa Clarita, that's part of what makes it so desirable to live here. This project will not only disrupt that but could lead to a mass exodus of people living here. I hope you will take this into consideration as you make your choice.

Tony Burke
Thank you

Tony Burke
Owner
Retractions Retractable Screen Systems

Retractablescreensonline.com
661-714-4390

800 915 2448
RetractableScreensOnline.com

NationsBestRS@gmail.com

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Jodie Sackett

From: DRP Public Comment
Sent: Tuesday, January 27, 2026 11:50 AM
To: Jodie Sackett; Joshua Huntington
Cc: DRP Public Comment
Subject: FW: Agenda item 26-013

Please see below public comment regarding tomorrow's item.

Thank you.

ELIDA LUNA (she/her/hers)
COMMISSION SECRETARY, Operations & Major Projects (OMP)
Direct: (213) 974-6409
Email: eluna@planning.lacounty.gov

From: NationsBest <nationsbestrs@gmail.com>
Sent: Tuesday, January 27, 2026 11:48 AM
To: DRP Public Comment <comment@planning.lacounty.gov>
Subject: Agenda item 26-013

CAUTION: External Email. Proceed Responsibly.

Tony Burke,
Nationsbestrs@gmail.com

661-714-4390

Tony Burke,
Nationsbestrs@gmail.com

661-714-4390

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I'm a homeowner in Castaic and I vehemently oppose this project. I have lived here for 30 years and what makes this area desirable is the peace and small population. The loud construction, the influx of people I'm sure will drive current residents out. Castaic is a haven away from the bustle of Santa Clarita, that's part of what makes it so desirable to live here. This project will not only disrupt that but could lead to a mass exodus of people living here. I hope you will take this into consideration as you make your choice.

Tony Burke

Tony Burke

Tony Burke
Owner
Retractions Retractable Screen Systems

Retractablescreensonline.com
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MOUNTAINS RECREATION & CONSERVATION AUTHORITY
King Gillette Ranch
26800 Mulholland Highway
Calabasas, California 91302
PHONE (818) 878-0886

January 26, 2026

Planning Commission
Los Angeles County Department of Regional Planning
320 West Temple Street
Los Angeles, California 90012

Recirculated Partial Final Supplemental Environmental Impact Report for the Northlake Phase 1 Project No. R2015-00408, etc., Not in Compliance with CEQA

Dear Planning Commissioners:

The Mountains Recreation and Conservation Authority (MRCA) recommends the Los Angeles County Planning Commission (Commission) find that the Recirculated Partial Final Supplemental Environmental Impact Report (RPFS-EIR) for Northlake Phase 1 Project No. R2015-00408, Vesting Tentative Tract Map No. 073336, Vesting Tentative Parcel Map No. 073335, and Conditional Use Permit No. RPPL2023004316 (Project) is not in compliance with the California Environmental Quality Act (CEQA) and deny the Project as presented to the Commission.

The supplemental findings of fact in the RPFS-EIR are unequivocally incorrect and inconsistent with Public Resources Code Sections 21081 and State CEQA Guidelines Section 15091 as the proposed Project requires compensatory mitigation to be performed on MRCA lands without consultation of, agreement with, or approval by the MRCA. Specifically, the RPFS-EIR identified southwestern spiny rush (*Juncus acutus*) occurrences on MRCA-owned lands to satisfactorily mitigate adverse impacts to documented southwestern spiny rush within the Project (see RPFS-EIR Mitigation Measure [MM] 5.2-5c). On October 5, 2022, the MRCA Governing Board approved MRCA Resolution No. 22-138 entering into a Mitigation Agreement pursuant to California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement 1600-2015-0271-R5 (and other regulatory permits) with Lennar Homes of California, LLC, to perform habitat mitigation on MRCA property in Marple Canyon associated with the Habitat Mitigation and Monitoring Plan for the Aidlin Hills Residential Project. MRCA has initiated this habitat restoration work in Marple Canyon and cannot provide the requisite off-site southwestern spiny rush compensatory mitigation as outlined in RPFS-EIR MM 5.2-5c.

Further, the proposed Partial Creek Avoidance Alternative (PCAA) would irreparably impact wildlife usage of an oversized box culvert below southbound Interstate 5 (I-5) on MRCA-owned land that provides protected wildlife crossing of I-5 between Marple and Grasshopper Canyons. Deterrence of wildlife use of this protected I-5 crossing in the regionally significant, multi-agency designed *Sierra Madre-Castaic Connection* linking the Southern California Ecoregion with the Tehachapi and Sierra Nevada ranges would result in additional wildlife-vehicle collisions on I-5 and Ridge Route Road and further reduce

the genetic viability of Central Coast and Southern California mountain lion (*Puma concolor*)—a candidate species for protection by California Endangered Species Act (CESA). Given the public trust doctrine codified by Fish and Game Code Section 1600 that wildlife (and their habitat) are held in trust for the people and the protection and conservation of fish and wildlife is of utmost public interest, the Commission has an opportunity to appropriately deny the Project while satisfying the requisite conditions of the Housing Accountability Act (HAA) whereby the Project has (1) specific, adverse impacts upon public health or safety and (2) no feasible method to satisfactorily mitigate or avoid these impacts as related to southwestern spiny rush and mountain lion.

Recent wildfires in the immediate vicinity of the Project include: Holser Fire (2020), Castaic Fire (2020), Route Fire (2021), Route Fire (2022), Hughes Fire (2025), and Canyon Fire (2025). See attached MRCA – Northlake 20-Year Fire Recurrence Map for reference. Repeat fires in the same area over a short interval often result in habitat type change where former oak woodlands are converted to chaparral shrublands and chaparral shrublands are converted to grasslands—each successive type change results in more fire prone, faster burning fuel types. Because the proposed Project's development is sited over one mile from the nearest planned residential developments along Pine Crest Place, the Project unnecessarily fragments habitat and creates a fire-vulnerable island of development surrounded by flashy fuels.

The Project's "planned" expansion of the wildland-urban interface in a California Department of Forestry and Fire Protection (CalFire) designated Very High Fire Hazard Severity Zone (VHFHSZ) endangers the public health and safety of future residents and overburdens local and mutual-aid fire departments tasked to defend ever expanding suburban sprawl. Additionally, the Project Area regularly receives high wind warnings issued by the National Weather Service to alert the public about dangerous weather conditions. As evidenced by the Palisades and Eaton Fires (2025), high wind events and wildfires can overwhelm home-hardening defenses and on-the-ground fire suppression, prevent aerial fire containment, and result in extensive destruction to life and property.

Given the extensive liabilities the County is experiencing from the Palisades and Eaton Fires (2025), the Commission should not further imperil the public, first responders, or the County's fiscal solvency by approving 2,295 new residential units in a VHFHSZ with at least one decaying 34-inch, 600-psi petroleum pipeline running through failure-prone hillsides. The Commission should also recognize the unmitigated threat the Project poses to habitat (including southwestern spiny rush) and habitat connectivity that supports the persistence of State-protected mountain lions in Southern California.

The County must also ensure the Project applicants, developers, financiers, future residents, and insurance providers sufficiently understand the multitude risks of living next to a 34-inch, 600-pounds-per-square-inch pressured petroleum pipeline that ruptured on December 27, 2025, and forced thousands of area residents and visitors to shelter in place. Preliminary investigation indicates the gas pipeline exploded after a minor landslide below Ridge Route Road, on or near LA County APN 3244-014-050 owned by Northlake

Associates LLC, and approximately 250 feet from the primary ingress/egress for the Project. See attached MRCA – Northlake Gas Line Rupture Map for reference. Since there are other aging pipelines that run through the PCAA footprint, the Project's evaluation of hazards must include assessments of each petroleum pipeline, the adequacy of performed pipeline maintenance, and the planned future pipeline maintenance and/or replacement schedule(s) in the Project Area. The Project applicant must also prepare public outreach materials for all future residents (fee owners and renters) outlining emergency preparedness information about how to minimize sensitive-receptor exposure to any future gas line ruptures. Similar sensitive-receptor information should be prepared for future residents for information regarding the nearby Chiquita Canyon Landfill that is unable to abate toxic air pollution derived from uncontrolled decomposition of landfill waste. Commercial businesses within the Project must be required to publicly and prominently display emergency evacuation routes and effective methods to shelter in place.

In 2025, MRCA completed a Wildlife Conservation Board (WCB) funded implementation project to improve 2.5 acres of cover and forage for wildlife at the above-mentioned box culvert I-5 crossing on MRCA land. Throughout the course of this state-funded project that initiated in April 2020, MRCA's wildlife cameras documented several species using the I-5 culvert including: lion, deer, bobcat, coyote, roadrunner, quail, and weasel. Attached are select photos (see MRCA Marple Canyon Photo Exhibit) that document wildlife that will be directly impacted by Project construction and prevented from using this critical connectivity point across the 26-mile-plus I-5 wildlife barrier from State Route 138 (SR 138) to State Route 126 (SR 126) as identified on the Project's PCAA Exhibit 2 map. The same PCAA Exhibit 2 map also delineates presumed wildlife dispersal routes through the Project where wildlife will have to cross a new, at-grade, 64-foot-wide "Modified Industrial Collector" and several crossings of new, at-grade, 40-foot-wide "Local Collector" streets to travel between Grasshopper Canyon and Marple Canyon.

Grasshopper Canyon is currently undeveloped except for overhead and underground utilities and unpaved roads to service these utilities—virtually no barriers to wildlife movement. By developing Grasshopper Canyon, even with the reduced grading footprint for the PCAA, wildlife will be irreparably harmed by the Project's impacts to existing wildlife dispersal routes and forced to cross new Project roads that do not incorporate any avoidance or mitigation measures (such as oversized culverts or bridge spans, habitat cover to reduce vehicle noise and light impacts, etc.) that can facilitate east-west wildlife movement through the Project. The proposed "emergency vehicle access" road to the new school site will connect to Ridge Route Road within 450 feet of the I-5 crossing structure on MRCA property. At minimum, this school service road must be realigned to the south, as shown on MRCA – Northlake Road Alignment Alternative Map, to avoid and/or mitigate additional impacts to this existing I-5 wildlife crossing route of regional significance.

The proposed PCAA school service road's connection with Ridge Route Road is dangerously close (within 200 feet and on a slight curve) to the Marple Canyon access

road used by MRCA, Southern California Edison, SoCalGas Company, and contractors to enter and exit Marple Canyon. The gate at this location is a double-arm swinging gate and there is minimal room for parking along Ridge Route Road to unlock or close the gate. As designed, the school's service road will endanger authorized work crews and the public traveling Ridge Route Road. At minimum, the school service road should be moved to approximate the orientation shown in MRCA – Northlake Road Alignment Alternative Map; however, MRCA recommends a formal traffic study to align with appropriate site distances and intersection design criteria set forth in the California Highway Design Manual as Ridge Route Road is often used as a bypass for I-5 during extreme traffic conditions.

In furtherance of the multi-agency designed *Sierra Madre-Castaic Connection* to identify the least-cost corridor for movement of priority indicator species between the Tehachapi Range and the Transverse Ranges of Southern California, MRCA is conducting a project in coordination with California Department of Transportation (Caltrans), CDFW, U.S. Geological Survey (USGS), and other partner organizations, to study the 26-mile stretch of Interstate 5 (I-5) between SR 138 and SR 126 for wildlife permeability and opportunities to improve wildlife connectivity across I-5. CDFW and Caltrans have each designated this section of I-5 as a barrier to wildlife movement and genetic contact between increasingly homogenous Southern California species with their more heterogenous populations of the Tehachapi and Sierra Nevada mountain ranges.

Preliminary MRCA I-5 study data indicates the oversized box culvert on MRCA property below the southbound I-5 regularly transmits priority megafauna between Marple and Grasshopper Canyons. Complementary mountain lion field work is being collected by U.C. Davis's California Carnivores Program in coordination with U.S. Forest Service to determine how regional lions are, or are not, able to cross I-5. The U.C. Davis project has only recently collared a mountain lion west of I-5 near the Project Area; however, the extent of tracked mountain lion movement data, compared to mountain lion roadkill data, indicates that lions confined east of I-5 and south of SR 138 have limited points of access westerly across I-5 and any further reductions in wildlife connectivity across I-5 associated with the proposed Project will represent cumulative, avoidable impacts to a CESA-protected species. See MRCA – Northlake Puma Observation Map for reference.

Adding additional vehicle traffic to Ridge Route Road to serve the Project's 2,295 new residential units will reduce wildlife approaches to the CDFW and Caltrans recognized I-5 barrier and force wildlife to attempt dangerous at-grade crossings or attempt to use the northern Marple Canyon box culvert identified on PCAA Exhibit 2 that leads directly to an existing paintball/airsoft park that severely dissuades wildlife connectivity. Extensive roadkill data compiled for MRCA's I-5 wildlife connectivity study indicates Project development of Grasshopper Canyon will result in addition roadkill of priority megafauna species including mountain lion, mule deer, black bear, bobcat, coyote, and fox. Increased wildlife-vehicle collisions resultant from the Project will similarly endanger vehicle occupants, increase insurance costs, and increase commerce delays on an already congested I-5.

Through a series of acquisitions facilitated by the Trust for Public Land, in 2022 MRCA completed the 6,000-acre-plus Temescal-Hathaway Ranch acquisition that comprises the bulk of the County-designated Santa Felicia Significant Ecological Area (SEA). Project development would impact wildlife connectivity between Castaic Lake and the Santa Felicia SEA that abuts Ventura County and Lake Piru. Development of 2,295 residential units and associated roadway improvements would irreparably harm wildlife connectivity in this biologically unique and sensitive area between perennial water sources of Lake Piru and Castaic Lake. While Southern California is not currently experiencing drought conditions, climate change science anticipates future droughts punctuated by extreme rainfall events which requires conservation of existing surface water resources and preservation of access to surface water in support of rare, threatened, endangered, or at-risk wildlife.

Considering the threat to public health and safety posed by this Project and the inability of Project applicant to propose mitigation that satisfactorily avoids or mitigates impacts to wildlife and habitat, the Commission is fully justified to deny Project No. R2015-00408, Vesting Tentative Tract Map No. 073336, Vesting Tentative Parcel Map No. 073335, and Conditional Use Permit No. RPPL2023004316.

Please address any correspondence to me by email at chad.christensen@mrca.ca.gov, by phone at (310) 589-3230, ext. 121, or at the above letterhead address.

Sincerely,

Chad Christensen
Deputy Chief
Natural Resources and Planning

Attachments:
MRCA – Northlake Road Alignment Alternative Map
MRCA – Northlake Gas Line Rupture Map
MRCA – Northlake 20-Year Fire Recurrence Map
MRCA – Northlake Puma Observation Map
MRCA – Marple Canyon Photo Exhibit

January 26, 2026

Sent via email, with references via FTP and FedEx

Chair Michael R. Hastings and Members of the
Regional Planning Commission
Los Angeles County Department of Regional Planning
320 West Temple St.
Los Angeles, CA 90012
commission@planning.lacounty.gov
comment@planning.lacounty.gov

Re: January 28, 2026 Regional Planning Commission Meeting Agenda Item No. 7 – Northlake Development (Project No. R2015-00408-(5))

Dear Chair Hastings and Members of the Regional Planning Commission:

These comments are submitted on behalf of the Center for Biological Diversity (the "Center") regarding the proposed Northlake Development ("Project"). The Center has reviewed the Recirculated Partial Final Supplemental EIR ("EIR") closely and remains concerned that the EIR's analysis of, *inter alia*, biological resources, wildfire, and transportation impacts is inadequate. The Center urges the Regional Planning Commission ("Commission") not to approve the Project without first remedying these deficiencies.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has members and online activists throughout California and the United States. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County.

I. The RPFSEIR Fails to Adequately Assess and Mitigate the Project's Impacts to Mountain Lions and Wildlife Connectivity.

The RPFSEIR fails to appropriately respond to the Center's comments regarding mountain lions and wildlife connectivity, stating "[w]ith respect to the portions of the SEIR that were not recirculated, the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of those issues states" (RPFSEIR at 2-22) and that "[c]ollateral estoppel bars relitigation of the mountain/wildlife movement *[sic]* and connectivity issues" (RPFSEIR at 2-24). However, as discussed in the Center's May 29, 2025 comment letter, new and significant information regarding the conservation status of local mountain lions and the increasing threats they face, the movement of at least one mountain lion adjacent to the Project area, and the

importance of the existing wildlife connectivity in and near the Project area for their long-term survival has become available since the EIR was certified in 2018.

The California Environmental Quality Act ("CEQA") states that a subsequent or supplemental EIR may be required when either (1) substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report or (2) new information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available. (Pub. Res. Code § 21166.) Below we present clear evidence regarding mountain lions and wildlife connectivity that falls into both categories. Therefore, the RPFSEIR fails to comply with CEQA.

A. Since Project Approval, CDFW has Recommended Mountain Lions in the Project area to be Listed as Threatened under the California Endangered Species Act.

The Project area is located in the Sierra Pelona Mountains, which is within the geographic range of the Southern California and Central Coast mountain lion populations that were petitioned to be listed under the California Endangered Species Act ("CESA") in June 2019 (Yap et al., 2019). In April 2020 these populations were granted "candidacy status" under CESA, such that they are afforded the same protections as other CESA-listed species. And on December 10, 2025, the California Department of Fish and Wildlife ("CDFW") released their status review regarding the petition and recommended listing all of the petitioned mountain lion populations as a threatened Southern California and Central Coast mountain lion distinct population segment (DPS) under CESA (CDFW, 2025a).

CDFW's recommendation relies on numerous scientific studies published after the Northlake EIR was certified in April 2018 that illuminate the dire conditions of the DPS mountain lion populations' genetic health and viability, the myriad threats they face, and the importance of the Project area for their long-term survival (e.g., Benson et al., 2019, 2023; Gustafson et al., 2018, 2021); see the Center's May 29, 2025 comments, the CESA petition [Yap et al., 2019], and the CESA status review [CDFW 2025a] for more studies and details). In particular, CDFW identifies the Sierra Pelona Mountains as a high priority area that is critical to maintain and improve the genetic health of the populations within the DPS because of its proximity to the Tehachapi Mountains, an important area for genetic exchange between the DPS and relatively robust mountain lions in the Western Sierra Nevada (CDFW, 2025a). According to CDFW, "[m]itigating the barriers of Highway 58 and Interstate 5 to allow safer and easier dispersal across those roads should be considered high priorities, as well as the conservation of suitable habitat in the Sierra Pelona, Topatopa, and San Emigdio Mountains" (CDFW, 2025a). The previously certified EIR does not—and cannot—adequately analyze or mitigate impacts of the Project on mountain lions given this wealth of new information.

The Project would result in the destruction of high-priority mountain lion habitat and degradation of a critical connectivity area that is already constrained, which could drive the Southern California and Central Coast mountain lion DPS closer towards extinction. The Project is also located adjacent to a segment of the I-5 that, in 2024, CDFW identified as Barrier ID W231: I-5 Sierra Madre to Castaic Ranges, with mountain lion as a target species for recovery (CDFW, 2024). According to CDFW, "[t]he Sierra Madre-Castaic linkage is vitally important for restoring gene flow to southern California mountain lion populations" (CDFW, 2024).

CEQA requires a "mandatory finding of significance" when a project has the potential to impact a CESA-listed species. (CEQA Guidelines § 15065(a)(1); *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 792 fn. 12.) And such a finding triggers a duty to consider and adopt all feasible alternatives or mitigation measures to reduce such impacts. (Pub. Res. Code § 21002.) Moreover, CESA provides that agencies should not approve projects that could jeopardize the continued existence of this DPS or result in destruction of essential habitat (Fish & Game Code, § 2053(a)) and agencies must require that appropriate mitigation measures be implemented for projects that could destroy mountain lion habitat or impair connectivity. (See Fish & Game Code, § 2054).

The CESA status of local mountain lions as a candidate species in 2020 and a recommended threatened DPS in 2025 and the numerous scientific studies published after the 2018 EIR certification qualify as both (1) substantial changes that require major revisions in the environmental impact report so that it includes adequate analyses and mitigation for the Project's impacts to mountain lions and wildlife connectivity and (2) new information, which was not known and could not have been known at the time the environmental impact report was certified as complete. (Pub. Res. Code § 21166.) The RPFSEIR lacks any analysis or mitigation for the Project's impacts to mountain lions and therefore fails to comply with CEQA.

B. Since Project Approval, at Least One Mountain Lion Traveled from Grasshopper Canyon to Marple Canyon Through an Adjacent Wildlife Crossing.

The Mountains Recreation and Conservation Authority ("MRCA") documented at least one mountain lion using a box culvert under the southbound I-5 that is adjacent to the Project area. Photos, authenticated by the attached declaration from Chad Christensen, the Deputy Chief of Natural Resources and Planning for MRCA, depict a mountain lion crossing from the east side of the southbound direction of the separated I-5 freeway from Grasshopper Canyon westerly into Marple Canyon on November 5, 2020 approximately between 2:49 a.m. and 2:59 a.m. (the "Mountain Lion Photos") (Exhibit A). The single-lane box culvert for the Marple Canyon access road that crosses under this southbound section of I-5 is identified as "Tunnel 2" and "Underpass 2" in Santa Monica Mountains Conservancy's April 17, 2018 letter on the Northlake Development (Exhibit B). Underpass 2 is one of two freeway crossing structures along a ten-mile section of I-5 between Templin Highway and Castaic Creek. The MRCA owns 245 acres of Marple Canyon west of Underpass 2 between the separated north-/southbound sections of I-5 and six acres east of Underpass 2 that connect with Grasshopper Canyon. The Mountain Lion Photos were taken by a camera placed on MRCA conservation lands by Mr. Christensen for the MRCA's Marple Canyon I-5 Wildlife Crossing Enhancement Project.

The use of this crossing by a mountain lion moving west, towards the severely imperiled Central Coast South population that is facing an "extinction vortex" (Benson et al., 2019) from the eastern side of I-5 indicates potential gene flow that is desperately needed. According to researchers, "a single migrant [per generation] can have immediate positive effects on the genetics of a small, isolated and inbred puma population" if the individual successfully breeds (Gustafson et al., 2017). This documented movement adjacent to the Project area highlights the critical value of the Project area as live-in and move-through habitat and for east-west mountain lion movement.

While the approved 2018 EIR for the Northlake Project does generally acknowledge that mountain lions may use the Project area (2018 Final EIR at 2-136), County counsel joined the project proponents (which include Northlake Associates, LLC, which is controlled by NLDP Associates, LLC, Castaic Development Partners, LLC, and Michael Rosenfeld of Woodridge Capital Partners, LLC) in representing in court proceedings that "mountain lions will not be impacted by the Project" and "mountain lions are not using Project site crossings as confirmed by expert studies, including a wildlife camera study . . . ." (Respondents' and Real Parties in Interest's Joint Opposition Trial Brief at pp. 8 & 16-17.) **The Mountain Lion Photos demonstrate that these claims (which were based on a developer-commissioned study) are incorrect.**[1]

The County's own staff biologist, Joseph Decruyenaere, urged the developer's EIR drafters not to minimize the connectivity value of the existing culverts under the I-5, which are far from perfect but are the only available means for mountain lions to cross the I-5 in the area. Mr. Decruyenaere wrote that the EIR language prepared by the developer's consultant:

> unduly minimizes the value of compromised movement opportunities. Nowhere else in biological conservation would you want to argue that because a resource is rare it's less than valuable. The fact that the use of a highly constrained opportunity for movement between natural areas might be made more difficult should always be considered a potentially significant impact unless there simply aren't any wildlife around to use the crossing. If a movement opportunity lacks a vegetated approach or some other feature that would seem to make it work better, that doesn't mean it doesn't pose an opportunity for movement. It just suggests that an animal might be less inclined to use it in the imaginary scenario that they have a better alternative. **However, in the real world, and in the highly fragmented, difficult to navigate landscapes that wildlife are consigned to, compromised movement opportunities may be the only opportunities available.** Revise the discussion to acknowledge the value of the crossings and instead of devaluing them, talk about how the project might change the potential for their use.[2]

Mr. Decruyenaere also wrote that the developer's consultant relies "chiefly on the idea that existing crossing features are not ideal but [they] neglect[] to provide conclusions as to how

[1] On December 17, 2020, the Center for Biological Diversity and Endangered Habitats League requested judicial notice of the Mountain Lion Photos in Los Angeles County Superior Court case *Center for Biological Diversity et al. v. County of Los Angeles et al*., Case No. 19STCP01610, and the County and developer submitted a brief opposing the request for judicial notice. The request was denied, and the Mountain Lion Photos were not considered in the Court's decision.

[2] Mr. Decruyenaere's comments were attached to an email sent by County Planner Jodie Sackett on February 18, 2018 and are accessible in the administrative record ("AR") of the Los Angeles County Superior Court case *Center for Biological Diversity et al. v. County of Los Angeles et al*., Case No. 19STCP01610 at AR025874 (and Mr. Sackett's email is located at AR025825-26).

overall wildlife movement on the site and through the crossing features may actually change with buildout of the project."[3]

The Mountain Lion Photos confirm that mountain lions (and likely other wildlife) can and do use the culvert adjacent to the Project site even if the culvert could be enhanced to be more friendly for wildlife. If built as proposed, the Northlake Development would destroy high quality, intact mountain lion habitat; degrade surrounding habitat with edge effects including but not limited to new roads and increased traffic, lighting at night, noise, rat poisons, disease risk, domestic animals, and wildfire, which could have direct and indirect impacts to mountain lions (e.g., (Barrientos et al., 2023; Benson et al., 2023; Blakey et al., 2022; CDFW, 2025b); block this critical crossing; and further constrain the already-limited movement opportunities for mountain lions and other wildlife in the region.

The Mountain Lion Photos qualify as both (1) a substantial change that requires major revisions in the environmental impact report so that it includes adequate analyses and mitigation for the Project's impacts to mountain lions and wildlife connectivity and (2) new information, which was not known and could not have been known at the time the environmental impact report was certified as complete. (Pub. Res. Code § 21166.) The documented use of this crossing by a mountain lion, new scientific studies identifying the vulnerability of the region's mountain lions to extinction and the importance of the Project area for mountain lion habitat and connectivity (and therefore the genetic health of populations within the DPS), and CDFW's recommendation to list local mountain lions as threatened under CESA illuminate the major deficiencies in the previously certified EIR and precipitate the need of new analyses of the Project's impacts to mountain lions and wildlife connectivity in the RPFSEIR. (See *Moss v. County of Humboldt* (2008) 162 Cal.App.4th 1041 [finding supplemental environmental review was required when there was mere anecdotal evidence of a listed species newly occurring in the project area].)

C. New Data Indicate the Project Area is Important for Mountain Lions and Wildlife Movement.

The Project area is located in a focal area for recent and ongoing wildlife connectivity and mountain lion studies. As mentioned previously, CDFW has identified the I-5 as an important barrier to mitigate to improve gene flow in the Southern California/Central Coast mountain lion DPS, in part because of the area's importance for statewide gene flow and there is high quality suitable mountain lion habitat on both sides of the freeway. These studies aim to help decisionmakers understand how mountain lions are moving through the area and how conditions could be improved to support more movement. From 2022 to 2025, the UC Davis California Carnivores Program collected movement data from several individuals that were radio-collared west of I-5 and north of SR-138 as part of the first phase of their ongoing study, "Understanding ecological and human-related factors affecting felid movement in a critical wildlife linkage" (Figure 1). The study area was focused in the Tehachapi Mountains linkage, north of the Project area. In October 2025 the UC Davis California Carnivores Program began the second phase of their study, expanding southward to investigate mountain lion movement in

[3] Mr. Decruyenaere's comments are included in an email sent on February 12, 2018, and is available at AR025822-23.

the Castaic Study Area (Figure 2). January 2026 was their first month of attempting captures, and they have already collared two individuals west of I-5 (Figure 3).

In addition to the radio-collar data, a young injured mountain lion cub was found in Castaic, on Hillcrest Parkway near Olympic Street, on January 21, 2026. And witnesses observed a mom and sibling mountain lion nearby. The presence of these mountain lions in Castaic indicates suitable habitat in the vicinity, including in the Project area. And when the young mountain lions become old enough, they will need suitable habitat and connectivity to safely disperse and find their own territories.

The data indicate that mountain lions are present and moving through the landscape quite widely while also showing the I-5 is a formidable barrier to movement. This highlights the importance of every single time a mountain lion is able to successfully cross the I-5 through the limited culverts. Although mountain lions east of I-5 and south of SR-138 have not yet been collared, the UC Davis researchers are planning to collar mountain lions in the area as part of the study. Given the data of mountain lion movement west side of I-5 and the high quality habitat east of I-5, mountain lions are likely living in and moving through the Project area.

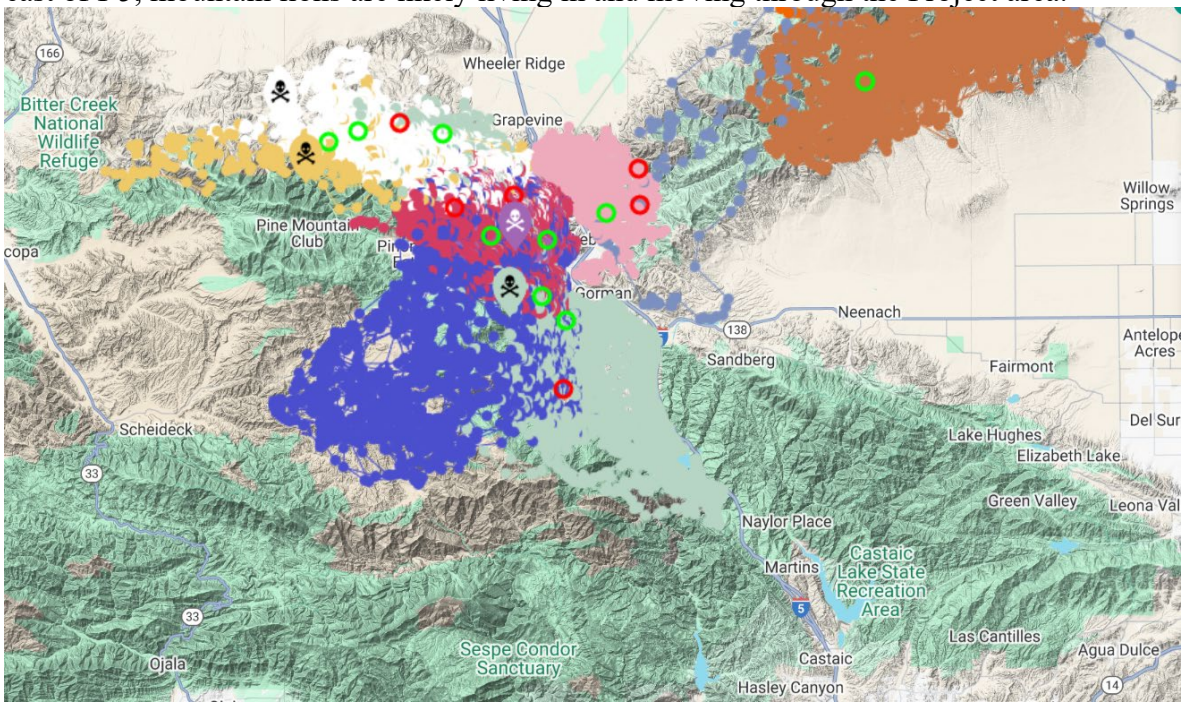

Figure 1: The last 18 months of radio-collar data from individuals captured in the first phase (2022-2025) of the UC Davis California Carnivores Program study.

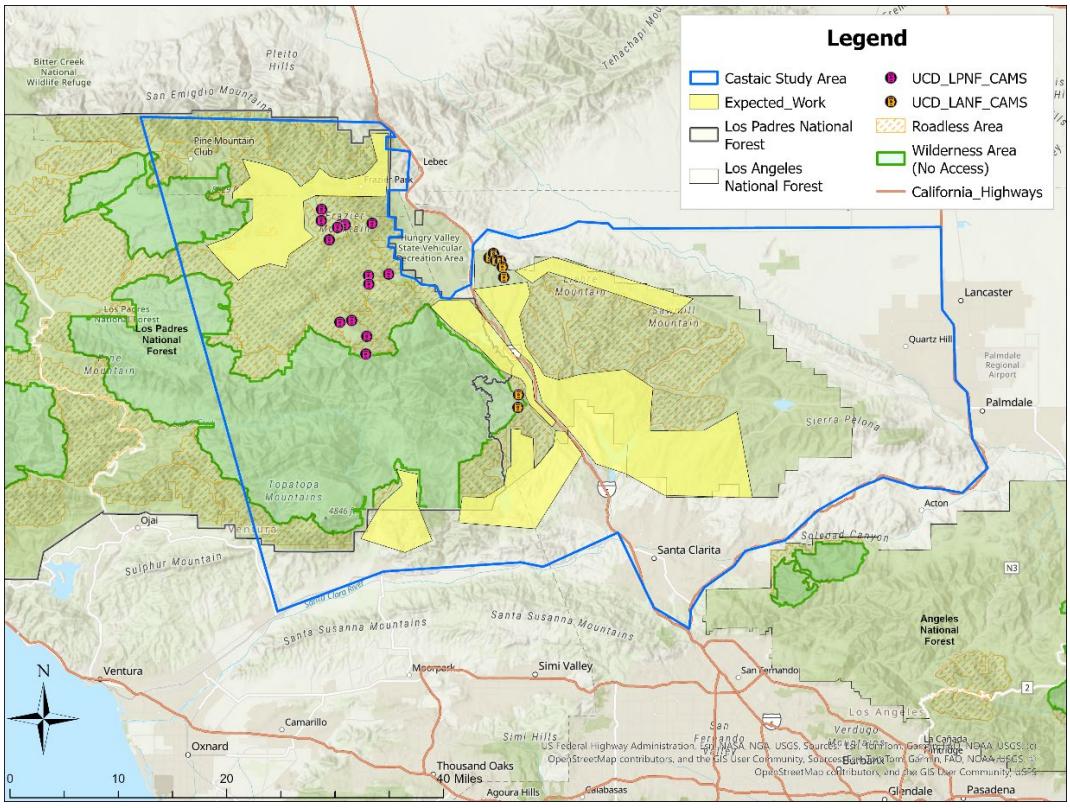

Figure 2: The UC Davis California Carnivores Program Castaic Study Area. This encompasses the second phase of the study, which began in October 2025.



Figure 3: GPS collar data from the first two mountain lions collared in the Castaic Study Area. These lions were captured and collared in January 2026.

Meanwhile, the Mountains Recreation and Conservation Authority ("MRCA") is leading a wildlife connectivity study in the area for their "Interstate 5 (Sierra Madre-Castaic) Wildlife Crossing Infrastructure Assessment and Implementation Plan," which began in December 2025. Their study includes roadkill surveys and wildlife cameras set up at culverts along I-5, including along the section of I-5 that is near the Project area. Importantly, in the first two months since they placed cameras at culverts along I-5, they have documented three instances of a mountain lion using culverts less than four miles from the northernmost portion of the Project area (Figure 4). Mountain lion home ranges can be large, depending on the sex and life stage (i.e., females tend to have smaller home ranges than males, females denning with kittens shrink their home ranges, and dispersing subadult mountain lions can travel long distances). For example, in the nearby Santa Monica Mountains, home ranges were found to be an average of 52 mi^2 for females and 144 mi^2 for males in the nearby (Riley et al., 2021). And dispersing mountain lions in Southern California have been documented traveling 50 to 93 miles (Vickers et al., 2015). Given their large home ranges and long-distance traveling behaviors, it is not inconceivable that the mountain lions documented in nearby culverts could move through the Project area and be impacted by new development there. In addition, other wildlife have been documented using the culverts (Figure 5), indicating these culverts provide important connectivity for other wildlife in the region.

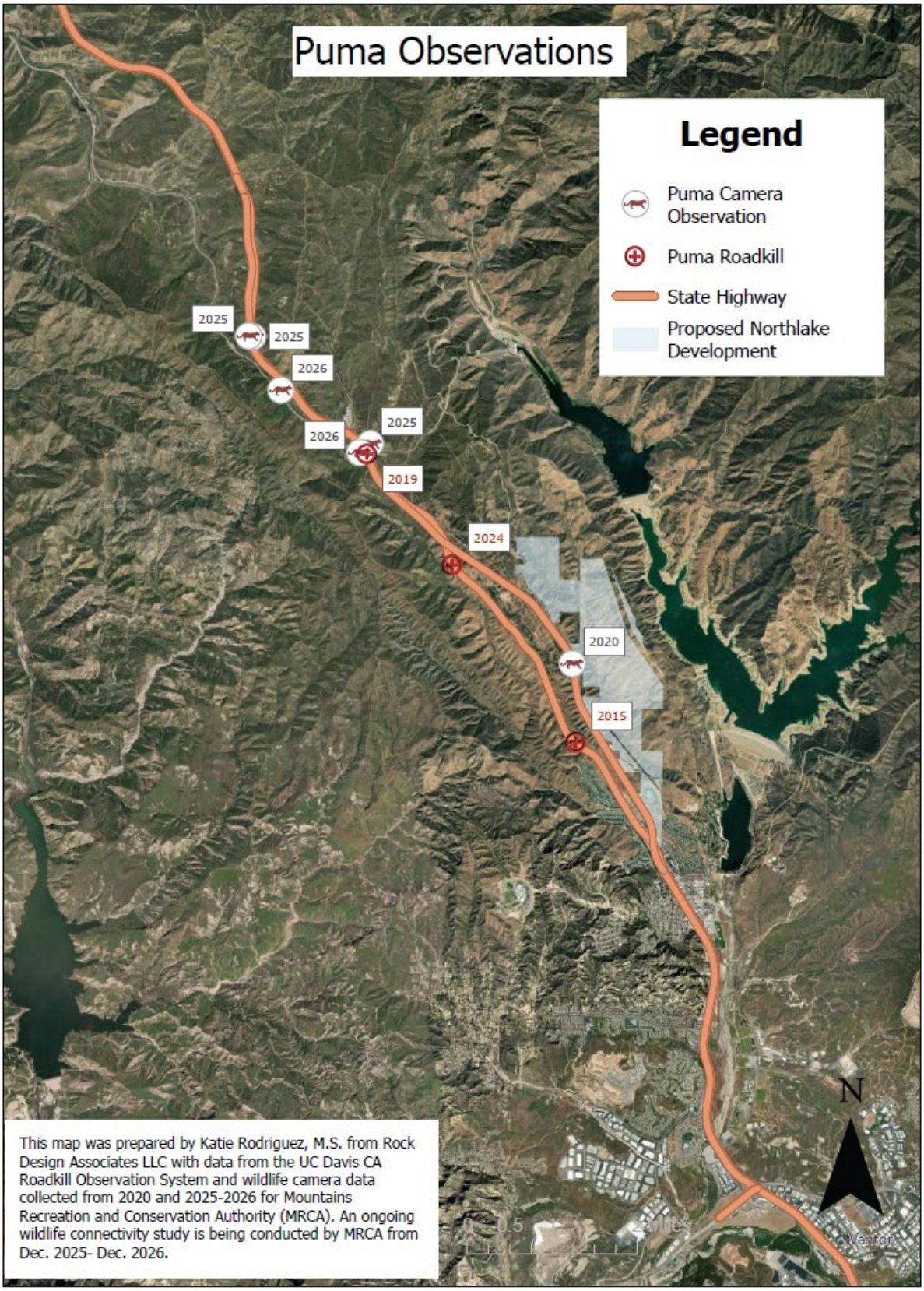

Figure 4: I-5 Mountain lion observation data from MRCA's ongoing wildlife connectivity study.



Figure 4: I-5 Other wildlife observation data from MRCA's ongoing wildlife connectivity study.

II. The RPFSEIR Continues to Provide Insufficient Analysis and Mitigation for Impacts to Western Spadefoot.

The RPFSEIR did not substantially address concerns raised in the Center's May 29, 2025 comment letter regarding the PRDSEIR related to the importance of the western spadefoot (referred to as "WST" in the RPFSEIR) population present at the Project site, the interpretation of previous studies, the uncertainty of success for artificial pools providing adequate breeding habitat, or the importance of connectivity. Instead, the RPFSEIR's primary response is to explain that the Habitat Mitigation and Monitoring Plan ("HMMP") has been approved by CDFW (RPFSEIR 2-28, 29). The RPFSEIR further claims that our previous comment "provides no credible evidence of a potential significant impact not already addressed in the WST analysis or fully mitigated to CDFW's satisfaction."

On the contrary, the Center's May 29, 2025 comment letter explains the uncertainty around long-term success of artificial breeding pools, the importance of redundancy given recent history of drought in California, and the importance of landscape connectivity, as restated below. Regardless of CDFW's approval, the EIR fails to respond to the comment or address the concern, as detailed below.

A. The RPFSEIR Continues to Minimize the Importance of the Project Site for Western Spadefoot.

The RPFSEIR continues to minimize the importance of the western spadefoot population present at the Project site. The RPFSEIR includes no changes regarding western spadefoot analysis and impacts. As such, the RPFSEIR continues to claim that "WST populations are not rare in the nearby areas." (WST Plan, p.7). As described in our previous letter, this claim is contrary to the Applicant's own description in the 2017 Draft Supplemental Environmental Impact Report ("DSEIR"), which states that "the Grasshopper Canyon population is one of few known populations in the region" (DSEIR p. 5.2-36) (and which is quoted in a June 15, 2017 comment letter submitted by CDFW). The claim is also contrary to available evidence regarding the presence of western spadefoot in the region and the current status of western spadefoot populations.

As described in the May 29, 2025 comment letter, we conducted a query of the California Natural Diversity Database ("CNDDB") western spadefoot occurrences on May 21, 2025 including the Mint Canyon, Newhall, Val Verde, and Whitaker Peak, and San Fernando 7.5 Minute Quadrangles ("quads") (note that we included additional quads that were further from the Project site than those displayed in the PRDSEIR to capture the entire Santa Clarita Valley). Our search resulted in 44 total observations, including those at the Project site in the Whitaker Peak quad. Of these observations, only 10 had occurrence ranks (a ranking of the quality of the habitat and the condition of the population at that location) of "Good" or "Excellent;" 10 others were "Fair," 10 were "Poor," 14 were "Unknown" and one was "Possibly extirpated." The CNDDB results therefore do not necessarily indicate a healthy, widespread population—rather, they show that western spadefoot do occur in the area, but while numerous populations appear healthy, numerous others are likely struggling. Importantly, many of the populations in and around the Santa Clarita Valley are highly fragmented and surrounded by roads and development. Such urbanization and development reduce regional and local connectivity across the landscape, isolating these remaining populations. When isolated populations experience years with low reproductive success or become locally extirpated, recovery is difficult because they no longer

have adjacent subpopulations to supply individuals and boost the population or facilitate re-establishment. Therefore, urban development that destroys remaining habitat and continues to fragment dwindling spadefoot populations leads to higher risks of local and regional extinction (Neal et al., 2020). We do not dispute the fact that western spadefoot occur south and west of the project, but this does not mean they are common, and it certainly does not mean they are free from risk of regional decline.

Additionally, the population at the Project site lies in an important location in the species' range, considering western spadefoot biogeography. Western spadefoot in Southern California (south of the Transverse Ranges) are genetically distinct from western spadefoots in central and northern California (Neal et al., 2018). The western spadefoot present in the Project area belong to the southern population. As detailed in a recent Center petition to list western spadefoot as threatened or endangered under CESA, the southern population has experienced more severe declines than the northern population (although both populations have been heavily impacted by habitat loss and continue to decline) (Prado-Irwin, 2025). The population present at the Project site lies at the northernmost extent of the southern western spadefoot population. If the western spadefoot population currently present at the Project site is lost, the range of the southern population will shrink, furthering the pattern of regional decline.

Importantly, very little suitable habitat remains in Los Angeles County or surrounding counties (Rose et al., 2022), so fully protecting the habitat that remains—especially occupied habitat like that which occurs at the Project site–is essential. The Project site represents the last large, undeveloped, core habitat for western spadefoot in the entire County. Thus while the PRDEIR is correct in observing that other populations occur in and around the Santa Clarita Valley, it is important to recognize that this does not diminish the importance of the population at the Project site, especially considering the intact habitat present at the Project site, the lack of suitable habitat in the rest of the County, and the population's position at the northern edge of the southern population's range.

B. The RPFSEIR Still Fails to Provide an Adequate Baseline Regarding Western Spadefoot Presence.

In addition to the issues described above regarding the importance of the western spadefoot population at the Project site, the RPFSEIR also fails to provide sufficient information to establish a reliable environmental baseline at the Project site regarding potential western spadefoot habitat and western spadefoot presence.

The WST Plan states that "WST was observed on the NorthLake Project site during various general and focused amphibian surveys as well as during focused surveys for listed fairy shrimp within seasonal pools" and "While numerous ephemeral ponds and features have been observed on the Project site over time with respect to various surveys for different species, at no time have more than 3 features been observed to contain WST and one additional feature was observed to contain potential WST habitat, despite no WST being observed." (WST Plan, p. 7).

Importantly, the analysis of suitable habitat for western spadefoot was initially extrapolated from surveys for suitable habitat for fairy shrimp, as stated in the WST Plan: "A determination for the extent of suitable habitat for WST is possible from the data collected during wet-season fairy shrimp surveys in 2004/2005, which was one of the wettest rainfall years in the last 50 years" (WST Plan, p. 8). However, fairy shrimp and western spadefoots do not have the same habitat requirements. Fairy shrimp generally occupy clay-pan vernal pools.

Western spadefoots occupy these types of pools as well, but can also breed in many other temporary water bodies, including ditches, erosion cuts, road ruts, and ephemeral streams (Baumberger et al., 2019; Stebbins, 2003).

The WST Plan goes on to state that "In 2014, surveys for fairy shrimp and amphibians, were conducted" (WST Plan, p. 9) but fails to provide any details on survey methodology. It is unclear whether the 2014 surveys used the same methods as the 2004/2005 surveys, in which case non-vernal pool habitats would likely be overlooked, or used a different methodology. Further, the WST Plan provides no information regarding the geographic scope of either survey (2004/2005 or 2014). It is completely unclear whether the entire site was even surveyed for western spadefoot. If indeed the surveys were based on methodology intended to identify vernal pools, they would likely have excluded higher elevation areas or habitats like Grasshopper Creek and temporary pools along eroded areas or defunct roads.

If additional suitable breeding pools do exist at the Project site, based on the survey methodology, it is likely that they would not have been detected. Surveys focused on fairy shrimp in 2004/2005 would have likely excluded water bodies that contain suitable western spadefoot habitat but were not suitable for fairy shrimp. And surveys in 2014, which did target western spadefoot, would not necessarily have detected additional pools due to the "lower-than-average rainfall" that year (WST Plan, p.9). Aside from the lack of detail on the area surveyed, the survey methodology simply does not guarantee that all suitable western spadefoot habitat would have been detected.

Additional temporary waters could occur in many geologic features throughout the Project site, including along small canyons or areas with sandstone erosion, along defunct access roads, and especially in the upstream areas of the ephemeral Grasshopper Creek that experience low and intermittent flows. Given the fact that western spadefoot occupy upland habitat up to 600 meters away from breeding pools (Halstead et al., 2021), if ponding features are present across more of the Project site than presented in the WST Plan—which is likely given the landscape—much of the Project site would present suitable habitat and could be occupied by western spadefoot. However, because the RPFSEIR does provide any detail on how much of the Project site was surveyed, when it what seasons the surveys occurred, or what the climatic conditions of the site were during these surveys, it is impossible to know the extent of the western spadefoot population. It is entirely possible that western spadefoot are much more common throughout the Project site than the RPFSEIR claims, in which case the impacts to this sensitive species from Project construction and operation would be highly significant and potentially catastrophic.

Under CEQA, an environmental review document must evaluate the potential environmental impacts of the project as compared to the existing environmental conditions (the "baseline"), so that the Project's impacts can be meaningfully analyzed and compared to alternatives. (CEQA Guidelines § 15125(a); see County of Amador v. El Dorado County Water Agency (1999) 76 Cal.App.4th 931, 952; Neighbors for Smart Rail v. LA County Metropolitan Transit Authority (2013) 57 Cal.4th 310, 315.) The information provided in the RPFSEIR regarding the presence of suitable western spadefoot habitat does not meet this standard.

C. The Proposed Mitigation for Impacts to Western Spadefoot Remains Insufficient.

As we described in the May 29, 2025 comment letter, the mitigation for impacts to western spadefoot in the form of mitigation ponds is improved from previous environmental review documents, but is still not sufficient to ensure long-term population persistence.

The RPFSEIR claims that "it is speculation to assume that onsite pools will not be successful and thus additional ponds at different locations will be needed." (RPFSEIR at 2-29). However, we do not assume the onsite pools will not be successful without evidence. Rather, the evidence cited in the PRDEIR itself shows that success rates of artificial pools are not 100%. Based on the results of the study conducted by Baumberger et al (2020) and referenced in the PRDSEIR, it is entirely reasonable to expect that some pools may not be successful.

As we wrote in our previous comment letter, Baumberger (2020) investigated the success of artificial breeding pools that were created in 2006 as mitigation for impacts to ten breeding pools at a site in East Orange. The mitigation for this project included the creation of 21 pools to mitigate for the 10 affected pools, providing a total mitigation ratio of 2.1:1. Fifteen of these pools (which became 14 when two pools merged together) were in Irvine Mesa, and six were in Shoestring Canyon. In Shoestring Canyon, all six mitigation pools failed to hold water and breeding western spadefoot were completely absent from the pools and the nearby creek bed during the 2016 survey period (Baumberger et al., 2020). The PRDEIR omits this information, focusing only on the pools in Irvine Mesa, which had higher rates of success, thereby misrepresenting the success of the mitigation and making it appear to be more successful than it was.

Further, the PRDSEIR quotes the following excerpt of the study itself, claiming that this excerpt shows WST breeding in 12 of the 14 pools on Irvine Mesa (WST Plan, p.31):

> Twelve of the 14 mitigation pools at Irvine Mesa held water for >30 d. During our 2016 surveys, two of the mitigation pools built by Glenn Lukos Associates, Inc. merged (Pools 5 and 9) and we considered them as one pool (Pool 9). We detected *S. hammondii* tadpoles in eight of the Irvine Mesa mitigation pools but documented successful breeding through metamorphosis at only seven of these pools in April 2016 due to desiccation and/or water quality.

However, the PRDSEIR misrepresents the findings of this study. This excerpt only says that 12 of the 14 pools held water for >30 days, but merely holding water does not necessarily mean that western spadefoot were breeding in those pools. In fact, the sentence following this excerpt states "*Spea hammondii* did not breed in all the pools with hydroperiods >30 d (Table 3)." (Baumberger et al., 2020). The excerpt itself states that tadpoles were only detected in eight of the pools, and breeding through metamorphosis was only observed at seven of the pools. It is difficult to understand therefore why the PRDSEIR claims that western spadefoot were breeding in 12 of the 14 pools in 2016, when the very excerpt they cite to support this statement says WST only bred in seven of these pools.

The PRDSEIR is misleading and falsely claims that the study's artificial mitigation pools were more successful during the drought year of 2016 than the reality. In fact, only ½ (7/14) of the pools in Irvine Mesa showed successful breeding in 2016, and 0/6 of the pools in Shoestring Canyon showed successful breeding, leading to an overall success rate of just 35% (7/20). Thus the mitigation ratio of 2:1 implemented in the study did not even successfully mitigate for the full impacts to the ten original pools.

The PRDSEIR notes that the 2016 study occurred during a drought year, and that monitoring of the following 2016/2017 season showed tadpoles in 12 of the pools and "extensive breeding was present" (WST Plan p.31). The reference cited to support this claim is not published and is not publicly available (as far as we can ascertain), so it is impossible to determine whether the "12 pools" refers to pools in Irvine Mesa only or in Irvine Mesa and Shoestring Canyon, and therefore it is impossible to determine the overall efficacy of the mitigation during this "ideal" wet year. It appears likely that the study refers only to Irvine Mesa, in which case the population did show a notable increase in pool occupation, but the exclusion of Shoestring Canyon remains unexplained.

Given the variable conditions experienced by vernal pools including drought—which can last for years in California and is expected to become more common in the future (Diffenbaugh et al., 2015)—reliance on a simple 1:1 replacement, which is what the RPFSEIR does, is not sufficient to mitigate for impacts to breeding habitat by creating artificial pools.

The RPFSEIR should take into account the fact that, habitat loss and species displacement from construction of the proposed Project are immediate, while any gains from their mitigation are uncertain. Moilanen et al. (2009) found that "very high offset ratios may be needed to guarantee a robustly fair exchange" and that "considerations of uncertainty, correlated success/failure, and time discounting should be included in the determination of the offset ratio to avoid a significant risk that the exchange is unfavorable for conservation in the long run." Restoring complex ecosystems like ephemeral wetlands often results in reduced ecological function. In studies conducted in California on wetland mitigation sites permitted between 1979 and 2002, less than 20% of mitigated wetlands were performing optimally (Ambrose et al., 2006; Sudol & Ambrose, 2002).

Given the importance of vernal pools and associated upland (heterogeneous) habitat to western spadefoots and numerous other native, rare, and special-status animals and plants, connectivity, and overall biodiversity, the RPFSEIR should provide higher mitigation ratios. In addition, mitigation ratios need to take the types of mitigation to be implemented into consideration, as not all mitigation is created equal. Restoration, enhancement, and creation of habitats can have limited success due to the challenges of establishing the appropriate hydrology when compared to preservation of existing habitats (Matthews & Endress, 2008; Stein et al., 2018; Sudol & Ambrose, 2002; Windmiller & Calhoun, 2007). Scientific studies specifically speak to the need for higher mitigation ratios (along with long-term monitoring, identified and measurable success criteria, and adaptive management strategies) to improve chances of adequately mitigating impacts to habitats and species (Matthews & Endress, 2008; Mitsch & Wilson, 1996; Moilanen et al., 2009; Stein et al., 2018; Sudol & Ambrose, 2002; Windmiller & Calhoun, 2007; Zedler & Callaway, 1999). The western spadefoot's continued survival relies on created wetlands having the appropriate hydrological and biological conditions and adequate upland habitat.

Given that western spadefoots have been extirpated from 80% of their range in Southern California (Stebbins & McGinnis, 2012; US Fish and Wildlife Service, 2005) and amphibian populations in the U.S. are declining at an alarming rate of almost 4% per year (Grant et al., 2016), a higher mitigation ratio than the approximate 1:1 ratio employed by the RPFSEIR is necessary.

Further, the proposed mitigation ponds are very clustered, unlike the current pond arrangement. Currently, the stock pond is approximately 4,000ft away from the seasonal ponds, which are all within approximately 100-400ft of one another (including VP-6/Pond 3) (WST Plan, Exhibit 4). However, the proposed mitigation ponds are all clustered very close together on the west side of the property, within 50ft of one another (WST Plan, Exhibit 5). The PRDSEIR claims that "total acreage as opposed to number of ponds is all that is relevant" (WST Plan, p.18). However, this claim does not consider the importance of landscape connectivity and potential metapopulation dynamics.

The natural history of western spadefoots makes them vulnerable to climate and habitat disturbances. Given the variation in geology, hydrology, climate, and habitat across a landscape, if one population declines or becomes extirpated, it is possible that others nearby can survive and re-colonize. Importantly, high pool density per se is not a problem. We acknowledge that high density of a pool complex can be quite beneficial for connectivity between pools and vernal pool complex hydrology. However, in placing the planned vernal pools so close to one another, and only creating two vernal pools, the Project design has minimized the amount of upland habitat available around the vernal pools and decreased the likelihood of population resilience in the case of an extreme disturbance. If the ponds are clustered, any extreme climatic events or random disturbances are likely to impact all of them in similar ways. On the contrary, if ponds are more spread out across the landscape, the local population is more resilient to random disturbance and potential climatic, hydrological, and ecological changes as well. The RPFSEIR does not address this point at all, and continues to claim that creating two ponds clustered close to one another is sufficient to maintain the spadefoot population at this site. The RPFSEIR fails to consider the importance of redundancy and landscape connectivity to population resilience, especially for a demographically unstable species like western spadefoot. Their high demographic instability makes them particularly sensitive to habitat alterations that may interfere with recolonization and reestablishment after unsuccessful recruitment years (Fisher & Shaffer, 1996).

Western spadefoot populations are often able to persist in the face of environmental variability due to metapopulation connectivity; when one population experiences decline, migrants from surrounding populations can bolster the population and prevent local extirpation. As climate change impacts become more severe and extreme weather events continue to occur, shifts in hydroperiod and increased temperatures expected to become more extreme (Montrone et al., 2019; Pyke, 2004; Thomson et al., 2016), and such population dynamics are likely to be increasingly important for species persistence. Due to reduced connectivity between suitable habitats, populations that are unable to successfully breed may decline and disappear and will be unable to be re-established by neighboring populations, leading to further permanent species decline. It is therefore highly important to consider habitat connectivity between upland and aquatic habitat as well as between different pools and pool complexes.

In Southern California, western spadefoot populations have become extremely fragmented, and persistence of remaining subpopulations of is fragile (Halstead et al., 2021; Neal, 2019; Neal et al., 2020). Additionally, it is more important than ever to prioritize climate resiliency as both drought and extreme storms become more common in California (Diffenbaugh et al., 2015; Swain et al., 2018).

The proposed mitigation therefore remains insufficient because a) the mitigation ratio is too low, and does not provide sufficient replacement habitat in the form of artificial pools and b) the ponds are too close together, increasing the risk of extirpation compared to more dispersed

aquatic habitat. The RPFSEIR thus fails to adequately analyze or mitigate impacts to western spadefoot.

III. The RPFSEIR Dangerously Dismisses the Increased Ignition Risk and Harms to People, Communities, and Wildlife Due from the Project.

The RPFSEIR fails to adequately assess and mitigate the Project's impacts on wildfire risk, and the RPFSEIR's responses to the Center's comments regarding the Project's impacts to wildfire risk are insufficient. The responses mostly point to technical appendices D-1, D-2, and K, which lack adequate analyses and unsubstantiated conclusions. Neither the responses nor the appendices resolve the concerns raised in the Center's May 29, 2025 comment letter. Although Appendix D-1 acknowledges that "the expected fire behavior in the interface of the Northlake development indicates that the fire behavior could produce extreme fire behavior" (RPFSEIR Appendix D-1 at 5), the RPFSEIR somehow, and without providing substantial evidence or using the best available science, concludes that the Project's impacts to wildfire risk are less than significant.

A. The RPFSEIR Overly Relies on Over-burdened Wildfire Protection Services and Resources.

The Project will put more families and structures in harm's way without adequate safeguards for their health and well-being. For example, the RPFSEIR skirts responsibility for when (not if) a fire occurs, stating, "[w]here fires are initialized within the Project Site or near its boundary, the fire incident command and control will have to determine if the population will be moved or "sheltered in place"." (RPFSEIR Appendix D-1 at 5). The Project proponent essentially passes off responsibility for community safety to the County, which has repeatedly failed to keep residents safe from wildfire.

An after action review of the 2018 Woolsey Fire, which resulted in three deaths and more than 1,600 structures destroyed in Los Angeles and Ventura counties, identified that the responding agencies were "overwhelmed" by the fire's "speed and weight of impact" and lacked sufficient trained staff, clear policies and protocols, crisis communication, inter-agency and inter-jurisdictional collaboration, situational awareness, real-time data availability with coordinated response tools, emergency preparedness, and evacuation plans (Citygate Associates, 2019). These same issues have come up in other wildfire disasters throughout the state that occurred around the same time, including the 2017 Tubbs Fire (County of Sonoma, 2018) and 2018 Camp Fire (Constant Associates, 2020).

Despite these reports on lessons learned from fires that occurred seven years ago, the County of Los Angeles and likely many other counties have failed to make the necessary improvements. This is evident with the response to the Eaton and Palisades fires. The County was plagued with the same problems as previous fires, which led to fatal errors and destruction (Jarvie, 2025; McChrystal Group, 2025). Lack of funding, insufficient staffing, unclear and outdated evacuation protocols, limited firefighting resources, insufficient communications and alerts, and more resulted in the death of at least 31 people, the destruction of more than 17,000 structures, and the loss and upheaval of many communities that will be recovering for years to come.

The appendix provides "a simple decision tree for evacuation vs. protecting people in place" (RPFSEIR Appendix D-1 at 75). However, as detailed in the numerous incident reviews

cited above, such decisions while navigating these crises are anything but simple, particularly at a time when wildfires are moving faster and climate change is amplifying extreme weather conditions and wildfire risk (Goss et al., 2020; Swain, 2021; Swain et al., 2018, 2025). The after action review of the Woolsey Fire states, "the size and speed of the Woolsey Fire, at times, outpaced the early efforts of some of the largest and most experienced and capable agencies in the United States" (Citygate Associates, 2019). The review also highlights the need to manage the public's "unrealistic expectations" of agency abilities to protect communities from fire, stating, "[w]e cannot expect that all population growth in Very High or High Fire Hazard Severity areas can be protected simply by increasing resiliency [hardening buildings, fuels treatment, and vegetation management] to wildfire and by adding more fire engines" (Citygate Associates, 2019). The RPFSEIR cannot rely on "fire incident command and control" to keep people safe from wildfire while adding to the burden by placing more people and structures in high fire-prone areas.

In addition, relying on sheltering in place if evacuation becomes infeasible has no basis in U.S. fire safety standards and cannot protect thousands of residents in a fast-moving wildfire. While some measures can reduce fire risk, they do not make structures or communities fire*proof*. Experts found that 56% of homes built to Chapter 7A fire-safety codes burned in the 2018 Camp Fire (Knapp et al., 2021). And such measures do not prevent structure-to-structure fire spread during extreme wind events (Knapp et al., 2021; Zamanialaei et al., 2025). Without population-level standards or evidence that thousands of residents could survive while trapped inside their homes or "safety zones" or "areas of refuge" to be identified after a fire has already been ignited (RPFSEIR Appendix D-1 at 76), sheltering in place cannot be an option.

The RPFSEIR also relies on a new fire station that may not ever get built. According to the appendix, "[a] site will be provided for a new fire station within the development. In addition, the project will pay its proportionate fees for the construction of that station which will enhance the regional fire protection already in place" (RPFSEIR Appendix D-1 at 4). However, as mentioned in the Center's May 29, 2025 comment letter, there is no guarantee that a fire station would actually be built. And even if it were to be built, it is unclear if human and monetary capital will be sufficient to sustain and maintain a new fire station. There is no requirement that the developer pay for the county's costs of building or operating a station, nor is there any guarantee that sufficient firefighting personnel and equipment will be available. During the LA wildfires in January 2025, firefighters lacked enough personnel and fire engines to keep all communities safe (Fuller et al., 2025; Toohey & Fry, 2025). The personnel cost over the life of the Project (essentially forever) will likely be hundreds of millions of dollars. Funding is already lacking for the increasing costs of fire suppression and property damage from wildfires in California, and the developer is not required to reimburse the California Department of Forestry and Fire Protection (CalFire) for the many millions (or billions) of dollars CalFire will likely expense when (not if) Centennial needs to be defended from wildfire. The cost of fire suppression in areas managed by CalFire has skyrocketed from $114 million in the 2000-2001 fiscal year to close to $3 billion for the 2020-2021 and 2021-2022 fiscal years combined (CalFire 2022). The Legislative Analyst's Office (LAO) reported that CalFire used an estimated $3.3 billion for wildfire protection and suppression in the 2022-2023 fiscal year (LAO 2023). And as mentioned previously, climate change is amplifying extreme weather conditions and wildfire risk (Goss et al., 2020; Swain, 2021; Swain et al., 2018, 2025), which is making it more challenging to protect communities from wildfire. Such information must be analyzed when assessing wildfire risk.

This build now, deal with it later approach is no way to house Californians.

B. The Project's Impacts to Wildfire Risk are Significant and Unavoidable.

The RPFSEIR erroneously concludes that the Project's impacts to wildfire risk are less than significant. The RPFSEIR states that the Center's May 29, 2025 letter "provided no credible evidence of a significant wildfire impact" (RPFSEIR at 2-27), which is false. We provided ample scientific evidence that is specific to California ecosystems and land use practices that unequivocally highlights that placing new developments in fire-prone habitats increases ignition risk. As mentioned in the Center's May 29, 2025 comment letter, reckless land-use planning that extends the wildlife-urban interface ("WUI") further into California's fire-prone landscape is causing fires to be more destructive. Almost all destructive wildfires are accidentally ignited by humans or human infrastructure near roads and development (Balch et al., 2024; Chen & Jin, 2022; Keeley & Syphard, 2018; Syphard et al., 2019).

According to a report from Governor Gavin Newsom's Office, construction of more homes in the wildland-urban interface is one of the main factors that "magnify the wildfire threat and place substantially more people and property at risk than ever before" (Governor Newsom's Strike Force, 2019). Another 2019 study found that housing and human infrastructure in fire-prone wildlands are the main drivers of fire ignitions and structure loss (Syphard et al., 2019). Sprawl developments extending into habitats that are prone to fire have led to more frequent wildfires caused by human ignitions, like power lines, arson, improperly disposed cigarette butts, debris burning, fireworks, campfires, or sparks from cars or equipment (Alexandre, Stewart, Keuler, et al., 2016; Alexandre, Stewart, Mockrin, et al., 2016; Balch et al., 2017; Bistinas et al., 2013; Keeley et al., 1999; Keeley & Fotheringham, 2003; Keeley & Syphard, 2018; Radeloff et al., 2018; Syphard et al., 2007, 2012, 2019).

Yet the RPFSEIR dismisses this established science, simply stating "Appendix K (Wildland Fire Risk Report Northlake Project Addendum #1) specifically addresses risk from new human presence in high fire-prone areas and the wildlife-urban interface (WUI) and concluded that "the increased wildfire risk from human-ignited wildfire is less than significant"" (RPFSEIR at 2-27). However, upon inspection of Appendix K, the RPFSEIR fails to provide credible evidence that supports their conclusions. The appendix seemingly avoids recent California studies, opting instead to highlight one 2009 California study and a few studies conducted in central Texas and Canada to argue that "at a point of development density, wildland fuels are reduced/eliminated or fragmented to a point where fire suppression effort are more effective" (RPFSEIR Appendix K at 2). However, this rationale is false and dangerously misleading. Although previous studies have found that low to intermediate development density surrounded by vegetation had the greatest risk of burning in a wildfire (*i.e.*, Syphard et al., 2012), more recent analyses show that once structures ignite in high-density development, there is an increased risk of fire through structure-to-structure spread (Knapp et al., 2021; Mockrin et al., 2023; Zamanialaei et al., 2025). Wildfires in the WUI since 2017 demonstrate this falsehood. High density development was extremely vulnerable and many lives and homes were lost in Santa Rosa, Paradise, Palisades, and Altadena in the 2017 Tubbs Fire, the 2018 Camp Fire, the 2025 Palisades Fire, and the 2025 Eaton Fire, respectively. To dismiss these horrific tragedies is a complete failure to analyze relevant information that is necessary to keep communities safe. The RPFSEIR endangers families by ignoring glaring truths and excluding analyses of these recent California wildfires.

C. Wildfire in the Wildland Urban Interface Leads to Harmful Air Quality and Health Impacts

The RPFSEIR fails to adequately respond to the Center's comments regarding how wildfires in the WUI cause poor air quality and therefore harm people, stating the following:

> "[c]ommenter speculates that an unintentional wildfire in the Project Area would result in poor air quality; none of the commenter's citations are Project Site specific. CEQA does not require the analysis of speculative impacts. (CEQA Guidelines Section 15145.) Commenter provided no credible evidence of a significant wildfire impact" (RPFSEIR at 2-27).

This is false. Such impacts are not mere speculation. Providing evidence that is site-specific to Northlake is unnecessary. When unintentional wildfires occur, science and experience show (and common sense dictates) that burning vegetation and structures filled with toxic metals, plastics, and other hazardous chemicals release $PM_{2.5}$ and toxic smoke, and such air pollution harms people. Numerous scientific studies provided with the Center's May 29, 2025 comment letter support the fact that wildfires result in an increases fine particulate matter ($PM_{2.5}$) exposure, which has been found to have severe health effects, including respiratory and cardiovascular symptoms; higher rates of dementia, cancer and other serious disease; and premature death. Other studies have found that toxic smoke from building structures can travel more than 150 miles. For more details and citations see the Center's May 29, 2025 comment letter and Section D: Wildfires in the Wildland Urban Interface Harm People and Wildlife. The RFPSEIR fails to adequately assess the Project's impacts to wildfire risk and the impacts of ignition to air quality and human health.

D. Wildfires in the Wildland Urban Interface Harm People and Wildlife

The RPFSEIR must consider that when wildfires burn through communities, they threaten homes, livelihoods, lives, and health. In addition to the immediate impacts of lives and homes lost, evacuations and displacement, impacts from air pollution, soil contamination, lost jobs, and the trauma of escape and recovery extend well beyond the fire footprint and last long after the fire is extinguished. Impacts to wildlife are also potentially long-lasting. The RPFSEIR downplays and dismisses the serious and cascading consequences of more wildfire in the WUI and continues to lack adequate wildfire analyses and mitigation.

i. Wildfire Impacts Disproportionately Affect Low-income, Minority Communities

Impacts of wildfire disproportionately affect vulnerable communities with less adaptive capacity to respond to and recover from hazards like wildfire. Low-income and minority communities, especially Native American, Black, Latinx, and Southeast Asian communities, are the most marginalized groups when wildfires occur (Davies et al., 2018).

Those in at-risk populations (*e.g.,* low-income, elderly, disabled, non-English-speaking, unhoused) often have limited resources for disaster planning and preparedness (Richards, 2019). Vulnerable groups also have fewer resources to have cars to evacuate, buy fire insurance,

implement fire-resilient retrofits, maintain defensible space around their homes, or rebuild, and they have less access to disaster relief during recovery (Davis, 2018; Fothergill & Peak, 2004; Harnett, 2018; Morris, 2018; Ong, Pech, Frasure, et al., 2025; Richards, 2019; Vives & Castillo, 2025). And survivors are left without resources to cope with the death of loved ones, physical injuries and emotional trauma from the chaos that wildfires have inflicted on their communities.

Emergency services often miss at-risk individuals when disasters happen because of limited capacity or language constraints (Richards, 2019). This was the case for both the Palisades and Eaton fires. Many elderly and disabled community members unable to evacuate on their own were left stranded as the wildfires advanced, and the median age of those who died in the fires was 77 (Ellis, 2025; Jarvie et al., 2025). Meanwhile, delayed evacuation alerts and limited fire trucks in western Altadena, a predominantly Black and Latino neighborhood, resulted in 18 of the 19 deaths from the wildfire (Castleman, 2025; Ellis & Greene, 2025; Toohey & Jarvie, 2025).

In the aftermath of wildfires and other environmental disasters, news stories have repeatedly documented the lack of multilingual evacuation warnings leaving non-English speakers in danger (Axelrod, 2017; Banse, 2018; Gerety, 2015; Ong, Pech, Ong, et al., 2025; Richards, 2019). This was exemplified during the Eaton and Palisades fires; evacuation alerts were only sent in English and Spanish, leaving more than 12,000 Asian Americans with limited English proficiency in the evacuation zones without potentially life-saving information (Ong, Pech, Ong, et al., 2025).

Health impacts from wildfires can have both acute and long-term health effects that disproportionately affect vulnerable populations, like children, the elderly, pregnant women and fetuses, those with underlying chronic disease, low-income communities, and communities of color. A recent study found that wildfire smoke now accounts for up to 50% of ambient fine particle pollution ($PM_{2.5}$) in the western United States (Burke et al., 2021).

Increased exposure to fine particulates in wildfire smoke has been linked with increased hospital visits for respiratory symptoms (*e.g.*, asthma, acute bronchitis, pneumonia, or chronic obstructive pulmonary disease) and cardiovascular symptoms (*e.g.*, congestive heart failure, ischemic heart disease, and myocardial infarction) (Delfino et al., 2009; Künzli et al., 2006; Liu et al., 2015; Rappold et al., 2012; Reid et al., 2016; Viswanathan et al., 2006). It has also been linked to higher rates of dementia (B. Zhang et al., 2023; Z. Zhang et al., 2023). And experts have also found that greater exposure to wildfire smoke and excessive heat during the month before conception and the first trimester of pregnancy is linked with greater risk of both short- and long-term health problems (Evans et al., 2022; Khalili et al., 2025). Researchers estimated that between 2008 and 2018 more than 50,000 premature deaths were caused by California wildfire smoke (Connolly et al., 2024). As climate change intensifies, scientists predicted that wildfire smoke could cause approximately 700,000 excess deaths between 2025-2055 (Qiu et al., 2025).

Wildfires in the WUI can lead to other harmful public health impacts due to increased exposure to toxic contaminants from burned buildings, cars, electronics, and more. Buildings and infrastructure often contain plastic materials, heavy metals, benzene, and carcinogenic gases. These toxic chemicals pose a threat in the burn area and they can travel long distances.

During the 2018 Camp Fire that burned 19,000 structures, the smoke caused dangerously high levels of air pollution in the Sacramento Valley and Bay Area and the California Air Resources Board found that high levels of heavy metals like lead and zinc traveled more than 150 miles (CARB, 2021). And unsafe levels of lead, arsenic, and other dangerous metals have

been documented in and downwind of the Eaton and Palisades fire footprints (Champlin, 2025; Smith & Briscoe, 2025).

Families living or working in or near the burn area also risk increased exposure to hazardous chemicals. After the Eaton Fire, some families with no other options returned to live in homes deemed "uninhabitable" by insurance companies, surrounded by toxic debris (Vives & Castillo, 2025). Almost 50% of schools where students had returned to in the Pasadena Unified School District had elevated levels of lead and arsenic in their soils due to toxic ash, which can have damaging effects on the nervous system, cardiovascular system, and kidneys (Haggerty & Briscoe, 2025). And farmworkers often have to continue working while fires burn and pollutants fill the air, or risk not getting paid (Herrera, 2018; Kardas-Nelson et al., 2020; Parshley, 2018). Wildfire victims have also had to deal with lack of funding and support for cleanup as well as improper cleanup, "adding to the trauma" they have already endured (Briscoe, 2025; Briscoe et al., 2025).

Service workers also face increased risk. Firefighters are suffering disproportionately high rates of cancer and other serious diseases (Dreier, 2025; Hwang et al., 2023; Johnson & Lam, 2023) as well as mental health issues due to extended fire seasons and working extended shifts away from their families (Ashton et al., 2018; Bransford et al., 2018; Del Real & Kang, 2018; Greene, 2018; Gutierrez, 2018; Simon, 2018). And firefighters who fought blazes in the LA wildfires had high levels of lead and mercury in their blood, (Hernandez, 2025). Fire cleanup workers also risk increased exposure to harmful chemicals; they often do not use appropriate protective gear as they remove toxic debris from the burn area (Haggerty, 2025).

Scientists are continuing to uncover the devastating health impacts of wildfires in the WUI. In a study that included more than 1,100 participants that were affected by the 2023 wildfires in Maui, Hawai'i, researchers found that six to 14 months after the wildfires more than 20% of participants had reduced lung function and almost 50% had clinical symptoms of depression (Juarez et al., 2025). The majority of participants reported food insecurity, economic hardship, and displacement due to the wildfires (Juarez et al., 2025), and in the month of the wildfires, the suicide and overdose rate doubled (Purtle et al., 2025). Other experts attributed more than 400 additional deaths to the LA wildfires, likely due to poor air quality, delays in health care, and other factors (Paglino et al., 2025).

Science unequivocally shows that California wildfires in the WUI are increasing negative health impacts within and beyond their footprint. Proper analyses and mitigation of the Project's impacts on wildfire ignition, wildfire spread, and the negative health impacts associated with wildfire are needed. The RPFSEIR fails to accomplish this and is dangerously deficient.

ii. Wildfires in the WUI Threaten Vulnerable Wildlife

Wildfires are a natural and necessary process in many of California's ecosystems, and many areas need beneficial fire to restore ecosystem health and cultural connection to the land. However, the last decade of unprecedented wildfires in the wildland urban interface ("WUI") are pushing fragmented populations of sensitive species to the brink. Wildlife, including genetically isolated mountain lions, remnant populations of frogs and fish, resident and migratory birds, nearby marine life, and more are all vulnerable to direct and indirect impacts from wildfire. They can suffer burns, smoke-induced asphyxiation, heat stress, traumatic injuries, and death (Garcês & Pires, 2023).

For example, two mountain lion deaths in the Santa Monica Mountains were attributed to the 2018 Woolsey Fire. Although mountain lions are highly mobile and generally able to move away from wildfires, these lions were unable to escape to safety because they were boxed in by roads and development. In addition, researchers found that after a large wildfire in an urbanized region, mountain lions avoided burn areas and increased risky behavior that could lead to more conflict with people, increased mortality, and extinction risk (Blakey et al., 2022). Such deaths can further destabilize small mountain lion populations that are already facing numerous other threats, including low genetic diversity, vehicle strikes and rodenticide poisoning, and make them more vulnerable to local extinction (Benson et al., 2016, 2019).

Smoke inhalation from wildfires can lead to negative health effects, like carbon monoxide poisoning, damage to lung tissue, and weakened immune response, in both terrestrial and aquatic wildlife (Sanderfoot et al., 2021). Smoke exposure can also cause shifts in animal behavior and stress levels, which could influence short- and long-term health and survival (Sanderfoot et al., 2021). One study found that increased smoke exposure led to decreased body condition (i.e., lower body mass) of wild birds in California, which suggests that they expend more energy while coping with sub-lethal health effects of smoke exposure (Nihei et al., 2024).

Heavy rains after wildfire can trigger landslides and debris flows that threaten small populations of sensitive, less mobile species that have been diminished due to habitat loss and fragmentation from sprawl development, dams, disease, non-native predators, and other threats. After the 2020 Bobcat Fire, biologists were desperate to rescue remnant populations of yellow-legged frogs, Santa Ana suckers, unarmored threespine stickleback fish, speckled dace, arroyo chub and arroyo chub because they were concerned that post-fire debris flows due to winter rains would wipe out their populations in the fire zone (Sahagun, 2020). Biologists conducted similar rescue missions for the last-known populations of Southern California steelhead and northern tidewater gobies in the Santa Monica Mountains after the 2025 Palisades Fire (Seidman, 2025a, 2025b, 2025c).

Historically, these species would have been able to recolonize from neighboring populations after the loss of individuals or populations to fire impacts. Unfortunately, that ability is now limited by the species' currently small and fragmented population structure. Continued alteration of historical fire regimes due to sprawl development will further endanger remnant populations.

Devastation caused by wildfire in the WUI is far-reaching and long-lasting. We have yet to uncover the full extent of harm such wildfires due to wildlife and the habitats they rely on, but it is certain that careless land use planning and policy are causing death and destruction in the natural world. The RPFSEIR fails to adequately assess and mitigate the Project's impacts on wildfire risk and how increased ignitions will impact biological resources.

iii. The RPFSEIR fails to consider mitigation related to wildlife insurance for new residents and owners.

California is facing an insurance crisis. Many private insurers are leaving California or otherwise refusing to insure homes built in the wildland-urban interface (like the Proposed Project), and this has resulted in an addition of approximately one half of a *trillion* dollars of added assets being "covered" under California's FAIR Plan, which was designed to be a wildfire insurance of last resort for homeowners otherwise unable to obtain coverage (and is owned and managed by the State) (Saleh, 2025). In turn, this has caused a major uptick in premiums on the

State's FAIR Plan, which has led some homeowners to forego wildfire insurance altogether. (*Id*.) And many of the homeowners that have been able to retain private wildfire insurance have been unable to actually be reimbursed through their insurers' claims process (Overland, 2025 [discussing litigation filed by victims of the recent fires in Los Angeles against their insurer for failing to pay out valid claims resulting from those fires]).

The RPFSEIR should therefore analyze whether the residences contemplated will be insurable through private insurers or will require access to the California FAIR Plan and what each home's premium ought to be. (*Laurel Heights Improvement Assn.,* 47 Cal. 3d at 392.) In undertaking that analysis, the Project proponent must also take into account that many private insurers have a documented practice of underinsuring homes when contracting for wildfire insurance, and that this practice of underinsurance has resulted in many homeowners receiving far less than their home's worth from their insurer after their homes are destroyed by wildfire (Neilson, 2025). Moreover, the RPFSEIR should include a mitigation measure requiring the Project proponent to financially cover the wildfire insurance for the homes being sold or otherwise disclose accurate and helpful information regarding the availability of private or public wildfire insurance, the costs thereof, and the risks inherent in obtaining such insurance and, more importantly, in foregoing to do so when advertising and selling the residences contemplated under the Proposed Project and Specific Plan. (14 C.C.R. § 15021(a).) In fact, the State is working on preparing and publishing a tool that would help facilitate that process (Rahim, 2025).

IV. The County's Environmental Review of the Project's Significant Transportation Impacts Is Deficient.

This Project will increase regional vehicle miles traveled ("VMT'') by more than *one hundred million miles* each year, running against California's goals to reduce car-based lifestyles, vehicle accidents, greenhouse gas emissions, and air pollution. By building in the wildland urban interface far from existing services, this Project will entrench automobile dependence for the Project's residents for decades to come. The impacts from this enormous increase in car travel are significant and must be mitigated as such.

Providing alternatives to single occupancy vehicle travel is essential to building an efficient, sustainable and equitable transportation system. Unfortunately, the U.S. is far from achieving a multi-modal transit system, and projects like this move California even further from that target. In 2013, one study found that 76.4% of U.S. daily commutes were people driving alone (McKenzie, 2015). According to the EPA, the collective daily transportation in the U.S. constitutes about 27% of the total greenhouse gasses released (U.S. Environmental Protection Agency, 2017). California's annual average emissions associated with passenger vehicles between 2000 and 2020 was approximately 110 million metric tons of CO2 equivalent, or 25% of the state's total emissions. (CARB, 2022).

Increasing a region's VMTs isn't just bad planning, it also undermines community health. Increasing VMT increases emissions of air pollutants such as nitrogen oxides (NO_x), volatile organic compounds (VOCs), carbon monoxide, heavy metals, carbon dioxide and respirable particulate matter ($PM_{2.5}$). Increasing VMT also leads to more ozone (O_3) production through the photochemical reactions of NO_x and VOCs emitted by vehicles. (Fu et al., 2021). Short- and long-term exposure to several of these pollutants has been linked to premature mortality, compromised birth outcomes, heart disease and a host of respiratory illnesses (Mujtaba & Shahzad, 2021).

Another serious direct impact of increasing the number of cars on roads, like the Project would do, is automobile crashes, which have historically been the leading cause of death among adolescents in the United States. (Goldstick et al., 2022 [showing vehicle crash as the top cause of death from 1999 to 2019, when firearm deaths narrowly surpassed vehicle deaths]). An estimated 42,915 people in the U.S. died in car crashes in 2021 alone and 3.4 million people are injured each year, which costs an estimated $473.2 billion annually as measured by wage and productivity losses, medical expenses, motor-vehicle damage, and employers' uninsured costs (Frumkin et al., 2004; U.S. Department of Transportation, 2022). The rate of deaths due to traffic has been increasing since 2013. (National Safety Council, 2026)

Beyond the direct impacts, increased VMT has long term impacts on commuters. In 2019, the duration of the average daily commute in the United States increased to a new high of 55.2 minutes, and a record 9.8 percent of commuters reported daily commutes of at least 2 hours (Burd et al., 2021). These long commutes reduce the amount of time that workers are available to spend with family, friends, and community. The increase in inactivity and isolation can also lead to long-term health complications such as pre-diabetes, diabetes, obesity, asthma, isolation, stress and depression (Ewing et al., 2003; Leyden, 2003). In contrast, developments that facilitate commuting my mass transit, foot, or bicycle increase people's overall activity level and health. (Sahlqvist et al., 2012).

Given the myriad public health problems associated with increased car dependance, it should be a priority of the County to reduce VMT with every new project, especially for projects as large as this. The County needs to continue investing—and requiring project applicants to invest—in alternative modes of transportation to not only make multi-modal transit cheaper, quicker, and easier than passenger vehicle transit. Best practices for transportation options should include providing free public transit services for future residents and workers; implementing bus only lanes; optimizing bus routes to minimize overlap and ensure coverage across the city in line with demand; and providing high-frequency, reliable services with regular bus stops for easy access.

Studies indicate that free public transit services typically result in ridership increase from 20% to 60% in a matter of just a few months (Studenmund and Connor, 1982). Similarly, bus lanes that reduce total transit door-to-door travel times by 5%-15% will increase urban peak ridership 2%-9% (UCLA Institute of Transportation Studies, 2019). Lastly, ensuring accessibility and convenience is essential to increasing ridership. Providing more bus stops decreases the distance residents have to travel to access such services.

Instead of pursuing these common-sense solutions, this Project envisions continuing California's failed experiment of building car-centered infrastructure by creating a sprawling, low density, mass transit desert far from any existing services. This will result in the Project's residents being tethered to their cars for their every need for decades to come. The VMT analysis shows that the Project will induce over 100 million miles travelled per year. (RPFSEIR Appx. C-1 at 9.) This dramatic amount of automobile travel will result in an average of 1.38 of the Project's residents to die each year in vehicle accidents. (National Safety Council, 2026 [showing a death rate of 1.38 people per 100 million miles travelled].) Vehicle travel resulting from the Project will also emit 53,873 tons of CO_2 per year, 220 pounds of Nox per day, 657 pounds of carbon monoxide per day, and 237 pounds of particulate matter 10 per day. (Draft SEIR at 5.1-34, 5.7-26.) This Project will steer region in the opposite direction of local, county, and state policy, eroding community and environmental health to build yet more car-dependent infrastructure.

The RPFSEIR fails to adequately assess and mitigate the VMT, GHG, air pollution impacts from the massive increase in car travel that will be caused by this Project.

A. The RPFSEIR'S VMT Analysis is Unsupported and Deficient

The County argues that this Project, which will add one hundred million VMT to the area's roadways each year, does not have a significant traffic impact. The Project's enormous VMT impacts are significant when compared to the County-established threshold. Yet instead of using its established threshold, the County instead used an inapposite environmental baseline and threshold of significance to preclude a finding of significance. These findings are not supported by substantial evidence. The County must recirculate the EIR to explain how it will mitigate its significant impacts to VMT.

i. The County Was Required to Perform a VMT Analysis in the RPFSEIR

Senate Bill 743, passed in 2013, amended CEQA to require lead agencies to replace the outdated level of service traffic metric with VMT. (See Guidelines § 15064.3). The level of service analysis focused on how a project would impact road congestion, a metric that does not factor in GHG emissions or air pollution. The purpose of SB 743 was to amend CEQA to be more "able to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution, [while] promoting the development of a multimodal transportation system, and providing clean, efficient access to destinations." (Steinberg, 2013). In other words, SB 743 aligns CEQA with California's climate goals by focusing the traffic analysis on how much a project will impact automobile use, rather than how a project will impact road congestion.

Though Senate Bill 743 was passed after the 1992 development was approved, CEQA requires the County to replace its outdated level of service analysis with a VMT analysis. CEQA Guidelines section 15007(b) states that "new requirements in amendments will apply to steps in the CEQA process not yet undertaken by the date when agencies must comply." This step in the CEQA process—the Revised Partial SEIR—could not have begun before the final judgment granting the Center's writ of mandate was filed by the Los Angeles County clerk. This filing occurred on February 1, 2021, well after the new VMT requirement took effect on July 1, 2020. (See Guideline § 15064.3.) As such, the VMT CEQA Guidelines apply to this RPFSEIR, and the County was required to redo its 1992 traffic analysis.

The County recognized this requirement and prepared a Transportation Analysis because the "level or service metric . . . is no longer the applicable metric for identifying significant impacts under CEQA." (RPFSEIR Appx C-1 at p. 1.) While the County appropriately decided to conduct this analysis, the analysis and its attendant findings were deficient.

ii. The Environmental Baseline Used in the VMT Analysis is Unsupported

The new traffic analysis found that VMT impacts were not significant. The County's conclusion is flawed for two reasons. First, the appropriate environmental baseline is the existing, undeveloped baseline. Instead, the Conty used the hypothetical baseline of the 1992 project at full buildout. Second, the threshold of significance chosen by the County is not supported by substantial evidence.

The County used the 1992 project and its 12,585 hypothetical residents as the environmental baseline, rather than the actual baseline, which is no residents. The County's

attempt to obfuscate the significance of the Project's VMT impacts by inflating the environmental baseline violates CEQA. As evidenced thoroughly in the Center's May 29 letter, a foundational aspect of CEQA is to treat the *existing* environment as the baseline. The County provided no rebuttal to the abundant evidence provided by the Center, failing to cite a single case, provision of the Public Resources Code, CEQA Guideline, or County policy. Instead, the County relies on unsupported assertions that the previous project, which was never built, was not hypothetical.

Though the development had been approved in 1992, that approval does not constitute an acceptable baseline. The CEQA Guidelines and Supreme Court speak directly to this set of facts, detailing that permitted conditions are not the same as a CEQA baseline. The Guidelines detail that "an existing conditions baseline shall not include hypothetical conditions, *such as those that might be allowed, but have never actually occurred*." (Guidelines § 15125(a)(3) [emphasis added].) The Supreme Court has held that "a long line of Court of Appeal decisions holds, in similar terms, that the impacts of a proposed project are ordinarily to be compared to the actual environmental conditions existing at the time of CEQA analysis, *rather than to allowable conditions defined by a plan* or regulatory framework." (*Communities for a Better Environment v. South Coast Air Quality Management Dist.*, 48 Cal. 4th 310, 320-321 [emphasis added].) Though the 34-year-old development approval set some "allowable conditions," those conditions never came to fruition. The "actual environmental conditions existing at the time of" this RPFSEIR are undeveloped land with no residences and minimal business activity. The environmental baseline must be set based on this reality, not the hypothetical project.

Using this appropriate, existing environmental baseline would undeniably lead to a finding of significance because the Project would add 275,141 VMT to the region each day compared to the negligible existing VMT associated with the Project area.

As described in the next subsection, even if the Project uses the generous Southern California Association of Governments environmental baseline of 22.3 VMT per capita, the Project will nonetheless result in significant VMT impacts.

iii. The VMT Significance Threshold Used by the County is Unsupported

The appropriate threshold of significance of 18.5 VMT per capita has already been established by the County, yet the County failed to use this threshold for the Project.

Los Angeles County prepared a SB 743 Implementation and CEQA Updates Report ("County Guidance") in 2020 to help guide agencies through Senate Bill 743 VMT analyses for the purposes of CEQA review. This County Guidance sets the baseline VMT for North Los Angeles County, where the Project is located, for a residential project at 22.3 VMT per capita. (Los Angeles County, 2020, pp. 16, 30). The County Guidance sets the VMT significance threshold at 16.8% below this baseline. (Los Angeles County, 2020, pp. 16, 29). In this case, a 16.8% reduction from the 22.3 VMT per capita equals 18.5 VMT per capita. (Los Angeles County Public Works, 2020, p. 11).

The significance threshold of 18.5 VMT per capita is dramatically lower than the Project's 25.7 VMT per capita. (RPFSEIR Appx. C-1 at 9.) Since the per capita VMT will greatly exceed the County-established significance threshold for residential projects, the VMT impacts from the Project are significant and must be analyzed and mitigated as such.

Instead of using the County's own guidance for residential projects, the County declares that any decrease in VMT per *service population* compared to the 1992 project automatically

results in insignificance. (RPFSEIR Appx. C-1 at p. 7.) As described in the County Guidance, VMT per service population is the correct metric only when a project is *not* a residential or office project. (SB 743 Implementation Report, 2020, p. 30). This is because VMT per service population is intended to include the VMT from both a development's residents and employees commuting to "service" the development's businesses. As such, the baseline for VMT per service population is higher than per capita because it includes these worker trips from outside the development.

Where, as here, a development has no businesses, this metric does not make sense. This Project is almost entirely residential, with only 22.9 acres of the 1329.7 acre Project zoned as commercial or industrial. (PRFSEIR at Ex. 1). Non-residential VMT makes up just 3.2% of the Project's overall VMT. (RPFSEIR Appx C-1 at 4 [showing commercial retail VMT at 3,670, recreation/park VMT at 2,640, and school VMT at 2,640].)

The County argues that the Project's impacts are not significant because VMT per service population decreased from 27 to 25.7 for the 1992 development compared to the 2018 Project. Yet the correct metric is VMT per capita, which is the exact same for both projects. The RPFSEIR must redo its analysis using this per capita metric rather than the unsupported per service population metric.

iv. The Traffic Analysis's VMT Per Capita is Flawed

Beyond using an unsupported environmental baseline and significance threshold, the entire VMT analysis understates the amount of driving that the Project will cause. As noted in footnote 2 of the VMT and Service Population Calculation Worksheet, the only trips used in the analysis include "2 trips per employee (26.4 VMT per employee/2 trips per employee =13.2 miles." (RPFSEIR Appx C-1 at 9.) This meager VMT accounting ignores that the Project will require residents to drive to fulfill all their daily needs, not just to get to work. Unaccounted for are trips to the grocery store, to drop kids off at school, to medical appointments, to restaurants, to cultural and social events, and more. And since this Project sprawls into undeveloped lands without existing services, residents would need to travel miles to existing urban centers to fulfill these needs. If these unaccounted for trips were included in the VMT analysis, the overall VMT would no doubt be substantially higher As such, the VMT analysis is not supported by substantial evidence.

v. The RPFSEIR Fails to Incorporate All Feasible Measures to Mitigate VMT Impacts

Since the Project's VMT impacts are significant, the County must implement all feasible mitigation measures. The RPFSEIR fails to do so, requiring no mitigation for VMT. Even if the County succeeded in implementing the Project's "features that tend to reduce VMT" (which are not enforceable mitigation measures), the Project would still greatly exceed the VMT significance threshold. These features include building bike infrastructure (VMT reduction of 0.08%), expanding the transit network (4.6%), affordable housing (2.4%)[4], and pedestrian network (6.4%). Together, this would decrease VMT per capita by 13.4%, or 22.3 VMT per capita. This is number is still 20% higher than the significance threshold of 18.5 VMT per capita.

[4] This reduction is based on a 28.6% decrease for the Project's 315 affordable units, assuming those units are multiple family residential units with an average of 2.79 inhabitants. (RPFSEIR Appx C-1 at 9.)

Since the VMT would remain far above the significance threshold under any circumstance contemplated by the RPFSEIR, the County must consider all feasible measures to mitigate the Project's VMT impacts. Some of the short-term measures identified by the County in its guidance document, but not included in the RPFSEIR, include implementing a commute trip reduction program, providing ride-sharing programs, implementing subsidized or discounted transit programs, encouraging telecommuting and alternative work schedules, unbundling parking costs from property costs, implementing market price public on-street parking, providing traffic calming measures, and implementing car-sharing programs. (Los Angeles County, 2020, p. 34). The County guidance also identified two long-term mitigation measures, neither of which were contemplated by the Project. These measures include a VMT mitigation exchange and a VMT mitigation bank. (Los Angeles County, 2020, p. 36). The County must adopt enough of these additional, feasible mitigation measures to reduce the VMT per capita below the threshold of significance.

A decades-old EIR that fails to even calculate VMT is not sufficient to satisfy CEQA's requirements; the appropriate inquiry is "whether a proposed project or plan adequately reduces total VMT." (Los Angeles County Public Works, 2020). This Project clearly does not.

V. Conclusion

The Center appreciates the Commission's consideration of these comments. Because the environmental review for the Project is inadequate for the foregoing reasons, the Center urges the Commission not to approve the Project unless and until these deficiencies are remedied.

Given the possibility that the Center will be required to pursue legal remedies in order to ensure that the County complies with its legal obligations including those arising under CEQA, we would like to remind the County of its statutory duty to maintain and preserve all documents and communications that may constitute part of the "administrative record" of this proceeding. (Pub. Res. Code § 21167.6(e); *Golden Door Properties, LLC v. Superior Court* (2020) 53 Cal.App.5th 733.) Please include this letter and the provided references in the County's file for this Project, and continue to include the Center on the notice list for this Project using the contact information below.

Sincerely,

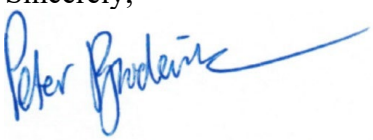

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Exhibit A

Declaration of Chad Christensen

I, Chad Christensen, hereby declare as follows:

1. The facts set forth in this declaration are based on my personal knowledge. If called as a witness, I could and would testify competently to these facts. As to those matters which reflect an opinion, they reflect my personal opinion and judgment on the matter.

2. I am the Deputy Chief of Natural Resources and Planning for the Mountains Recreation and Conservation Authority (MRCA) and have been in this position since April 2020. Previously I was a Project Analyst hired in February 2017.

3. Attached are true and correct copies of photos taken on November 5, 2020 approximately between 2:49 a.m. and 2:59 a.m. of a mountain lion crossing from the east side of the southbound direction of the separated I-5 freeway from Grasshopper Canyon and westerly into the Marple Canyon. The single-lane box culvert for the Marple Canyon access road that crosses under this southbound section of I-5 is identified as "Tunnel 2" and "Underpass 2" in Santa Monica Mountains Conservancy's April 17, 2018 letter on the Northlake Project (AR010051-59). Underpass 2 is one of two freeway crossing structures along a ten-mile section of I-5 between Templin Highway and Castaic Creek. The MRCA owns 245 acres of Marple Canyon west of Underpass 2 between the separated north-/southbound sections of I-5 and six acres east of Underpass 2 that connect with Grasshopper Canyon.

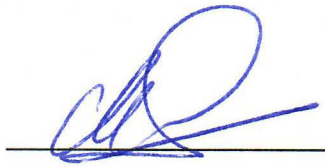
4. These photos were taken by a wildlife camera that I placed on MRCA conservation lands on June 9, 2020 in my official capacity as Deputy Chief of Natural Resources and Planning and as Project Manager for the MRCA's Marple Canyon I-5 Wildlife Crossing Enhancement Project (Project).

5. The Project was awarded Wildlife Conservation Board (WCB) funding in 2020 to enhance 2.75 acres of habitat on the west and east approaches to Underpass 2 in order to promote wildlife movement between Marple and Grasshopper Canyons. On March 27, 2020, I received a Caltrans Encroachment Permit No. 07-20-N-SV-0894 to install the wildlife cameras within the freeway right-of-way as an MRCA in-kind contribution towards the Project. The

Project Area and Underpass 2 are part of the South Coast Wildland's *Castaic – Sierra Madre Connection.*

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 15th of December 2020,



Chad Christensen

Ventura, California


28.32 inHg - 68°F 11/05/2020 02:49AM MARPLE1


28.32 inHg - 68°F 11/05/2020 02:49AM MARPLE1


28.32 inHg - 68°F 11/05/2020 02:49AM MARPLE1


28.38 inHg - 73°F 11/05/2020 02:59AM MARPLE2


28.38 inHg - 73°F 11/05/2020 02:59AM MARPLE2


28.38 inHg - 73°F 11/05/2020 02:59AM MARPLE2

Exhibit B

SANTA MONICA MOUNTAINS CONSERVANCY
RAMIREZ CANYON PARK
5750 RAMIREZ CANYON ROAD
MALIBU, CALIFORNIA 90265
PHONE (310) 589-3200
FAX (310) 589-3207
WWW.SMMC.CA.GOV

April 17, 2018

Regional Planning Commission
Department of Regional Planning
Los Angeles County Hall of Records, Room 1348
320 W. Temple Stree
Los Angeles, California 90012

Via Electronic Mail

North Lake Project
Final Supplemental Environmental Impact Report Comments
R2015-00408-(5) - SCH No. 2015031080 - VTT No. TR 073336

Dear Planning Commissioners:

The Santa Monica Mountains Conservancy (Conservancy) urges the Regional Planning Commission at a minimum to not certify the Final Supplemental Environmental Impact Report and require a re-circulation to address major deficiencies in the record including an inadequate range of alternatives. More decisively we urge the Commission to deny the North Lake project for the following ubiquitous and compelling reasons.

The huge myth and erroneous smoke screen that staff and the developer are putting before your Commission is that the 1992 North Lake Specific Plan guarantees the developer substantial immutable development rights. That Plan is a devastating early 1990's dinosaur document that does not have the foundation of a Environmental Impact Report representing either current physical conditions and standards beneath it. For all intents and purposes, this project is starting at close to square one in regards to environmental review. There is an attempt to lure the Commission into myopically believing differently and thus force perhaps the most ill suited land use in the County's history -- a land use that provides no general public benefit (except for tract residents) and heaps of permanent public detriment for the whole County. The Commission must, and legally can, look at this property as a fresh slate in regards to environmental review and thus project design. The developer common cry that,"We made it better than the prior project" does nothing to substantively solve huge unmitigable environmental issues with the project.

The FSEIR was intentionally crafted to exclude any Alternative projects for your consideration that provide even a slightly better public outcome on everything from traffic to degradation of public lands to regional wildlife habitat connectivity. That is an insult and

slight to the Commission and the people of Los Angeles County. The project grading footprint of every FSEIR alternative is the same with tens of millions of cubic yards of earth filling Grasshopper Canyon and scraping its walls bare. What fallacy that the project would not be blatantly visible with a fully improved miles of street-lit Ridge Route, a ridgeline commercial complex, and over a thousand dwelling units and street lights glowing above the Santa Clarita Valley surrounded by natural darkness.

Only a misguided decision-making body would approve a project that unnecessarily extends suburban residential development over three miles into an area jacketed by public National Forest lands, Bureau of Land Management property, and high public visitation-State-owned-Castaic Lake Recreation Area. Through what mechanism is the County providing its now public land to facilitate this development? Is the developer paying the County?

Nobody would benefit from this project in either the short or long run other than the developer and maybe the few vocal small businesses at the base of the grade. Do you destroy a whole remote canyon next to a cherished recreation area and exacerbate an existing traffic nightmare just to benefit future totally unknown homeowners in area that has a glut of approved unbuilt development? Luxury housing available at best three years from now at the maximum possible distance from the City of Los Angeles does not address address home afford ability.

Only a poorly informed decision-making body would fall into the trap of burying 3.5 miles of blueline stream that flow into Castaic Lagoon used for swimming to create expensive housing in the Santa Clarita Valley where there are tens of thousands of unbuilt approved housing units.

There is no combined set of needs for this project that outweigh the massive amount of unmitigated adverse environmental impacts. The benefits in the Statement of Overriding Considerations (SOC) are all unsupported with data or common sense. However, the regionally significant project detriments are patently clear in every arena of environmental impact.

The County published a April 5, 2018 Supplemental Memo that disclosed that revisions to the Project were made which removed virtually all of the proposed commercial and industrial uses in favor of more dwelling units. Such revisions effect various EIR technical analyses that now do not reflect this project revision. In addition, a project description cannot be changed after a DSEIR has be circulated. The SOC claims that the project will provide for (now non-existent) industrial uses. Those claimed economic benefits no longer exist even on paper.

The applicant made an attempt to show east-west wildlife connectivity through the project connected to the two adjacent vehicle tunnels under southbound Interstate 5. Tunnel 2 in the FSEIR appendices is flanked on both sides by parkland owned by the Mountains Recreation and Conservation Authority and paid for by the owner of over one hundred acres between the south and north bound I5 lanes. Given the paucity of undercrossings for animals under the I5 from Violin Canyon to Templin Highway, no under-crossing can be dismissed as valuable to cross-freeway wildlife movement. The FSEIR fails to include a viable habitat linkage option from Tunnel 2 to protected public lands without a minimum 6,000 foot journey around either end of the proposed project. Animals can navigate 60 percent slopes for considerable lengths. The applicant dismisses the ability of animals to enter the North Lake property approximately east of Tunnel 2 because of steep terrain. The FSEIR shall remain deficient until a detailed slope study shows the terrain viability for animals to move from Tunnel 2 over the Grasshopper Canyon watershed divide to the bottom of Grasshopper Canyon. The FSEIR shall remain deficient until includes an Alternative that provides a protected direct east-west habitat linkage between Tunnel 2 and Castaic Lake Recreation Area public lands. No non-North Lake private lands can break this linkage.

The applicant will taut the value of Tunnel 3 as a superior habitat linkage. However, both sides of Tunnel 3 have multiple non-North Lake private parcels that could easily be blocked by fencing and diminish the efficacy of the tunnel. At paint ball facility is also in the way.

The FSEIR is deficient for not addressing how improvements to Ridge Route and added traffic would diminish wildlife potential to safely cross Ridge Route. The FSEIR is deficient for not addressing how a 3.5-mile-long development next to Castaic Lake Recreation Area could adversely affect human intolerant wildlife species on the land between the lake and the development.

Letters in record from the Center for Biological Diversity and the California Department of Fish and Wildlife address a plethora of FSEIR deficiencies that are herein incorporated by reference.

The FSEIR totally fails to make the case that a much less damaging project is infeasible. The project design does not avoid any environmental resources. The project does not cluster any development to create ecologically viable blocks of open space. The minimum basic unwritten standard for open space dedications of County projects is a minimum 50 percent open space dedication. This project does not even come close to that standard.

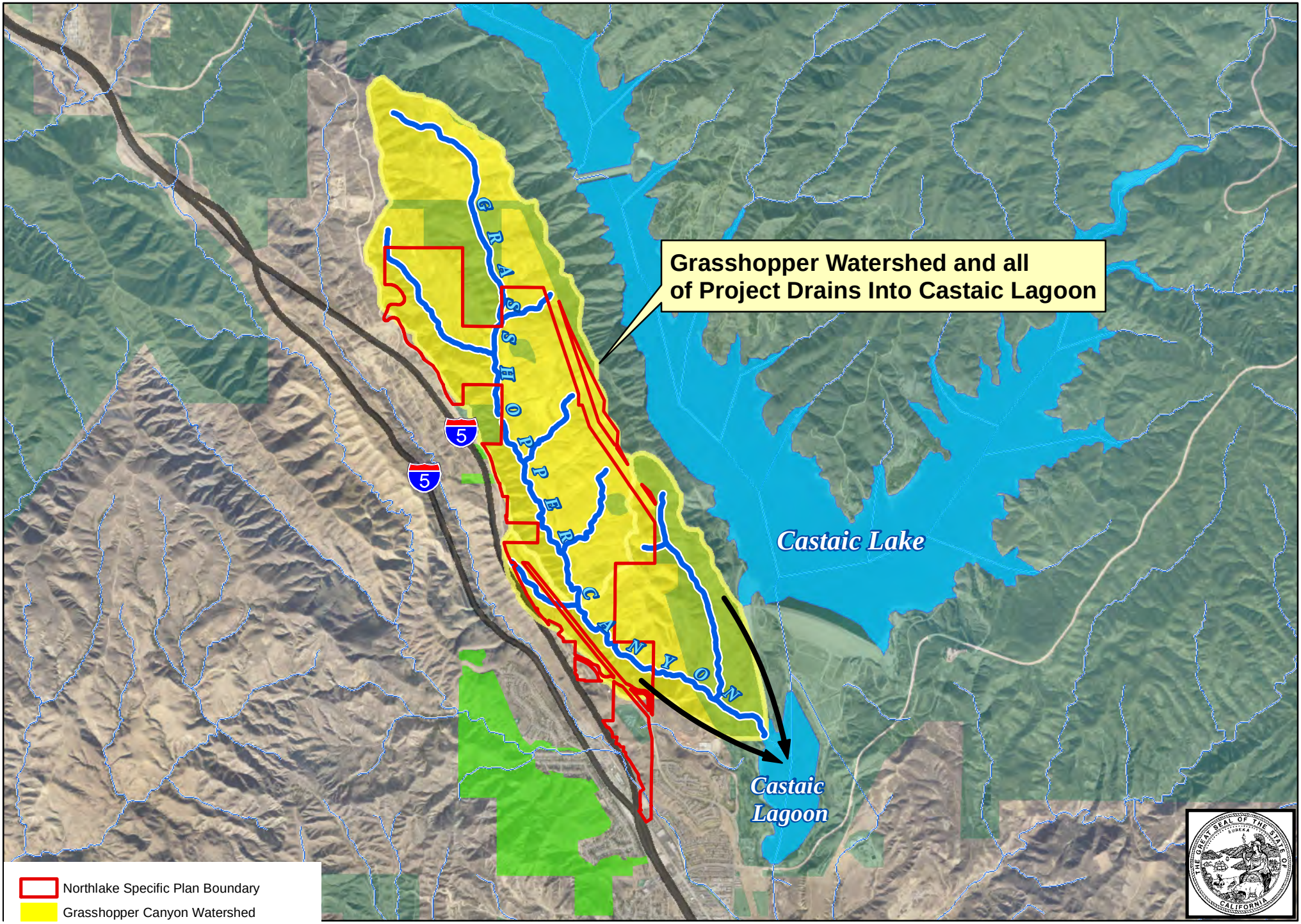
The FSEIR is deficient for not addressing why the Creek Avoidance Alternative would require exporting a minimum 10 million cubic yards of earth. Where is the demonstrated proof? The FSEIR partially rules out a creek avoidance alternative because it will require three bridges. Since when does the need for three bridges rule out the viability of a project with over 1,000 housing units? These stark omissions show the weakness of the FSEIR Alternatives selection.

The entire proposed development project footprint collects pollutants, concentrates them in artificial ponds, and then releases them into the Castaic Lagoon swimming area. How is this a public benefit? It is a huge permanent public safety threat.

The FSEIR is deficient for not addressing new standards for debris flow generated by the recent catastrophic debris flows in Montecito. The Tract Map cannot be approved because of this public safety issue. The County will develop new standards for silt and debris flow from offsite upstream properties perhaps ridgeline to ridgeline. The FSEIR does not taken into account potential additional debris flow from the "Montecito Effect."

Sincerely,

PAUL EDELMAN
Deputy Director
Natural Resources and Planning


Grasshopper Watershed and all
of Project Drains Into Castaic Lagoon
GRASSHOPPER CANYON
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Lagoon
Northlake Specific Plan Boundary
Grasshopper Canyon Watershed
SMMC MRCA Owned/Managed Property
Other Public Land
Project No. R2015-00408-(5)
Northlake Associates LLC
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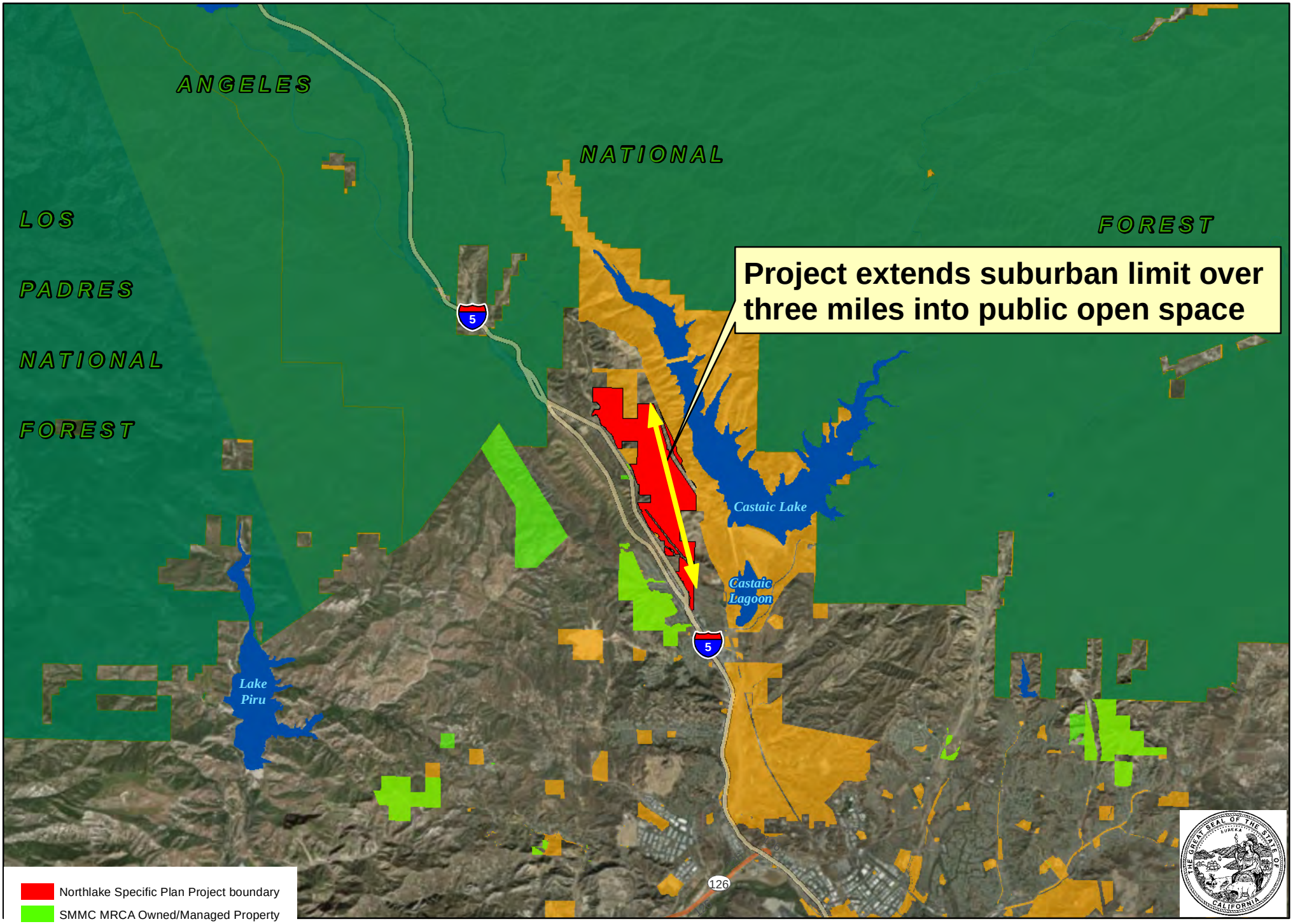
ANGELES
NATIONAL
FOREST
LOS
PADRES
NATIONAL
FOREST
Project extends suburban limit over three miles into public open space
Castaic Lake
Castaic Lagoon
Lake Piru
5
5
126
Northlake Specific Plan Project boundary
SMMC MRCA Owned/Managed Property
Angeles/Los Padres National Forest
Other Public Land
Project No. R2015-00408-(5)
Northlake Associates LLC
4/18/2018
0
1.5
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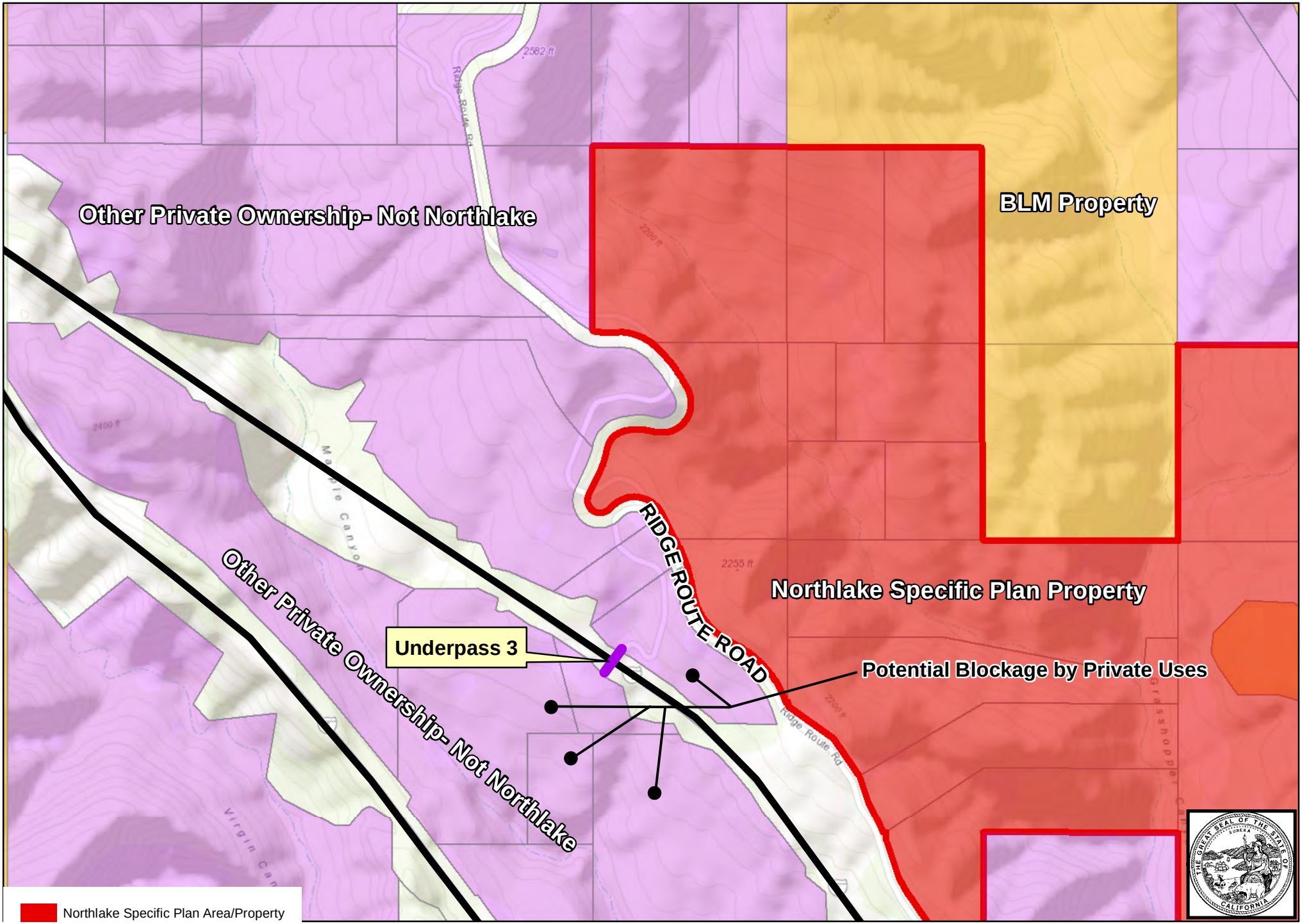

Project No. R2015-00408-(5)
Northlake Associates LLC

4/18/2018

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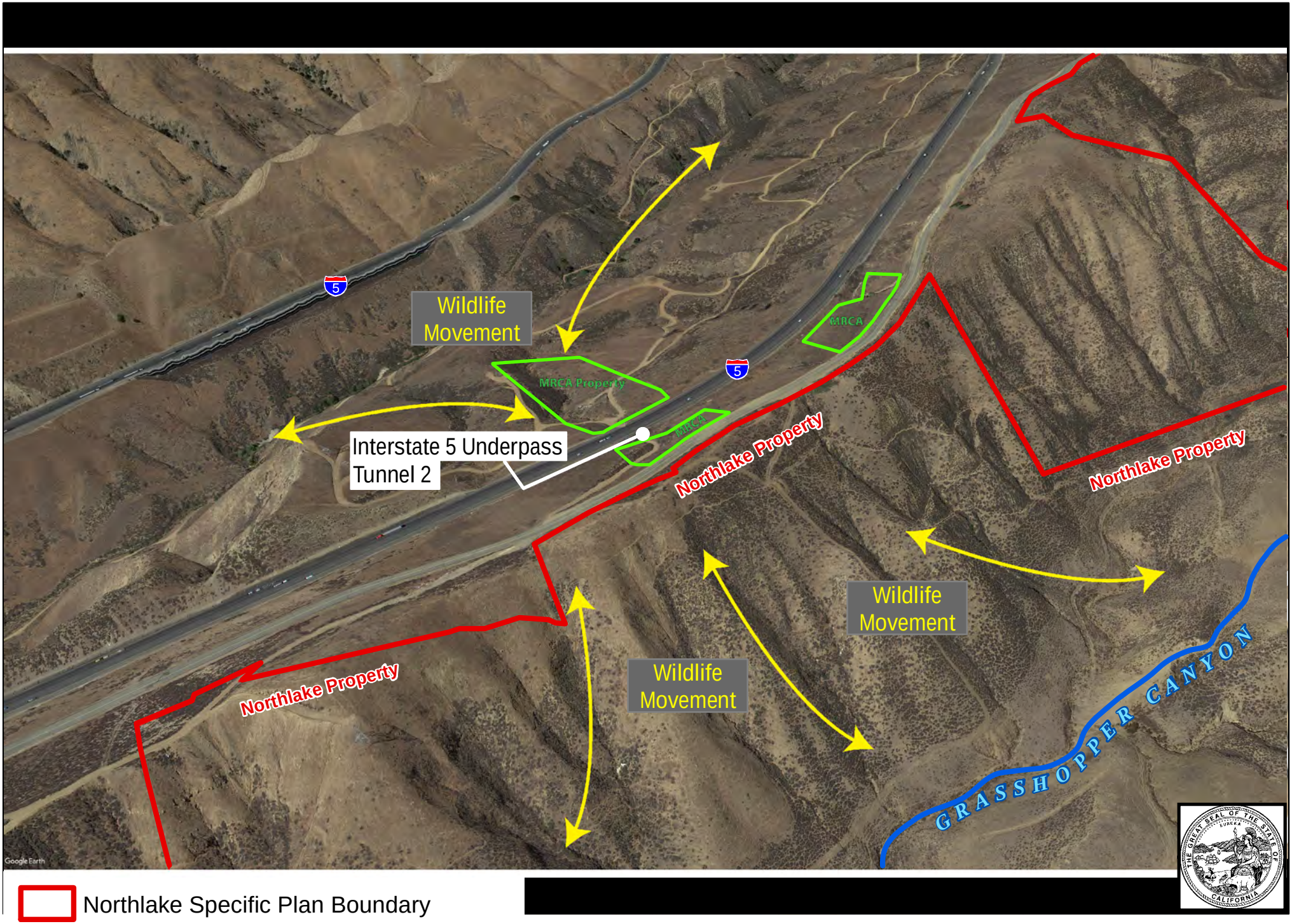


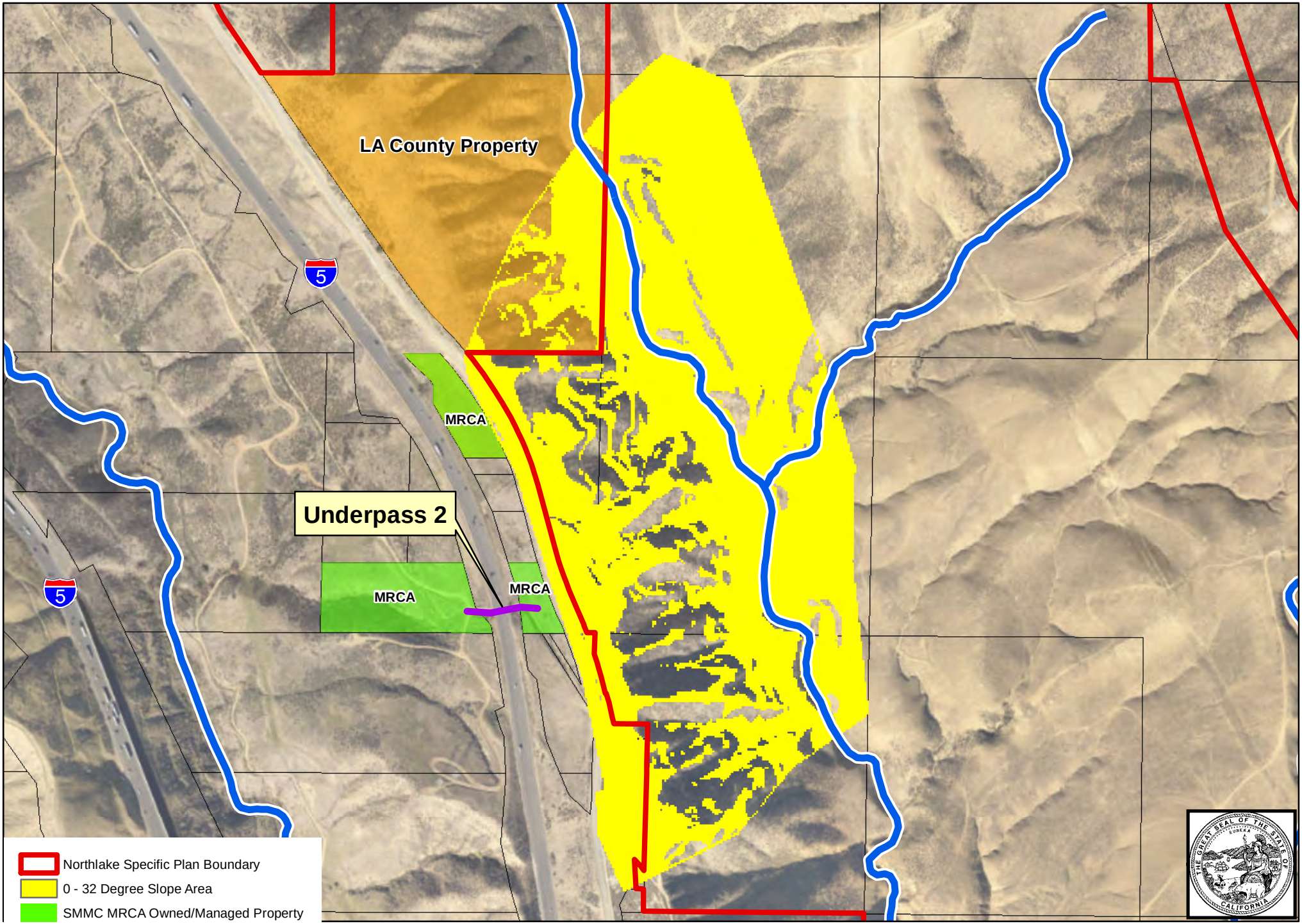
Northlake Specific Plan Boundary

SMMC MRCA Owned/Managed Property

Project No. R2015-00408-(5)
Northlake Associates LLC

4/18/2018

0 250 500 Feet



Project No. R2015-00408-(5)
Northlake Associates LLC

4/18/2018

ENDANGERED HABITATS LEAGUE

DEDICATED TO ECOSYTEM PROTECTION AND SUSTAINABLE LAND USE

January 23, 2026

VIA ELECTRONIC MAIL

Chair Elvin W. Moon
Regional Planning Commission
Department of Regional Planning
320 West Temple Street
Los Angeles, California 90012

RE: Item 7, NorthLake Specific Plan Project - *OPPOSITION*

Dear Chair Moon and Members of the Commission:

Endangered Habitats League (EHL) requests denial of this project. For your reference, EHL is a Southern California regional conservation group dedicated to ecosystem protection and sustainable land use. We are long-term participants in County planning initiatives, from the General Plan to the SEA Ordinance to the Climate Action Plan.

EHL is a longstanding "pro-housing" and a "smart growth" advocate. However, NorthLake abjectly fails minimum tests for acceptable land use. Regional Planning, through its Area Plan updates, has shown that all RHNA needs can be met in safe and environmentally sound locations. Sprawl from the early1990s – *backward even for that era* – is contrary to contemporary needs and should be rejected rather than re-adopted.

Biology

According to the Santa Monica Mountains Conservancy, NorthLake is a "tragedy." This is not an exaggeration as it is one of the most biologically destructive proposals in my long experience. It would pave over a blueline stream (Grasshopper Creek) which runs the length of site, a virtually unprecedented impact. If this is "necessary" as the RPFSEIR claims, then a site so full of landslides that it requires 33 million cubic yards of grading is not suitable for intensive development.

640 acres of coastal sage scrub – a huge amount - would be obliterated, including many rare plants, whose very rarity indicates specialized niche habitats that make the proposed mitigation via re-planting unlikely to succeed.

Sometimes a sprawl project will preserve a large fraction of its site in intact natural open space, arguing for its approval. This is *not* the case with NorthLake. Its limited open space consists of remnants around the development periphery, impacted by development edge effects.

Fire safety

New information requires subsequent environmental analysis as shown in comments from the Center for Biological Diversity.

Also, the County's General Plan Safety Element policies make it clear that expanding the Wildland Urban Interface (WUI) into Very High wildlife hazard with thousands of vulnerable new residents is irresponsible. This injury is compounded by the untruthfulness of the Final EIR which claims that the project – even if exempt from General Plan Policies S4.1, S4.20 and L1.10 – is "consistent" with them because it is "generally surrounded existing built development." Please look at an aerial photo of the site and then revise the Responses to Comments so that this falsehood does not compromise your Commission's integrity and make a sham of the General Plan.

Wildlife movement and mountain lion impacts

New information requires subsequent environmental analysis as shown in comments from the Center for Biological Diversity.

VMT

Distant from employment, and locked into perpetual automotive commutes and high GHG emissions, NorthLake epitomes "dumb" growth and unsustainability. Defying common sense and well-established CEQA law, the EIR uses the baseline of the old Specific Plan instead of the required "plan-to-ground" baseline of existing conditions for VMT analysis. While this may comport with Public Works direction, that does not make it proper or legal.

Alternatives

The RPDSEIR purports, based on applicant-prepared studies, that full creek avoidance is infeasible for geotechnical reasons. Has the County verified this information with an independent geologist accountable to the public? Further avoidance of Grasshopper Creek, coastal sage scrub, and rare plants may be possible.

The RPDSEIR deems the Partial Creek Avoidance Alternative (PCAA) as the Environmentally Superior Alternative. Prepared as a result of the court ruling, it reduces impacts to Grasshopper Creek by 20% and improves wildlife connectivity in the northern part of the site, while retaining all housing. The RPDSEIR notes that the PCAA does not meet the Open Space/ Recreational Area Goal *to the same extent as* the proposed Project because there would be 37 acres less Recreation/Park. However, there would still be *130 acres* of Recreation/Park. This is a very substantial amount. There is no showing that 130 acres is inadequate, that land uses could not otherwise be rearranged, or that the increased natural open space of unfilled Grasshopper Creek does not provide a compensatory benefit. An alternative can be adopted even though it does not satisfy *every* goal as much as the proposed Project. The PCAA is fully feasible.

Conclusions and recommendations

A project bereft of all planning merit should not go forward. That is the case here. A plan over 30 years old, and flatly inconsistent with today's modern General Plan Safety and Land Use Elements, is far past any reasonable "sell by" date. *Your Commission is under no obligation to make Overriding Findings on behalf of the applicant.* Rather, significant and unavoidable impacts are legal grounds for denial. No vested rights accrue from the 1992 Specific Plan, whose Development Agreement expired. The project *should be denied* but followed by expeditious replanned to provide an economic use to the landowner which is consistent with the constraints of landslides, remote location, wildlife habitat and rare plants, and fire hazard.

Thank you for your consideration.

Yours truly,



Dan Silver
Executive Director



January 22, 2026

Los Angeles County Regional Planning Commission
Hall of Records
320 West Temple Street, Room 150
Los Angeles, CA 90012

RE: Support of Northlake Project – Project No. R2015-00408

Chair and Members of the Commission:

On behalf of the Golden State Gateway Coalition, we write to renew our strong support for the Northlake project.

The Golden State Gateway Coalition represents public-private sector stakeholders committed to improving transportation infrastructure, goods movement, and economic competitiveness along the Interstate 5 corridor and throughout the greater Southern California logistics and industrial network. From this perspective, Northlake represents a critical, long-planned investment that advances both transportation efficiency and workforce sustainability.

Northlake has been an active participant and supporter of the Golden State Gateway Coalition for decades, recognizing early on that land use, transportation, and economic development must be planned together. The project has consistently engaged in regional discussions around mobility, infrastructure funding, and corridor performance, and its development framework reflects that long-term commitment.

As the project moves forward, Northlake is anticipated to deliver approximately tens of millions in transportation infrastructure investments, supporting roadway improvements, system connectivity, and regional mobility. These investments are essential to maintaining efficient movement of people and goods along the I-5 corridor and within the Santa Clarita Valley.

Equally important is Northlake's role in addressing a structural imbalance that directly affects congestion and infrastructure performance: the growing disconnect between housing supply and employment centers.

Manufacturing, logistics, and industrial jobs in nearby commerce and industrial centers depend on a workforce that is increasingly forced to commute long distances due to housing costs and limited supply. Northlake's inclusion of housing priced for working families helps place workers closer to their jobs, reducing long-distance commuting, lowering vehicle miles traveled, and easing pressure on regional freeways.

Providing housing near employment centers is one of the most effective, and cost-efficient, ways to address congestion and improve transportation system performance.

Northlake represents the type of integrated land use and transportation planning that regional mobility strategies depend upon. Its long-standing engagement with the Golden State Gateway Coalition, significant infrastructure investment, and contribution to workforce housing make it a project of regional importance.



For these reasons, the Golden State Gateway Coalition respectfully urges the Los Angeles County Regional Planning Commission to support approval of the Northlake project.

Thank you for your leadership and consideration.

Sincerely,

John Musella

John Musella
Executive Director, Golden State Gateway Coalition

January 22, 2026

Los Angeles County Regional Planning Commission
Hall of Records
320 West Temple Street, Room 150
Los Angeles, CA 90012

RE: Support for the Northlake Project – Project No. R2015-00408 January 28, 2026 Regional Planning Commission Hearing

Honorable Chair and Members of the Commission:

On behalf of the Santa Clarita Valley Chamber of Commerce, I am pleased to submit this letter in strong support of the Northlake Project, scheduled for public hearing before the Los Angeles County Regional Planning Commission on Wednesday, January 28, 2026.

As the region's largest business advocacy organization, the Chamber views housing availability—particularly price-attainable housing for working families—as one of the most pressing economic development issues facing the Santa Clarita Valley and Los Angeles County today. Northlake directly addresses that need in a manner that is policy-consistent, environmentally responsible, and economically essential.

Housing as Economic Infrastructure
Employers throughout the Santa Clarita Valley consistently identify housing costs as a primary barrier to workforce recruitment and retention. Teachers, healthcare workers, first responders, skilled tradespeople, and service-sector employees are increasingly priced out of the communities they serve. Northlake's diversified housing program—including 315 affordable units representing approximately 10 percent of the total project—provides critically needed options for working families and seniors while supporting long-term regional economic stability.
Housing is economic infrastructure. Projects such as Northlake ensure that businesses can grow, expand, and retain talent locally rather than losing workers to longer commutes or other regions entirely.

A Proven, Longstanding Planning Framework
The Northlake Specific Plan was unanimously approved by the Los Angeles County Board of Supervisors in 1992, and the current proposal remains fully within the envelope of that approved plan, while updating the community to reflect modern standards for sustainability, walkability, and environmental performance.

The project is consistent with the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, "One Valley, One Vision" (OVOV), which explicitly identifies this area for future growth and housing opportunity.

Economic and Fiscal Benefits
In addition to meeting housing needs, Northlake will:

- Support local businesses through population growth and consumer demand
- Generate construction and permanent employment opportunities
- Strengthen local school enrollment and funding stability

- Deliver commercial and mixed-use development that supports services closer to where people live and work

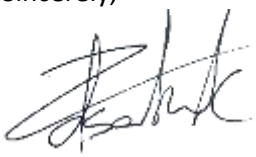
These benefits contribute to a more resilient and balanced regional economy.

Responsible Growth and Environmental Stewardship
The Chamber also recognizes the project's significant environmental and recreational commitments, including expanded open space, enhanced parks, wildlife connectivity, and an integrated trail and active transportation network. This approach demonstrates that economic growth and environmental stewardship are not mutually exclusive, but rather complementary when guided by sound planning.

Northlake represents the type of thoughtful, long-term investment needed to support a healthy regional economy—one that balances housing affordability, job creation, environmental protection, and quality of life.

For these reasons, the Santa Clarita Valley Chamber of Commerce respectfully urges the Regional Planning Commission to support approval of the Northlake Project.
Thank you for your consideration.

Sincerely,



Ivan Volschenk
President & CEO, Santa Clarita Valley Chamber of Commerce

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victoria@lozeaudrury.com

Via Email

January 27, 2026

Elvin W. Moon, Chair
Yolanda Duarte-White, Vice Chair
David W. Louie, Commissioner
Pam O'Connor, Commissioner
Michael R. Hastings, Commissioner
Regional Planning Commission
Los Angeles County
320 W. Temple Street, Room 150
Los Angeles, CA 90012
comment@planning.lacounty.gov

Jodie Sackett, Planner
Department of Regional Planning
County of Los Angeles
320 West Temple Street, 13th Floor
Los Angeles, CA 90012
jsackett@planning.lacounty.gov

Re: Comment on the Recirculated Partial Final Supplemental Environmental Impact Report for the NorthLake Specific Plan Project; January 28, 2026 Los Angeles County Planning Commission Agenda Item 7

Dear Chair Moon, Vice Chair Duarte-White, Honorable Planning Commissioners, and Ms. Sackett:

This comment is submitted on behalf of Supporters Alliance for Environmental Responsibility ("SAFER") regarding the Recirculated Partial Final Supplemental Environmental Impact Report ("RPFSEIR" or "SEIR") for the NorthLake Specific Plan Project (SCH No. 2015031080, Project No. R2015-00408-(5), Vesting Tentative Tract Map No. 07336, Tentative Parcel Map Np. 07335, Conditional Use Permit No. RPPL2023004316, Environmental Assessment No. RPPL2023004887), including all actions related or referring to the proposed development of 2,295 dwelling units, located east of Interstate (I) 5, west of Castaic Lake, and north of the community of Castaic, California in unincorporated Los Angeles County. ("Project"). The Project is scheduled to be heard as Agenda Item 7 at the Los Angeles County Regional Planning Commission's January 28, 2026 meeting.

SAFER is concerned that the RPFSEIR fails as an informational document and fails to impose all feasible mitigation measures to reduce the Project's impacts. Among other concerns, SAFER has identified the following issues:

1. A project will have a significant greenhouse gas ("GHG") impact if it conflicts with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (CEQA Guidelines, App. G, § VIII.) Here, the SEIR

concludes that the Project will have a less than significant GHG impact. However, after reviewing the SEIR, SAFER found that the Project conflicts with the California Air Resources Board's *2022 Scoping Plan for Achieving Carbon Neutrality* ("2022 Scoping Plan"), which identifies strategies for achieving California's long-term climate goal of carbon neutrality by 2045 or earlier. Any revised EIR must show how a project will conform to current statewide GHG reduction targets and adopt enforceable mitigation to achieve these goals. (*Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 62 Cal.4th 204, 225-26; *League to Save Lake Tahoe v. County of Placer* (2022) 75 Cal.App.5th 63, 121-22.) As such, the Project's conflict with the 2022 Scoping Plan is a significant GHG impact that must be analyzed and mitigated in a revised RPFSEIR.

2. The RPFSEIR failed to adequately analyze vehicle miles traveled ("VMT") impacts because it applied an incorrect and outdated threshold of significance to measure impacts. The Department of Transportation's ("DOT") May 29, 2025 comment on the Draft SEIR states that the County applied an outdated threshold to measure VMT impacts. (RPFSEIR, p. A.2-3.) Specifically, the DOT explains that the County incorrectly applied the prior Northlake Specific Plan VMT per service population (27.03) as the significance threshold for determining an impact. However, the VMT per Service Population (27.03) is the baseline for comparison to the previously approved Project. The County was required to apply the VMT per Service Population (25.70) per the methodology required by the County Department of Public Works. Therefore, the RPFSEIR's less-than-significant conclusion for VMT impacts cannot be relied upon. A revised Draft SEIR should be prepared and recirculated that includes an adequate analysis of the Project's VMT impacts using the proper threshold of significance.

3. Since the Project will have significant unmitigated impacts, the City must analyze whether the Project's economic benefits exceed its environmental impacts before adopting a statement of overriding considerations. (14 Cal. Code Regs. § 15043; Pub. Res. Code § 21081(B); *Sierra Club v. Contra Costa County* (1992) 10 Cal.App.4th 1212, 1222.) Key among the findings that the lead agency must make is that:

> "Specific economic, legal, social, technological, or other considerations, ***including the provision of employment opportunities for highly trained workers***, make infeasible the mitigation measures or alternatives identified in the environmental impact report…[and that those] benefits of the project outweigh the significant effects on the environment."(Pub. Res. Code §21081(a)(3), (b).)

Thus, the County must analyze whether the Project provides "employment opportunities for highly trained workers." The RPFSEIR contains no such analysis.

4. SAFER also agrees with the expert findings of the Center for Biological Diversity ("CBD") regarding the Project's significant biological resources, VMT, GHG, and wildfire risk impacts, among others. CBD reviewed the Project and the Draft SEIR

and prepared expert comments on the Draft SEIR, which were submitted on May 29, 2025. CBD's comments on the Draft SEIR also apply to the RPFSEIR. SAFER adopts by reference all comments filed by CBD in this matter. CBD concluded that the SEIR failed to adequately analyze and mitigate the Project's biological resources, VMT, GHG, and wildfire risk impacts, among others. Specifically, CBD found, *inter alia*, that:

a. The SEIR fails to consider new information regarding significant impacts to mountain lions, burrowing owls, and wildlife movement.
b. The SEIR's analysis of impacts to special-status species, including western spadefoot, is inadequate.
c. The Project will have significant wildfire risks not analyzed or mitigated by the SEIR.
d. The SEIR fails to adequately analyze and mitigate VMT impacts.
e. The SEIR fails to consider new scientific knowledge and state policy on climate change.
f. The SEIR fails to consider significant new information regarding California's water supply.
g. The SEIR's revised alternatives analysis continues to be inadequate.

SAFER requests that the Planning Commission deny approving this Project, and instead, direct staff to address these shortcomings in a revised recirculated partial draft supplemental environmental impact report prior to considering approvals for the Project.

SAFER reserves the right to supplement these comments during the administrative process. (*Galante Vineyards v. Monterey Peninsula Water Management Dist*. (1997) 60 Cal.App.4th 1109, 1121.)

Sincerely,



Victoria Yundt
Lozeau Drury LLP

SUPPLEMENTAL FINDINGS OF FACT and STATEMENT of OVERRIDING CONSIDERATIONS regarding the NORTHLAKE SPECIFIC PLAN PROJECT

PROJECT NUMBER: R2015-00408-(5)

VESTING TENTATIVE TRACT MAP: TR073336

CONDITIONAL USE PERMIT: CUP2023004316

STATE CLEARINGHOUSE NUMBER: 2015031080

COUNTY OF LOS ANGELES DEPARTMENT OF REGIONAL PLANNING

320 WEST TEMPLE STREET

LOS ANGELES, CALIFORNIA 90012

SUPPLEMENTAL FINDINGS OF FACT AND STATEMENT OF OVERRIDING CONSIDERATIONS FOR THE NORTHLAKE SPECIFIC PLAN PROJECT

(STATE CLEARINGHOUSE NUMBER 2015031080)

(COUNTY PROJECT NUMBER R2015-00408-(5))

The Board of Supervisors (Board) of the County of Los Angeles (County) hereby certifies the NorthLake Specific Plan Supplemental Environmental Impact Report, State Clearinghouse Number 2015031080, which consists of the Draft Supplemental Environmental Impact Report (Draft SEIR) dated May 2017, Technical Appendices to the Draft SEIR, the Final Supplemental Environmental Impact Report, including Responses to Comments dated January 2018, the February 2018 Errata, the April 4, 2018 Errata, the August 2018 Second Errata, Recirculated Portions of the Draft Supplemental EIR (RPDSEIR) dated March 2025, and Recirculated Portions of the Final Supplemental EIR (RPFSEIR) dated August 2025 (collectively referred to as the "Final SEIR") and finds that the Final SEIR has been completed in compliance with the California Environmental Quality Act (Public Resources Code §§ 21000, *et seq*.) (CEQA). The Board further hereby certifies that it has received, reviewed, and considered the information contained in the Final SEIR; the applications for Vesting Tentative Tract Map (VTTM) No. TR073336, and Conditional Use Permit (CUP) No. CUP2023004316 (collectively, Project Approvals) to permit the implementation of the previously approved NorthLake Specific Plan (Project); all hearings and submissions of testimony from officials and departments of the County, the Applicant NorthLake Associates LLC (Applicant), the public, and other municipalities and agencies; and all other pertinent information in the record of proceedings. Concurrently with the adoption of these supplemental findings, the Board adopts the Mitigation Monitoring and Reporting Program (hereinafter referred to as the "MMRP") attached as Exhibit A to these findings and readopts the findings set aside by the Board on May 18, 2021 (as revised herein) attached as Exhibit B to these supplemental findings.

Having received, reviewed, and considered the foregoing information, as well as any and all other information in the record, the Board hereby makes supplemental

findings regarding the Project's significant effects as it relates to the RPDSEIR and RPFSEIR pursuant to and in accordance with Section 21081 of the Public Resources Code as follows:

(a) Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

(b) Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency,

(c) Specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or alternatives identified in the environmental impact report.

UPDATED BACKGROUND

NorthLake Specific Plan and Previous Environmental Impact Report

In 1992, the County adopted the NorthLake Specific Plan (SP No.87-172) (Specific Plan). The Specific Plan established land uses and development standards for an approximate 1,330-acre area of undeveloped land east of Interstate 5 (I-5), west of Castaic Lake, and north of the community of Castaic in unincorporated Los Angeles County, California (Project Site). As adopted, the Specific Plan permitted the development of 3,623 dwelling units, as well as 13.2 acres of commercial uses, 50.1 acres of industrial uses, and supporting infrastructure and public services uses, including schools, parks, a potential library site, a potential fire station site, and an 18-hole golf course.

In addition to the 1992 approval of the Specific Plan, the County adopted a Conditional Use Permit (CUP No. 87 172-(5)). This CUP, sometimes referred to as the Master CUP, addressed the permitted land uses as defined in the Specific Plan, including intensity of development and related grading consistent with the County of Los Angeles' Grading Ordinance in effect at the time. The Specific Plan and Master CUP acknowledged that future implementation of the Specific Plan would require a subsequent CUP to accomplish Site Plan review for Project implementation.

In conjunction with its consideration of the Specific Plan, in 1992 the County prepared and certified the NorthLake Specific Plan EIR (1992 SP EIR) (SCH No.

1988071329) as a Program EIR. As defined in the State CEQA Guidelines (Section 15168), a Program EIR is an EIR prepared on a series of actions that can be generally characterized as one large and related project. The Program EIR is used with later/subsequent activities to determine whether additional environmental documentation will be necessary and/or to simplify the scope of additional environmental documentation.

Subsequent to the 1992 approval of the Specific Plan, market conditions and changes in property ownership placed development of the Specific Plan on hold.

Supplemental Environmental Impact Report (SEIR)

The project analyzed in the SEIR (the Project or proposed Project) would implement the previously adopted Specific Plan, but with a reduction of the area and intensity of physical development and corresponding increase in open space as compared to the approved Specific Plan project that was considered in the 1992 SP EIR. Specifically, the Project would involve the phased development of up to 3,150 residential units, 9.2 acres of commercial uses, 13.9 acres of industrial uses, 799.5 acres of parks and open space, a 22.9-acre school site in the Phase 2 area (in addition to the already constructed Northlake Hills Elementary School), and a 1.4-acre pad for a future fire station. As compared to the approved Specific Plan, the Project represents reductions of 473 residential units, four acres of commercial uses, 36.4 acres of industrial uses, elimination of the 167-acre golf course, and increases of 165.3 acres of open space and 167 acres of trails and parks.

To implement the Project, the Applicant requested approval of: (1) VTTM 073336 to subdivide a 720-acre portion of the Project Site (as described below); and (2) CUP No. 201500019 to authorize: (a) Specific Plan Site Plan review; (b) grading exceeding 100,000 cubic yards; and (c) construction of water tanks and water supply infrastructure. As the Project is consistent with the Specific Plan, no amendments to the Specific Plan would be required.

The Project consists of development of Phase 1, Phase 2, and associated off-site external map improvements in both Phase 1 and Phase 2 totaling 65.13 acres (External Map Improvements Area), which include remedial grading, drainage features, and road and utility alignments (the External Map Improvements). As originally proposed, Phase

1 would comprise development of a 720-acre portion of the Project Site with a total of 1,974 dwelling units, including 588 single-family units on approximately 73.3 acres, 1,041 multi-family units on approximately 74.5 acres, and 345 senior multi-family units on approximately 49.1 acres. Phase 1 would also include, and lots would be also provided for, light industrial uses (13.7 acres), commercial development (9.2 acres), open space and parks (414.3 acres), roadways (84.3 acres), and a fire station pad (1.4 acres).

The remainder of the Project Site, referred to as the Phase 2 area, would be developed with 1,176 single family homes, 385.2 acres of parks, trails, and open space, 43.5 acres of school uses, and 36.2 acres of associated roadway and infrastructure improvements. Phase 2 is included in VTTM 073336 and the current CUP request as 21 large lot parcels (40 acres or more) for future lease and finance purposes. Future development of Phase 2, which will require a project-specific CUP, has been fully analyzed in the Final SEIR.

The External Map Improvements will consist of the construction of Ridge Route Road at the Project's main entrance to the south and a secondary access route to the northwest; construction of NorthLake Parkway adjacent to and west of the Phase 2 portion of the proposed Project Site, a 4.64-acre connection of Grasshopper Creek Park, a debris basin, 2.39 acres in trail connections, a 5.1-acre pad for a water tank, 29.79 acres of manufactured slopes and 11.98 acres of natural open space. In addition, extensions of the existing electrical distribution circuitry would occur along the existing Ridge Route Road to reach the proposed Project, and substation upgrades would occur on Southern California Edison property.

In addition to the above improvements, an existing crude oil pipeline easement containing two oil pipelines that traverse the entire north-south length of the Project Site will be relocated to an alignment along the eastern boundary of the proposed development area and within the identified grading footprint.

Under the Project, minor additions and changes were required to be made to the 1992 SP EIR to adequately analyze: (1) the revised scope of development; (2) changes to environmental conditions; and (3) the addition of project-specific analysis since its adoption.

In addition to the 1992 SP EIR, 2012, the Final Program EIR for the Santa Clarita Valley Area Plan, One Valley One Vision, 2012 ("2012 SCVAP EIR") was certified and included the Specific Plan as a future entitled development. In light of the existing environmental analysis performed under the 1992 SP EIR and the 2012 SCVAP EIR, and as the Lead Agency responsible for CEQA compliance for the Project, the County reviewed the need for additional environmental documentation and determined that a supplemental environmental impact report to the 1992 SP EIR should be prepared for the Project.

Consistent with the State CEQA Guidelines Section 15163, which defines the role and use of a SEIR, the purposes of the SEIR prepared for the Project are: (1) to address minor additions and changes that would update information in the 1992 SP EIR and 2012 SCVAP EIR to reflect current environmental conditions and thereby make the previous EIR adequate for use by the Project; (2) to provide Project-level analysis as appropriate for those issues for which more detailed Project information is now known for Project implementation; and (3) to provide updated program-level analysis as appropriate for those issues pertaining to Phase 2 for which more detailed Project information is not now known. In addition to updating program-level information from the 1992 SP EIR, this SEIR evaluates Project-level impacts from implementation of the Specific Plan, including both development of Phase 1, as well as future development of Phase 2.

In compliance with the State CEQA Guidelines, the County conducted an Initial Study of the proposed Project and determined that an SEIR would be the appropriate environmental document to analyze the Project's potential impacts to the environment, as there have been additions and changes to the Specific Plan project, but they would not require major revisions to the 1992 SP EIR. The Initial Study identified a preliminary range of potential impact issues to be analyzed. A Notice of Preparation (NOP) and the Initial Study were distributed to responsible and interested agencies and key interest groups to solicit comments and to inform the public of the proposed Project. The NOP/Initial Study was distributed on March 24, 2015, for a 30-day review period, as required by CEQA. In addition, the County held a scoping meeting for the Draft SEIR on April 8, 2015. The purpose of the meeting was to solicit input from interested

agencies, individuals, and organizations regarding the Project, alternatives, mitigation measures, and significant effects to be analyzed in the Draft SEIR.

Potentially significant environmental impacts addressed in the Draft SEIR include Air Quality, Biological Resources, Cultural Resources, Energy, Hazards and Hazardous Materials, Geology and Soils, Greenhouse Gas Emissions, Hydrology and Water Quality, Land Use and Planning, Noise, Transportation/Traffic, and Utilities and Service Systems. The Draft SEIR analyzed both individual component and cumulative effects of the Project together with related projects on these topics and identified a variety of mitigation measures to mitigate the potential adverse effects of the Project.

In accordance with CEQA requirements, the Draft SEIR also analyzed potential alternatives to the Project, including (1) No Project/No Development Alternative, (2) No Project/Development Pursuant to the Approved NorthLake Specific Plan, (3) No Industrial Development Alternative, and (4) Phase 1 Development Alternative. Potential environmental impacts of each of these alternatives were discussed as required by CEQA and each alternative was compared to the Project. The above range of alternatives was a reasonable range for consideration and allowed for informed decision making among the alternatives as well as to direct specific changes to the Project.

The Los Angeles County Department of Regional Planning (DRP) conducted its own independent departmental review and analysis of the Project and the preliminary Draft SEIR and circulated copies of the preliminary Draft SEIR to all affected County agencies. Interested County agencies conducted an independent review and analysis of the Project and preliminary Draft SEIR and provided written comments on the document, where appropriate, and those comments were incorporated into and made part of the Draft SEIR.

The Draft SEIR for the proposed Project was released for public review on May 2, 2017, and circulated for public review and comment for a 45-day period ending on June 15, 2017. In compliance with Section 15087 of the State CEQA Guidelines, the County provided public Notice of Availability (NOA) of the Draft SEIR at the same time it sent a Notice of Completion to the Office of Planning and Research. The County used several methods to solicit comments on the Draft SEIR. The NOA, along with a CD containing the Draft SEIR and technical appendices, were mailed to various agencies

and organizations and to individuals who had previously requested such notice. The Draft SEIR was submitted to the State Clearinghouse for distribution to and review by State agencies. The NOA was also mailed to all property owners and occupants within 500 feet of the Project Site; homeowners associations within 500 feet of the Project Site; and all interested parties who previously called, corresponded, attended an EIR scoping session, and/or provided comments on the IS/NOP. Additionally, the NOA was posted on the Project Site and off site at two separate locations. Copies of the Draft SEIR were available for review at three public libraries and at the County Department of Regional Planning counter. The Draft SEIR was also available on the County's website by typing "Northlake" or "R2015-00408" into the case archive search box at this web address: http://planning.lacounty.gov/case. In addition, the County held a public hearing regarding the Project before a Hearing Examiner on May 24, 2017 to take public comments.

Following the close of public comment period on the Draft SEIR on June 15, 2017, detailed responses to all public agency comments and comments received from members of the general public regarding the Project and the analyses of the Draft SEIR were prepared by DRP staff with assistance of a private consultant and reviewed and revised as necessary by DRP and other County staff to reflect the County's independent judgment on issues raised. These Responses to Comments are included in the Final SEIR. In addition to correspondence from the Governor's Office of Planning and Research, 22 comment letters regarding the Project and Draft SEIR were received by the County; four of these letters were received after the end of the 45-day public review period. All of the comment letters received by the County were included and responded to within the Final SEIR. Additionally, a transcript of the Hearing Examiner meeting is included in the Final SEIR.

The Final SEIR was prepared by the County in accordance with CEQA, and State and County Guidelines for implementation of CEQA. More specifically, the County relied on Section 15084(d)(3) of the State CEQA Guidelines, which allows acceptance of drafts prepared by the applicant, a consultant retained by the applicant, or any other person. DRP, acting for the County, has reviewed, considered, revised,

and edited as necessary the submitted drafts to reflect its own independent judgment, including reliance on County technical personnel from other departments.

Minor Project Revisions and Errata

An Errata was prepared to address late comments regarding the Final SEIR included as part of the February 15, 2018 Supplemental Memo For Additional Project Information (February Errata). The revisions involve only minor changes to the distribution of land uses and an overall reduction in density and intensity or use, and the Errata merely clarified or amplified or made insignificant modifications in the adequate SEIR, which, in combination with the Errata, was appropriate for analyzing the environmental impacts of the Project, as revised.

At the February 21, 2018 public hearing, the Regional Planning Commission requested that the Applicant include an affordable housing component in the Project. Based on this request, the Applicant made minor revisions to the Project analyzed in the SEIR to include an affordable component. Specifically, the Applicant eliminated 108,283 square feet (SF) of industrial use and 13,197 SF of commercial land uses and redesignated the industrial areas and remaining 31,200 SF of commercial land uses (excluding Highway Commercial) as Mixed Use Neighborhood Commercial. The residential total at full buildout remains 3,150 units. However, 321 units will be reallocated from the Phase 2 area of the Project to the Phase 1 area (for a total of 2297 Phase 1 units). This includes six market-rate live-work units, which would combine residential living space with commercial space.

In addition, a total of 315 units will be deed restricted as affordable as defined by the County and developed over both phases. Of the 315 affordable units, 95 would be designated as senior-living affordable units. The senior-living affordable units would be available to occupants aged 55 and over who meet the minimum criteria to qualify for affordable housing. The remainder of the affordable housing units would not have any age restrictions.

An Errata dated April 4, 2018 (April Errata) was prepared to determine whether these minor changes would change any of the conclusions of the SEIR. The April Errata shows that (a) the revisions result in a project that is substantially consistent with the Project as analyzed in the SEIR, (b) the revisions would not result in a new

significant impact from the Project or a new mitigation measure or a substantial increase in the severity of previously identified effects, (c) there is no feasible project alternative or mitigation measure considerably different from others previously analyzed that would clearly lessen the significant environmental impacts of the Project, but the Project's proponents decline to adopt it, and (d) the SEIR was not inadequate or conclusory in nature. The revisions involve only minor changes to the distribution of land uses and an overall reduction in density and intensity or use, and the April Errata merely clarified or amplified or made insignificant modifications in the adequate SEIR, which, in combination with the Errata, is appropriate for analyzing the environmental impacts of the Project, as revised.

On April 18, 2018, the Regional Planning Commission adopted the required findings, certified the SEIR, and granted the requested Project approvals. The Center for Biological Diversity, Santa Monica Mountains Conservancy, and Golden State Environmental Justice Alliance (collectively, Appellants) each filed an appeal (collectively, the Appeals) of the Commissions' actions, including the certification of the SEIR and requested Project approvals.

An additional Errata was prepared in August 2018 (August Errata) to make minor technical corrections in the Final SEIR and to provide further information in response to public comments at the Regional Planning Commission meeting, including information of suitable on- and off-site habitat available to implement mitigation measures for biological resources and a health risk assessment for sensitive receptors' proximity to the I-5 freeway. The August Errata did not disclose any new or substantially increased environmental effects of the Project, any feasible project alternative or mitigation measure considerably different from others previously analyzed that would clearly lessen the significant environmental impacts of the Project, or any significant new information requiring recirculation of the SEIR. The August Errata included only minor technical changes to the SEIR and additional information to support the SEIR's conclusions, and the August Errata merely clarified or amplified or made insignificant modifications in the adequate SEIR, which, in combination with the February Errata (hereinafter, the term SEIR shall refer to the SEIR and all of the Errata), remains appropriate for analyzing the environmental impacts of the Project, as revised. On

September 25, 2018, the Board held a public hearing on the Appeals, took public testimony, and then voted to reject the Appeals, uphold the Regional Planning Commission's approval of the Project, and certify the SEIR. On April 2, 2019, the Board adopted the Project entitlements, CEQA findings, MMRP, and Project conditions.

CEQA Litigation and Preparation of the RPDSEIR

On May 1, 2019, Center for Biological Diversity and Endangered Habitats League filed a Petition for Writ of Mandate (Petition) in the Los Angeles Superior Court challenging the County's approval of the Project under CEQA (*Center for Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al, and Real Parties in Interest, Northlake Associates, et al,* Case No. 19STCP01610). On January 11, 2021, the Court issued its ruling (Court Ruling), finding that the County did not comply with CEQA in certain respects in approving the Project, and granting in part and denying in part the Petition. The Court Ruling ordered the County to set aside all of their Project approvals and revise the SEIR as directed in the Court Ruling.

On February 1, 2021, the Court issued a Writ of Mandate and Judgment. The Writ of Mandate obligated the County to set aside its certification of the SEIR, its adoption of the Findings of Fact, Statement of Overriding Considerations, and MMRP, its approval of the Northlake Specific Plan Project (Project No. 2015-00408-(5)), the Vesting Tentative Parcel Map No. 073335-(5), Conditional Use Permit No. 2015-00019-(5), and Vesting Tentative Tract Map No. 073336-(5), and any other associated approvals (Project Approvals). The approval of the 1992 Specific Plan was not a rescinded approval as it was previously approved and beyond challenge.

On May 18, 2021, the Board set aside all Project Approvals, including certification of the SEIR. On April 14, 2025, the RPDSEIR, prepared in response to the Court Ruling, was made available for public review and comment for a 45-day comment period. The RPDSEIR contained the following revised and updated portions and/or sections to be recirculated for public comment:

(1) Revised biological impact analysis only as to the Western Spadefoot Toad (WST) and special-status plants, as well as impact assessment for Crotch's Bumblebee (CBB),

(2) Updated Traffic Analysis as to Vehicle Miles Travelled (VMT) pursuant to Senate Bill (SB) 743 and CEQA Guidelines Section 15064.3,

(3) Updated Wildfire Analysis pursuant to Appendix G of the CEQA Guidelines, and

(4) Revised alternatives analysis only as to the addition of a Creek Avoidance Alternative and a Partial Creek Avoidance Alternative.

Following the close of public comment period on May 29, 2025, detailed responses to all public agency comments and comments received from members of the general public regarding the Project and the analyses in the RPDSEIR were prepared by DRP staff with assistance of a private consultant and reviewed, and revised as necessary by DRP and other County staff to reflect the County's independent judgment on issues raised. These Responses to Comments are included in the RPFSEIR. The County received eight comment letters regarding the RPDSEIR. All of these comment letters were included and responded to within the RPFSEIR.

The RPFSEIR has been prepared by the County in accordance with CEQA, and State and County Guidelines for implementation of CEQA. More specifically, the County has relied on Section 15084(d)(3) of the State CEQA Guidelines, which allows acceptance of drafts prepared by the applicant, a consultant retained by the applicant, or any other person. DRP, acting for the County, has reviewed, considered, revised, and edited as necessary the submitted drafts to reflect its own independent judgment, including reliance on County technical personnel from other departments.

On October __, 2025, the Regional Planning Commission, upon the recommendation of DRP, adopted the Partial Creek Avoidance Alternative (PCAA), the environmental superior alternative, as the proposed Project along with adopted the required findings, certified the SEIR (including the RPDSEIR and RPFSEIR), and granted the requested Project approvals.

Section 1 of these supplemental findings discusses the potential environmental effects of the Project assessed in the sections that were recirculated (including WST, CBB, Rare Plants, VMT and Wildfire). Section 2 discusses the evaluation of the two additional Alternatives analyzed in the RPDSEIR. Section 3 discusses the Project's MMRP. Section 4 contains the Statement of Overriding Considerations. Section 5

contains the findings pursuant to State CEQA Guidelines Sections 15091 and 15092. Section 6 contains the findings pursuant to Public Resources Code Section 21082.1(c)(3). Section 7 contains a finding that no recirculation is required. Section 8 identifies the custodian of the record upon which these findings are based. Section 9 sets forth additional CEQA findings. The findings set forth in each section are supported by substantial evidence in the administrative record of the Project.

SECTION 1
SUPPLEMENTAL CEQA FINDINGS

All mitigation measures (as set forth in the MMRP attached as Exhibit A to these findings) have been incorporated by reference into the Project's conditions of approval. In addition, the other required conditions of the Project Approvals further lessen the potential effects of the Project.

The County has determined, based on the RPFSEIR, that the Project's design features, mitigation measures, and conditions of approval will reduce Project-specific impacts concerning Biological Resources (WST, CBB, Rare Plants), Transportation (VMT), and Wildfire to less than significant levels.

The County has further determined, based on the RPFSEIR, that there are no significant cumulative impacts, or that the Project's design features, mitigation measures, and conditions of approval will reduce the Project's contribution to less than cumulatively considerable levels, concerning Biological Resources (WST, CBB, Rare Plants), Transportation (VMT), and Wildfire.

1. Biological Resources - WST

Potential Effect

The Project could have a substantial adverse effect, either directly or through habitat modifications, on WST.

Finding

With implementation of the mitigation measure identified in the RPDSEIR and approved by the California Department of Fish and Wildlife (CDFW), potential impacts to WST would be reduced to a less than significant level during construction and operation of the Project.

Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen potential significant environmental effects to WST, and the biological resources (WST) impacts of the Project would be less than significant.

Facts

Potential impacts to the WST are discussed in Section 2.1 of the RPDSEIR, as well as in the RPFSEIR.

The WST is a species of amphibian in the family Scaphiopodidae. It is found in western California (USA) and northwestern Baja California (Mexico). WST is a relatively smooth-skinned species of American spadefoot toad. Its eyes are pale gold with vertical pupils. It has a green or grey dorsum, often with skin tubercles tipped in orange, and has a whitish color on the abdomen. On each hind foot is a wedge-shaped black spade. Adult toads are between 3.8 cm and 7.5 cm (1.5 in and 3.0 in) long. Juveniles have a similar appearance to adults, but with more distinct spotting. It is nocturnal, and activity is limited to the wet season, summer storms, or during evenings with elevated substrate moisture levels.

WST was observed on the Project Site during various general and focused amphibian surveys, as well as during focused surveys for listed fairy shrimp species within seasonal pools. The surveys that observed WST were conducted during years with well above-average rainfall (2004/2005) and below-average rainfall (2014). While numerous ephemeral ponds and features have been observed on the Project Site over time during various surveys for different species, only three features have been observed to contain WST, and only one additional feature was observed to contain potential WST habitat, despite no WST being observed in this latter feature. Subsequent surveys were conducted in 2023 and 2024.

The Project Site contains a maximum of four ponded features that can support WST. These four ponded features will be potentially impacted by the Project. As shown in RPDSEIR Table 2-4, the four ponded features total 0.95 acres of habitat for the WST. The loss of 0.95 acres of habitat for the WST would be considered significant before mitigation. With implementation of revised MM 5.2-9, the impact would be reduced to a less than significant level. Revised MM 5.2-9 is designed to recreate the optimal conditions for WST habitat that was observed and documented in the 2006 BonTerra fairy shrimp report.

Rationale For Expecting Success With Mitigation

As noted in the WST Report (RPDSEIR Appendix B-1), and summarized in the RPDSEIR, WST has shifted habitat use in portions of California from vernal pools to artificial ponds such as stock ponds and other ponding features of anthropogenic origin, many of which have created WST breeding areas quite by accident. As such, any

assertions that it is difficult to create ponds that are suitable for WST breeding are not accurate. Glenn Lukos Associates (GLA), the Project biologist, has been involved in WST habitat creation projects that have been successful and provided an example of one such effort that has been well-studied since the seasonal ponds were created in 2005 and 2006 on Irvine Mesa in an area known as East Orange, which is now part of the Orange County Central Coastal Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) Reserve. The 15 created pools overall achieved performance standards after six years of monitoring and included breeding WST in eight of the pools as of the 2009/2010 rainfall season. It is important to note that the performance standards included a number of components that were focused on the quality of the created pools and included hydroperiod (length of ponding) as it was recognized that this is clearly the most critical component of WST pond creation. The presence of fairy shrimp, a common food source for WST larvae, are an important pool component and these, along with the egg masses and larvae were introduced from the impact pools to the created pools. It was understood that pools with the proper characteristics would ultimately support WST. Thus, the results of follow-up studies conducted up to seven years following completion of the initial program, showed that WST had expanded to 12 pools within the 15-pool complex. Importantly, even in a drought year the pools exhibited sufficient ponding for breeding, though as is often the case for WST in such years, desiccation resulted in the loss of many tadpoles. Revised MM 5.2-9, below, is based on GLA's expert and successful experience in creating ponds that are suitable for WST breeding. The Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan, which is incorporated into revised MM 5.2.9, also includes a 10-year monitoring and maintenance program and contingency measures that would be implemented should WST translocation of inoculum not be on a trajectory for meeting the final success criteria. CDFW reviewed and approved the Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan.

Impact Conclusion and Mitigation Measures

Potentially significant direct impacts on WST would be reduced to less than significant after implementation of revised MM 5.2.9.

Mitigation Measure

MM 5.2-9 A mitigation program for western spadefoot toad (WST) shall be implemented prior to construction, ground disturbance, or vegetation removal that would impact the WST breeding habitat, or areas within 1,000 feet of WST-occupied ponds within the Project Site. The mitigation program would include the components set forth below. A detailed methodology for this effort shall be reviewed by the CDFW and the LACDRP prior to implementation of the mitigation program. Results of the mitigation program shall be provided to the CDFW and the LACDRP.

- Prior to implementing the Spadefoot Relocation Plan, two focused surveys during average or above-average rainfall years will be conducted within the prior appropriate seasons. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e., 2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied pond as well as those identified in recent surveys.
- Suitable sites for seasonal pond creation, within the Project open space, specifically within other NorthLake-owned properties, have been identified and 1.07 acres of seasonal pond habitat will be created. The specific location of the 1.07-acre pool complex is depicted on Exhibit 5 of the NorthLake Castaic, Los Angeles County, California, Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan July 2022 (Revised March and June 2023) (HMMP). As described in the WST Mitigation Implementation Plan, three pools would be created based on current grading plans. The combined size of the three pools (1.07 acres) exceeds the maximum combined size of potential WST habitat currently at the Project Site (0.95 acres, as shown in Table 2-4, above). The WST Mitigation Implementation Plan would address the following issues specific to the site or sites:
  - Soil Characteristics and whether clay liners will be necessary
  - Pool locations and site access routes for construction

        - Types of habitat potentially affected by construction and measures to restore damaged habitat, subject to temporary impacts
        - Watershed size and characteristics
        - Grading plan with cross section for each pool to be created
        - Specifications for clay liner (in needed) including source of clay and installation methods
        - Upland habitat characteristics, including soil suitability for burrowing and vegetative buffer, will also be addressed in the plan
    - Following creation of the 1.07-acre pool complex or complexes and prior to grading of the impacted pools, each pool within each complex will be monitored during the rainy season to ensure that the created pools exhibit at least 60 days of ponding during an average or above-average rainfall year.
    - Following documentation of adequate ponding for each created pool during an average or above-average rainfall year, and prior to grading of the impacted pools, soil inoculum from the impacted pools will be translocated to the created pools to provide a food source for WST.
    - Following documentation of adequate ponding for each created pool during an average or above-average rainfall year, and prior to grading of the impacted pools, WST egg masses, larvae and metamorphs will be translocated to the created pools for at least two wet seasons where WST egg masses, larvae and metamorphs are present in the impact pools and suitable conditions to receive the WST egg masses, larvae and metamorphs are present in the created pools. In addition, data regarding successful breeding will be submitted to CDFW for concurrence that sufficient reproduction has occurred to allow impacts to the pools in the development area.
    - During grading of the pools to be impacted, the Project Biologist will be present to rescue any adult WST that would be relocated to the created pool complex.

- Following the two seasons of translocation of WST egg masses, larvae and metamorphs, and successful breeding, the created pools will be monitored for ten years as set forth in HMMP Table 6 (Conceptual Schedule for Pond Creation Milestones) to document the progression of the WST toward the performance standards provided in the WST HMMP prepared for the project:
    - **Hydrological Monitoring Performance Standard**. Ponding duration of at least 60 days must be documented to occur during average or above average rainfall years prior to translocation of egg masses, larvae, metamorphs, or adults. Ponding duration of at least 60 days must also be documented during the 10-year monitoring period. At the end of the ten-year monitoring period, this performance standard will have been achieved if ponding duration equals or exceeds ponding duration of 60 days during average or above-average rainfall years. It is important to note that during below-average rainfall years, depending on the severity of drought conditions that the created ponds will not pond for sufficient duration to allow WST to reach maturity. Thus, during the ten-year monitoring period, it is to be expected that some years will not pond for 60 days. Nevertheless, the performance standard for hydrology will be considered achieved as long a ponding for 60 days occurs during average rainfall years. Finally, hydrology may be augmented at the direction of the Project Biologist, especially once breeding is observed and is threatened by declining water levels in the pools due to lower-than average rainfall. In the event that the Project Biologist determines that additional water should be added to any pond occupied by egg masses or larvae, it will be necessary to ensure protection of the egg masses and larvae by discharging water to the pool(s) in a manner that does not disturb the egg masses or larvae and does not result in the erosion of soil into the pool(s). This could be accomplished through temporary placement

of large gravel at the discharge site (at the edge of the pool(s)) underlain by plastic that would allow the water to enter the pool(s) slowly and with no sediment.

- **Performance Standard Prior to Grading**. Prior to Project grading that removes the impacted doner pools, during an average or above-average rainfall year, at least two of the three created ponds within the pond complex exhibits emergence of metamorphs in each pond to ensure breeding in subsequent years. Successful breeding would be determined by the presence of egg masses that are not present due to translocation but which occur due to reproduction. Should this occur during a below-average rainfall year, the condition would be satisfied as it would show that the pools are performing as intended. In any case, data regarding successful breeding will be submitted to CDFW for concurrence that sufficient reproduction has occurred to allow impacts to the pools in the development area.
- **Performance Standard Post-Grading**. Following Project grading that removes the impacted donor pools, during an average or above-average rainfall year, at least two of the three created ponds within the pond complex will exhibit breeding as indicated by the presence of WST egg masses, tadpoles/larvae/ or metamorphs, to confirm establishment of breeding WST for each pond complex created. Should this occur during a below-average rainfall year, the condition would be satisfied as it would show that the pools are performing as intended.

2. <u>Biological Resources – Rare Plants</u>

Potential Effect

The Project would have a potentially significant impact on five special-status plant species – Round-Leaved Filaree, Paniculate Tarplant, Southwestern Spiny Rush, Slender Mariposa Lily, and Club-Haired Mariposa Lily.

Finding

With implementation of the mitigation measure identified in the RPDSEIR and approved by CDFW, potential impacts to Rare Plants (Round-Leaved Filaree, Paniculate Tarplant, Southwestern Spiny Rush, Slender Mariposa Lily, and Club-Haired Mariposa Lily) would be reduced to a less than significant level during construction and operation of the Project.

Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen potential significant environmental effects to rare plants (Round-Leaved Filaree, Paniculate Tarplant, Southwestern Spiny Rush, Slender Mariposa Lily, and Club-Haired Mariposa Lily), and the biological resources (Round-Leaved Filaree, Paniculate Tarplant, Southwestern Spiny Rush, Slender Mariposa Lily, and Club-Haired Mariposa Lily) impacts of the Project would be less than significant.

Facts

Round-Leaved Filaree

Round-leaved filaree was observed during 2001 plant surveys, when 39 plants were observed within the Project development boundary. However, this species was not observed during surveys conducted in 2014, indicating that this species may have been extirpated from the Project Site. Site visits on April 6 and 14, 2022 to the site location where the species was previously detected in 2001 did not find the population, consistent with the finding that the population may have been extirpated. If this species is not detected during pre-construction plant surveys, it would be considered extirpated, and no mitigation would be required.

In November 2017, the California Native Plant Society removed this species from the “Inventory of Rare and Endangered Plants” changing the status from 1B.2 to CBR with the note: “Too common statewide,” with the additional comment: “counties that contain small, localized populations under severe threat should track *C. macrophylla* as a species of local concern.” This species has over 600 reported occurrences in CalFlora statewide. Thus, this species no longer has special status in California. The round-leaved filaree is not listed on an official local or regional plan; nevertheless, there are only a few occurrences in northern Los Angeles County, and it is considered locally rare. Therefore, potential impacts to this species, if determined to be present, would be

considered significant under CEQA. With implementation of MM 5.2-5(a), below, the impact would be reduced to a less than significant level.

Rationale For Expecting Success With Mitigation

Round-leaved filaree is an annual herb that reproduces by seed in open areas such as grasslands and in openings in coastal sage scrub. Collection of seed with germination, propagation, and translocation of propagated plants to suitable habitat/soils by a qualified nursery or similar institution, as set forth in MM 5.2-5(a) below, will ensure a high probability of success for the translocation program. The round-leaved filaree translocation program also includes a ten-year monitoring and maintenance program and contingency measures that would be implemented should translocation sites not be on a trajectory for meeting the final success criteria.

Paniculate Tarplant

Paniculate tarplant was observed in 2014 in a single population that consisted of several hundred individual plants, all of which occur within the Project's development boundary. The population was detected on April 14, 2022, consistent with the previous observations. This species is listed as S4 in the CNDDB or "apparently secure within California". Moreover, while (1) the CRPR rank of 4 and the S4 Rarity Ranking, (2) over 700 reported population occurrences in CalFlora statewide–substantially exceeding the minimum threshold of 100 occurrences for the S4 category, and (3) that this species is not on any official local or regional plans, there are only a few occurrences in northern Los Angeles County and is considered locally rare. Therefore, removal of the Project Site population would be considered significant under CEQA and would require mitigation. With implementation of MM 5.2-5(b), below, the impact would be reduced to a less than significant level.

Rationale For Expecting Success With Mitigation

Paniculate tarplant is an annual herb that reproduces prolifically by seed in open areas such as grasslands, disturbed areas such as roadsides, as well as in openings in coastal sage scrub. Collection of seed with hand broadcasting to suitable habitat/soils over a period of three seasons to the translocation of seed as set forth in MM 5.2-5(b) habitat by a qualified biologist or botanist as set forth in MM 5.2-5(b) below, will ensure a high probability of success for the translocation program. The paniculate tarplant

translocation program also includes a ten-year monitoring and maintenance program and contingency measures that would be implemented should translocation sites not be on a trajectory for meeting the final success criteria.

Southwestern Spiny Rush

Southwestern spiny rush was observed throughout Grasshopper Canyon, and it was estimated that several hundred individual plants exist in the Project development boundary. GLA conducted a focused survey and census in 2021 and found approximately 2,000 individuals in Grasshopper Creek. As noted, this subspecies is listed as S4 in the CNDDB or “apparently secure within California”. Moreover, while this species has the CRPR rank of 4 and the S4 Rarity Ranking, (1) over 400 reported occurrences in CalFlora statewide were observed–substantially exceeding the minimum threshold of 100 occurrences for the S4 category, and (2) this species is not on any official local or regional plans; however, there are only a few occurrences in northern Los Angeles County and it is considered locally rare. Therefore, removal of the Project Site population would be considered significant under CEQA and would require mitigation. With implementation of MM 5.2-5(c), below, the impact would be reduced to a less than significant level.

Rationale For Expecting Success With Mitigation

Southwestern spiny rush is a perennial rush that propagates from seed and vegetatively from rhizomes. Southwestern spiny rush grows along streams and also grows in areas with springs or seeps. Seed will be collected from southwestern spiny rush plants located within the impact boundaries by a qualified nursery or similar institution as set forth in MM 5.2-5(c) below. This will ensure a high probability of success for the translocation program. The collected seed will be stored for propagation of container plants. Once propagated, the container plants would be introduced to the translocation site. The southwestern spiny rush translocation program also includes a ten-year monitoring and maintenance program and contingency measures that would be implemented should translocation sites not be on a trajectory for meeting the final success criteria.

Slender Mariposa Lily and Club-Haired Mariposa Lily

BonTerra, the prior Project biologist, reported that approximately 1,709 individuals of slender/club-haired mariposa lily hybrids were observed at 36 locations on the Project Site during botanical surveys conducted in 2014; an additional 22 populations contained plants of varying densities, likely representing an additional 1,000 or more individuals. It is estimated that over 3,000 individuals occur on the Project Site. However, in the BonTerra *Draft Rare Plant Plan*, it was clarified that of the approximately 3,000 individuals observed in the Project Site, approximately 2,000 individuals are located within the Project's development boundary. Given the List 1B status and S2S3 CNDDB Rank for the slender mariposa lily and the S3 Rarity Rank for the club-haired mariposa lily and the CalFlora occurrences (95 and 117 respectively), impacts to this species would be considered significant under CEQA and mitigation would be required. With implementation of MM 5.2-4, below, the impact would be reduced to a less than significant level.

Rationale For Expecting Success With Mitigation

The slender/club-haired mariposa lilies are a short-lived perennial bulb that reproduces from seed. As set forth in MM 5.2-4, translocation will be implemented through a combination methods, including collection of existing bulbs for translocation by qualified habitat restoration specialist and seed collection with propagation by a qualified nursery or similar institution for translocation following propagation. The slender/club-haired mariposa lily translocation program also includes a ten-year monitoring and maintenance program and contingency measures that would be implemented should translocation sites not be on a trajectory for meeting the final success criteria.

Impact Conclusion and Mitigation Measures

After implementation of the recommended mitigation measures, significant impacts to Biological Resources – Rare Plants would be reduced to less than significant. CDFW has reviewed and approved the mitigation measures.

Mitigation Measures

Round-Leaved Filaree

MM 5.2-5(a) Mitigation for the round-leaved filaree shall consist of

transplantation of round-leaved filaree to a mitigation site and establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*).[1] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from round-leaved filaree that are located within the impact boundaries and stored for propagation of container plants to provide for introduction of propagated plants to the translocation site depicted on Exhibit 4A of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the round-leaved filaree:

- A pre-grading survey shall be conducted for two seasons, prior to grading of the occupied area, during the peak flowering period (approximately March through May) by the Biological Monitor. The Biological Monitor shall clearly identify the extent of the round-leaved filaree location within the impact area with pin flags and record the extent of the population using sub-meter GPS for later collection. The pre-grading surveys shall also document the approximate coverage of native and non-native plants at the location of the population to be impacted.
- Prior to seed collection, the existing round-leaved filaree locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities.

[1] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

- Collected seeds, up to one half, will be used to grow a minimum of 300 plants and the remaining half will be stored to allow for contingency purposes all of which would be planted at the receptor site once performance standards are achieved.
- Receptor site or sites identified by GLA during site assessments in 2021 (see Exhibit 4A in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[2]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas.

Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP and CDFW. In developing the performance standards for the round-leaved filaree, it is important to consider the primary goal of the plan referenced above, which is to establish a self-sustaining population of this plant consisting of the number of individuals/population size determined during pre-construction surveys. With replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors:

- The number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe the translocated populations over a period of years to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track emergent plants along with flowering individuals which in combination provides the best and easiest indicators to track that the translocation is succeeding.
- Various threats to the plants must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of recruited individuals, with seed set, leading to future germination/successful

[2] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

reproduction.

- Habitat characteristics, including non-native grasses and herbaceous weeds, are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory.

Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the variability in the number of flowering individuals from year-to-year, the performance standards will have been achieved during at least three years of the ten-year monitoring program. Thus, the standards provide specific criteria showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction.

Year One Through Year Ten

- Flowering of a minimum of 100-percent of the total number of flowering plants counted during pre-construction surveys originating from container stock or seed bank. As noted, the number of container stock individuals planted or plants originating from seed following the initial establishment will equal or exceed the number impacted as determined during pre-construction surveys during at least three years of the ten-year monitoring period; and
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial planting (30-percent).

<u>Contingency Plan</u>

In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards:

- If the receptor site is observed to be failing significantly to achieve the performance standards during the ten-year monitoring period (e.g., flowering of

100-percent is not achieved after three years with normal or above-normal rainfall), the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be propagated from the contingency seed supply held at the nursery for contingency purposes (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials.

The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, the container stock would be propagated from the contingency seed and the plants would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance, would be initiated as set forth above.

Paniculate Tarplant

MM 5.2-5(b) Mitigation for the paniculate tarplant shall consist of transplantation of paniculate tarplant by means of seed broadcasting to a mitigation site with establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*). [3] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from paniculate tarplant that are located within the impact boundaries and stored for introduction to the receptor site depicted on Exhibit 4A of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the

[3] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

significant impacts to the paniculate tarplant:

- A pre-grading survey shall be conducted for two seasons during the peak flowering period (approximately June through August) by the Project Biologist. The Project Biologist shall clearly identify the extent of the paniculate tarplant location within the impact area with perimeter pin flags and sub-meter GPS for later use during seed collection. The pre-grading survey shall also document the approximate coverage of native and non-native plants at the location of the population to be impacted.
- Prior to seed collection, the existing paniculate tarplant locations marked during pre-construction surveys shall be monitored every two weeks by the Project Biologist or a qualified Seed Collector under the direction of the Project Biologist to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities.
- One third of the collected seeds will be used to broadcast on the receptor site during an initial year and one third would be retained for the second year at the receptor site. The remaining one-third of the seed would be held for contingency purposes until performance standards are achieved. Once they are achieved, the contingency seed would be distributed into the mitigation site.
- The receptor site identified by GLA during 2021 (see Exhibit 4A in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[4]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas.

Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the

[4] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

LACDRP (and CDFW). In developing the performance standards for the paniculate tarplant, it is important to consider the primary goal of the plan as set forth above, which is to establish a self-sustaining population of this plant consisting of the number of individuals/population size determined during the largest population number of the two years of pre-construction surveys. With replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors:

- The number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe the translocated populations over a period of years to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track flowering individuals to confirm that the translocation is succeeding.
- Various threats to the plants must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of recruited individuals, with seed set, leading to future germination/successful reproduction.
- Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory.

Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the variability in the number of flowering individuals from year-to-year, the performance standards will have been achieved during at least three years during the ten-year monitoring program. Thus, the annual standards provide specific criteria showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County’s satisfaction.

Year One Through Year Ten

- Flowering of a minimum of 100-percent of the total number of flowering plants counted during the larger of the two years during which pre-construction monitoring was conducted. This would be achieved during at least three years of the ten-year monitoring period); and
- Habitat subject to translocation must exhibit same or less cover by non-native grasses; and forbs than during the initial planting (30-percent).

Contingency Plan

In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards:

- If the receptor site is observed to be failing significantly to achieve the performance standards during the ten-year monitoring period (e.g., flowering of 100-percent is not achieved after three years with normal or above-normal rainfall), the Biological Monitor will identify an alternate site(s) in which to install the contingency seed held at the nursery for contingencies purposes (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials.

The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, contingency seed would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance would be initiated as set forth above.

Southwestern Spiny Rush

MM 5.2-5(c) Mitigation for the southwestern spiny rush includes two components to ensure long-term persistence of southwestern spiny rush in northern Los Angeles County. Mitigation includes 1) preservation of streambed habitat within Marple

Canyon that contains 523 individuals of the spiny rush, and 2) planting of southwestern spiny rush at a mitigation site with establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan)*.[5] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seed will be collected from southwestern spiny rush plants located within the impact boundaries. The collected seed will be stored for propagation of container plants. Once propagated, the container plants would be introduced to the translocation site depicted on Exhibit 4B of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan.* The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the southwestern spiny rush:

- A pre-grading survey shall be conducted during a single season during the peak flowering period (approximately March through May) by the Biological Monitor. The Biological Monitor shall identify the extent of the southwestern spiny rush location within the impact area using sub-meter GPS for later seed collection.
- Prior to seed collection, the existing southwestern spiny rush locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities.
- Collected seeds will be used to grow a minimum of 600 plants to allow for contingency purposes all of which would be planted at the receptor site. Half of

[5] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

the seed collected will be retained by the nursery for additional propagation as a contingency measure.

- Receptor site or sites identified by GLA during site assessments in 2021 (see Exhibit 4B in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[6]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas.

Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP and CDFW. In developing the performance standards for the southwestern spiny rush, it is important to consider the primary goal of the plan as set forth above, which is to provide for a combination of preservation and establishment of a self-sustaining population of this plant consisting of the 300 individuals, which in combination of the preservation in Marple Canyon would mitigate impacts to this species. In order to achieve survival of 200 plants within Grasshopper Creek, 300 individuals will be planted initially to allow for natural attrition. With the combined preservation and replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors:

- Southwestern spiny rush is a perennial plant and the number of flowering individuals in any given year does not vary substantially. However, based on environmental conditions, it is not expected that populations change significantly over the period of years needed to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track the existing population within Marple Canyon along with established individuals in Grasshopper Creek to determine progress.
- Various threats to the plants established within Grasshopper Creek must be minimized during the ten-year monitoring and maintenance period to ensure

[6] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

survival, germination, and ultimate flowering of planted and recruited individuals, with seed set, leading to future germination/successful reproduction.

- Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory.

Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the expected stability in the number of flowering individuals from year-to-year, the performance standards will have been achieved at the end of the ten-year monitoring program. Thus, the annual standards provide a guide showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction.

Marple Canyon Year One Through Year Ten

- Persistence of Marple Canyon population totaling 523 individuals with no more than ten-percent reduction due to such factors such as drought. Thus, there would be a minimum of 471 individuals at the end of the ten-year monitoring period.

Grasshopper Creek Year One

- Survival of 80-percent of the 200 established individuals.
- Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year.

Grasshopper Creek Year Two

- Survival of 90-percent of the 200 established individuals.
- Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year.

Grasshopper Creek Year Three through Ten

- Survival of 100-percent of the 200 established individuals.
- Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year.

Contingency Plan

In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards:

- If the Grasshopper Creek receptor site is observed to be failing significantly to achieve the performance standard during the ten-year monitoring period (e.g., survival of 100-percent of 200 established individuals is not achieved by the end of ten years), the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be propagated from the contingency seed supply held at the nursery for the (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials.

The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, the container stock would be propagated from the contingency seed and the plants would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance, would be initiated as set forth above.

Slender Mariposa Lily and Club-Haired Mariposa Lily

MM 5.2-4 Mitigation for the club-haired mariposa lily and the slender mariposa lily shall consist of transplantation of lilies to a mitigation site and establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation*

and Monitoring Plan).[7] The *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from lilies that are located within the impact boundaries and bulbs will be subsequently excavated and stored for later transplantation to the translocation site depicted on Exhibit 5 of the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the club-haired mariposa lily and the slender mariposa lily:

- A pre-grading survey shall be conducted for two seasons following emergence of leaves and during the peak flowering period (approximately March through June) by the Biological Monitor. The Biological Monitor shall clearly identify each lily location within the impact area with a pin flag for later collection. The pre-grading survey shall also document the approximate coverage of native and non-native plants at each lily population to be impacted.
- Prior to seed collection, the existing lily locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities.
- Individual lily bulbs shall be excavated and collected following the seed collection and once the bulbs have entered their winter dormancy period (approximately September 1). The bulbs shall be stored by a qualified nursery or institution with appropriate storage facilities and all non-target bulbiferous species shall be discarded.

[7] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

- A portion of the collected seeds will be used to grow 500 slender/club-haired mariposa lilies for contingency purposes and stored a native plant nursery until needed as determined by the project biologist.
- Receptor site or sites identified in BonTerra's *Feasibility Analysis of NorthLake Biological Mitigation Requirements* and refined by GLA (as shown on Exhibit 5 of the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan*) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas.
- Receptor sites on lands currently owned by NorthLake will be managed by SMMC or other approved entities. Prior to commencing the actions set forth in this plan, the applicant shall submit final agreements to CDFW and the County with the acceptable entities that will hold the Conservation Easement(s) (CE) and provide long-term management.
- Funding for this measure shall be suitably established to the County's satisfaction.
- Performance criteria have been developed in the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan,* dated February 2023, and pre-approved by the LACDRP and CDFW. The performance criteria shall address (1) native and non-native plant coverage requirements (mitigation site conditions should be consistent with lily populations in the impact area) and (2) percentage of lilies that exhibit emergent leaves that that bloom each year as follows (because the salvaged plantings will be phased over a three-year period as described above, the monitoring period would be ten years for each phase or a minimum of 13 years beginning from the start of phase 1. As set forth in Table 3 of the of the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan*, under the phased translocation, 40-percent of plants would be translocated in year 1, 40-percent in year 2 and 20-percent in year 3):

Year One

- Emergence of leaves of a minimum of 70-percent of the translocated bulbs
- Flowering of a minimum of 50-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Two

- Emergence of leaves of a minimum of 60-percent of the translocated bulbs
- Flowering of a minimum of 40-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Three

- Emergence of leaves of a minimum of 50-percent of the translocated bulbs
- Flowering of a minimum of 30-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Four

- Emergence of leaves of a minimum of 50-percent of the translocated bulbs
- Flowering of a minimum of 30-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Five

- Emergence of leaves of a minimum of 60-percent of the translocated bulbs
- Flowering of a minimum of 40-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Six

- Emergence of leaves of a minimum of 70-percent of the translocated bulbs
- Flowering of a minimum of 50-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Seven

- Emergence of leaves of a minimum of 70-percent of the translocated bulbs
- Flowering of a minimum of 50-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Eight

- Emergence of leaves of a minimum of 80-percent of the translocated bulbs
- Flowering of a minimum of 60-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Nine

- Emergence of leaves of a minimum of 90-percent of the translocated bulbs
- Flowering of a minimum of 70-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Ten

- Emergence of leaves of a minimum of 100-percent of the translocated bulbs
- Flowering of a minimum of 70-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

The monitoring shall be conducted for ten years (for each phase) from installation of the translocated bulbs or from installation of container plants. As noted, this could result in two separate and unrelated ten-year monitoring efforts, including one that originates with bulb installation and a subsequent effort that begins with container stock installation. If the performance standards are not being met during the first year, additional measures may be suggested as determined appropriate by the Project Biologist as set forth in the Contingency Plan set forth in the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* as set follows:

- If any of the translocation/receptor sites are observed to be failing significantly to achieve the performance standard during the ten-year monitoring period, the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be stored at a nursery for the first year of the program.
- If the receptor sites appear on track to meet the performance standards no sooner than year seven of the monitoring and maintenance period, the remaining plant material may be planted at the receptor sites (if space allows) or additional acceptable receptor sites will be identified.
- Seeds and/or bulbs will continue to be harvested from lilies maintained in the nursery and installed in the receptor sites on an as-needed basis to ensure receptor sites are progressing toward final performance.
- If the receptor sites fail to achieve the performance standards by the tenth year of the program, the monitoring period may be extended if the Project Biologist in consultation with LACDRP and CDFW, determines that the site is continuing to progress and can ultimately achieve the performance standards. Alternatively, if it is determined that a particular receptor site is not able to meet performance standards, then additional receptor sites will be identified to make up the difference. Thus, for example, if a receptor site received 500 bulbs, at the 80-percent success criteria it must have 400 emergent plants or 300 flowering plants to be successful. If the site only exhibits 40-percent emergent plants and 30-percent of flowering Mariposa lilies, then the site would be credited with the partial success achieved and an additional site where the shortfall could be made

up would be identified.

- Potential seed sources from additional donor sites shall also be identified in case it becomes necessary to collect additional seed for use on the site following performance of remedial measures.

3. <u>Biological Resources - CBB</u>

Potential Effect

The development and operation of the Project could impact the CBB.

Finding

With implementation of the mitigation measure identified in the RPDSEIR, potential impacts to CBB would be reduced to a less than significant level during construction and operation of the Project.

Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen potential significant environmental effects on CBB, and the Project's biological resources impacts on CBB would be less than significant.

Facts

The Project is already required to provide mitigation for Coastal Sage Scrub and other flowering resources. Coastal Sage Scrub and other flowering resource mitigation is more than adequate for CBB. In fact, Coastal Sage Scrub is the preferred habitat for CBB. Mitigation of flowering resources at a 2:1 ratio exceeds what CDFW requires for CBB mitigation. Based on areas of suitable habitat, the Project would provide 337.55 acres of mitigation within the onsite conservation areas and 156.7 acres of conservation on adjacent NorthLake ownership for a total of 492.2 acres of preservation. (Exhibit 3 to the CBB Survey Report.) Thus, based on impacts to up to 1,001.8 acres of suitable habitat that supports or potentially supports CBB, the mitigation ratio of 2:1 would be 2,003.6 acres. To achieve 2:1 mitigation, NorthLake will provide approximately 337.5 acres onsite, 156.7 acres on NorthLake-owned offsite property, and obtain 1,509.4 acres from a CDFW-approved mitigation bank or through purchase and long-term conservation of suitable habitat, or a combination of the two options to account for the remainder. Appendix B to the CBB Survey Memo (Feasibility Analysis of NorthLake Biological Resources Contributors, Attachment 2, Table 3, Top 20 High Scoring Parcels

from Regional Analysis) is a Mitigation Feasibility Assessment that includes candidate properties with suitable habitat such as Coastal Sage Scrub, chaparral, and native grasslands that contain suitable habitat for CBB.

Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen potential significant environmental effects on CBB to less than significant levels.

Project grading will impact the following vegetation alliances that support or could potentially support CBB based on the presence of suitable floral resources.

Sage Scrub Communities

Project implementation would impact a total of 634.70 acres of sage scrub, including Purple sage scrub, California sagebrush–California buckwheat scrub, Black sage scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, California sagebrush–California buckwheat scrub/California annual grassland, and the burned sage scrub areas: burned Purple sage scrub, burned California sagebrush–California buckwheat scrub, burned Black sage scrub, and burned California sagebrush–California buckwheat scrub/California annual grassland. Impacts on these vegetation types would be considered significant due to the loss of this vegetation type in southern California and the potential for this habitat to support special status species.

Native Grassland Communities

A total of 24.23 acres of Foothill needlegrass grassland and burned Foothill needle grass grassland would be impacted by Project implementation. Impacts on this vegetation type would be considered significant due to the limited distribution of this vegetation type in California.

California Annual Grassland/Wildflower Fields

A total of 342.85 acres of California annual grassland/Wildflower fields would be impacted by Project implementation. Impacts on California annual grassland/Wildflower fields would be considered adverse and potentially significant because of the density and diversity of native plants found in this vegetation type and because of the general lack of similar areas in the Project vicinity.

Based on the detection of CBB within the NorthLake development area, it is expected that an Incidental Take Permit will be needed to authorize incidental take of CBB during grading. Mitigation for direct impacts to CBB and associated habitat will be fulfilled through compensatory mitigation at a minimum 2:1 suitable habitat that provides replacement of equal functions and values to those impacted by the NorthLake project, or as otherwise determined through the Incidental Take Permit process. Mitigation will be accomplished either through a combination of onsite conservation, offsite conservation on adjacent NorthLake owned lands, and/or through a CDFW-approved mitigation bank. If mitigation is not purchased through a mitigation bank, and lands are conserved separately, a cost estimate will be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity. The funding source will be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount will be established following the completion of a project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The Property Analysis Record will consider all management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development.

Based on areas of suitable habitat, the Project would provide 337.55 acres of mitigation within the onsite conservation areas and 156.7 acres of conservation on adjacent NorthLake ownership for a total of 494.25 acres of preservation. (Exhibit 3 to the CBB Survey Report.) Thus, based on impacts to up to 1,001.8 acres of suitable habitat which supports or potentially supports CBB, the mitigation ratio of 2:1 would be 2,003.6 acres. To achieve 2:1 mitigation, NorthLake will provide approximately 337.5 acres onsite, 156.7 acres on NorthLake-owned offsite property, and obtain 1,509.4 acres from a CDFW-approved mitigation bank or through purchase and long-term conservation of suitable habitat, or a combination of the two options to account for the remainder. Appendix B to the CBB Survey Memo (Feasibility Analysis of NorthLake Biological Resources Contributors, Attachment 2 [Table 3, Top 20 High Scoring Parcels from Regional Analysis]) is a Mitigation Feasibility Assessment that includes candidate

properties with suitable habitat such as coastal sage scrub, chaparral, and native grasslands that contain suitable habitat for CBB.

The proposed mitigation will correspond to the requirements of the NorthLake Specific Plan Final Supplemental EIR (FSEIR) that were set forth in the previous approvals. With the implementation of the previously approved proposed mitigation set forth below, significant impacts on CBB would be reduced to less-than-significant consistent with the FSEIR measures excerpted below.

Rationale For Expecting Success With Mitigation

Regarding the mitigation, it is important to note that for a recently issued Incidental Take Permit for CBB, the CDFW required a ratio of 1.5:1, consisting of a combination of restoration and enhancement. The preservation of Open Space Mitigation Areas, including onsite areas and adjacent offsite areas owned by NorthLake plus purchase of suitable habitat in a mitigation bank or other approved lands determined in coordination with CDFW results in conservation of substantial areas of high-quality chaparral and coastal sage scrub and other habitat types that are both suitable for and occupied by the CBB at a 2:1 ratio, exceeding the amount required for the Incidental Take Permit referenced above.

Impact Conclusion and Mitigation Measures

The previously approved Project is already required to provide mitigation for coastal sage scrub and other flowering resources as set forth below. Coastal sage scrub and other flowering resource mitigation is more than adequate for the CBB. In fact, coastal sage scrub is the preferred habitat for CBB. As set forth above, mitigation of flowering resources at a 2:1 ratio exceeds what CDFW requires for the CBB. Based on areas of suitable habitat, the Project would provide 337.55 acres of mitigation within the onsite conservation areas and 156.7 acres of conservation on adjacent NorthLake ownership for a total of 492.2 acres of preservation. (Exhibit 3 to the CBB Survey Report.) Thus, based on impacts to up to 1,001.8 acres of suitable habitat that supports or potentially supports CBB, the mitigation ratio of 2:1 would be 2,003.6 acres. To achieve 2:1 mitigation, NorthLake will provide approximately 337.5 acres onsite, 156.7 acres on NorthLake-owned offsite property, and obtain 1,509.4 acres from a CDFW approved mitigation bank or through purchase and long-term conservation of suitable habitat, or a

combination of the two options to account for the remainder. Appendix B to the CBB Survey Memo (Feasibility Analysis of NorthLake Biological Resources Contributors, Attachment 2, Table 3, Top 20 High Scoring Parcels from Regional Analysis) is a Mitigation Feasibility Assessment that includes candidate properties with suitable habitat such as coastal sage scrub, chaparral, and native grasslands that contain suitable habitat for CBB.

Mitigation Measures

Coastal Sage Scrub

MM 5.2-6

The loss of sage scrub habitat within the impact area is considered a significant impact. Sage scrub habitat shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but shall be no less than 2:1 for habitat restoration, enhancement or preservation, or combination thereof. A total of 634.70 acres of sage scrub would be impacted by Project implementation, which includes Purple sage scrub, California sagebrush–California buckwheat scrub, Black sage scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, California sagebrush–California buckwheat scrub/California annual grassland, and the burned sage scrub areas: burned Purple sage scrub, burned California sagebrush–California buckwheat scrub, burned Black sage scrub, and burned California sagebrush–California buckwheat scrub/California annual grassland. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, and preservation shall depend on the initial quality of the habitat area to be restored, enhanced or preserved and would be determined by the Project Applicant and the LACDRP. Sage scrub habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. Where restoration or enhancement is the proposed mitigation, the Project Applicant shall develop a Habitat Mitigation and Monitoring

Program (HMMP) and shall submit it to the LACDRP and the California Department of Fish and Wildlife (CDFW) for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to the issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants of suitable sage scrub species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), Peirson's morning-glory will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria, which shall include the following items

a. Responsibilities and Qualifications. The responsibilities and qualifications of the Project Applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures and/or State or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency.
b. Performance Criteria. Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The HMMP shall state that the use of the mitigation site by special status wildlife species (e.g., coastal California gnatcatcher), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off.

c. Site Selection. The mitigation sites shall be determined in coordination with the Project Applicant and the LACDRP. The site(s) shall be located in dedicated open space areas (or areas available for dedication), and shall be contiguous with other natural open space areas. Mitigation sites include onsite, NorthLake-owned offsite property, and obtaining acres from a CDFW-approved mitigation bank or through purchase and long-term conservation of suitable habitat, including areas where restoration or enhancement is needed, or a combination of the two options to account for the remainder. The Project Applicant shall demonstrate acquisition of suitable lands for restoration, enhancement, or preservation prior to issuance of the Project grading permit.
d. Native Plant and Seed Materials Procurement. For restoration or enhancement, at least three years prior to mitigation implementation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin: i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. All container plants shall be propagated from seed of local origin as defined above. No plant or seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the' following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations.
e. Wildlife Surveys and Protection. The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., coastal California gnatcatcher]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. The HMMP shall also describe potential restrictions on these management tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits).

f. Site Preparation and Plant Materials Installation. For restoration or enhancement, mitigation site preparation shall include, as necessary (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, decompacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photodegradable'] fiber roll); (f) application of salvaged native plant materials (i.e., duff) as available, and supervised by a biological monitor, (g) temporary irrigation installation; (h) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials including specification of approved herbicides); (i) planting of container species; and (j) seed mix application.

g. Schedule. An implementation schedule shall be developed for restoration or enhancement, that includes planting and seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below).

h. Maintenance Program. The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal-including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) replacement of dead container plants (as needed); (g) application of remedial seed mixes (as needed); (h) herbivory control; and (i) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. The mitigation site shall be maintained for a period of five years to ensure the successful sage scrub habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be

released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria.

i. Monitoring Program. The Monitoring Program for restoration or enhancement shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring (e.g., randomly placed point-intercept transects); (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the Project Applicant has been released from maintenance requirements by the LACDRP.

j. Long-term preservation. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.

Grassland/Wildflower field

- **MM 5.2-7** The loss of California annual grassland/wildflower fields within the impact area is considered to be a significant impact. California annual grassland/wildflower fields shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 24.23 acres of Foothill needlegrass grassland and burned Foothill needle grass grassland would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas

through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). California annual grassland/wildflower fields habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit It to the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist submitted for review and approval to the LACDRP and LACDRP and the California Department of Fish and Wildlife (CDFW) prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for burrowing owls. Habitat restoration/enhancement shall consist of seeding of suitable California annual grassland/wildflower fields plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria, which shall include the following items:

- The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall

specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration enhancement programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency.

- Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program.
- The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas or areas available for dedication as open space, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owls and other wildlife species; e.g., opportunities for escape and refuge from stochastic events such as fire, flood, etc.; (3) consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible. soil types and microhabitat conditions suitable for the special status plant species listed above.
- At least two years prior to mitigation plant and seed installation associated with restoration of enhancement, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials

specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations.

- The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owls, to determine the species' occupation of the mitigation site(s). The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits).
- For restoration or enhancement, mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) temporary irrigation installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)--including specification of approved herbicides; and (g) seed mix application. Mitigation site preparation and installation shall reflect the

habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage.

- An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below).
- The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal-including specification of approved herbicides; (d) maintenance of erosion control measures; (e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria for restoration or enhancement.
- The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photodocumentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and

diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP.

- Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.

Needlegrass Grassland

- **MM 5.2-8** The loss of foothill needle grass grassland within the impact area is considered to be a significant impact. Foothill needle grass grassland shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 342.85 acres of California annual grassland/Wildflower fields would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). Foothill needlegrass grassland habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and

shall submit it to the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP and LACDRP and the California Department of Fish and Wildlife (CDFW) prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for the burrowing owl. Habitat restoration/enhancement shall consist of seeding of suitable foothill needlegrass grassland plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria, which shall include the following items:

a. Responsibilities and Qualifications. The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency.
b. Performance Criteria. Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for the burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-

glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off.

c. Site Selection. The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas or areas available for dedication, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owls and other wildlife species; e.g., opportunities for escape and refuge from stochastic events such as fire, flood, etc.; (3) consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible, soil types and microhabitat conditions suitable for the special status plant species listed above.

d. Seed Materials Procurement. At least two years prior to mitigation plant and seed installation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area. in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations.

e. Wildlife Surveys and Protection. The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owls, to determine the species' occupation of the mitigation site(s).

The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits).

f. Site Preparation and Plant Materials Installation. For restoration or enhancement, mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, decompacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photodegradable'] fiber roll); (f) temporary irrigation installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)--including specification of approved herbicides; and (h) seed mix application. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage.

g. Schedule. An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below).

h. Maintenance Program. The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal- including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shalt reflect the habitat requirements for burrowing owls; i.e.,

grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria.

i. Monitoring Program. The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP.

j. Long-term preservation. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.

4. <u>Biological Resources – Cumulative Impacts</u>

Potential Effect

The Project could cause potential impacts to sensitive biological resources when added to other past, present, and reasonably foreseeable future projects having closely related impacts.

Finding

The Project is not expected to contribute a significant impact to the Project area. Incremental impacts would not be cumulatively considerable, and no additional mitigation is required.

Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen potential significant environmental effects on biological resources to less than significant levels.

Facts

The Project would have potentially significant adverse impacts on biological resources. Several mitigation measures (MM 5.2-1 through MM 5.2-22, including as modified above) would be implemented to reduce these impacts to less than significant levels. Cumulative projects in the area are expected to have similar potential impacts to the Project on biological resources in the Project vicinity due to similar development activity and/or similar existing conditions. The cumulative impact on biological resources would be considered greater than the Project alone. However, when considering all the proposed and existing projects in the Project area, the Project contributes a relatively small portion of the impacts in the area due to its relatively small impact acreage, and the location adjacent to existing development. The Project is not expected to contribute a significant impact to the Project area.

Impact Conclusion

Incremental impacts would not be cumulatively considerable, and no additional mitigation is required.

5. <u>Transportation - VMT</u>

Potential Effect

Development of the Project would increase the amount of traffic in and out of the area, both on a short-term basis during Project construction and on a long-term basis during Project operation.

Finding

The Project would generate less VMT and have a VMT per service population rate lower than the NorthLake Specific Plan (NLSP) p[roject. Due to the VMT reduction, the previously approved Project's impacts would be less, and the Project would not result in any new or increased significant transportation impacts.

The Project does not conflict with the General Plan, any program plan, ordinance, or policy addressing the circulation system.

The Project would include implementation of an Access and Circulation Plan that provides circulation and design standards for the layout of arterial highways and local collector streets within the Project Site. Because the NLSP project, which included the Access and Circulation Plan, was evaluated as part of the Northlake 1992 EIR and approved as part of the NLSP, no significant impacts are anticipated.

The Project's impact on emergency access would be less than significant.

Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen potential significant environmental effects on traffic (VMT) of the Project to less than significant levels.

Facts

The NLSP VMT per Service Population (27.03) is the baseline for comparison to the previously approved Project VMT per Service Population (25.70) per the methodology required by the County Department of Public Works. Per the County Department of Public Works (LACPW), this threshold is appropriate because the NLSP approval occurred before SB 743 and modifications are being made after SB 743. Because the previously approved Project VMT per Service Population is less than the NLSP, VMT impacts were determined to be less than significant. LACPW approved the VMT Transportation Analysis.

The Project does not conflict with the General Plan or any program plan, ordinance, or policy addressing the circulation system. The Project does not propose to amend or adjust roadway classifications, roadway network, transit routes, or bicycle network under existing conditions and future conditions as identified in the General Plan.

The Project would involve construction of a new internal circulation system. According to the Santa Clarita Valley Area Plan 2012 EIR, hazards due to roadway design would be evaluated on a project-by-project basis. The Project would include implementation of an Access and Circulation Plan that provides circulation and design standards for the layout of arterial highways and local collector streets in support of the NLSP. Because the NLSP, which included the Access and Circulation Plan, was

evaluated as part of the Northlake 1992 EIR and approved as part of the NLSP, no significant impacts are anticipated. Further, all roadway design would comply with applicable design standards and requirements set forth in the NLSP and would be subject to review and approval by the LACPW.

Emergency vehicles would access the Project Site using Ridge Route Road and use the internal street network. North of the Project Site, existing Ridge Route Road can be accessed from Templin Highway. Vehicular circulation within the Project Site would be accommodated by public and private roadways, which would be constructed consistent with applicable LACPW design standards for local roads. According to the California Fire Code, fire apparatus access roads need to be no less than 20 feet wide and shall always be unobstructed, which the internal Project streets will meet. Based on the Project Site plan, the internal streets and intersections, including the Project cul-de-sacs, would accommodate a fire truck.

The Project driveways are designed to comply with turning radius requirements for emergency vehicles and will not cause hazardous driving conditions. The Project's detailed design will be completed in compliance with California Fire Code requirements and not impair emergency vehicle access in the vicinity of the Project during construction and in ongoing operation. Compliance with the California Fire and Building Codes will be mandated through the plan check and approval process. This process will also ensure that adequate access for emergency services is provided, and the County's emergency response plan will be upheld during construction.

Impact Conclusion

The Project would have a less than significant VMT impact at the Project-level and would, therefore, also have a less-than-significant cumulative VMT impact.

The Project does not conflict with the General Plan, any program plan, ordinance, or policy addressing the circulation system. Impacts are less than significant.

The Project would include implementation of an Access and Circulation Plan that provides circulation and design standards for the layout of arterial highways and local collector streets in support of the NLSP. Because the NLSP, which included the Access and Circulation Plan, was evaluated as part of the Northlake 1992 EIR and approved as

part of the NLSP, no significant impacts are anticipated. Further, all roadway design would comply with applicable design standards and requirements set forth in the NLSP and would be subject to review and approval by the LACPW. Therefore, impacts would be less than significant.

The Project's impact on emergency access would be less than significant.

6. Wildfire

Potential Effect

The Project Site is located within a Very High Fire Hazard Severity Zone (VHFHSZ) and would therefore be subject to wildfire risks.

Finding

There would be less than significant impacts related to emergency response and evacuation due to a wildland fire affecting the Project area or surrounding area during construction and operations, and no mitigation is required.

There would be less than significant impacts related to exacerbation of wildfire risk that would expose the population to fire-related pollutant concentrations during construction and operations, and no mitigation is required.

There would be less than significant impacts related to installation and maintenance of infrastructure that could exacerbate wildfire risk during construction and operations, and no mitigation is required.

The increased wildfire risk from human-ignited wildfire would be less than significant. There would be less than significant impacts related to downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes during construction and operations, and no mitigation is required.

Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen potential significant environmental effects on Wildfire impacts of the Project to less than significant levels.

Facts

Emergency Response Plan & Emergency Evacuation Plan

The Project area does not have an adopted emergency evacuation plan. Neither construction nor operation of the Project would impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. The area's

emergency response would be enhanced by implementation of the previously approved Project with the addition of the proposed fire station and improvements to the public roadways.

The Wildfire Evacuation Memo (RPDSEIR Appendix D-1) determined that all 10 modeled wildfire scenarios allowed all vehicles to evacuate within the allowable time limit. This assumes that an evacuation point would only temporarily close (approximately 90 minutes at most) and would reopen after the fire is no longer a threat to that area. The closure of the southerly segments of Ridge Route Road would result in a temporary pause on evacuations. Since Ridge Route Road is the only egress route, a "shelter in place" recommendation may be made in an event during which Ridge Route Road cannot reopen. However, an evacuation route directly onto the I-5 freeway from Ridge Route Road would provide an alternative to Ridge Route Road but would require a substantial amount of evaluation and coordination with Caltrans to implement (NorthLake Specific Plan Wildland Fire Evacuation Scenarios – Evacuation Time Estimates Memorandum (RPDSEIR Appendix D-1)).

From a wildland fire perspective, the Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. Project Site-specific evacuation plans would be completed as an integral part of Resident Information and Community Communications efforts by the Project sponsors, builders, and the homeowner's associations (HOAs) who would have the ongoing responsibility for this information. In addition, the Genasys Protect app is an evacuation management tool that will be available to assist future residents and first responders to effectively evacuate in the event of a wildfire occurrence. Based on the findings of both the Wildfire Report (RPDSEIR Appendix D-1) and Wildfire Evacuation Memo (RPDSEIR D-2), there would be less than significant impacts related to emergency response and evacuation due to a wildland fire affecting the previously approved Project area or surrounding area during construction and operations, and no mitigation is required.

There is currently one cumulative (i.e., related) project in the vicinity of the Project Site: the Centennial Specific Plan. This project will not utilize Ridge Route Road for access; therefore, traffic generation from this project would not affect the findings of

the evacuation analysis (Wildfire Evacuation Memo (RPDSEIR D-2)). There would be less than significant cumulative impacts related to emergency response and evacuation.

Exacerbate Wildfire Risks

Neither construction nor operation of the Project would exacerbate wildfire risks, thereby exposing occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire. During construction, the Project would be required to implement all applicable Federal, State and local regulations pertaining to wildfire. Consistent with current regulations, all dwelling units during operations would be protected with automatic fire sprinklers and the site design would implement appropriate fuel breaks, fire breaks, and fuel modification zones. The Project would create buffer zones and defensible space within and adjacent to the proposed development, with particular attention to ensuring that vegetation would not touch structures or overhang roofs. Structures and homes would be fire hardened in accordance with Chapter 7A of the Building Code, Section R337 of the Residential Code and the specific requirements of Los Angeles County Fire Department (LACoFD) during the development review process for the site-specific locations. On-site, gravity fed, water supply/storage would be provided to ensure fire flow during power outages for the required duration established in the Fire Code. The Fire Management Program specified in the NLSP requires compliance with the County Fire Code and all other regulatory standards.

The size, location, and configuration of the Project make it unlikely that a fire would affect the entire site at a single time, but, rather, the fire would affect sections of the Project site's interface over a period of time allowing for resources to be redistributed and for evacuation opportunities after the fire front has passed a specific location. Travel within the site would be viable at all times, given the distance from the wildland fuels and the wildland fire protection features. The wildland fire modeling indicates there would always be some portion of the community that is not impacted or has already been impacted and is now no longer a significant risk to the occupants/evacuees. The Project Site would have three egress points available for evacuation efforts should law enforcement deem it necessary. Additionally, the combination of fuel modification, hardened structures, the placement of the structures, and features on the topography relative to the wildland fuels creates a community that is

capable of “sheltering in place” if necessary. While never a first choice by emergency service providers, if moving the population is a greater risk, this community as designed and as it would be constructed would be capable of a sheltering operation without undue risk to the residents.

All 10 fire scenarios that have been modeled have at least one evacuation point that is viable for four hours or more except one, the Freeway Spots scenario. In the Freeway Spots scenario, all three evacuation points would be viable for an estimated 30 minutes until it is limited by fire and would reopen in an estimated 60 to 90 minutes depending on location. All fire scenarios were run under extreme conditions that have been recorded in previous fires or that are likely to occur in the future and are considered the worst-case scenarios. Fires with wildland fuels, such as those adjacent to the Project Site, tend to burn in “ribbons of fire” that have a flaming front and little fire behavior behind the flaming front. For this reason, once the fire has passed, so has most of the risk associated with the fire. The Wildfire Report (RPDSEIR Appendix D-1) concluded that while fire would be expected to affect portions of the Project Site before the entire population is evacuated, options exist to change routes, use areas of refuge on a temporary basis, or shelter populations that are not currently at risk until those at risk have been moved to safer areas.

The Project traffic engineer, Stantec, modeled scenarios to validate the time needed to empty the at risk or priority populations and the entire Project Site. With each modeled scenario, the number of people at risk determines the number of dwelling units that would be a priority to evacuate (hereinafter referred to as a priority area). In some instances, the entire Project Site is in the priority area. After the priority area has been evacuated, the remainder of the site would be evacuated. Based on worst-case assumptions, the Wildfire Evacuation Memo (RPDSEIR Appendix D-1) estimated that it would require between 1 and 3.5 hours to evacuate the priority area (for the eight scenarios where the priority area is not the entire Project Site) and between 3.5 and 5.75 hours to evacuate the entire Site. For the Freeway Spots scenario, the Wildfire Evacuation Memo estimates it would require an estimated 2.5 hours to evacuate the priority area and 5 hours to evacuate the entire Project Site. For the Freeway Spots scenario, the three egress points would each be viable for approximately 30 minutes.

Therefore, in such a scenario the remaining on-site population would shelter in place until one or more evacuation points reopen (estimated to be in 60 to 90 minutes) and then evacuation would continue.

Evacuation reduces exposure to pollutant concentrations generated by a wildfire. Therefore, the combined effects of the fuel modification, roadside clearance, building code requirements, and the site design/placement of the structures work together to protect the community from a wildfire. The Project Site would provide a buffer to some of the existing communities by removing or modifying the wildland fuels that are upwind from them. With the fuel modification and roadside clearance in place, the probability of a fire originating from the Project Site is lower in the adjacent communities than without this protection. To access the wildlands, it would be necessary to traverse the 200-foot-wide fuel modification zone. Ignitions from the normal sources associated with development would be much less likely to occur. There would be less than significant impacts related to exacerbation of wildfire risk that would expose the population to fire-related pollutant concentrations during construction and operations, and no mitigation is required.

Installation And Maintenance Of Infrastructure That Could Exacerbate Wildfire Risk

Construction of the Project would not require the installation of associated infrastructure that would exacerbate fire risk. In addition, none of the proposed infrastructure would exacerbate the wildfire risk for the Project Site during operations. The improved water supply for the general area, placement of fuel modification zones, and establishment of a community that has the option to “shelter in place” if needed provides an alternative to existing residents in the immediate area where this level of protection does not exist. If evacuation to the south is not possible, nearby communities would be safer on the Project Site development areas than they would be in some of the current neighborhoods due to the protections provided as part of the Project. There would be less than significant impacts related to installation and maintenance of infrastructure that could exacerbate wildfire risk during construction and operations, and no mitigation is required.

Expose People Or Structures to Significant Wildfire Risks

As proposed, the Project would not expose people or structures on the Project Site, either directly or indirectly, during construction or operations, to a significant risk of loss, injury or death due to a wildland fire in the undisturbed areas adjacent to the site due to the use of fuel modification, defensible space, fire sprinklers, placement of the structure on the landscape/topography, street widths, amount of fire protection water available, and placement of fire hydrants at specified intervals, hardening of the structures to comply with the current wildland interface regulations, and availability of firefighter resources within the Project Site, and the regional assets available to combat a wildland fire by LACoFD and the other associated agencies (CalFire, USFS, mutual aid fire resources, call when needed fire resources) who routinely assist in the suppression of wildfires in the region.

During construction, the Project would be required to comply with all applicable federal, State and local rules and regulations governing construction fire safety, including Chapter 33 of the California State Fire Code entitled, Fire Safety During Construction and Demolition, which provides requirements for precautions against fire and requires readily accessible means of reporting emergencies, access roadways and fire department water supplies to all areas where combustible construction is occurring. This section also requires the development, implementation, and maintenance of an approved, written Site Safety Plan establishing a fire prevention program at the Project Site applicable throughout all phases of the construction, repair, alteration, or demolition work. This plan addresses the requirements of the Fire Code, the duties of staff, and staff training requirements. The Project would also be required to comply with California (Cal/OSHA) regulation section 5141.1, which protects outdoor employees exposed to wildfire smoke and poor air quality through monitoring air quality levels, required training and instructions, and control of harmful exposures to workers by providing respiratory protective equipment and portable air filters. A Project-specific Construction Monitoring Plan and Stormwater Pollution Prevention Plan (SWPPP) would be required to ensure all appropriate erosion control measures and best management practices (BMPs) are implemented during construction activities. The BMPs would include, but would not be limited to, physical barriers to prevent erosion and sedimentation, construction of

sedimentation basins, limitations on work periods during storm events, use of infiltration swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion from occurring during construction. In the event that a wildland fire is followed by a rain event, and results in downstream flooding or landslides from post-fire runoff, the BMP measures required to be implemented under the SWPPP would reduce the risk of runoff, post-fire slope instability, and drainage changes.

Per the approved hydrology study[8] and latest County policies, the Project has been designed with upstream debris basins that are engineered to contain debris flows from upstream natural areas that have burned in wildfires. Upstream flows are conveyed into these basins, where debris settles, and clear water would then be conveyed downstream through a conduit. Based on the approved hydrology study for the Project, Sikand concluded the proposed flows during operations exiting the Project Site would mimic the existing conditions and as such would not result in downslope or downstream flooding (Sikand, Northlake Drainage Memo 2023 (RPDSEIR Appendix D-3)).

In addition, the increase in wildfire risk due to human caused ignitions was assessed. (See Wildland Fire Risk Report NorthLake Project Addendum #1 December 2024 (RPDSEIR Appendix K).) Development of the Project Site would introduce additional wildfire risk factors as compared to existing conditions. Specifically, increased human habitation in a wildlife-urban interface increases the fire risk from arson, children playing with fire, and debris-burning; increased vehicular traffic increases fire risk from sparks, catalytic converters, and discarding of cigarettes; and the introduction of residences within the site would create a wildland-urban interface that increases the general potential for human-ignited wildfires. The Project would introduce residences within the site, creating a wildland-urban interface that increases the general potential for human-ignited wildfires. All of these factors could expose Project occupants to pollutant concentrations from wildfire or the uncontrolled spread of wildfire near or into the development footprint. Although additional opportunities for wildfires would occur, factors associated with the changes in the wildland fuels and topography would have an

[8] NorthLake Hydrology Study, 2017 (Appendix D-4 to the RPDSEIR).

offsetting effect. The ignition gradient along the Project's lateral development could lower ignition probabilities when new development areas are located nearest to the previous urban development, while existing outlying development patterns in the wildland areas may have higher probabilities for wildfire. At a point of development density, wildland fuels are reduced/eliminated or fragmented to a point where fire suppression efforts are more effective. A higher level of development would also have a greater concentration of emergency services resources to aid the protective actions needed to bring the incident to a close.

The Project would not expose people or structures on the Project Site, either directly or indirectly, to a significant risk of loss, injury or death due to a wildland fire caused by human ignitions due to the use or implementation of:

- fuel modification,
- defensible space,
- fire sprinklers,
- placement of the structure on the landscape/topography,
- street widths,
- amount of fire protection water available,
- placement of fire hydrants at specified intervals,
- hardening of the structures to comply with the current wildland interface regulations,
- availability of firefighter resources within the Project Site, and
- the regional assets available to combat a wildland fire by LACoFD and the other associated agencies (CalFire, USFS, mutual aid fire resources, call when needed fire resources) who routinely assist in the suppression of wildfires in the region.

The Project would avoid human-ignited wildfire risk by:

- Prohibiting smoking in wildland and wildland interface,
- Banning solid fuel outfire fires within the community without spark arrestor and only in approved devices, and
- Limiting access to vulnerable open space.

The Project would minimize, prevent and reduce human-ignited wildfire risk by providing:

- Fuel Breaks and Fire Breaks which reduce fire intensity and forward progress in the direction of the community,
- Undergrounding of utilities, pump stations, switch gear to make them less impacted by wildfires,
- Annual inspections for wildland interface (common areas) to insure readiness,
- Defensible space inspections to educate and inform homeowners on what can be accomplished to make the structure more resistant to wildland fires,
- Community cleanup programs (ongoing) to assist in removing wildland fuels from the interface and the community as a whole,
- Back up of critical infrastructure (water, communications, traffic control, electrical) to ensure that they are functional when needed,
- Fuel modification zones which slow or stop the forward progression of the wildland fire
- Defensible space which eliminates or greater reduces the fire pathways between the native fuels and the ignition zone around the structure,
- Roadside clearance zones which increase the utility of the roads for evacuation while reducing the impact of possible ignition sources by reducing fuels near the roads by creating a buffer area,
- New fire suppression resources which are closer/faster to the incident in order to intercede before the fire reaches a point where it exceeds the local resources and becomes a large wildland fire,
- Hardened structures to wildland fire impacts through physical construction, distance and configuration of items on or near the structure which might ignite, and
- Placement of structures relative to the potential wildland fires to reduce or eliminate the possible ignition of the structure or the vegetation around it.

Finally, the Project would compensate and offset human-ignited wildfire risk through:

- Increased detection of ignition which results in actions which limit the size and scope of the fire with early intervention by citizens or emergency personnel,
- Rapid suppression capabilities (as opposed to longer responses to areas without immediate access),
- Fire prevention and public education programs to reduce, eliminate and prevent wildland fires by changing behavior and practice which could elevate the risk of a wildland fire or its impacts,
- Community information and communication systems to keep residents informed and aware of risks, actions needed and increases the ability to plan for future actions such as evacuation prior to being in harm's way, and
- Preplanned evacuation areas/routes which are known to residents to ensure that, if evacuation is needed, it can be completed quickly and in the most efficient and effective manner.

Therefore, the increased wildfire risk from human-ignited wildfire would be less than significant.

There would be less than significant impacts related to downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes during construction and operations, and no mitigation is required.

Impact Conclusion and Project Design Features

Emergency Response Plan and Emergency Evacuation Plan

The Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. Project Site-specific evacuation plans would be completed as an integral part of Resident Information and Community Communications efforts by the Project sponsors, builders, and the homeowner's associations (HOAs) who would have the ongoing responsibility for this information. In addition, the Genasys Protect app is an evacuation management tool that will be available to assist future residents and first responders to effectively evacuate in the event of a wildfire occurrence. Based on the findings of both the Wildfire Report (RPDSEIR Appendix D-1) and Wildfire Evacuation Memo (RPDSEIR D-2), there would be less than significant impacts related to emergency response and evacuation due to a wildland fire affecting

the previously approved Project area or surrounding area during construction and operations, and no mitigation is required.

There is currently one cumulative (i.e., related) project in the vicinity of the Project Site: the Centennial Specific Plan. This project will not utilize Ridge Route Road for access; therefore, traffic generation from this project would not affect the findings of the evacuation analysis (Wildfire Evacuation Memo (RPDSEIR D-2)). There would be less than significant cumulative impacts related to emergency response and evacuation.

PDF-3: Evacuation Plan: A detailed Evacuation Plan would be prepared and shall include, at a minimum, the below described evacuation plan elements, actions during a wildfire, and actions during site evacuation due to wildfire:

Evacuation Plan Elements

Coordination with applicable agencies: During development of the Evacuation Plan, the applicant will communicate with public agencies that may provide emergency response to the Project area in the event of a disaster, such as a wildfire, and emergency assistance is needed. Public agencies could include LACPW, Los Angeles County Fire Department (LACoFD), Los Angeles County Sheriff's Department (LASD), County Supervisor's Office, California Department of Transportation (Caltrans), California Highway Patrol (CHP), and companies providing utility services for the community.

Evacuation zones map: The Evacuation Plan will categorize the Project into Evacuation Zones; the Project Site is within zone CAS-RIDGE. The purpose of the Evacuation Zones is to aid agencies and/or emergency personnel in quickly identifying areas of the Project to plan for the evacuation timing, the evacuation order, and the evacuation routes so that traffic flow is managed and traffic bottlenecks are avoided. For example, the Priority Area under evacuation would be identified by the applicable Evacuation Zones.

Ingress and egress routes: The Evacuation Plan will identify regional and local ingress and egress routes such as the I-5 freeway, Lake Hughes Road Interchange, Ridge Route Road Interchange, and the Ridge Route Road and Lake Hughes Road intersection.

Street routes: The Evacuation Plan will detail the Project's internal circulation and provide evacuation routes using the Project's main three evacuation points: "B" Street at Ridge Route Road, Northlake Boulevard at Ridge Route Road, and "A" Street at Ridge Route Road.

Detour plan: In the event an evacuation point is not available, the evacuation plan will identify alternative routes to an available evacuation point.

Pre-identified safe refuge areas: The Evacuation Plan will provide a map with pre-identified safe refuge areas.

Evacuation traffic control plans: The Evaluation Plan will include traffic control plans such as, but not limited to, deployment of portable generators to intersections with traffic signals, changeable message signs to inform motorists, and modification of signal timing to allow emergency personnel to operate the traffic signals manually.

Resident outreach and education: Resident outreach will be conducted to educate residents on what evacuation zone they are in, evacuation routes, evacuation points, emergency contacts, pre-identified safe refuge areas, and notification systems to enlist.

Actions During a Wildfire

Initial action: LACoFD would assess the event and communicate with LASD if an evacuation order, evacuation warning, or a shelter in place notice is needed. LASD will coordinate with other agencies such as (but not limited to) Caltrans and CHP to close routes into the area. This could mean closing sections of the I-5 freeway or diverting local traffic in the Castaic community near Lake Hughes Road.

Community notifications: The County of Los Angeles will notify the community before, during and after an emergency. Communication will be done via an emergency alert system, Alert LA County, commercial media, amateur radio, and websites. The emergency alert system is broadcasted directly by LASD. Alert LA County is a Community Mass Notification System that is an emergency system used to contact County residents through phone calls, text messages, and email. Commercial media refers to television stations in the surrounding area. Amateur radio refers to Los Angeles County Disaster Communications Service (DCS) which works with ham radio operators throughout the County. Lastly, websites such as the

Los Angeles County Website and National Weather Service will provide up to date fire information and shelter sites. Social media could also be used to notify residents. Residents would be notified of available evacuation routes, shelter locations, refuge areas, and animal shelters.

Response organization contact list: The Evacuation Plan will include a list of contacts that will implement the evacuation plan, such as, but not limited to, LACPW, LACoFD, LASD, Caltrans, CHP, school district, and utilities.

Site Evacuation Due to Wildfire

Evacuation of the Priority Area: Emergency personnel would determine the Priority Area and provide community notifications to the affected evacuation zones on an evacuation warning, evacuation order, or a shelter in place.

Identification of available/open evacuation points closest to the Priority Area: Community notifications would include information related to the availability of the nearest evacuation points. At this time emergency personnel would monitor the movement of the fire and provide updates to the availability of the evacuation points.

Deployment of emergency personnel to direct evacuation: Based on the movement of the wildfire, emergency personnel would open or close the available evacuation points and help reroute vehicles so residents can efficiently exit the area and avoid traffic bottlenecks.

Exacerbate Wildfire Risks

There would be less than significant impacts related to exacerbation of wildfire risk that would expose the population to fire-related pollutant concentrations during construction and operations, and no mitigation is required.

PDF-3: Evacuation Plan: (see above)

PDF-4: Wildfire Prevention and Protection Features: The Project includes several features that would both help prevent a wildfire from starting from within the site and protect the on-site population and structures if a wildfire occurred on or near the site. These features include:

- The Project includes increased housing density and a consolidated design to reduce or eliminate, where possible, wildland fuels within the interior of the site and to keep the edge of the site as an identifiable interface.

- The Project has been designed to avoid and minimize low-density urban development patterns or leapfrog-type developments (i.e., those with undeveloped wildland between developed areas).
- Decreasing the extent and amount of “edge,” or interface area, where development is adjacent to undeveloped wildlands.
- The Project would establish the legal obligations within the codes, covenants, and restrictions (CCR’s) to ensure that defensible space measures are retained over time.
- Undergrounding of power lines throughout the entire Project Site except for the SCE overhead transmission lines that bisect the site.
- The Project design limits development along steep slopes and amidst rugged terrain to decrease exposure to rapid fire spread and increase accessibility for firefighting. Only a few locations have wildland fuels below (lower than proposed structures) the site and these sites would have additional protections such as radiant heat walls, increased built-in fire protection features, and/or placement of the structure so that the effects of “underslung fuels” are reduced.
- Structures and features have been sited to maximize the role of low-flammability landscape features and roadways that may buffer the development from fire spread.
- The Project would expand existing fire resources in the region, including a new fire station location and more water storage than required resulting in additional regional fire duration capacity.
- Proposed development has been situated within the existing or planned ingress/egress and designated evacuation routes to efficiently evacuate the on-site population and the existing community population, consistent with evacuation plans, while simultaneously allowing emergency access.

Installation And Maintenance Of Infrastructure That Could Exacerbate Wildfire Risk

There would be less than significant impacts related to installation and maintenance of infrastructure that could exacerbate wildfire risk during construction and operations, and no mitigation is required.

Expose People Or Structures To Significant Wildfire Risks

The increased wildfire risk from human-ignited wildfire would be less than significant. There would be less than significant impacts related to downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes during construction and operations.

SECTION 2
FINDINGS REGARDING RECIRCULATED ALTERNATIVES

In addition to the alternatives to the Project described and analyzed in the SEIR, the RPDSEIR considered and analyzed two additional alternatives in response to the Court Ruling: (1) Recirculated Alternative 1: the Creek Avoidance Alternative (CAA) and (2) Recirculated Alternative 2: the Partial Creek Avoidance Alternative (PCAA). The Draft SEIR concluded that the No Project/No Development Alternative was the environmentally superior alternative. However, as specified in State CEQA Guidelines Section 15126.6(e)(2), if the No Project Alternative is the environmentally superior alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. Of the remaining alternatives considered in the Draft SEIR, the Phase 1 Development Alternative was considered the environmentally superior alternative. However, upon consideration of the Recirculated Alternatives (CAA and PCAA), in compliance with Section 15126.6(e)(2) of the State CEQA Guidelines, Recirculated Alternative 2, the PCAA, would be the environmentally superior alternative among all six Project alternatives summarized in RPDSEIR Table 2-12 as it reduces the development footprint, thus reducing biology impacts and greenhouse gas emissions and would have less construction noise impacts (though construction noise would still be significant and unavoidable). However, the significant and unavoidable impacts to air quality would not be reduced to below a level of significance. All other impacts would be similar to the previously approved Project. On balance, Recirculated Alternative 2, the PCAA, would result in the greatest reduction in impacts compared to the previously approved Project while maintaining the same amount of housing. For these reasons, the PCAA is the environmentally superior alternative.

Project Objectives

The adopted Specific Plan's goals and policies are set forth in Table 6-1 of the Draft SEIR and serve as the Project's primary Project Objectives. In addition to these goals and polices, implementation of the Specific Plan includes the following additional Project Objectives.

- **Create a healthy "Community"**. Create an innovative, dynamic community focused on active outdoor recreation. Evoke a sense of "pride of place" where people love to live by encouraging social, civic, and leisurely interaction.
- **Celebrate uniqueness of place**. Reinforce and capitalize on the unique qualities of each neighborhood and the surrounding environment through land planning, architecture, and landscape architecture. Integrate the natural beauty and setting of the site into all land uses.
- **Create connectivity**. Encourage community participation and interaction by providing enhanced connections to recreational amenities, open spaces, and regional destinations.
- **Optimize open space relationships**. Provide a comprehensive public and private park system offering a wide variety of passive and active recreational opportunities. Enrich and support the overall walking and bicycling experience by providing significant destinations.
- **Encourage diversity**. Encourage physical, social, and economic diversity through the inclusion of a wide range of home sizes and prices, resulting in a richness of experience for all residents.
- **Integrate environmentally responsible practices**. Conservation of land, energy, materials, and natural resources is of critical importance to our continued well-being. Practices minimizing impact and use of natural resources shall be adopted, resulting in healthy, safe, and responsible environments.
- **Enhance local economic well-being**. Offer commercial and industrial land uses that will create jobs. Provide a larger population near Castaic Lake that will stabilize and support local businesses.

Recirculated Alternative 1, The Creek Avoidance Alternative

Description of Alternative

The Creek Avoidance Alternative (CAA) assumes the same design basis as the previously assessed screening alternative in the SEIR (Section 6.5, Alternatives Deemed Not Feasible, Section 6.5.1 Creek Avoidance Alternative): avoid disturbing the creek bottom that runs through the Project Site while developing a viable land plan effectuating the approved NLSP. The existing landform is created by landslides that traverse the Project Site from the westerly side of Grasshopper Creek to the easterly side of the Site boundary. Typically, per standard engineering and design practices and Los Angeles County requirements, all underlying landslides would be removed and recompacted to provide suitable soil conditions for Project development. Grasshopper Creek has several existing landslides directly underneath the creek bottom that extend from approximately 10 feet to 200 feet easterly and westerly of the creek bottom. A 300-foot setback from the creek bottom was determined to be an appropriate buffer for the CAA. Thus, the developable area for the CAA would commence at the creek setback line and ascend easterly to the easterly boundary of this Alternative. Unlike the previously approved Project, the CAA would require the realignment and new construction of Ridge Route Road, export of approximately 8.2 million cubic yards (mcy) of soils from the Project Site, and the construction of three clear span bridges to access the Project from Ridge Route Road.

The developable acreage for the CAA decreases from 364 acres under the Project to 286 acres, thereby reducing the amount of area available for development. After incorporating other conditioned site elements such as a 23-acre school site and 1-acre fire station (as per the NLSP), along with 167 acres of recreation and park areas, under the CAA, the residential unit count would be reduced to 1,815 units (of which 165 units would be affordable). Compared to the 3,150 dwelling units (of which 315 units would be affordable) under the previously approved Project, the CAA would result in a reduction of 1,335 dwelling units. The CAA would have similar commercial acreages as the previously approved Project. Proportionately, the affordable unit count would be reduced from 315 to 165 units.

Comparison of Effects

Development of the Project Site with the CAA would decrease development intensity compared to the previously approved Project. Although the degree of impacts

for many topics may be similar or less with this alternative, from an engineering geologic, geotechnical, and hydrologic perspective, the alternative is not feasible. Consistent with the previously approved Project, the CAA would result in significant and unavoidable impacts related to air quality (construction NOx, PM10, and PM2.5 and operational VOC and NOx), noise, and traffic. The CAA would result in new significant and unavoidable impacts related to geology and soils, hazards and hazardous materials, hydrology and water quality, traffic (VMT), and wildfire (greater hazards related to emergency access and evacuation due to both existing and proposed geologic and geotechnical conditions).

Finding

The CAA is rejected because it fails to meet many of the Project objectives identified in the SEIR and would not provide any of the Project benefits as set forth herein.

Facts

From an engineering geologic, geotechnical, and hydrologic perspective, the CAA is not feasible. The CAA would result in significant and unavoidable impacts related to air quality (construction and operational), noise, and traffic, similar to the previously approved Project. The CAA would result in new significant and unavoidable impacts related to geology and soils, hazards and hazardous materials, hydrology and water quality, traffic (VMT) and wildfire.

The CAA would not provide as many housing opportunities (1,815 units versus 3,150 units) and would not contribute as much towards the County's Regional Housing Needs Assessment (RHNA) allocation as the previously approved Project. In particular, the affordable unit count would be reduced from 315 units to 165 units, proportional to the reduction in dwelling units as a whole. As such, the CAA does not meet the following objective to the same degree as the previously approved Project:

- Specific Plan III, Housing, Goal i: To develop housing that satisfies the needs of the present and future residents of the NorthLake community.

The CAA would not meet the following objectives due to the adverse indirect impacts to Grasshopper Creek and resulting geotechnical and hydrogeological risks to the development compared to the previously approved Project:

- Specific Plan I, Land Use, Goal i: To encourage high quality design in all development projects compatible with and sensitive to the natural and man-made environment.
- Specific Plan IV, Open Space/Recreation, Goal ii: To preserve and protect sites with scenic and/or recreational value.
- Specific Plan IV, Open Space/Recreation, Goal iii: To reduce the risk to life and property from seismic occurrences, flooding, erosion, wildland fires and landslides.
- Specific Plan VII, Safety, Goal i: Protection of life and property.
- Specific Plan VII, Safety, Goal ii: Reduction of adverse economic, environmental and social conditions resulting from fires and geologic hazards.

Alternative 2, Partial Creek Avoidance Alternative

Description of Alternative

The Partial Creek Avoidance Alternative (PCAA) would leave Phase 1 as designed in the previously approved Project, but would reduce the scope of Phase 2 development. The reduced Phase 2 design avoids a cluster of smaller and larger landslides in the northern portion of Project Site, which results in adverse geotechnical, hydrological, and biological effects. This alternative is therefore proposed to avoid disturbing the landslides and the associated risk of additional loss of creek area. This alternative design would reduce the total disturbance area in Phase 2 by 61 percent, which would preserve a portion of Grasshopper Creek and the associated sensitive habitat within this area of the Project Site. Specifically, disturbance to the northern portion of Grasshopper Creek on the Project Site would be reduced by approximately 20 percent. This alternative provides a balanced site within the proposed Phase 2 grading footprint and does not require any additional import or export of soil, same as the previously approved Project. Furthermore, this alternative greatly reduces the raw earthwork of Phase 2 by approximately 10 mcy. This alternative would maintain the same amount of housing provided on the Project Site as the previously approved Project. The PCAA would include the agreed-upon affordable mixed-use housing (315

units) and six market-rate live-work units, and would preserve the school and fire station sites, commercial sites, and sports park proposed in the previously approved Project.

Comparison of Effects

Development of the Project Site with the PCAA would decrease the development disturbance area compared to the previously approved Project, although the uses remain the same. Although the degree of impacts for some topics may be less with this alternative, the overall impact conclusions would be consistent with the previously approved Project. Consistent with the previously approved Project, the PCAA would result in significant and unavoidable impacts related to air quality and noise. No additional significant or more significant impacts would occur with this alternative.

Finding

While the Alternative would meet the Project Objectives, it would not avoid or substantially lessen the Project's significant and unavoidable environmental impacts.

Facts

Development of the Project Site with the PCAA would decrease the development disturbance area compared to the previously approved Project, although the uses remain the same. Although the degree of impacts for some topics may be less with this alternative, the overall impact conclusions would be consistent with the previously approved Project. Consistent with the previously approved Project, the PCAA would result in significant and unavoidable impacts related to air quality and noise. No additional significant or more significant impacts would occur with this alternative.

The PCAA provides the same number of residential units as the previously approved Project, but on a smaller Phase 2 development area. As such, the PCAA contributes the same as the previously approved Project regarding the County's RHNA allocation. As with the previously approved Project, the affordable unit count would be maintained at 315 units. However, the PCAA provides less active recreational and open space area.

SECTION 3
FINDINGS REGARDING MITIGATION MONITORING PROGRAM

Section 21081.6 of the Public Resources Code requires that when a public agency is making the findings required by State CEQA Guidelines Section 15091(a)(1), codified as Section 21081(a) of the Public Resources Code, the public agency shall adopt a mitigation monitoring and reporting program (MMRP) for the changes to the Project which it has adopted or made a condition of approval, in order to mitigate or avoid significant effects on the environment.

The County hereby finds that the MMRP, which is attached as Exhibit A to these Findings and incorporated in the Project's entitlement approvals, meets the requirements of Section 21081.6 of the Public Resources Code by providing for the implementation and monitoring of Project conditions to mitigate or avoid potential environmental effects in a manner designed to ensure compliance during Project implementation. The MMRP includes all of the mitigation measures and project design features adopted by the County in connection with the approval of the project and has been designed to ensure compliance with such measures during implementation of the Project. In accordance with CEQA, the MMRP provides the means to ensure that the mitigation measures are fully enforceable. In accordance with the requirements of Public Resources Code Section 21081.6, the County hereby adopts the MMRP. In accordance with the requirements of Public Resources Section 21081.6, the County hereby adopts each of the mitigation measures expressly set forth herein as conditions of approval for the Project.

SECTION 4
STATEMENT OF OVERRIDING CONSIDERATIONS

Section 21081 of the California Public Resources Code and Section 15093(b) of the State CEQA Guidelines provide that when the decisions of the public agency allow the occurrence of significant impacts identified in the EIR that are not substantially lessened or avoided, the lead agency must state in writing the reasons to support its action based on the EIR and/or other information in the record. Chapter II of the County's CEQA Guidelines incorporates all of the State CEQA Guidelines contained in Title 14, California Code of Regulations, Sections 15000 et seq. and thereby requires, pursuant to Section 15093(b) of the State CEQA Guidelines, that the decision maker adopt a Statement of Overriding Considerations at the time of approval of a project if it finds that significant adverse environmental effects identified in the EIR cannot be substantially lessened or avoided. To adopt a Statement of Overriding Considerations, the decision-maker must balance the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable." These findings incorporate and state the Statement of Overriding Considerations adopted for the Project.

The Findings and this Statement of Overriding Considerations are based on substantial evidence in the record, including but not limited to the SEIR (the SEIR consists of the Draft SEIR, Final SEIR and the Errata to the SEIR), including the reference library to the SEIR, and documents and materials that constitute the record of proceedings.

The SEIR identified and discussed significant effects that will occur as a result of the Project. With the implementation of the mitigation measures discussed in the SEIR, these effects can be mitigated to levels of insignificance except for potential unavoidable significant Project impacts to air quality, noise, and traffic, as identified in Section 3 of these findings. Accordingly, the County adopts the following Statement of

Overriding Considerations. The County recognizes that significant and unavoidable impacts would result from implementation of the Project. Having (i) adopted the environmentally superior alternative, (ii) reduced the significant adverse environmental effects of the Project by incorporating Project Design Features into the Project, (iii) adopted all feasible mitigation measures described above and in the SEIR and Mitigation Monitoring Program, (iv) rejected certain alternatives to the Project (as analyzed in the SEIR), (v) recognized all significant, unavoidable impacts, and (vi) balanced the benefits of the Project against the Project's significant and unavoidable impacts, the County hereby finds that the benefits of the Project outweigh the potential unavoidable significant adverse impacts, and that the unavoidable significant adverse impacts are nonetheless acceptable, based on the following overriding considerations.

Summarized below are the benefits, goals and objectives of the Project. These provide the rationale for approval of the Project. Any one of the overriding considerations of economic, social, aesthetic and environmental benefits individually would be sufficient to outweigh the significant unavoidable impacts of the Project and justify the approval, adoption or issuance of all of the required permits, approvals and other entitlements for the project and the certification of the completed SEIR.

1. The Project will implement the approved NorthLake Specific Plan with a residential, and commercial development project with significant open space and recreation facilities that conform to the Specific Plan's goals, objectives, and policies.
2. The Project will provide a well-designed development that is compatible with and complementary to surrounding land uses.
3. The Project will generate employment opportunities for the local community and surrounding area by providing for new commercial uses that will generate approximately 548 permanent jobs and a substantial number of construction jobs over the next approximately 10 to 11 years.
4. The Project will provide a comprehensive public and private park system offering a wide variety of passive and active recreational opportunities.

5. The Project will provide 3,150 needed housing units, including 315 affordable units and senior housing, in a range of unit types, size, and prices. According to the current Regional Housing Needs Allocation (RHNA) for unincorporated Los Angeles County as stated in the Revised County of Los Angeles Housing Element (2021 – 2029), there is a need for 90,052 housing units, with some level of housing needed for each income level. While the highest amount of housing (36,533 units) is needed to serve the Above Moderate Income level, there is also a need for Low Income Units (13,691), Very Low Income Units (12,824) and Extremely Low Income Units (12,824). Although housing values will be dictated by market conditions, it is anticipated that many of the housing units proposed as part of the Project would fall within the Above Moderate Income level. Moreover, the Project will provide 315 deed-restricted affordable housing units to be reserved for Low and Very Low Income households. Therefore, the Project would assist the County in achieving its RHNA goals.
6. The Project will encourage physical, social, and economic diversity through the inclusion of a wide range of home types, sizes, and prices, including deed restricted affordable units.
7. The Project will mitigate, to the extent feasible, the potential environmental impacts of the proposed Project.
8. The Project will support public services in the area by providing sites for a fire station and a potential school.

In addition, the development and use of the Project will accomplish and be substantially consistent with Project Objectives, including the applicable goals and policies identified in the Specific Plan and described in Table 6-1 of the SEIR. The Project would produce fewer jobs due to the elimination of industrial uses as compared to the originally proposed project (NLSP project) but would provide 315 affordable housing units. The County finds that due to the pressing need for affordable housing, the revisions to the Project will result in a greater overall benefit to the County.

SECTION 5
SECTION 15091 AND 15092 FINDINGS

Based on the foregoing findings and the information contained in the record, the County has made one or more of the following findings with respect to each of the significant adverse effects of the Project:

a. Changes or alterations have been required in, or incorporated into, the Project that mitigate or avoid many of the significant environmental effects identified in the SEIR.

b. Some changes or alterations are within the responsibility and jurisdiction of another public agency and such changes have been adopted by such other agency, or can and should be adopted by such other agency.

c. Specific economic, legal, social, technological or other considerations make infeasible the mitigation measures or alternatives identified in the SEIR.

Based on the foregoing findings and the information contained in the record, and as conditioned by the foregoing:

a. All significant effects on the environment due to the Project have been eliminated or substantially lessened where feasible.

b. Any remaining significant effects on the environment found to be unavoidable are acceptable due to the overriding considerations set forth in the foregoing Statement of Overriding Considerations.

SECTION 6
SECTION 21082.1(c)(3) FINDINGS

In approving the Project, the County decision-makers have reviewed and considered the Draft SEIR and appendices, the Final SEIR and appendices, the February, April and August Errata (collective, "Errata") as well as the RPDSEIR and RPFSEIR, and all other pertinent evidence in the record of proceedings.

The Applicant's consultants prepared the screen check versions of the RPDSEIR and RPFSEIR, responses to comments (to the RPDSEIR) and technical studies as permitted under Public Resources Code § 21082.1(a). All such materials and all other materials related to the SEIR (including the RPDSEIR and RPFSEIR) were extensively reviewed and, where appropriate, modified by the Department of Regional Planning or other County representatives. As such, pursuant to Public Resources Code § 21082.1(c)(3), the County finds that the Draft SEIR, Final SEIR, Errata, RPDSEIR, RPFSEIR, technical studies, and all other related materials reflect the independent judgment and analysis of the Lead Agency.

SECTION 7
NO RECIRCULATION

The RPFSEIR documents changes to the RPDSEIR. The RPFSEIR provides additional analysis that was not included in the RPDSEIR. The RPFSEIR merely clarifies or amplifies or makes insignificant modifications to the adequate SEIR.

The Responses to Comments contained in the RPFSEIR fully considered and responded to comments made regarding the RPDSEIR. Furthermore, the Responses to Comments include substantial evidence that none of these comments provided substantial evidence that the Project would result in changed circumstances, significant new information, considerably different mitigation measures, or new or more severe significant impacts than were discussed in the RPDSEIR. The County has thoroughly reviewed the oral and written public comments received regarding the Project and the RPFSEIR to determine whether any of the public comments provide substantial evidence that would require recirculation of the RPDSEIR prior to its adoption. The RPFSEIR provides adequate, good faith and reasoned response to the comments.

The County hereby finds, consistent with State CEQA Guidelines Section 15088.5, that no significant new information requiring recirculation of the RPDSEIR has occurred. Specifically, the County has determined, based on the substantial evidence presented to it, that (1) no new significant environmental impact would result from the Project or from a new mitigation measure proposed to be implemented; (2) no substantial increase in the severity of an environmental impact would result from the Project; (3) no feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the Project; and (4) the RPDSEIR is not so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. None of the information submitted after publication of the RPDSEIR, including testimony at the public hearings on the Project, constitutes significant new information or otherwise requires preparation of a supplemental or subsequent EIR. The County further finds that none of the public comments to the RPDSEIR or subsequent public comments or other evidence in the record, including any changes in

the Project in response to input from the community or the Regional Planning Commission, include or constitute substantial evidence that would require recirculation of the RPDSEIR prior to its certification and that there is no substantial evidence elsewhere in the record of proceedings that would require substantial revision of the RPDSEIR prior to its certification, and that the RPDSEIR need not be recirculated prior to its certification.

SECTION 8
CUSTODIAN OF RECORDS

The custodian of the documents or other material which constitute the record of proceedings upon which the Board's decision is based is the Los Angeles County Department of Regional Planning located at 320 West Temple Street, Los Angeles, California 90012.

SECTION 9
ADDITIONAL CEQA FINDINGS

1. Textual refinements were compiled and presented to the decision-makers for review and consideration. The County staff has made every effort to notify the decision-makers and the interested public/agencies of each textual change in the various documents associated with project review. These textual refinements arose for a variety of reasons. First, it is inevitable that draft documents would contain errors and would require clarifications and corrections. Second, textual clarifications were necessitated in order to describe refinements suggested as part of the public participation process.

2. The County finds and declares that substantial evidence for every finding made herein is contained in the SEIR, which is incorporated herein by this reference, or is in the record of proceedings in the matter.

3. The SEIR is a project EIR for purposes of environmental analysis of the Project. A project EIR examines the environmental effects of a specific project. The SEIR serves as the primary environmental compliance document for entitlement decisions regarding the Project by the County and other regulatory jurisdictions.

4. Each of the Project Design Features and mitigation measures identified in the SEIR are hereby incorporated into the, and are enforceable as, Conditions of Approval.

DAMON P MAMALAKIS
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January 27, 2026

BY EMAIL

The Honorable Regional Planning Commission
of the County of Los Angeles
320 Temple Street, Room 150
Los Angeles, CA 90021
Attn:

Re: Northlake Specific Plan
Responses to Public Comments

Dear Commissioners:

We represent Northlake Associates, the Applicant for the reapproval of the Northlake Specific Plan Project, a project you previously approved in 2018.

Several support letters were submitted, as well as a few letters that raise concerns about the Project or its environmental analyses. Attached hereto are point by point responses to those comment letters that raise issues with the various impact analyses contained in the Recirculated SEIR. (Attachment A, Response to Comments.) None of these letters contain credible evidence of a potential significant impact, including regarding wildfire, evacuation, biology and Vehicle Miles Travelled (VMT).

With respect to wildfire and evacuation, attached is a memorandum by Stantec, the Project's expert traffic consultant, that provides additional clarification regarding the potential evacuation impacts on existing communities, which concludes that "Northlake Project traffic is not anticipated to affect the existing communities from evacuating on Ridge Route Road." (Attachment B, Stantec January 23, 2026 Memo: Evaluation of Evacuation Impacts on Existing Communities.) Also attached is Wildland Fire Risk Addendum No. 2 which provides additional clarification on evacuation zones and implementation. (Attachment C.)

We respectfully request your approval of the improved Project with the adoption of the Partial Creek Avoidance Alternative, the environmentally superior alternative.

Very truly yours,

Damon P. Mamalakis

Attachments: Response to Comments (Attachment A)

Stantec January 23, 2026 Memorandum (Attachment B)

Wildland Fire Risk Addendum No. 2 (Attachment C)

Stantec

Memo

To:	Damon Mamalakis Armbruster Goldsmith & Delvac	From:	Daryl Zerfass PE, PTP Maria Morris AICP, PTP
Project/File:	2042648800	Date:	January 26, 2026

Reference: Evaluation of Evacuation Impacts on Existing Communities

The Northlake Project Wildland Fire Risk Report[1] (Risk Report) modeled fire behavior for ten (10) scenarios where a fire originates at different points around the Project site. The Risk Report identified a "fire flow path" that would be the priority area to evacuate for each scenario. Stantec estimated how long it would take for the residences in the priority area to evacuate using Ridge Route Road within the Specific Plan area and south to Lake Hughes Road where Ridge Route Road enters the existing Castaic community[2]. Stantec estimated the approximate number of households, vehicles, and the time needed to evacuate the Project site for each of the scenarios in the Risk Report.

Per the Risk Report, "the size, location, and configuration of the Project site make it unlikely that a fire will impact the entire Project site at as single time but rather the fire will impact sections of the project interface over a period of time which will allow for resources to be redistributed and for evacuation opportunities after the fire front has passed a specific location." Therefore, per the Risk Report, a scenario where the entire Northlake Project and the adjacent existing neighborhoods to the south[3] (Northlake Hills and Wildwood) are both in the priority area to evacuate is unlikely. It is anticipated that if the fire is coming from the north to the south, the Northlake Project will act as a buffer to the existing neighborhood to the south and would evacuate first. If the fire is coming from the south, the existing neighborhoods would evacuate first. Therefore, Northlake Project traffic is not anticipated to affect the existing communities from evacuating on Ridge Route Road.

Evacuation of the Northlake Project and adjacent communities is dependent on having adequate traffic conditions within the existing Castaic community just south of the Project area. The Ridge Route Road/Lake Hughes Road intersection is currently configured as an all-way stop but will be upgraded to a traffic signal with development of the Project. During an evacuation, traffic flow through the intersection should be directly managed by emergency personnel to ensure a continual flow of traffic from the areas being evacuated.

[1] Wildland Fire Risk Report Northlake Project, Firesafe Planning Solutions, December I 2024.
[2] Northlake Specific Plan Wildland Fire Evacuation Scenarios – Evacuation Time Estimates, August 9, 2024.
[3] There are only existing adjacent neighborhoods to the south of the Project site.

Reference: **Evaluation of Evacuation Impacts on Existing Communities**

Sincerely,

Stantec Consulting Services Inc.

Daryl Zerfass PE, PTP
Principal, Transportation Planning & Traffic Engineering
Phone: (949) 302-8995
daryl.zerfass@stantec.com

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c.

RESPONSE TO COMMENTS SUBMITTED FOR JANUARY 28, 2026 REGIONAL PLANNING COMMISSION HEARING

SCH No. 2015031080

Prepared by | Psomas
5 Hutton Centre Drive, Suite 300
Santa Ana, California 92707

January 2026

RESPONSE TO COMMENTS

The following is a list of public agencies, organizations, and persons that submitted comments for the January 28, 2026 Regional; Planning Commission hearing. Comments have been numbered and responses have been developed with corresponding letters/numbers.

1.1 LIST OF WRITTEN COMMENTERS

A list of the public agencies and the persons and organizations that submitted written comments is provided in Table 2-1.

TABLE 2-1
COMMENTS RECEIVED ON THE RPDSEIR FROM AGENCIES, ORGANIZATIONS, AND INDIVIDUALS

Comment Letter	Date	Name
C.1	December 30, 2026	Ashley Funicello
C.2	December 30, 2026	William Kennedy
C.3	January 23, 2026	Dan Silver, Endangered Habitats League
C.4	January 26, 2026	Chad Christensen, Mountains Recreation & Conservation Authority
C.5	January 26, 2026	Peter Broderick, Center for Biological Diversity
C.6	January 27, 2026	Sydney Croasmun, Ridge Route Preservation Organization
C.7	January 26, 2026	Miguel Luna, Santa Monica Mountains Conservancy
C.8	January 27, 2026	Victoria Yundt, Lozeau Drury LLP
C.9	January 27, 2026	Tony Burke
C.10	January 27, 2026	Heather Smokler

Response to Comment Letter C.1

Ashley Funicello
December 30, 2025
Email

Comment No. C.1-1:
Good afternoon. I am writing in regards to the proposed building of 3,150 homes in the northern Castaic area. As a long time Castaic resident, I am deeply concerned about the danger to public safety this addition will cause in an emergency.

Response to Comment No. C.1-1: Commenter's concern is noted for the record.

Comment No. C.1-2:
I have been a resident in Castaic long enough to have been involved in many fires, some with mandatory evacuations, as well as countless closures of the 5 freeway due to traffic incidents or weather. With each of these incidents, our very limited access to exit routes has created a significant threat to residents. We are a small town and have already outgrown our roads. In the event of an evacuation or simply freeway closures, emergency services have no way of reaching us due to unbelievable traffic and no shoulders available for them to drive on in most areas. The addition of 3,150 homes will add at least that many more cars, more than likely double as most homes have at least two vehicles.

Response to Comment No. C.1-2: Stantec, the Project's expert traffic consultant, estimated how long it would take for the residences in the Project priority areas to evacuate in the event of a wildfire using Ridge Route Road within the Specific Plan area and south to Lake Hughes Road where Ridge Route Road enters the existing Castaic community. Stantec estimated the approximate number of households, vehicles, and the time needed to evacuate the Project Site for each of the scenarios in the Wildland Fire Risk Report. It was determined that under all scenarios, evacuation could safely take place within the allowable limit. As set forth in Stantec's January 23, 2026 Memo: Evaluation of Evacuation Impacts on Existing Communities, a scenario where the entire Northlake Project and the adjacent existing neighborhoods to the south (Northlake Hills and Wildwood, the only adjacent existing communities) are both in the priority area to evacuate is unlikely. "It is anticipated that if the fire is coming from the north to the south, the Northlake Project will act as a buffer to the existing neighborhood to the south and would evacuate first. If the fire is coming from the south, the existing neighborhoods would evacuate first. Therefore, Northlake Project traffic is not anticipated to affect the existing communities from evacuating on Ridge Route Road."

Comment No. C.1-3:
The fire we had early in 2025 made it very clear we are in a position to easily become the next Paradise in terms of catastrophic outcomes when a fire or other emergency happens. I beg you to reconsider this project. It would be incredibly irresponsible and cause massive anxiety for current residents. Please instead consider making our escape roads wider or carve out alternative routes for us. This has to be priority before any more homes can be added.

Response to Comment No. C.1-3: The Recirculated Partial Draft SEIR (RPDSEIR) wildfire analysis and the Wildfire Technical reports (RPDSEIR Appendices D-1, D-2 and K) fully comply with the requirements of CEQA and the California Attorney General's "Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act" guidelines. The Wildland Fire Risk Report was prepared in December 2024, a month before the Hughes Fire in 2025. As such, it was not included in the fire history section of the report as it had not occurred at the time the

report was prepared. Inclusion of that wildfire does not change any of the impact conclusions in the RPDSEIR or the Wildland Fire Risk Report. In fact, the Hughes Fire was predicted by Scenario 6 - LakeSpotsat40, with the origin within the County Recreation Area (RPDSEIR Appendix D-1, page 65, 68 and Appendix B), and the Evacuation Report determined that there would be sufficient time to evacuate the previously approved Project (RPDSEIR Appendix D-1, Table 6; see also RPDSEIR Appendix D-1, page 68) with no impediment to all three evacuation points. The fact that the Hughes Fire happened, as predicted, does not change the analysis, conclusion, or determination that the wildfire impact is less than significant. The Wildfire Technical report contains numerous precautionary measures, regulatory compliance measures, and project design features that will be implemented as part of the Project to reduce fire hazards and the need for emergency responses. (RPDSEIR Appendix D-1 (Wildfire Technical Report), pages 77-78.)

Response to Comment Letter C.2

William Kennedy
December 30, 2025
Email

Comment No. C.2-1:
My wife Virginia and I are retired from L.A. County Sheriff's Department and have been residents of Castaic since 2004. We currently live north of Lake Hughes Road in the CC Ranch community. In the 21 years we have lived here, we have personally experienced unique area challenges including wildfires, road closures, traffic jams, and most recently a ruptured natural gas transmission line that was directly behind our home. The reality of where we live is there is only one way in and one way out of our community which makes emergencies particularly dangerous. As long-time residents, we have learned the area and know of vital shortcuts and alternate routes that help us when these problems arise. However, these alternate routes are not always available, and some are on private property.

Response to Comment No. C.2-1: Stantec, the Project's expert traffic consultant, estimated how long it would take for the residences in the Project priority areas to evacuate in the event of a wildfire using Ridge Route Road within the Specific Plan area and south to Lake Hughes Road where Ridge Route Road enters the existing Castaic community. Stantec estimated the approximate number of households, vehicles, and the time needed to evacuate the Project Site for each of the scenarios in the Wildland Fire Risk Report. It was determined that under all scenarios, evacuation could safely take place within the allowable limit. As set forth in Stantec's January 23, 2026 Memo: Evaluation of Evacuation Impacts on Existing Communities, a scenario where the entire Northlake Project and the adjacent existing neighborhoods to the south (Northlake Hills and Wildwood, the only adjacent existing communities) are both in the priority area to evacuate is unlikely. "It is anticipated that if the fire is coming from the north to the south, the Northlake Project will act as a buffer to the existing neighborhood to the south and would evacuate first. If the fire is coming from the south, the existing neighborhoods would evacuate first. Therefore, Northlake Project traffic is not anticipated to affect the existing communities from evacuating on Ridge Route Road."

Comment No. C.2-2:
This area is not like the San Fernando Valley or the Antelope Valley where there are multiple options for evacuation routes. The newly proposed housing development will be in an area that suffered two major wildfires last year. Our home nearly caught fire in 2019. At least four homes in this community suffered fire damage. Being close to the Castaic Lake helps but it didn't prevent those homes from burning. The new developments' close proximity to the lake will not guarantee a fire will be put out immediately. Also, the last big wildfire in 2024 burned in such a way that prevented aircraft from using most of the lake due to smoke. No Super Scoopers could refill on the lake.

Response to Comment No. C.2-2: See Response above regarding evacuation. The Recirculated Partial Draft SEIR (RPDSEIR) wildfire analysis and the Wildfire Technical reports (RPDSEIR Appendices D-1, D-2 and K) fully comply with the requirements of CEQA and the California Attorney General's "Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act" guidelines. The Wildfire Technical report contains numerous precautionary measures, regulatory compliance measures, and project design features that will be implemented as part of the Project to reduce fire hazards and the need for emergency responses. (RPDSEIR Appendix D-1 (Wildfire Technical Report), pages 77-78.)

Comment No. C.2-3:
The new development will be further away from the alternate routes and shortcuts that are closer to town. It will also be built on top of the same natural gas transmission line that recently ruptured and could result in a major disaster for that community. In addition to the dangers of fires and gas lines, traffic is already challenging in the area. In the winter, it is common for the Grapevine section of Interstate 5 to be closed down completely for days at times. This will take away the alternate route of Templin Hwy for the new community and create quite a backup in town for those residents and others. Interstate 5 has been under construction since we moved into the community, and this frequently causes delays. Adding 3,000 more vehicles will create even more congestion for daily commutes and emergencies.

Response to Comment No. C.2-3: As noted in the above responses, it was determined that under all wildfire scenarios, evacuation could safely take place in the allowable limit and that Northlake Project traffic is not anticipated to affect the existing communities from evacuating on Ridge Route Road.

Comment No. C.2-4:
Finally, almost everyone in our neighborhood has to use the California Fair Plan for fire insurance. How are the residents in the new development going to afford fire insurance?

Response to Comment No. C.2-4: The comment does not raise issues regarding the RPDSEIR or the impact analyses. Social and economic issues are not within the purview of CEQA under CEQA Guidelines Section 15131. Comment is noted.

Comment No. C.2-5:
In conclusion, this new development will place extreme strains on the existing community and will be a recipe for disaster in the future. Please do not allow this development to be built.

Response to WF Comment No. 5: Comment is noted.

Response to Comment Letter C.3

Dan Silver
Endangered Habitats League
January 23, 2026
Letter

Comment No. C.3-1:

Endangered Habitats League (EHL) requests denial of this project. For your reference, EHL is a Southern California regional conservation group dedicated to ecosystem protection and sustainable land use. We are long-term participants in County planning initiatives, from the General Plan to the SEA Ordinance to the Climate Action Plan.

EHL is a longstanding "pro-housing" and a "smart growth" advocate. However, NorthLake abjectly fails minimum tests for acceptable land use. Regional Planning, through its Area Plan updates, has shown that all RHNA needs can be met in safe and environmentally sound locations. Sprawl from the early1990s – *backward even for that era* – is contrary to contemporary needs and should be rejected rather than re-adopted.

Response to Comment No. C.3-1: This is an introductory comment.

Comment No. C.3-2:

SECTION 1.0 BIOLOGY

According to the Santa Monica Mountains Conservancy, NorthLake is a "tragedy." This is not an exaggeration as it is one of the most biologically destructive proposals in my long experience. It would pave over a blueline stream (Grasshopper Creek) which runs the length of site, a virtually unprecedented impact. If this is "necessary" as the RPFSEIR claims, then a site so full of landslides that it requires 33 million cubic yards of grading is not suitable for intensive development.

640 acres of coastal sage scrub – a huge amount - would be obliterated, including many rare plants, whose very rarity indicates specialized niche habitats that make the proposed mitigation via re-planting unlikely to succeed.

Sometimes a sprawl project will preserve a large fraction of its site in intact natural open space, arguing for its approval. This is *not* the case with NorthLake. Its limited open space consists of remnants around the development periphery, impacted by development edge effects.

Response to Comment No. C.3-2: Commenter provides no evidence of a significant biology impact; rather just states general opposition. All biology impacts were determined to be less than significant.

Comment No. C.3-3:

SECTION 2.0 Fire safety

New information requires subsequent environmental analysis as shown in comments from

the Center for Biological Diversity.

Also, the County's General Plan Safety Element policies make it clear that expanding the Wildland Urban Interface (WUI) into Very High wildlife hazard with thousands of vulnerable new residents is irresponsible. This injury is compounded by the untruthfulness of the Final EIR which claims that the project – even if exempt from General Plan Policies S4.1, S4.20 and L1.10 – is "consistent" with them because it is "generally surrounded existing built development." Please look at an aerial photo of the site and then revise the Responses to Comments so that this falsehood does not compromise your Commission's integrity and make a sham of the General Plan.

Response to Comment No. C.3-3: Center for Biological Diversity did not provide any new information regarding wildfire requiring additional review or analysis. Their comment letter was fully responded to in the Recirculated Partial Final Supplemental Environmental Impact Report. The Recirculated Partial Draft Supplemental Environmental Impact Report (RPDSEIR) wildfire analysis and the Wildfire Technical reports (RPDSEIR Appendices D-1, D-2 and K) comply fully with the requirements of CEQA and the California Attorney General's "Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act" guidelines. The built environment generally consists of the 5 Freeway to the west which runs the length of the Project site; residential neighborhoods to the South, the Castaic Lake Recreational Area to the East and the Templin Highway to the North.

Comment No. C.3-4:

SECTION 3.0 Wildlife movement and mountain lion impacts

New information requires subsequent environmental analysis as shown in comments from the Center for Biological Diversity.

Response to Comment No. C.3-4: As set forth in RPFSEIR Response to Comment B.4-11, collateral estoppel bars relitigation of the mountain lion/wildlife movement and connectivity issues. See Responses B.4-1, B.4-3, B.4-5, and B.4-6. The Court Ruling denied all of the commenter's claims regarding mountain lions and wildlife crossings finding that "The use of the undercrossings by large animals was thoroughly discussed in the SEIR … The County had the best available information on the topic when it approved the Project in April 2019. The County's implied determination that the Project will not interfere with mountain lion crossings of the I-5 is supported by substantial evidence. (RPDSEIR Appendix A (Court Ruling), pages 19 through 21.)"

Comment No. C.3-5:

SECTION 4.0 VMT

Distant from employment, and locked into perpetual automotive commutes and high GHG emissions, NorthLake epitomes "dumb" growth and unsustainability. Defying common sense and well-established CEQA law, the EIR uses the baseline of the old Specific Plan instead of the required "plan-to-ground" baseline of existing conditions for VMT analysis. While this may comport with Public Works direction, that does not make it proper or legal.

Response to Comment No. C.3-5: The Project is a revision to the 1992 Project, as such it is proper and legal to use the original project as the baseline for comparison. Public Works, the

County's expert agency approved the VMT report including the methodology and impact determination. (RPDSEIR Appendix C-2).

Comment No. C.3-6:

SECTION 5.0 Alternatives

The RPDSEIR purports, based on applicant-prepared studies, that full creek avoidance is infeasible for geotechnical reasons. Has the County verified this information with an independent geologist accountable to the public? Further avoidance of Grasshopper Creek, coastal sage scrub, and rare plants may be possible.

The RPDSEIR deems the Partial Creek Avoidance Alternative (PCAA) as the Environmentally Superior Alternative. Prepared as a result of the court ruling, it reduces impacts to Grasshopper Creek by 20% and improves wildlife connectivity in the northern part of the site, while retaining all housing. The RPDSEIR notes that the PCAA does not meet the Open Space/ Recreational Area Goal *to the same extent as* the proposed Project because there would be 37 acres less Recreation/Park. However, there would still be *130 acres* of Recreation/Park. This is a very substantial amount. There is no showing that 130 acres is inadequate, that land uses could not otherwise be rearranged, or that the increased natural open space of unfilled Grasshopper Creek does not provide a compensatory benefit. An alternative can be adopted even though it does not satisfy *every* goal as much as the proposed Project. The PCAA is fully feasible.

Response to Comment No. C.3-6: Public Works reviewed the geotechnical reports for the Creek Avoidance Alternative (CAA) and agreed with the determination that it is not feasible to construct. Staff recommends adoption of the PCAA as the proposed project, and the Applicant is accepting that recommendation.

Comment No. C.3-7:

Conclusions and recommendations

A project bereft of all planning merit should not go forward. That is the case here. A plan over 30 years old, and flatly inconsistent with today's modern General Plan Safety and Land Use Elements, is far past any reasonable "sell by" date. *Your Commission is under no obligation to make Overriding Findings on behalf of the applicant.* Rather, significant and unavoidable impacts are legal grounds for denial. No vested rights accrue from the 1992 Specific Plan, whose Development Agreement expired. The project *should be denied* but followed by expeditious replanned to provide an economic use to the landowner which is consistent with the constraints of landslides, remote location, wildlife habitat and rare plants, and fire hazard.

Response to EHL Comment No. C.3-7: Commenter's opposition is noted for the record. Commenter provided no credible evidence of a significant impact or error in the Recirculated SEIR.

Response to Comment Letter C.4

Chad Christensen
Mountains Recreation & Conservation Authority
January 26, 2026
Letter

Comment No. C.4-1:

The Mountains Recreation and Conservation Authority (MRCA) recommends the Los Angeles County Planning Commission (Commission) find that the Recirculated Partial Final Supplemental Environmental Impact Report (RPFS-EIR) for Northlake Phase 1 Project No. R2015-00408, Vesting Tentative Tract Map No. 073336, Vesting Tentative Parcel Map No. 073335, and Conditional Use Permit No. RPPL2023004316 (Project) is not in compliance with the California Environmental Quality Act (CEQA) and deny the Project as presented to the Commission.

Response to Comment No. C.4-1: This introductory comment is noted for the record.

Comment No. C.4-2:

The supplemental findings of fact in the RPFS-EIR are unequivocally incorrect and inconsistent with Public Resources Code Sections 21081 and State CEQA Guidelines Section 15091 as the proposed Project requires compensatory mitigation to be performed on MRCA lands without consultation of, agreement with, or approval by the MRCA. Specifically, the RPFS-EIR identified southwestern spiny rush (*Juncus acutus*) occurrences on MRCA-owned lands to satisfactorily mitigate adverse impacts to documented southwestern spiny rush within the Project (see RPFS-EIR Mitigation Measure [MM] 5.2-5c). On October 5, 2022, the MRCA Governing Board approved MRCA Resolution No. 22-138 entering into a Mitigation Agreement pursuant to California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement 1600-2015-0271-R5 (and other regulatory permits) with Lennar Homes of California, LLC, to perform habitat mitigation on MRCA property in Marple Canyon associated with the Habitat Mitigation and Monitoring Plan for the Aidlin Hills Residential Project. MRCA has initiated this habitat restoration work in Marple Canyon and cannot provide the requisite off-site southwestern spiny rush compensatory mitigation as outlined in RPFS-EIR MM 5.2-5c.

Response to Comment No. C.4-2: When last the Applicant communicated with MRCA in 2022, Marple Canyon was available as mitigation land. MRCA had not informed the Applicant that Marple Canyon was no long available. Table 1 Summary of Northlake Mitigation Requirements and Partial List of Mitigation Opportunities to the Feasibility Analysis of NorthLake Biological Requirements (attached to Appendix B-2 of the RPDSEIR [Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan]) identifies 12 additional sites with appropriate habitat for southwestern spiny rush mitigation. Thus, suitable sites are available absent Marple Canyon. Mitigation Measure MM 5.2-5c will be updated to reflect an appropriate site(s).

Comment No. C.4-3:

Further, the proposed Partial Creek Avoidance Alternative (PCAA) would irreparably impact wildlife usage of an oversized box culvert below southbound Interstate 5 (I-5) on MRCA-owned land that provides protected wildlife crossing of I-5 between Marple and Grasshopper Canyons. Deterrence of wildlife use of this protected I-5 crossing in the regionally significant, multi-agency

designed *Sierra Madre-Castaic Connection* linking the Southern California Ecoregion with the Tehachapi and Sierra Nevada ranges would result in additional wildlife-vehicle collisions on I-5 and Ridge Route Road and further reduce the genetic viability of Central Coast and Southern California mountain lion (*Puma concolor*)—a candidate species for protection by California Endangered Species Act (CESA). Given the public trust doctrine codified by Fish and Game Code Section 1600 that wildlife (and their habitat) are held in trust for the people and the protection and conservation of fish and wildlife is of utmost public interest, the Commission has an opportunity to appropriately deny the Project while satisfying the requisite conditions of the Housing Accountability Act (HAA) whereby the Project has (1) specific, adverse impacts upon public health or safety and (2) no feasible method to satisfactorily mitigate or avoid these impacts as related to southwestern spiny rush and mountain lion.

Response to Comment No. C.4-3: MRCA appears to misunderstand the development boundary associated with the PCAA. Avoiding impacts to spiny rush (which are mitigated to less than significant) and mountain lion (which are less than significant) is not a basis to deny the project with the use of the Housing Accountability Act, which requires the County to find, based on a preponderance of evidence that the project would result in a specific, adverse impact on public health or safety. Govt. Code section 65589.5(j)(1)(A) defines a "specific, adverse impact' as "a significant, quantifiable, direct, and unavoidable impact, based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete." The County does not have any objective, identified written public health or safety standards, policies, or conditions to support a finding that the purported impacts on spiny rush or mountain lions constitute a specific, adverse impact on public health or safety. Therefore, denial of the Project on these grounds would violate the Housing Accountability Act.

Comment No. C.4-4:

Recent wildfires in the immediate vicinity of the Project include: Holser Fire (2020), Castaic Fire (2020), Route Fire (2021), Route Fire (2022), Hughes Fire (2025), and Canyon Fire (2025). See attached MRCA – Northlake 20-Year Fire Recurrence Map for reference. Repeat fires in the same area over a short interval often result in habitat type change where former oak woodlands are converted to chaparral shrublands and chaparral shrublands are converted to grasslands—each successive type change results in more fire prone, faster burning fuel types. Because the proposed Project's development is sited over one mile from the nearest planned residential developments along Pine Crest Place, the Project unnecessarily fragments habitat and creates a fire-vulnerable island of development surrounded by flashy fuels.

Response to Comment No. C.4-4: Issues regarding potential habitat fragmentation and wildlife crossing was addressed in the underlying litigation. The Court denied the wildlife crossing challenge and did not require the wildlife crossing impact analysis to be recirculated. Specifically, the Court Ruling denied all of the commenter's claims regarding mountain lions and wildlife crossings, finding that "The use of the undercrossings by large animals was thoroughly discussed in the SEIR … The County had the best available information on the topic when it approved the Project in April 2019. The County's implied determination that the Project will not interfere with mountain lion crossings of the I-5 is supported by substantial evidence." (RPDSEIR Appendix A (Court Ruling), pages 19 through 21.)" As such, the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of those issues. See *Ione Valley Land, Air, and Water Defense Alliance, LLC v. County of Amador* (2019) 33 Cal.App.5th 165, 171 ("Res judicata bars all of LAWDA's objections to the partially recirculated EIR certification and project approval, except for those issues arising from the partially recirculated EIR concerning traffic impacts,

because the remaining issues were litigated and resolved, or could have been litigated and resolved, in connection with the first petition, and the writ of mandate did not require the County to revisit issues other than traffic impacts."); *Sierra Club v. County of Fresno* (2020) 57 Cal.App.5th 979, 990 ("[A]n order of partial decertification is not necessary to protect Developer from relitigating the CEQA compliance of parts of the EIR not affected by the errors relating to air quality impacts. Instead, Developer is protected by res judicata, collateral estoppel and the requirement for the exhaustion of administrative remedies."); *Citizens for Open Government v. City of Lodi* (2015) 205 Cal.App.4th 296, 325-327 (res judicata barred claim that EIR failed to disclose cumulative water supply impacts as that claim was based on the same conditions and facts in existence when the original action was filed.); *San Franciscans for Reasonable Growth v. City and County of San Francisco* (1989) 209 Cal.App.3d 1502, 1517–1518 (rejected a challenge to an EIR's impacts analysis after the issuance of a peremptory writ of mandate as beyond the scope of the additional environmental review ordered in the writ); *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 481 ("Because those challenges asserted in the new petition could have been asserted before the entry of judgment in the prior proceeding and the material facts have not changed, BEEP's challenges to the project description and to the finding on land use consistency asserted in its latest petition for writ of mandate are barred by res judicata."); *Town of Atherton v. California High-Speed Rail Authority* (2014) 228 Cal.App.4th 314, 354 ("Collateral estoppel precludes relitigation of issues argued and decided in prior proceedings."). The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Comment No. C.4-5:

The Project's "planned" expansion of the wildland-urban interface in a California Department of Forestry and Fire Protection (CalFire) designated Very High Fire Hazard Severity Zone (VHFHSZ) endangers the public health and safety of future residents and overburdens local and mutual-aid fire departments tasked to defend ever expanding suburban sprawl. Additionally, the Project Area regularly receives high wind warnings issued by the National Weather Service to alert the public about dangerous weather conditions. As evidenced by the Palisades and Eaton Fires (2025), high wind events and wildfires can overwhelm home-hardening defenses and on-the-ground fire suppression, prevent aerial fire containment, and result in extensive destruction to life and property.

Response to Comment No. C.4-5: The Recirculated Partial Draft SEIR (RPDSEIR) wildfire analysis and the Wildfire Technical reports (RPDSEIR Appendices D-1, D-2, and K) fully comply with the requirements of CEQA and the California Attorney General's "Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act" guidelines. The Wildland Fire Risk Report took into account years of meteorological data, including wind data. It determined that under all ten modeled fire scenarios, evacuation would take place within the allowable limit. Commenter provides not credible evidence of a significant wildfire impact.

Comment No. C.4-6:

Given the extensive liabilities the County is experiencing from the Palisades and Eaton Fires (2025), the Commission should not further imperil the public, first responders, or the County's fiscal solvency by approving 2,295 new residential units in a VHFHSZ with at least one decaying 34-inch, 600-psi petroleum pipeline running through failure-prone hillsides. The Commission should also recognize the unmitigated threat the Project poses to habitat (including southwestern spiny

rush) and habitat connectivity that supports the persistence of State-protected mountain lions in Southern California.

Response to Comment No. C.4-6: See responses to above comments.

Comment No. C.4-7:

The County must also ensure the Project applicants, developers, financiers, future residents, and insurance providers sufficiently understand the multitude risks of living next to a 34-inch, 600-pounds-per-square-inch pressured petroleum pipeline that ruptured on December 27, 2025, and forced thousands of area residents and visitors to shelter in place. Preliminary investigation indicates the gas pipeline exploded after a minor landslide below Ridge Route Road, on or near LA County APN 3244-014-050 owned by Northlake Associates LLC, and approximately 250 feet from the primary ingress/egress for the Project. See attached MRCA – Northlake Gas Line Rupture Map for reference. Since there are other aging pipelines that run through the PCAA footprint, the Project's evaluation of hazards must include assessments of each petroleum pipeline, the adequacy of performed pipeline maintenance, and the planned future pipeline maintenance and/or replacement schedule(s) in the Project Area. The Project applicant must also prepare public outreach materials for all future residents (fee owners and renters) outlining emergency preparedness information about how to minimize sensitive-receptor exposure to any future gas line ruptures. Similar sensitive-receptor information should be prepared for future residents for information regarding the nearby Chiquita Canyon Landfill that is unable to abate toxic air pollution derived from uncontrolled decomposition of landfill waste. Commercial businesses within the Project must be required to publicly and prominently display emergency evacuation routes and effective methods to shelter in place.

Response to Comment No. C.4-7: Regarding the oil pipelines on the Project Site, as set forth in the RPDSEIR Project Description, "an existing crude oil pipeline easement containing two oil pipelines that traverse the entire north-south length of the Project Site would be relocated to an alignment along the eastern boundary of the proposed development area and within the identified grading footprint.) (RPDSEIR, page 1-2.) These are the only oil pipelines that run through the site. Regarding the recent gas line rupture, Northlake Associates has been working cooperatively with Southern California Gas Company to provide access to Northlake-owned property allowing SoCalGas the ability to undertake immediate geotechnical investigations necessary to design and implement a permanent repair solution. The Northlake development plans include the replacement or realignment of the existing gas line in conjunction with the Ridge Route Road improvements, further enhancing safety and reliability as the relocation will be further away from the landslide area that caused the rupture.

Comment No. C.4-8:

In 2025, MRCA completed a Wildlife Conservation Board (WCB) funded implementation project to improve 2.5 acres of cover and forage for wildlife at the above-mentioned box culvert I-5 crossing on MRCA land. Throughout the course of this state-funded project that initiated in April 2020, MRCA's wildlife cameras documented several species using the I-5 culvert including: lion, deer, bobcat, coyote, roadrunner, quail, and weasel. Attached are select photos (see MRCA Marple Canyon Photo Exhibit) that document wildlife that will be directly impacted by Project construction and prevented from using this critical connectivity point across the 26-mile-plus I-5 wildlife barrier from State Route 138 (SR 138) to State Route 126 (SR 126) as identified on the

Project's PCAA Exhibit 2 map. The same PCAA Exhibit 2 map also delineates presumed wildlife dispersal routes through the Project where wildlife will have to cross a new, at-grade, 64-foot-wide "Modified Industrial Collector" and several crossings of new, at-grade, 40-foot-wide "Local Collector" streets to travel between Grasshopper Canyon and Marple Canyon.

Response to Comment No. C.4-8: See above responses regarding wildlife crossings.

Comment No. C.4-9:

Grasshopper Canyon is currently undeveloped except for overhead and underground utilities and unpaved roads to service these utilities—virtually no barriers to wildlife movement. By developing Grasshopper Canyon, even with the reduced grading footprint for the PCAA, wildlife will be irreparably harmed by the Project's impacts to existing wildlife dispersal routes and forced to cross new Project roads that do not incorporate any avoidance or mitigation measures (such as oversized culverts or bridge spans, habitat cover to reduce vehicle noise and light impacts, etc.) that can facilitate east-west wildlife movement through the Project. The proposed "emergency vehicle access" road to the new school site will connect to Ridge Route Road within 450 feet of the I-5 crossing structure on MRCA property. At minimum, this school service road must be realigned to the south, as shown on MRCA – Northlake Road Alignment Alternative Map, to avoid and/or mitigate additional impacts to this existing I-5 wildlife crossing route of regional significance.

Response to Comment No. C.4-9: As noted in the responses above, the PCAA will not impact or interfere with the existing I-5 crossing. The comment regarding the location of the emergency vehicle access road is noted for the record and will be forwarded to the decision makers.

Comment No. C.4-10:

The proposed PCAA school service road's connection with Ridge Route Road is dangerously close (within 200 feet and on a slight curve) to the Marple Canyon access road used by MRCA, Southern California Edison, SoCalGas Company, and contractors to enter and exit Marple Canyon. The gate at this location is a double-arm swinging gate and there is minimal room for parking along Ridge Route Road to unlock or close the gate. As designed, the school's service road will endanger authorized work crews and the public traveling Ridge Route Road. At minimum, the school service road should be moved to approximate the orientation shown in MRCA – Northlake Road Alignment Alternative Map; however, MRCA recommends a formal traffic study to align with appropriate site distances and intersection design criteria set forth in the California Highway Design Manual as Ridge Route Road is often used as a bypass for I-5 during extreme traffic conditions.

Response to Comment No. C.4-10: See above response. The emergency access road will meet all required design standards such that there will not be a potential safety impact. Commenter provided no credible evidence of a potential safety impact.

Comment No. C.4-11:

In furtherance of the multi-agency designed *Sierra Madre-Castaic Connection* to identify the least-cost corridor for movement of priority indicator species between the Tehachapi Range and the Transverse Ranges of Southern California, MRCA is conducting a project in coordination with California Department of Transportation (Caltrans), CDFW, U.S. Geological Survey (USGS), and other partner organizations, to study the 26-mile stretch of Interstate 5 (I-5) between SR 138 and SR 126 for wildlife permeability and opportunities to improve wildlife connectivity across I-5. CDFW

and Caltrans have each designated this section of I-5 as a barrier to wildlife movement and genetic contact between increasingly homogenous Southern California species with their more heterogenous populations of the Tehachapi and Sierra Nevada mountain ranges.

Preliminary MRCA I-5 study data indicates the oversized box culvert on MRCA property below the southbound I-5 regularly transmits priority megafauna between Marple and Grasshopper Canyons. Complementary mountain lion field work is being collected by U.C. Davis's California Carnivores Program in coordination with U.S. Forest Service to determine how regional lions are, or are not, able to cross I-5. The U.C. Davis project has only recently collared a mountain lion west of I-5 near the Project Area; however, the extent of tracked mountain lion movement data, compared to mountain lion roadkill data, indicates that lions confined east of I-5 and south of SR 138 have limited points of access westerly across I-5 and any further reductions in wildlife connectivity across I-5 associated with the proposed Project will represent cumulative, avoidable impacts to a CESA-protected species. See MRCA – Northlake Puma Observation Map for reference.

Adding additional vehicle traffic to Ridge Route Road to serve the Project's 2,295 new residential units will reduce wildlife approaches to the CDFW and Caltrans recognized I-5 barrier and force wildlife to attempt dangerous at-grade crossings or attempt to use the northern Marple Canyon box culvert identified on PCAA Exhibit 2 that leads directly to an existing paintball/airsoft park that severely dissuades wildlife connectivity. Extensive roadkill data compiled for MRCA's I-5 wildlife connectivity study indicates Project development of Grasshopper Canyon will result in addition roadkill of priority megafauna species including mountain lion, mule deer, black bear, bobcat, coyote, and fox. Increased wildlife-vehicle collisions resultant from the Project will similarly endanger vehicle occupants, increase insurance costs, and increase commerce delays on an already congested I-5.

Through a series of acquisitions facilitated by the Trust for Public Land, in 2022 MRCA completed the 6,000-acre-plus Temescal-Hathaway Ranch acquisition that comprises the bulk of the County-designated Santa Felicia Significant Ecological Area (SEA). Project development would impact wildlife connectivity between Castaic Lake and the Santa Felicia SEA that abuts Ventura County and Lake Piru. Development of 2,295 residential units and associated roadway improvements would irreparably harm wildlife connectivity in this biologically unique and sensitive area between perennial water sources of Lake Piru and Castaic Lake. While Southern California is not currently experiencing drought conditions, climate change science anticipates future droughts punctuated by extreme rainfall events which requires conservation of existing surface water resources and preservation of access to surface water in support of rare, threatened, endangered, or at-risk wildlife.

Response to Comment No. C.4-11: See above responses regarding wildlife crossings.

Comment No. C.4-12:

Considering the threat to public health and safety posed by this Project and the inability of Project applicant to propose mitigation that satisfactorily avoids or mitigates impacts to wildlife and habitat, the Commission is fully justified to deny Project No. R2015-00408, Vesting Tentative Tract Map No. 073336, Vesting Tentative Parcel Map No. 073335, and Conditional Use Permit No. RPPL2023004316.

Response to Comment No. C.4-12: Commenter's concluding comment is noted for the record

and will be forwarded to the decision makers.

Response to Comment Letter C.5

Peter Broderick
Center For Biological Diversity
January 26, 2026
Letter

Comment No. C.5-1:

These comments are submitted on behalf of the Center for Biological Diversity (the "Center") regarding the proposed Northlake Development ("Project"). The Center has reviewed the Recirculated Partial Final Supplemental EIR ("EIR") closely and remains concerned that the EIR's analysis of, *inter alia*, biological resources, wildfire, and transportation impacts is inadequate. The Center urges the Regional Planning Commission ("Commission") not to approve the Project without first remedying these deficiencies.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has members and online activists throughout California and the United States. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County.

Response to Comment No. C.5-1: This introductory comment is noted and will be forwarded to the decision makers.

Comment No. C.5-2:

I. The RPFSEIR Fails to Adequately Assess and Mitigate the Project's Impacts to Mountain Lions and Wildlife Connectivity.

The RPFSEIR fails to appropriately respond to the Center's comments regarding mountain lions and wildlife connectivity, stating "[w]ith respect to the portions of the SEIR that were not recirculated, the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of those issues states" (RPFSEIR at 2-22) and that "[c]ollateral estoppel bars relitigation of the mountain/wildlife movement *[sic*] and connectivity issues" (RPFSEIR at 2-24). However, as discussed in the Center's May 29, 2025 comment letter, new and significant information regarding the conservation status of local mountain lions and the increasing threats they face, the movement of at least one mountain lion adjacent to the Project area, and the importance of the existing wildlife connectivity in and near the Project area for their long-term survival has become available since the EIR was certified in 2018.

The California Environmental Quality Act ("CEQA") states that a subsequent or supplemental EIR may be required when either (1) substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report or (2) new information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available. (Pub. Res. Code § 21166.) Below we present clear evidence regarding mountain lions and wildlife connectivity that falls into both categories. Therefore, the RPFSEIR fails to comply with CEQA.

A. Since Project Approval, CDFW has Recommended Mountain Lions in the Project area to be Listed as Threatened under the California Endangered Species Act.

The Project area is located in the Sierra Pelona Mountains, which is within the geographic range of the Southern California and Central Coast mountain lion populations that were petitioned to be listed under the California Endangered Species Act ("CESA") in June 2019 (Yap et al., 2019). In April 2020 these populations were granted "candidacy status" under CESA, such that they are afforded the same protections as other CESA-listed species. And on December 10, 2025, the California Department of Fish and Wildlife ("CDFW") released their status review regarding the petition and recommended listing all of the petitioned mountain lion populations as a threatened Southern California and Central Coast mountain lion distinct population segment (DPS) under CESA (CDFW, 2025a).

CDFW's recommendation relies on numerous scientific studies published after the Northlake EIR was certified in April 2018 that illuminate the dire conditions of the DPS mountain lion populations' genetic health and viability, the myriad threats they face, and the importance of the Project area for their long-term survival (e.g., Benson et al., 2019, 2023; Gustafson et al., 2018, 2021); see the Center's May 29, 2025 comments, the CESA petition [Yap et al., 2019], and the CESA status review [CDFW 2025a] for more studies and details). In particular, CDFW identifies the Sierra Pelona Mountains as a high priority area that is critical to maintain and improve the genetic health of the populations within the DPS because of its proximity to the Tehachapi Mountains, an important area for genetic exchange between the DPS and relatively robust mountain lions in the Western Sierra Nevada (CDFW, 2025a). According to CDFW, "[m]itigating the barriers of Highway 58 and Interstate 5 to allow safer and easier dispersal across those roads should be considered high priorities, as well as the conservation of suitable habitat in the Sierra Pelona, Topatopa, and San Emigdio Mountains" (CDFW, 2025a).
The previously certified EIR does not—and cannot—adequately analyze or mitigate impacts of the Project on mountain lions given this wealth of new information.

The Project would result in the destruction of high-priority mountain lion habitat and degradation of a critical connectivity area that is already constrained, which could drive the Southern California and Central Coast mountain lion DPS closer towards extinction. The Project is also located adjacent to a segment of the I-5 that, in 2024, CDFW identified as Barrier ID W231: I-5 Sierra Madre to Castaic Ranges, with mountain lion as a target species for recovery (CDFW, 2024). According to CDFW, "[t]he Sierra Madre-Castaic linkage is vitally important for restoring gene flow to southern California mountain lion populations" (CDFW, 2024).CEQA requires a "mandatory finding of significance" when a project has the potential to impact a CESA-listed species. (CEQA Guidelines § 15065(a)(1); *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 792 fn. 12.) And such a finding triggers a duty to consider and adopt all feasible alternatives or mitigation measures to reduce such impacts. (Pub. Res. Code § 21002.) Moreover, CESA provides that agencies should not approve projects that could jeopardize the continued existence of this DPS or result in destruction of essential habitat (Fish & Game Code, § 2053(a)) and agencies must require that appropriate mitigation measures be implemented for projects that could destroy mountain lion habitat or impair connectivity. (See Fish & Game Code, § 2054).

The CESA status of local mountain lions as a candidate species in 2020 and a recommended threatened DPS in 2025 and the numerous scientific studies published after the 2018 EIR certification qualify as both (1) substantial changes that require major revisions in the environmental impact report so that it includes adequate analyses and mitigation for the Project's impacts to mountain lions and wildlife connectivity and (2) new information, which was not known and could not have been known at the time the environmental impact report was certified as

complete. (Pub. Res. Code § 21166.) The RPFSEIR lacks any analysis or mitigation for the Project's impacts to mountain lions and therefore fails to comply with CEQA.

B. Since Project Approval, at Least One Mountain Lion Traveled from Grasshopper Canyon to Marple Canyon Through an Adjacent Wildlife Crossing.

The Mountains Recreation and Conservation Authority ("MRCA") documented at least one mountain lion using a box culvert under the southbound I-5 that is adjacent to the Project area. Photos, authenticated by the attached declaration from Chad Christensen, the Deputy Chief of Natural Resources and Planning for MRCA, depict a mountain lion crossing from the east side of the southbound direction of the separated I-5 freeway from Grasshopper Canyon westerly into Marple Canyon on November 5, 2020 approximately between 2:49 a.m. and 2:59 a.m. (the "Mountain Lion Photos") (Exhibit A). The single-lane box culvert for the Marple Canyon access road that crosses under this southbound section of I-5 is identified as "Tunnel 2" and "Underpass 2" in Santa Monica Mountains Conservancy's April 17, 2018 letter on the Northlake Development (Exhibit B). Underpass 2 is one of two freeway crossing structures along a ten-mile section of I-5 between Templin Highway and Castaic Creek. The MRCA owns 245 acres of Marple Canyon west of Underpass 2 between the separated north-/southbound sections of I-5 and six acres east of Underpass 2 that connect with Grasshopper Canyon. The Mountain Lion Photos were taken by a camera placed on MRCA conservation lands by Mr. Christensen for the MRCA's Marple Canyon I-5 Wildlife Crossing Enhancement Project.

The use of this crossing by a mountain lion moving west, towards the severely imperiled Central Coast South population that is facing an "extinction vortex" (Benson et al., 2019) from the eastern side of I-5 indicates potential gene flow that is desperately needed. According to researchers, "a single migrant [per generation] can have immediate positive effects on the genetics of a small, isolated and inbred puma population" if the individual successfully breeds (Gustafson et al., 2017). This documented movement adjacent to the Project area highlights the critical value of the Project area as live-in and move-through habitat and for east-west mountain lion movement.

While the approved 2018 EIR for the Northlake Project does generally acknowledge that mountain lions may use the Project area (2018 Final EIR at 2-136), County counsel joined the project proponents (which include Northlake Associates, LLC, which is controlled by NLDP Associates, LLC, Castaic Development Partners, LLC, and Michael Rosenfeld of Woodridge Capital Partners, LLC) in representing in court proceedings that "mountain lions will not be impacted by the Project" and "mountain lions are not using Project site crossings as confirmed by expert studies, including a wildlife camera study …" (Respondents' and Real Parties in Interest's Joint Opposition Trial Brief at pp. 8 & 16-17.) The Mountain Lion Photos demonstrate that these claims (which were based on a developer-commissioned study) are incorrect.[1]

[1] On December 17, 2020, the Center for Biological Diversity and Endangered Habitats League requested judicial notice of the Mountain Lion Photos in Los Angeles County Superior Court case *Center for Biological Diversity et al. v. County of Los Angeles et al*., Case No. 19STCP01610, and the County and developer submitted a brief opposing the request for judicial notice. The request was denied, and the Mountain Lion Photos were not considered in the Court's decision.

The County's own staff biologist, Joseph Decruyenaere, urged the developer's EIR drafters not to minimize the connectivity value of the existing culverts under the I-5, which are far from perfect but are the only available means for mountain lions to cross the I-5 in the area. Mr. Decruyenaere wrote that the EIR language prepared by the developer's consultant:

> unduly minimizes the value of compromised movement opportunities. Nowhere else in biological conservation would you want to argue that because a resource is rare it's less than valuable. The fact that the use of a highly constrained opportunity for movement between natural areas might be made more difficult should always be considered a potentially significant impact unless there simply aren't any wildlife around to use the crossing. If a movement opportunity lacks a vegetated approach or some other feature that would seem to make it work better, that doesn't mean it doesn't pose an opportunity for movement. It just suggests that an animal might be less inclined to use it in the imaginary scenario that they have a better alternative. **However, in the real world, and in the highly fragmented, difficult to navigate landscapes that wildlife are consigned to, compromised movement opportunities may be the only opportunities available.** Revise the discussion to acknowledge the value of the crossings and instead of devaluing them, talk about how the project might change the potential for their use.[2]

Mr. Decruyenaere also wrote that the developer's consultant relies "chiefly on the idea that existing crossing features are not ideal but [they] neglect[] to provide conclusions as to how overall wildlife movement on the site and through the crossing features may actually change with buildout of the project."[3]

The Mountain Lion Photos confirm that mountain lions (and likely other wildlife) can and do use the culvert adjacent to the Project site even if the culvert could be enhanced to be more friendly for wildlife. If built as proposed, the Northlake Development would destroy high quality, intact mountain lion habitat; degrade surrounding habitat with edge effects including but not limited to new roads and increased traffic, lighting at night, noise, rat poisons, disease risk, domestic animals, and wildfire, which could have direct and indirect impacts to mountain lions (e.g., (Barrientos et al., 2023; Benson et al., 2023; Blakey et al., 2022; CDFW, 2025b); block this critical crossing; and further constrain the already-limited movement opportunities for mountain lions and other wildlife in the region.

The Mountain Lion Photos qualify as both (1) a substantial change that requires major revisions in the environmental impact report so that it includes adequate analyses and mitigation for the Project's impacts to mountain lions and wildlife connectivity and (2) new information, which was not known and could not have been known at the time the environmental impact report was certified as complete. (Pub. Res. Code § 21166.) The documented use of this crossing by a mountain lion, new scientific studies identifying the vulnerability of the region's mountain lions to extinction and the importance of the Project area for mountain lion habitat and connectivity (and

[2] Mr. Decruyenaere's comments were attached to an email sent by County Planner Jodie Sackett on February 18, 2018 and are accessible in the administrative record ("AR") of the Los Angeles County Superior Court case *Center for Biological Diversity et al. v. County of Los Angeles et al*., Case No. 19STCP01610 at AR025874 (and Mr. Sackett's email is located at AR025825-26).

[3] Mr. Decruyenaere's comments are included in an email sent on February 12, 2018, and is available at AR025822-23.

therefore the genetic health of populations within the DPS), and CDFW's recommendation to list local mountain lions as threatened under CESA illuminate the major deficiencies in the previously certified EIR and precipitate the need of new analyses of the Project's impacts to mountain lions and wildlife connectivity in the RPFSEIR. (See *Moss v. County of Humboldt* (2008) 162 Cal.App.4th 1041 [finding supplemental environmental review was required when there was mere anecdotal evidence of a listed species newly occurring in the project area].)

C. New Data Indicate the Project Area is Important for Mountain Lions and Wildlife Movement.

The Project area is located in a focal area for recent and ongoing wildlife connectivity and mountain lion studies. As mentioned previously, CDFW has identified the I-5 as an important barrier to mitigate to improve gene flow in the Southern California/Central Coast mountain lion DPS, in part because of the area's importance for statewide gene flow and there is high quality suitable mountain lion habitat on both sides of the freeway. These studies aim to help decisionmakers understand how mountain lions are moving through the area and how conditions could be improved to support more movement. From 2022 to 2025, the UC Davis California Carnivores Program collected movement data from several individuals that were radio-collared west of I-5 and north of SR-138 as part of the first phase of their ongoing study, "Understanding ecological and human-related factors affecting felid movement in a critical wildlife linkage" (Figure 1). The study area was focused in the Tehachapi Mountains linkage, north of the Project area. In October 2025 the UC Davis California Carnivores Program began the second phase of their study, expanding southward to investigate mountain lion movement in the Castaic Study Area (Figure 2). January 2026 was their first month of attempting captures, and they have already collared two individuals west of I-5 (Figure 3).

In addition to the radio-collar data, a young injured mountain lion cub was found in Castaic, on Hillcrest Parkway near Olympic Street, on January 21, 2026. And witnesses observed a mom and sibling mountain lion nearby. The presence of these mountain lions in Castaic indicates suitable habitat in the vicinity, including in the Project area. And when the young mountain lions become old enough, they will need suitable habitat and connectivity to safely disperse and find their own territories.

The data indicate that mountain lions are present and moving through the landscape quite widely while also showing the I-5 is a formidable barrier to movement. This highlights the importance of every single time a mountain lion is able to successfully cross the I-5 through the limited culverts. Although mountain lions east of I-5 and south of SR-138 have not yet been collared, the UC Davis researchers are planning to collar mountain lions in the area as part of the study. Given the data of mountain lion movement west side of I-5 and the high quality habitat east of I-5, mountain lions are likely living in and moving through the Project area.

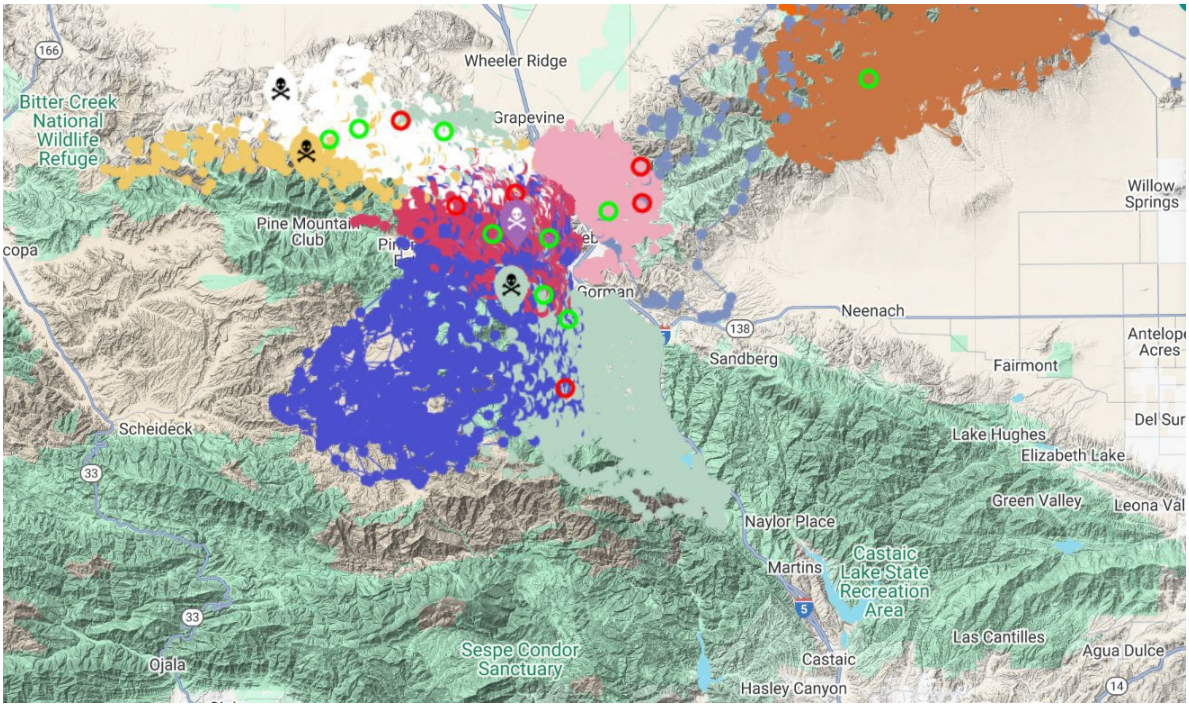


Figure 1: The last 18 months of radio-collar data from individuals captured in the first phase (2022-2025) of the UC Davis California Carnivores Program study.

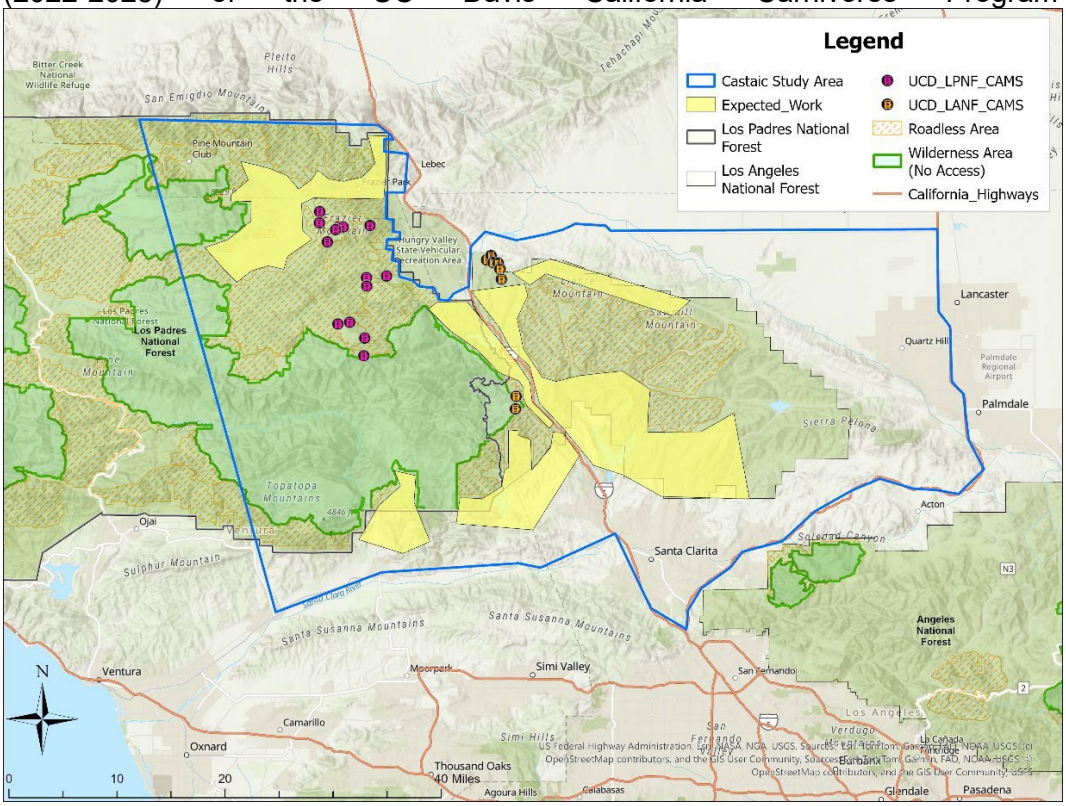


Figure 2: The UC Davis California Carnivores Program Castaic Study Area. This encompasses the second phase of the study, which began in October 2025.

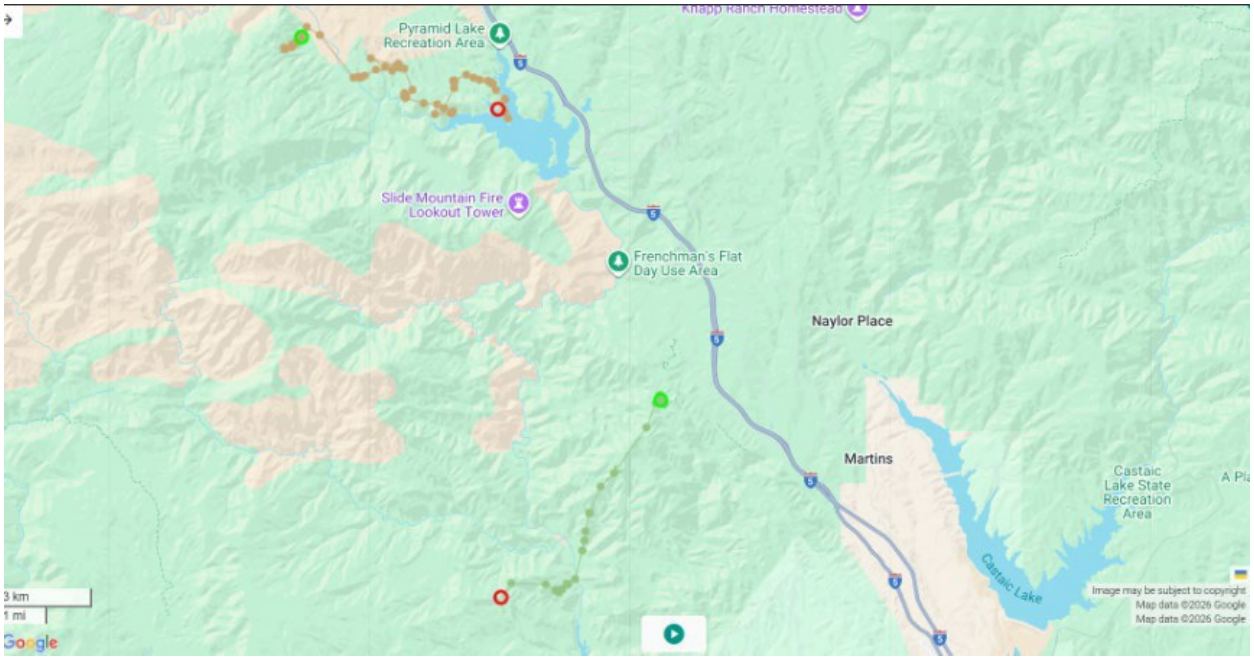


Figure 3: GPS collar data from the first two mountain lions collared in the Castaic Study Area. These lions were captured and collared in January 2026. Meanwhile, the Mountains Recreation and Conservation Authority ("MRCA") is leading a wildlife connectivity study in the area for their "Interstate 5 (Sierra Madre-Castaic) Wildlife Crossing Infrastructure Assessment and Implementation Plan," which began in December 2025. Their study includes roadkill surveys and wildlife cameras set up at culverts along I-5, including along the section of I-5 that is near the Project area. Importantly, in the first two months since they placed cameras at culverts along I-5, they have documented three instances of a mountain lion using culverts less than four miles from the northernmost portion of the Project area (Figure 4). Mountain lion home ranges can be large, depending on the sex and life stage (i.e., females tend to have smaller home ranges than males, females denning with kittens shrink their home ranges, and dispersing subadult mountain lions can travel long distances). For example, in the nearby Santa Monica Mountains, home ranges were found to be an average of 52 mi^2 for females and 144 mi^2 for males in the nearby (Riley et al., 2021). And dispersing mountain lions in Southern California have been documented traveling 50 to 93 miles (Vickers et al., 2015). Given their large home ranges and long-distance traveling behaviors, it is not inconceivable that the mountain lions documented in nearby culverts could move through the Project area and be impacted by new development there. In addition, other wildlife have been documented using the culverts (Figure 5), indicating these culverts provide important connectivity for other wildlife in the region.

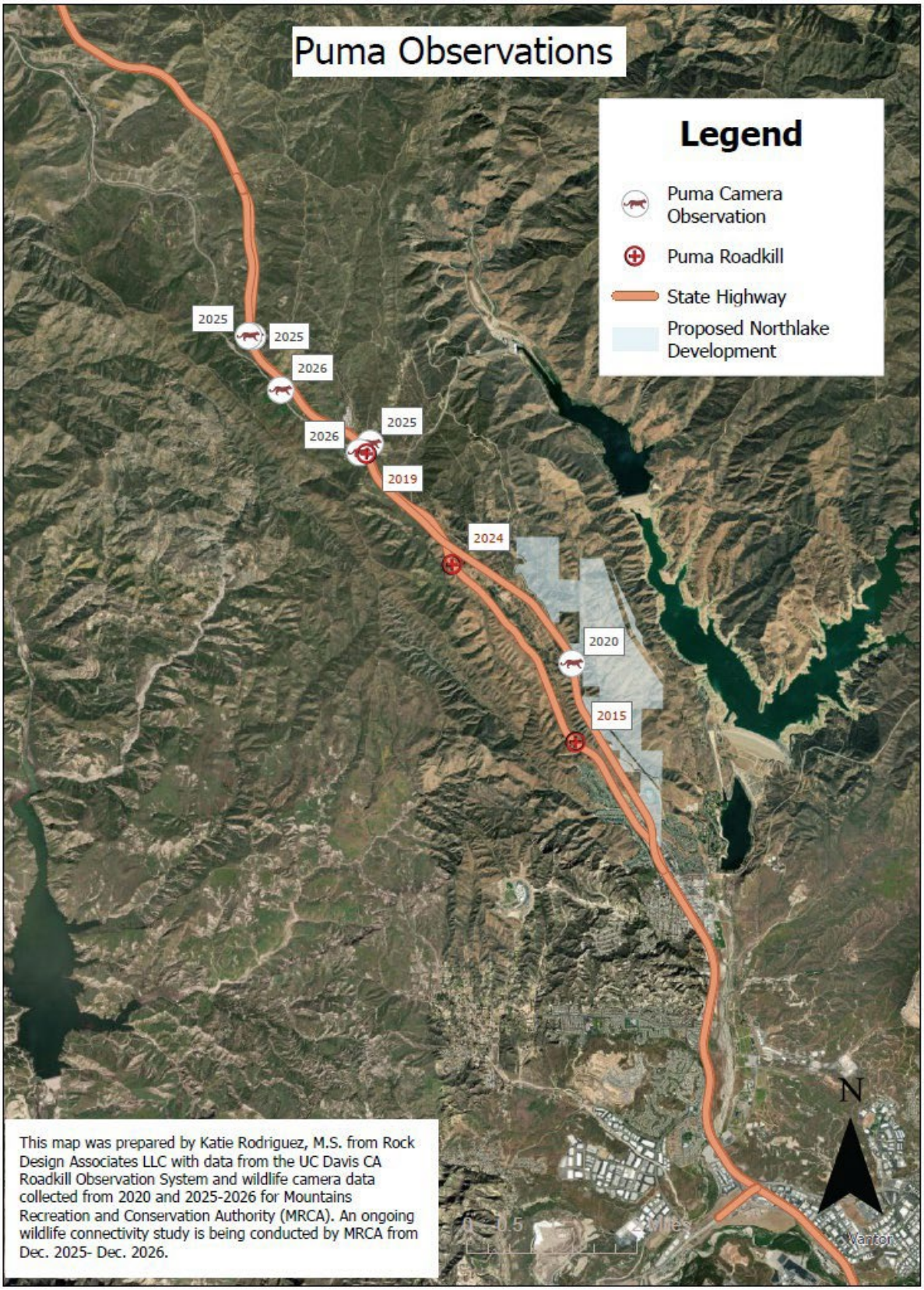

Puma Observations
Legend
Puma Camera Observation
Puma Roadkill
State Highway
Proposed Northlake Development
2025
2025
2026
2026
2025
2019
2024
2020
2015
This map was prepared by Katie Rodriguez, M.S. from Rock Design Associates LLC with data from the UC Davis CA Roadkill Observation System and wildlife camera data collected from 2020 and 2025-2026 for Mountains Recreation and Conservation Authority (MRCA). An ongoing wildlife connectivity study is being conducted by MRCA from Dec. 2025- Dec. 2026.
N
0 0.5 1 Miles
Kanan



Figure 4: I-5 Other wildlife observation data from MRCA's ongoing wildlife connectivity study.

Response to Comment No. C.5-2: As set forth in RPFSEIR Response to Comment B.4-11, collateral estoppel bars relitigation of the mountain lion/wildlife movement and connectivity issues. See Responses B.4-1, B.4-3, B.4-5, and B.4-6. The Court Ruling denied all of the commenter's claims regarding mountain lions and wildlife crossings, finding that "The use of

the undercrossings by large animals was thoroughly discussed in the SEIR … The County had the best available information on the topic when it approved the Project in April 2019. The County's implied determination that the Project will not interfere with mountain lion crossings of the I-5 is supported by substantial evidence. (RPDSEIR Appendix A (Court Ruling), pages 19 through 21.)" In any event, the PCAA, which the applicant is accepting as the proposed project, pulls the Phase 2 development boundary further south on the Project Site. Thus, Phase 2 development is necessarily further away from the wildlife crossing of I-5 between Marple and Grasshopper Canyons and will not deter wildlife from using this crossing. The northernmost portion of Phase 2, the area above the development line, will remain undeveloped. This is depicted on the PCAA Wildlife Crossing Exhibit, which the Project is conditioned to implement. See CUP Condition of Approval No. 47. Moreover, CEQA Guidelines sections 15088.5 and 15162 and Public Resources Code section 21199 do not trump the principles of res judicata and collateral estoppel.

Comment No. C.5-3:

II. The RPFSEIR Continues to Provide Insufficient Analysis and Mitigation for Impacts to Western Spadefoot.

The RPFSEIR did not substantially address concerns raised in the Center's May 29, 2025 comment letter regarding the PRDSEIR related to the importance of the western spadefoot (referred to as "WST" in the RPFSEIR) population present at the Project site, the interpretation of previous studies, the uncertainty of success for artificial pools providing adequate breeding habitat, or the importance of connectivity. Instead, the RPFSEIR's primary response is to explain that the Habitat Mitigation and Monitoring Plan ("HMMP") has been approved by CDFW (RPFSEIR 2-28, 29). The RPFSEIR further claims that our previous comment "provides no credible evidence of a potential significant impact not already addressed in the WST analysis or fully mitigated to CDFW's satisfaction."

On the contrary, the Center's May 29, 2025 comment letter explains the uncertainty around long-term success of artificial breeding pools, the importance of redundancy given recent history of drought in California, and the importance of landscape connectivity, as restated below. Regardless of CDFW's approval, the EIR fails to respond to the comment or address the concern, as detailed below.

Response to Comment No. C.5-3: The RPFSEIR fully addressed CBD's May 29, 2025 comments regarding WST. With respect to long-term success with WST mitigation, RPDSEIR provides the following at page 2-24:

> **Rationale For Expecting Success With Mitigation**
>
> As noted in the WST Report, and summarized herein, WST has shifted habitat use in portions of California from vernal pools to artificial ponds such as stock ponds and other ponding features of anthropogenic origin, many of which have created WST breeding areas quite by accident. As such, any assertions that it is difficult to create ponds that are suitable for WST breeding are not necessarily accurate. GLA has been involved in WST habitat creation projects that have been successful and provided an example of one such effort that has been well-studied since the seasonal ponds were created in 2005 and 2006 on Irvine Mesa in an area known as East Orange, which is now part of the Orange County Central Coastal Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) Reserve. The 15 created pools overall achieved performance standards after six years of monitoring and included breeding WST in eight of the pools as of the 2009/2010 rainfall season. It is important to note that the

performance standards included a number of components that were focused on the quality of the created pools and included hydroperiod (length of ponding) as it was recognized that this is clearly the most critical component of WST pond creation. Presence of fairy shrimp, a common food source for WST larvae were an important pool component and these along with the egg masses and larvae were introduced from the impact pools to the created pools. It was understood that pools with the proper characteristics would ultimately support WST. Thus, the results of follow-up studies conducted up to seven years following completion of the initial program, showed that WST had expanded to 12 pools within the 15-pool complex. Importantly, even in a drought year the pools exhibited sufficient ponding for breeding, though as is often the case for WST in such years, desiccation resulted in the loss of many tadpoles. Revised MM 5.2-9, below, is based on GLA's expert and successful experience in creating ponds that are suitable for WST breeding. The Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan, which is incorporated into revised MM 5.2.9, also includes a ten-year monitoring and maintenance program and contingency measures that would be implemented should WST translocation of inoculum not be on a trajectory for meeting the final success criteria.

Thus, there is no uncertainty regarding long-term success of artificial breeding pools. It is speculation to assume that the onsite pools will not be successful. CEQA does not require the analysis of speculative impacts. (CEQA Guidelines Section 15145.) The HMMP provides detailed performance criteria for both success criteria for the onsite ponds and contingency site criteria should additional pools be required. (See RPFSEIR Response B.4-25 and B.4-27.) And as noted, both the County Biologist and CDFW reviewed and approved the WST Report and mitigation.

Comment No. C.5-4:

A. The RPFSEIR Continues to Minimize the Importance of the Project Site for Western Spadefoot.

The RPFSEIR continues to minimize the importance of the western spadefoot population present at the Project site. The RPFSEIR includes no changes regarding western spadefoot analysis and impacts. As such, the RPFSEIR continues to claim that "WST populations are not rare in the nearby areas." (WST Plan, p.7). As described in our previous letter, this claim is contrary to the Applicant's own description in the 2017 Draft Supplemental Environmental Impact Report ("DSEIR"), which states that "the Grasshopper Canyon population is one of few known populations in the region" (DSEIR p. 5.2-36) (and which is quoted in a June 15, 2017 comment letter submitted by CDFW). The claim is also contrary to available evidence regarding the presence of western spadefoot in the region and the current status of western spadefoot populations.

As described in the May 29, 2025 comment letter, we conducted a query of the California Natural Diversity Database ("CNDDB") western spadefoot occurrences on May 21, 2025 including the Mint Canyon, Newhall, Val Verde, and Whitaker Peak, and San Fernando 7.5 Minute Quadrangles ("quads") (note that we included additional quads that were further from the Project site than those displayed in the PRDSEIR to capture the entire Santa Clarita Valley). Our search resulted in 44 total observations, including those at the Project site in the Whitaker Peak quad. Of these observations, only 10 had occurrence ranks (a ranking of the quality of the habitat and the condition of the population at that location) of "Good" or "Excellent;" 10 others were "Fair," 10 were "Poor," 14 were "Unknown" and one was "Possibly extirpated." The CNDDB results therefore do not necessarily indicate a healthy, widespread population—rather, they show that western

spadefoot do occur in the area, but while numerous populations appear healthy, numerous others are likely struggling. Importantly, many of the populations in and around the Santa Clarita Valley are highly fragmented and surrounded by roads and development. Such urbanization and development reduce regional and local connectivity across the landscape, isolating these remaining populations. When isolated populations experience years with low reproductive success or become locally extirpated, recovery is difficult because they no longer have adjacent subpopulations to supply individuals and boost the population or facilitate re-establishment. Therefore, urban development that destroys remaining habitat and continues to fragment dwindling spadefoot populations leads to higher risks of local and regional extinction (Neal et al., 2020). We do not dispute the fact that western spadefoot occur south and west of the project, but this does not mean they are common, and it certainly does not mean they are free from risk of regional decline.

Additionally, the population at the Project site lies in an important location in the species' range, considering western spadefoot biogeography. Western spadefoot in Southern California (south of the Transverse Ranges) are genetically distinct from western spadefoots in central and northern California (Neal et al., 2018). The western spadefoot present in the Project area belong to the southern population. As detailed in a recent Center petition to list western spadefoot as threatened or endangered under CESA, the southern population has experienced more severe declines than the northern population (although both populations have been heavily impacted by habitat loss and continue to decline) (Prado-Irwin, 2025). The population present at the Project site lies at the northernmost extent of the southern western spadefoot population. If the western spadefoot population currently present at the Project site is lost, the range of the southern population will shrink, furthering the pattern of regional decline.

Importantly, very little suitable habitat remains in Los Angeles County or surrounding counties (Rose et al., 2022), so fully protecting the habitat that remains—especially occupied habitat like that which occurs at the Project site–is essential. The Project site represents the last large, undeveloped, core habitat for western spadefoot in the entire County. Thus while the PRDEIR is correct in observing that other populations occur in and around the Santa Clarita Valley, it is important to recognize that this does not diminish the importance of the population at the Project site, especially considering the intact habitat present at the Project site, the lack of suitable habitat in the rest of the County, and the population's position at the northern edge of the southern population's range.

Response to Comment No. C.5-4: The presence of WST on the project site is not minimized. An additional WST surveys were conducted that confirmed the results of prior surveys. The WST mitigation reduces impacts to less than significant, which both the County Biologist and CDFW agreed with and approved. CEQA requires a good-faith, reasoned analysis, as was done here. The lead agency is not required to conduct every study suggested by a commenter. Commenter provides no credible evidence of a significant WST impact or inappropriate mitigation.

Comment No. C.5-5:

B. The RPFSEIR Still Fails to Provide an Adequate Baseline Regarding Western Spadefoot Presence.

In addition to the issues described above regarding the importance of the western spadefoot population at the Project site, the RPFSEIR also fails to provide sufficient information to establish a reliable environmental baseline at the Project site regarding potential western spadefoot habitat and western spadefoot presence.

The WST Plan states that “WST was observed on the NorthLake Project site during various general and focused amphibian surveys as well as during focused surveys for listed fairy shrimp within seasonal pools” and “While numerous ephemeral ponds and features have been observed on the Project site over time with respect to various surveys for different species, at no time have more than 3 features been observed to contain WST and one additional feature was observed to contain potential WST habitat, despite no WST being observed.” (WST Plan, p. 7).

Importantly, the analysis of suitable habitat for western spadefoot was initially extrapolated from surveys for suitable habitat for fairy shrimp, as stated in the WST Plan: “A determination for the extent of suitable habitat for WST is possible from the data collected during wet-season fairy shrimp surveys in 2004/2005, which was one of the wettest rainfall years in the last 50 years” (WST Plan, p. 8). However, fairy shrimp and western spadefoots do not have the same habitat requirements. Fairy shrimp generally occupy clay-pan vernal pools. Western spadefoots occupy these types of pools as well, but can also breed in many other temporary water bodies, including ditches, erosion cuts, road ruts, and ephemeral streams (Baumberger et al., 2019; Stebbins, 2003).

The WST Plan goes on to state that “In 2014, surveys for fairy shrimp and amphibians, were conducted” (WST Plan, p. 9) but fails to provide any details on survey methodology. It is unclear whether the 2014 surveys used the same methods as the 2004/2005 surveys, in which case non-vernal pool habitats would likely be overlooked, or used a different methodology. Further, the WST Plan provides no information regarding the geographic scope of either survey (2004/2005 or 2014). It is completely unclear whether the entire site was even surveyed for western spadefoot. If indeed the surveys were based on methodology intended to identify vernal pools, they would likely have excluded higher elevation areas or habitats like Grasshopper Creek and temporary pools along eroded areas or defunct roads.

If additional suitable breeding pools do exist at the Project site, based on the survey methodology, it is likely that they would not have been detected. Surveys focused on fairy shrimp in 2004/2005 would have likely excluded water bodies that contain suitable western spadefoot habitat but were not suitable for fairy shrimp. And surveys in 2014, which did target western spadefoot, would not necessarily have detected additional pools due to the “lower-than-average rainfall” that year (WST Plan, p.9). Aside from the lack of detail on the area surveyed, the survey methodology simply does not guarantee that all suitable western spadefoot habitat would have been detected.

Additional temporary waters could occur in many geologic features throughout the Project site, including along small canyons or areas with sandstone erosion, along defunct access roads, and especially in the upstream areas of the ephemeral Grasshopper Creek that experience low and intermittent flows. Given the fact that western spadefoot occupy upland habitat up to 600 meters away from breeding pools (Halstead et al., 2021), if ponding features are present across more of the Project site than presented in the WST Plan—which is likely given the landscape—much of the Project site would present suitable habitat and could be occupied by western spadefoot. However, because the RPFSEIR does provide any detail on how much of the Project site was surveyed, when it what seasons the surveys occurred, or what the climatic conditions of the site were during these surveys, it is impossible to know the extent of the western spadefoot population. It is entirely possible that western spadefoot are much more common throughout the Project site than the RPFSEIR claims, in which case the impacts to this sensitive species from Project construction and operation would be highly significant and potentially catastrophic.

Under CEQA, an environmental review document must evaluate the potential

environmental impacts of the project as compared to the existing environmental conditions (the "baseline"), so that the Project's impacts can be meaningfully analyzed and compared to alternatives. (CEQA Guidelines § 15125(a); see County of Amador v. El Dorado County Water Agency (1999) 76 Cal.App.4th 931, 952; Neighbors for Smart Rail v. LA County Metropolitan Transit Authority (2013) 57 Cal.4th 310, 315.) The information provided in the RPFSEIR regarding the presence of suitable western spadefoot habitat does not meet this standard.

Response to Comment No. C.5-5: The Project Site has been subject to multiple surveys for WST as well as for other species that have noted the presence or absence of WST. The commenter ignores the recent WST surveys conducted in 2023 and 2024 (RPDSEIR Appendix I), which confirmed the prior survey results. The commenter speculates that additional locations could contain WST, but provides no credible evidence of such locations. (CEQA Guidelines Section 15145.) See also RPFSEIR Responses B.4-25 – B.4-31.

Comment No. C.5-6:

C. The Proposed Mitigation for Impacts to Western Spadefoot Remains Insufficient.

As we described in the May 29, 2025 comment letter, the mitigation for impacts to western spadefoot in the form of mitigation ponds is improved from previous environmental review documents, but is still not sufficient to ensure long-term population persistence.

The RPFSEIR claims that "it is speculation to assume that onsite pools will not be successful and thus additional ponds at different locations will be needed." (RPFSEIR at 2-29). However, we do not assume the onsite pools will not be successful without evidence. Rather, the evidence cited in the PRDEIR itself shows that success rates of artificial pools are not 100%. Based on the results of the study conducted by Baumberger et al (2020) and referenced in the PRDSEIR, it is entirely reasonable to expect that some pools may not be successful.

As we wrote in our previous comment letter, Baumberger (2020) investigated the success of artificial breeding pools that were created in 2006 as mitigation for impacts to ten breeding pools at a site in East Orange. The mitigation for this project included the creation of 21 pools to mitigate for the 10 affected pools, providing a total mitigation ratio of 2.1:1. Fifteen of these pools (which became 14 when two pools merged together) were in Irvine Mesa, and six were in Shoestring Canyon. In Shoestring Canyon, all six mitigation pools failed to hold water and breeding western spadefoot were completely absent from the pools and the nearby creek bed during the 2016 survey period (Baumberger et al., 2020). The PRDEIR omits this information, focusing only on the pools in Irvine Mesa, which had higher rates of success, thereby misrepresenting the success of the mitigation and making it appear to be more successful than it was.

Further, the PRDSEIR quotes the following excerpt of the study itself, claiming that this excerpt shows WST breeding in 12 of the 14 pools on Irvine Mesa (WST Plan, p.31):

> Twelve of the 14 mitigation pools at Irvine Mesa held water for >30 d. During our 2016 surveys, two of the mitigation pools built by Glenn Lukos Associates, Inc. merged (Pools 5 and 9) and we considered them as one pool (Pool 9). We detected *S. hammondii* tadpoles in eight of the Irvine Mesa mitigation pools but documented successful breeding through metamorphosis at only seven of these pools in April 2016 due to

desiccation and/or water quality.

However, the PRDSEIR misrepresents the findings of this study. This excerpt only says that 12 of the 14 pools held water for >30 days, but merely holding water does not necessarily mean that western spadefoot were breeding in those pools. In fact, the sentence following this excerpt states "*Spea hammondii* did not breed in all the pools with hydroperiods >30 d (Table 3)." (Baumberger et al., 2020). The excerpt itself states that tadpoles were only detected in eight of the pools, and breeding through metamorphosis was only observed at seven of the pools. It is difficult to understand therefore why the PRDSEIR claims that western spadefoot were breeding in 12 of the 14 pools in 2016, when the very excerpt they cite to support this statement says WST only bred in seven of these pools.

The PRDSEIR is misleading and falsely claims that the study's artificial mitigation pools were more successful during the drought year of 2016 than the reality. In fact, only ½ (7/14) of the pools in Irvine Mesa showed successful breeding in 2016, and 0/6 of the pools in Shoestring Canyon showed successful breeding, leading to an overall success rate of just 35% (7/20). Thus the mitigation ratio of 2:1 implemented in the study did not even successfully mitigate for the full impacts to the ten original pools.

The PRDSEIR notes that the 2016 study occurred during a drought year, and that monitoring of the following 2016/2017 season showed tadpoles in 12 of the pools and "extensive breeding was present" (WST Plan p.31). The reference cited to support this claim is not published and is not publicly available (as far as we can ascertain), so it is impossible to determine whether the "12 pools" refers to pools in Irvine Mesa only or in Irvine Mesa and Shoestring Canyon, and therefore it is impossible to determine the overall efficacy of the mitigation during this "ideal" wet year. It appears likely that the study refers only to Irvine Mesa, in which case the population did show a notable increase in pool occupation, but the exclusion of Shoestring Canyon remains unexplained.

Given the variable conditions experienced by vernal pools including drought—which can last for years in California and is expected to become more common in the future (Diffenbaugh et al., 2015)—reliance on a simple 1:1 replacement, which is what the RPFSEIR does, is not sufficient to mitigate for impacts to breeding habitat by creating artificial pools.

The RPFSEIR should take into account the fact that, habitat loss and species displacement from construction of the proposed Project are immediate, while any gains from their mitigation are uncertain. Moilanen et al. (2009) found that "very high offset ratios may be needed to guarantee a robustly fair exchange" and that "considerations of uncertainty, correlated success/failure, and time discounting should be included in the determination of the offset ratio to avoid a significant risk that the exchange is unfavorable for conservation in the long run." Restoring complex ecosystems like ephemeral wetlands often results in reduced ecological function. In studies conducted in California on wetland mitigation sites permitted between 1979 and 2002, less than 20% of mitigated wetlands were performing optimally (Ambrose et al., 2006; Sudol & Ambrose, 2002).

Given the importance of vernal pools and associated upland (heterogeneous) habitat to western spadefoots and numerous other native, rare, and special-status animals and plants, connectivity, and overall biodiversity, the RPFSEIR should provide higher mitigation ratios. In addition, mitigation ratios need to take the types of mitigation to be implemented into consideration, as not all mitigation is created equal. Restoration, enhancement, and creation of habitats can have limited success due to the challenges of

establishing the appropriate hydrology when compared to preservation of existing habitats (Matthews & Endress, 2008; Stein et al., 2018; Sudol & Ambrose, 2002; Windmiller & Calhoun, 2007). Scientific studies specifically speak to the need for higher mitigation ratios (along with long-term monitoring, identified and measurable success criteria, and adaptive management strategies) to improve chances of adequately mitigating impacts to habitats and species (Matthews & Endress, 2008; Mitsch & Wilson, 1996; Moilanen et al., 2009; Stein et al., 2018; Sudol & Ambrose, 2002; Windmiller & Calhoun, 2007; Zedler & Callaway, 1999). The western spadefoot's continued survival relies on created wetlands having the appropriate hydrological and biological conditions and adequate upland habitat.

Given that western spadefoots have been extirpated from 80% of their range in Southern California (Stebbins & McGinnis, 2012; US Fish and Wildlife Service, 2005) and amphibian populations in the U.S. are declining at an alarming rate of almost 4% per year (Grant et al., 2016), a higher mitigation ratio than the approximate 1:1 ratio employed by the RPFSEIR is necessary.

Further, the proposed mitigation ponds are very clustered, unlike the current pond arrangement. Currently, the stock pond is approximately 4,000ft away from the seasonal ponds, which are all within approximately 100-400ft of one another (including VP-6/Pond 3) (WST Plan, Exhibit 4). However, the proposed mitigation ponds are all clustered very close together on the west side of the property, within 50ft of one another (WST Plan, Exhibit 5). The PRDSEIR claims that "total acreage as opposed to number of ponds is all that is relevant" (WST Plan, p.18). However, this claim does not consider the importance of landscape connectivity and potential metapopulation dynamics.

The natural history of western spadefoots makes them vulnerable to climate and habitat disturbances. Given the variation in geology, hydrology, climate, and habitat across a landscape, if one population declines or becomes extirpated, it is possible that others nearby can survive and re-colonize. Importantly, high pool density per se is not a problem. We acknowledge that high density of a pool complex can be quite beneficial for connectivity between pools and vernal pool complex hydrology. However, in placing the planned vernal pools so close to one another, and only creating two vernal pools, the Project design has minimized the amount of upland habitat available around the vernal pools and decreased the likelihood of population resilience in the case of an extreme disturbance. If the ponds are clustered, any extreme climatic events or random disturbances are likely to impact all of them in similar ways. On the contrary, if ponds are more spread out across the landscape, the local population is more resilient to random disturbance and potential climatic, hydrological, and ecological changes as well. The RPFSEIR does not address this point at all, and continues to claim that creating two ponds clustered close to one another is sufficient to maintain the spadefoot population at this site. The RPFSEIR fails to consider the importance of redundancy and landscape connectivity to population resilience, especially for a demographically unstable species like western spadefoot. Their high demographic instability makes them particularly sensitive to habitat alterations that may interfere with recolonization and reestablishment after unsuccessful recruitment years (Fisher & Shaffer, 1996).

Western spadefoot populations are often able to persist in the face of environmental variability due to metapopulation connectivity; when one population experiences decline, migrants from surrounding populations can bolster the population and prevent local extirpation. As climate change impacts become more severe and extreme weather events continue to occur, shifts in hydroperiod and increased temperatures expected to become more extreme (Montrone et al., 2019; Pyke, 2004; Thomson et al., 2016), and such population dynamics are likely to be increasingly

important for species persistence. Due to reduced connectivity between suitable habitats, populations that are unable to successfully breed may decline and disappear and will be unable to be re-established by neighboring populations, leading to further permanent species decline. It is therefore highly important to consider habitat connectivity between upland and aquatic habitat as well as between different pools and pool complexes.

In Southern California, western spadefoot populations have become extremely fragmented, and persistence of remaining subpopulations of is fragile (Halstead et al., 2021; Neal, 2019; Neal et al., 2020). Additionally, it is more important than ever to prioritize climate resiliency as both drought and extreme storms become more common in California (Diffenbaugh et al., 2015; Swain et al., 2018).

The proposed mitigation therefore remains insufficient because a) the mitigation ratio is too low, and does not provide sufficient replacement habitat in the form of artificial pools and b) the ponds are too close together, increasing the risk of extirpation compared to more dispersedaquatic habitat. The RPFSEIR thus fails to adequately analyze or mitigate impacts to western spadefoot.

Response to Comment No. C.5-6: As noted above, the WST Report and mitigation were approved by the County Biologist and CDFW. While the commenter would prefer different mitigation, the commenter had not identified any inadequacy in the CDFW-approved mitigation. CDFW is the expert state agency with respect to this issue, and thus CDFW's approval of the mitigation (and WST Report) is substantial evidence upon which the County can rely. See also RPFSEIR Responses B.4-25 – B.4-31.

Comment No. C.5-7:

III. The RPFSEIR Dangerously Dismisses the Increased Ignition Risk and Harms to People, Communities, and Wildlife Due from the Project.

The RPFSEIR fails to adequately assess and mitigate the Project's impacts on wildfire risk, and the RPFSEIR's responses to the Center's comments regarding the Project's impacts to wildfire risk are insufficient. The responses mostly point to technical appendices D-1, D-2, and K, which lack adequate analyses and unsubstantiated conclusions. Neither the responses nor the appendices resolve the concerns raised in the Center's May 29, 2025 comment letter. Although Appendix D-1 acknowledges that "the expected fire behavior in the interface of the Northlake development indicates that the fire behavior could produce extreme fire behavior" (RPFSEIR Appendix D-1 at 5), the RPFSEIR somehow, and without providing substantial evidence or using the best available science, concludes that the Project's impacts to wildfire risk are less than significant.

Response to Comment No. C.5-7: The commenter makes claims of inadequate wildfire impact analysis but fails to identify any inadequacies in the impact analysis or supporting technical reports. The commenter fails to provide any credible evidence of a significant wildfire impact.

Comment No. C.5-8:

A. The RPFSEIR Overly Relies on Over-burdened Wildfire Protection Services and Resources.

The Project will put more families and structures in harm's way without adequate safeguards for their health and well-being. For example, the RPFSEIR skirts responsibility for when (not if) a fire occurs, stating, "[w]here fires are initialized within the Project Site

or near its boundary, the fire incident command and control will have to determine if the population will be moved or "sheltered in place"." (RPFSEIR Appendix D-1 at 5). The Project proponent essentially passes off responsibility for community safety to the County, which has repeatedly failed to keep residents safe from wildfire.

An after action review of the 2018 Woolsey Fire, which resulted in three deaths and more than 1,600 structures destroyed in Los Angeles and Ventura counties, identified that the responding agencies were "overwhelmed" by the fire's "speed and weight of impact" and lacked sufficient trained staff, clear policies and protocols, crisis communication, inter-agency and inter-jurisdictional collaboration, situational awareness, real-time data availability with coordinated response tools, emergency preparedness, and evacuation plans (Citygate Associates, 2019).These same issues have come up in other wildfire disasters throughout the state that occurred around the same time, including the 2017 Tubbs Fire (County of Sonoma, 2018) and 2018 Camp Fire (Constant Associates, 2020).

Despite these reports on lessons learned from fires that occurred seven years ago, the County of Los Angeles and likely many other counties have failed to make the necessary improvements. This is evident with the response to the Eaton and Palisades fires. The County was plagued with the same problems as previous fires, which led to fatal errors and destruction (Jarvie, 2025; McChrystal Group, 2025). Lack of funding, insufficient staffing, unclear and outdated evacuation protocols, limited firefighting resources, insufficient communications and alerts, and more resulted in the death of at least 31 people, the destruction of more than 17,000 structures, and the loss and upheaval of many communities that will be recovering for years to come.

The appendix provides "a simple decision tree for evacuation vs. protecting people in place" (RPFSEIR Appendix D-1 at 75). However, as detailed in the numerous incident reviews cited above, such decisions while navigating these crises are anything but simple, particularly at a time when wildfires are moving faster and climate change is amplifying extreme weather conditions and wildfire risk (Goss et al., 2020; Swain, 2021; Swain et al., 2018, 2025). The after action review of the Woolsey Fire states, "the size and speed of the Woolsey Fire, at times, outpaced the early efforts of some of the largest and most experienced and capable agencies in the United States" (Citygate Associates, 2019). The review also highlights the need to manage the public's "unrealistic expectations" of agency abilities to protect communities from fire, stating, "[w]e cannot expect that all population growth in Very High or High Fire Hazard Severity areas can be protected simply by increasing resiliency [hardening buildings, fuels treatment, and vegetation management] to wildfire and by adding more fire engines" (Citygate Associates, 2019). The RPFSEIR cannot rely on "fire incident command and control" to keep people safe from wildfire while adding to the burden by placing more people and structures in high fire-prone areas.

In addition, relying on sheltering in place if evacuation becomes infeasible has no basis in U.S. fire safety standards and cannot protect thousands of residents in a fast-moving wildfire. While some measures can reduce fire risk, they do not make structures or communities fire*proof*. Experts found that 56% of homes built to Chapter 7A fire-safety codes burned in the 2018 Camp Fire (Knapp et al., 2021). And such measures do not prevent structure-to-structure fire spread during extreme wind events (Knapp et al., 2021; Zamanialaei et al., 2025). Without population-level standards or evidence that thousands of residents could survive while trapped inside their homes or "safety zones" or "areas of refuge" to be identified after a fire has already been ignited (RPFSEIR Appendix D-1 at 76), sheltering in place cannot be an option.

The RPFSEIR also relies on a new fire station that may not ever get built. According to the appendix, "[a] site will be provided for a new fire station within the

development. In addition, the project will pay its proportionate fees for the construction of that station which will enhance the regional fire protection already in place" (RPFSEIR Appendix D-1 at 4). However, as mentioned in the Center's May 29, 2025 comment letter, there is no guarantee that a fire station would actually be built. And even if it were to be built, it is unclear if human and monetary capital will be sufficient to sustain and maintain a new fire station. There is no requirement that the developer pay for the county's costs of building or operating a station, nor is there any guarantee that sufficient firefighting personnel and equipment will be available. During the LA wildfires in January 2025, firefighters lacked enough personnel and fire engines to keep all communities safe (Fuller et al., 2025; Toohey & Fry, 2025). The personnel cost over the life of the Project (essentially forever) will likely be hundreds of millions of dollars. Funding is already lacking for the increasing costs of fire suppression and property damage from wildfires in California, and the developer is not required to reimburse the California Department of Forestry and Fire Protection (CalFire) for the many millions (or billions) of dollars CalFire will likely expense when (not if) Centennial needs to be defended from wildfire. The cost of fire suppression in areas managed by CalFire has skyrocketed from $114 million in the 2000-2001 fiscal year to close to $3 billion for the 2020-2021 and 2021-2022 fiscal years combined (CalFire 2022). The Legislative Analyst's Office (LAO) reported that CalFire used an estimated $3.3 billion for wildfire protection and suppression in the 2022-2023 fiscal year (LAO 2023). And as mentioned previously, climate change is amplifying extreme weather conditions and wildfire risk (Goss et al., 2020; Swain, 2021; Swain et al., 2018, 2025), which is making it more challenging to protect communities from wildfire. Such information must be analyzed when assessing wildfire risk.

This build now, deal with it later approach is no way to house Californians.

Response to Comment No. C.5-8: Commenter questions the expert Wildland Fire Risk Technical report and Evacuation Report, yet fails to identify any errors or provide any credible evidence of a significant wildfire impact. The Recirculated Partial Draft Supplemental Environmental Impact Report (RPDSEIR) wildfire analysis and the Wildfire Technical reports (RPDSEIR Appendices D-1, D-2 and K) comply fully with the requirements of CEQA and the California Attorney General's "Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act" guidelines. See RPFSEIR Response B.4-16 – B.4-24. The commenter speculates that the County's emergency services will not adequately respond to a wildfire and that the fire station may never be built, but provides no credible evidence of either.

Comment No. C.5-9:

B. The Project's Impacts to Wildfire Risk are Significant and Unavoidable.

The RPFSEIR erroneously concludes that the Project's impacts to wildfire risk are less than significant. The RPFSEIR states that the Center's May 29, 2025 letter "provided no credible evidence of a significant wildfire impact" (RPFSEIR at 2-27), which is false. We provided ample scientific evidence that is specific to California ecosystems and land use practices that unequivocally highlights that placing new developments in fire-prone habitats increases ignition risk. As mentioned in the Center's May 29, 2025 comment letter, reckless land-use planning that extends the wildlife-urban interface ("WUI") further into California's fire-prone landscape is causing fires to be more destructive. Almost all destructive wildfires are accidentally ignited by humans or human infrastructure near roads and development (Balch et al., 2024; Chen & Jin, 2022; Keeley & Syphard, 2018; Syphard et al., 2019).

According to a report from Governor Gavin Newsom's Office, construction of more homes in the wildland-urban interface is one of the main factors that "magnify the wildfire threat and place substantially more people and property at risk than ever before" (Governor Newsom's Strike Force, 2019). Another 2019 study found that housing and human infrastructure in fire-prone wildlands are the main drivers of fire ignitions and structure loss (Syphard et al., 2019). Sprawl developments extending into habitats that are prone to fire have led to more frequent wildfires caused by human ignitions, like power lines, arson, improperly disposed cigarette butts, debris burning, fireworks, campfires, or sparks from cars or equipment (Alexandre, Stewart, Keuler, et al., 2016; Alexandre, Stewart, Mockrin, et al., 2016; Balch et al., 2017; Bistinas et al., 2013; Keeley et al., 1999; Keeley & Fotheringham, 2003; Keeley & Syphard, 2018; Radeloff et al., 2018; Syphard et al., 2007, 2012, 2019).

Yet the RPFSEIR dismisses this established science, simply stating "Appendix K (Wildland Fire Risk Report Northlake Project Addendum #1) specifically addresses risk from new human presence in high fire-prone areas and the wildlife-urban interface (WUI) and concluded that "the increased wildfire risk from human-ignited wildfire is less than significant"" (RPFSEIR at 2-27). However, upon inspection of Appendix K, the RPFSEIR fails to provide credible evidence that supports their conclusions. The appendix seemingly avoids recent California studies, opting instead to highlight one 2009 California study and a few studies conducted in central Texas and Canada to argue that "at a point of development density, wildland fuels are reduced/eliminated or fragmented to a point where fire suppression effort are more effective" (RPFSEIR Appendix K at 2). However, this rationale is false and dangerously misleading. Although previous studies have found that low to intermediate development density surrounded by vegetation had the greatest risk of burning in a wildfire (*i.e.*, Syphard et al., 2012), more recent analyses show that once structures ignite in high-density development, there is an increased risk of fire through structure-to-structure spread (Knapp et al., 2021; Mockrin et al., 2023; Zamanialaei et al., 2025). Wildfires in the WUI since 2017 demonstrate this falsehood. High density development was extremely vulnerable and many lives and homes were lost in Santa Rosa, Paradise, Palisades, and Altadena in the 2017 Tubbs Fire, the 2018 Camp Fire, the 2025 Palisades Fire, and the 2025 Eaton Fire, respectively. To dismiss these horrific tragedies is a complete failure to analyze relevant information that is necessary to keep communities safe. The RPFSEIR endangers families by ignoring glaring truths and excluding analyses of these recent California wildfires.

Response to Comment No. C.5-9: See response to comment above. The commenter fails to provide any credible evidence of a significant wildfire impact.

Comment No. C.5-10:

C. *Wildfire in the Wildland Urban Interface Leads to Harmful Air Quality and Health Impacts*

The RPFSEIR fails to adequately respond to the Center's comments regarding how wildfires in the WUI cause poor air quality and therefore harm people, stating the following:

> "[c]ommenter speculates that an unintentional wildfire in the Project Area would result in poor air quality; none of the commenter's citations are Project Site specific. CEQA does not require the analysis of speculative impacts. (CEQA Guidelines Section 15145.) Commenter provided no credible evidence of a significant wildfire impact" (RPFSEIR at 2-27).

This is false. Such impacts are not mere speculation. Providing evidence that is site-specific to Northlake is unnecessary. When unintentional wildfires occur, science and experience show (and common sense dictates) that burning vegetation and structures filled with toxic metals, plastics, and other hazardous chemicals release $PM_{2.5}$ and toxic smoke, and such air pollution harms people. Numerous scientific studies provided with the Center's May 29, 2025 comment letter support the fact that wildfires result in an increases fine particulate matter ($PM_{2.5}$) exposure, which has been found to have severe health effects, including respiratory and cardiovascular symptoms; higher rates of dementia, cancer and other serious disease; and premature death. Other studies have found that toxic smoke from building structures can travel more than 150 miles. For more details and citations see the Center's May 29, 2025 comment letter and Section D: Wildfires in the Wildland Urban Interface Harm People and Wildlife. The RFPSEIR fails to adequately assess the Project's impacts to wildfire risk and the impacts of ignition to air quality and human health.

Response to Comment No. C.5-10: The commenter is incorrect that the comment regarding air quality was not responded to. RPFSEIR Response B.4-22 specifically addressed this issue:

> Commenter raises concerns regarding unintentional wildfires and associated air quality. Addendum #1 to the Wildland Fire Risk Report specifically addresses risk from new human presence in high fire-prone areas and concluded that "the increased wildfire risk from human-ignited wildfire is less than significant." (RPDSEIR Appendix K at page 7.) Moreover, the RPDSEIR concludes that "Neither construction nor operation of the Project would exacerbate wildfire risks, thereby exposing occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire." Commenter speculates that an unintentional wildfire in the Project Area would result in poor air quality; none of the commenter's citations are Project Site specific. CEQA does not require the analysis of speculative impacts. (CEQA Guidelines Section 15145.) Commenter provided no credible evidence of a significant wildfire impact.

Comment No. C.5-11:

D. Wildfires in the Wildland Urban Interface Harm People and Wildlife

The RPFSEIR must consider that when wildfires burn through communities, they threaten homes, livelihoods, lives, and health. In addition to the immediate impacts of lives and homes lost, evacuations and displacement, impacts from air pollution, soil contamination, lost jobs, and the trauma of escape and recovery extend well beyond the fire footprint and last long after the fire is extinguished. Impacts to wildlife are also potentially long-lasting. The RPFSEIR downplays and dismisses the serious and cascading consequences of more wildfire in the WUI and continues to lack adequate wildfire analyses and mitigation.

i. Wildfire Impacts Disproportionately Affect Low-income, Minority Communities

Impacts of wildfire disproportionately affect vulnerable communities with less adaptive capacity to respond to and recover from hazards like wildfire. Low-income and minority communities, especially Native American, Black, Latinx, and Southeast Asian communities, are the most marginalized groups when wildfires occur (Davies et al., 2018).

Those in at-risk populations (*e.g.,* low-income, elderly, disabled, non-English-

speaking, unhoused) often have limited resources for disaster planning and preparedness (Richards, 2019). Vulnerable groups also have fewer resources to have cars to evacuate, buy fire insurance, implement fire-resilient retrofits, maintain defensible space around their homes, or rebuild, and they have less access to disaster relief during recovery (Davis, 2018; Fothergill & Peak, 2004; Harnett, 2018; Morris, 2018; Ong, Pech, Frasure, et al., 2025; Richards, 2019; Vives & Castillo, 2025). And survivors are left without resources to cope with the death of loved ones, physical injuries and emotional trauma from the chaos that wildfires have inflicted on their communities.

Emergency services often miss at-risk individuals when disasters happen because of limited capacity or language constraints (Richards, 2019). This was the case for both the Palisades and Eaton fires. Many elderly and disabled community members unable to evacuate on their own were left stranded as the wildfires advanced, and the median age of those who died in the fires was 77 (Ellis, 2025; Jarvie et al., 2025). Meanwhile, delayed evacuation alerts and limited fire trucks in western Altadena, a predominantly Black and Latino neighborhood, resulted in 18 of the 19 deaths from the wildfire (Castleman, 2025; Ellis & Greene, 2025; Toohey & Jarvie, 2025).

In the aftermath of wildfires and other environmental disasters, news stories have repeatedly documented the lack of multilingual evacuation warnings leaving non-English speakers in danger (Axelrod, 2017; Banse, 2018; Gerety, 2015; Ong, Pech, Ong, et al., 2025; Richards, 2019). This was exemplified during the Eaton and Palisades fires; evacuation alerts were only sent in English and Spanish, leaving more than 12,000 Asian Americans with limited English proficiency in the evacuation zones without potentially life-saving information (Ong, Pech, Ong, et al., 2025).

Health impacts from wildfires can have both acute and long-term health effects that disproportionately affect vulnerable populations, like children, the elderly, pregnant women and fetuses, those with underlying chronic disease, low-income communities, and communities of color. A recent study found that wildfire smoke now accounts for up to 50% of ambient fine particle pollution ($PM_{2.5}$) in the western United States (Burke et al., 2021).

Increased exposure to fine particulates in wildfire smoke has been linked with increased hospital visits for respiratory symptoms (*e.g.*, asthma, acute bronchitis, pneumonia, or chronic obstructive pulmonary disease) and cardiovascular symptoms (*e.g.*, congestive heart failure, ischemic heart disease, and myocardial infarction) (Delfino et al., 2009; Künzli et al., 2006; Liu et al., 2015; Rappold et al., 2012; Reid et al., 2016; Viswanathan et al., 2006). It has also been linked to higher rates of dementia (B. Zhang et al., 2023; Z. Zhang et al., 2023). And experts have also found that greater exposure to wildfire smoke and excessive heat during the month before conception and the first trimester of pregnancy is linked with greater risk of both short-and long-term health problems (Evans et al., 2022; Khalili et al., 2025). Researchers estimated that between 2008 and 2018 more than 50,000 premature deaths were caused by California wildfire smoke (Connolly et al., 2024). As climate change intensifies, scientists predicted that wildfire smoke could cause approximately 700,000 excess deaths between 2025-2055 (Qiu et al., 2025).

Wildfires in the WUI can lead to other harmful public health impacts due to increased exposure to toxic contaminants from burned buildings, cars, electronics, and more. Buildings and infrastructure often contain plastic materials, heavy metals, benzene, and carcinogenic gases.

These toxic chemicals pose a threat in the burn area and they can travel long distances. During the 2018 Camp Fire that burned 19,000 structures, the smoke caused dangerously high levels

of air pollution in the Sacramento Valley and Bay Area and the California Air Resources Board found that high levels of heavy metals like lead and zinc traveled more than 150 miles (CARB, 2021). And unsafe levels of lead, arsenic, and other dangerous metals have been documented in and downwind of the Eaton and Palisades fire footprints (Champlin, 2025; Smith & Briscoe, 2025).

Families living or working in or near the burn area also risk increased exposure to hazardous chemicals. After the Eaton Fire, some families with no other options returned to live in homes deemed "uninhabitable" by insurance companies, surrounded by toxic debris (Vives & Castillo, 2025). Almost 50% of schools where students had returned to in the Pasadena Unified School District had elevated levels of lead and arsenic in their soils due to toxic ash, which can have damaging effects on the nervous system, cardiovascular system, and kidneys (Haggerty & Briscoe, 2025). And farmworkers often have to continue working while fires burn and pollutants fill the air, or risk not getting paid (Herrera, 2018; Kardas-Nelson et al., 2020; Parshley, 2018). Wildfire victims have also had to deal with lack of funding and support for cleanup as well as improper cleanup, "adding to the trauma" they have already endured (Briscoe, 2025; Briscoe et al., 2025).

Service workers also face increased risk. Firefighters are suffering disproportionately high rates of cancer and other serious diseases (Dreier, 2025; Hwang et al., 2023; Johnson & Lam, 2023) as well as mental health issues due to extended fire seasons and working extended shifts away from their families (Ashton et al., 2018; Bransford et al., 2018; Del Real & Kang, 2018; Greene, 2018; Gutierrez, 2018; Simon, 2018). And firefighters who fought blazes in the LA wildfires had high levels of lead and mercury in their blood, (Hernandez, 2025). Fire cleanup workers also risk increased exposure to harmful chemicals; they often do not use appropriate protective gear as they remove toxic debris from the burn area (Haggerty, 2025).

Scientists are continuing to uncover the devastating health impacts of wildfires in the WUI. In a study that included more than 1,100 participants that were affected by the 2023 wildfires in Maui, Hawai'i, researchers found that six to 14 months after the wildfires more than 20% of participants had reduced lung function and almost 50% had clinical symptoms of depression (Juarez et al., 2025). The majority of participants reported food insecurity, economic hardship, and displacement due to the wildfires (Juarez et al., 2025), and in the month of the wildfires, the suicide and overdose rate doubled (Purtle et al., 2025). Other experts attributed more than 400 additional deaths to the LA wildfires, likely due to poor air quality, delays in health care, and other factors (Paglino et al., 2025).

Science unequivocally shows that California wildfires in the WUI are increasing negative health impacts within and beyond their footprint. Proper analyses and mitigation of the Project's impacts on wildfire ignition, wildfire spread, and the negative health impacts associated with wildfire are needed. The RPFSEIR fails to accomplish this and is dangerously deficient.

Response to Comment No. C.5-11: As set forth in RPFSEIR Response B.4-24,

> Commenter claims the RPDSEIR (though it cites the SEIR) fails to adequately assess and mitigate the Project's impacts to wildfire risk, yet fails to identify an error or omission in the extensive analysis. Stating that "wildfire impacts disproportionately affect low-income and minority communities," while may be true, is not a critique of the RPDSEIR wildfire impact analysis and in no way undermines the RPDSEIR's analysis. Moreover, commenter fails to cite any guideline or requirement for the wildfire impact analysis to address "the aftermath of a wildfire." The RPDSEIR wildfire analysis and the Wildfire Report comport with the requirements of CEQA and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California*

Environmental Quality Act" guidelines. Commenter submitted no credible evidence of a potential significant wildfire impact. See also Response B.4-22.

The commenter failed to submit any credible evidence of a potential wildfire impact.

Comment No. C.5-12:

ii. Wildfires in the WUI Threaten Vulnerable Wildlife

Wildfires are a natural and necessary process in many of California's ecosystems, and many areas need beneficial fire to restore ecosystem health and cultural connection to the land. However, the last decade of unprecedented wildfires in the wildland urban interface ("WUI") are pushing fragmented populations of sensitive species to the brink. Wildlife, including genetically isolated mountain lions, remnant populations of frogs and fish, resident and migratory birds, nearby marine life, and more are all vulnerable to direct and indirect impacts from wildfire. They can suffer burns, smoke-induced asphyxiation, heat stress, traumatic injuries, and death (Garcês & Pires, 2023). For example, two mountain lion deaths in the Santa Monica Mountains were attributed to the 2018 Woolsey Fire. Although mountain lions are highly mobile and generally able to move away from wildfires, these lions were unable to escape to safety because they were boxed in by roads and development. In addition, researchers found that after a large wildfire in an urbanized region, mountain lions avoided burn areas and increased risky behavior that could lead to more conflict with people, increased mortality, and extinction risk (Blakey et al., 2022). Such deaths can further destabilize small mountain lion populations that are already facing numerous other threats, including low genetic diversity, vehicle strikes and rodenticide poisoning, and make them more vulnerable to local extinction (Benson et al., 2016, 2019).

Smoke inhalation from wildfires can lead to negative health effects, like carbon monoxide poisoning, damage to lung tissue, and weakened immune response, in both terrestrial and aquatic wildlife (Sanderfoot et al., 2021). Smoke exposure can also cause shifts in animal behavior and stress levels, which could influence short- and long-term health and survival (Sanderfoot et al., 2021). One study found that increased smoke exposure led to decreased body condition (i.e., lower body mass) of wild birds in California, which suggests that they expend more energy while coping with sub-lethal health effects of smoke exposure (Nihei et al., 2024).

Heavy rains after wildfire can trigger landslides and debris flows that threaten small populations of sensitive, less mobile species that have been diminished due to habitat loss and fragmentation from sprawl development, dams, disease, non-native predators, and other threats. After the 2020 Bobcat Fire, biologists were desperate to rescue remnant populations of yellow-legged frogs, Santa Ana suckers, unarmored threespine stickleback fish, speckled dace, arroyo chub and arroyo chub because they were concerned that post-fire debris flows due to winter rains would wipe out their populations in the fire zone (Sahagun, 2020). Biologists conducted similar rescue missions for the last-known populations of Southern California steelhead and northern tidewater gobies in the Santa Monica Mountains after the 2025 Palisades Fire (Seidman, 2025a, 2025b, 2025c).

Historically, these species would have been able to recolonize from neighboring populations after the loss of individuals or populations to fire impacts. Unfortunately, that ability is now limited by the species' currently small and fragmented population structure. Continued alteration of historical fire regimes due to sprawl development will further endanger remnant populations.

Devastation caused by wildfire in the WUI is far-reaching and long-lasting. We have yet to uncover the full extent of harm such wildfires due to wildlife and the habitats they rely on, but it is certain that careless land use planning and policy are causing death and destruction in the natural world. The RPFSEIR fails to adequately assess and mitigate the Project's impacts on wildfire risk and how increased ignitions will impact biological resources.

Response to Comment No. C.5-12: See RPFSEIR Response B.4.21 and B.4.22. Commenter provided no credible evidence of a significant wildfire impact.

Comment No. C.5-13:

iii. The RPFSEIR fails to consider mitigation related to wildlife insurance for new residents and owners.

California is facing an insurance crisis. Many private insurers are leaving California or otherwise refusing to insure homes built in the wildland-urban interface (like the Proposed Project), and this has resulted in an addition of approximately one half of a *trillion* dollars of added assets being "covered" under California's FAIR Plan, which was designed to be a wildfire insurance of last resort for homeowners otherwise unable to obtain coverage (and is owned and managed by the State) (Saleh, 2025). In turn, this has caused a major uptick in premiums on the State's FAIR Plan, which has led some homeowners to forego wildfire insurance altogether. (*Id*.) And many of the homeowners that have been able to retain private wildfire insurance have been unable to actually be reimbursed through their insurers' claims process (Overland, 2025 [discussing litigation filed by victims of the recent fires in Los Angeles against their insurer for failing to pay out valid claims resulting from those fires]).

The RPFSEIR should therefore analyze whether the residences contemplated will be insurable through private insurers or will require access to the California FAIR Plan and what each home's premium ought to be. (*Laurel Heights Improvement Assn.,* 47 Cal. 3d at 392.) In undertaking that analysis, the Project proponent must also take into account that many private insurers have a documented practice of underinsuring homes when contracting for wildfire insurance, and that this practice of underinsurance has resulted in many homeowners receiving far less than their home's worth from their insurer after their homes are destroyed by wildfire (Neilson, 2025). Moreover, the RPFSEIR should include a mitigation measure requiring the Project proponent to financially cover the wildfire insurance for the homes being sold or otherwise disclose accurate and helpful information regarding the availability of private or public wildfire insurance, the costs thereof, and the risks inherent in obtaining such insurance and, more importantly, in foregoing to do so when advertising and selling the residences contemplated under the Proposed Project and Specific Plan. (14 C.C.R. § 15021(a).) In fact, the State is working on preparing and publishing a tool that would help facilitate that process (Rahim, 2025).

Response to Comment No. C.5-13: The commenter suggests that the wildfire impact analysis analyze the ability to obtain fire insurance. The Recirculated Partial Draft Supplemental Environmental Impact Report (RPDSEIR) wildfire analysis and the Wildfire Technical reports (RPDSEIR Appendices D-1, D-2 and K) comply fully with the requirements of CEQA and the California Attorney General's "Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act" guidelines. Social and economic issues are not within the purview of CEQA under CEQA Guidelines Section 15131.

Comment No. C.5-14:

IV. The County's Environmental Review of the Project's Significant Transportation Impacts Is Deficient.

This Project will increase regional vehicle miles traveled ("VMT'') by more than *one hundred million miles* each year, running against California's goals to reduce car-based lifestyles, vehicle accidents, greenhouse gas emissions, and air pollution. By building in the wildland urban interface far from existing services, this Project will entrench automobile dependence for the Project's residents for decades to come. The impacts from this enormous increase in car travel are significant and must be mitigated as such.

Providing alternatives to single occupancy vehicle travel is essential to building an efficient, sustainable and equitable transportation system. Unfortunately, the U.S. is far from achieving a multi-modal transit system, and projects like this move California even further from that target. In 2013, one study found that 76.4% of U.S. daily commutes were people driving alone (McKenzie, 2015). According to the EPA, the collective daily transportation in the U.S. constitutes about 27% of the total greenhouse gasses released (U.S. Environmental Protection Agency, 2017). California's annual average emissions associated with passenger vehicles between 2000 and 2020 was approximately 110 million metric tons of CO2 equivalent, or 25% of the state's total emissions. (CARB, 2022).

Increasing a region's VMTs isn't just bad planning, it also undermines community health. Increasing VMT increases emissions of air pollutants such as nitrogen oxides (NO_X), volatile organic compounds (VOCs), carbon monoxide, heavy metals, carbon dioxide and respirable particulate matter ($PM_{2.5}$). Increasing VMT also leads to more ozone (O_3) production through the photochemical reactions of NO_X and VOCs emitted by vehicles. (Fu et al., 2021). Short- and long-term exposure to several of these pollutants has been linked to premature mortality, compromised birth outcomes, heart disease and a host of respiratory illnesses (Mujtaba & Shahzad, 2021). Another serious direct impact of increasing the number of cars on roads, like the Project would do, is automobile crashes, which have historically been the leading cause of death among adolescents in the United States. (Goldstick et al., 2022 [showing vehicle crash as the top cause of death from 1999 to 2019, when firearm deaths narrowly surpassed vehicle deaths]). An estimated 42,915 people in the U.S. died in car crashes in 2021 alone and 3.4 million people are injured each year, which costs an estimated $473.2 billion annually as measured by wage and productivity losses, medical expenses, motor-vehicle damage, and employers' uninsured costs (Frumkin et al., 2004; U.S. Department of Transportation, 2022). The rate of deaths due to traffic has been increasing since 2013. (National Safety Council, 2026)

Beyond the direct impacts, increased VMT has long term impacts on commuters. In 2019, the duration of the average daily commute in the United States increased to a new high of 55.2 minutes, and a record 9.8 percent of commuters reported daily commutes of at least 2 hours (Burd et al., 2021). These long commutes reduce the amount of time that workers are available to spend with family, friends, and community. The increase in inactivity and isolation can also lead to long-term health complications such as pre-diabetes, diabetes, obesity, asthma, isolation, stress and depression (Ewing et al., 2003; Leyden, 2003). In contrast, developments that facilitate commuting my mass transit, foot, or bicycle increase people's overall activity level and health. (Sahlqvist et al., 2012).

Given the myriad public health problems associated with increased car dependance, it should be a priority of the County to reduce VMT with every new project, especially for projects as large as this. The County needs to continue investing—and

requiring project applicants to invest—in alternative modes of transportation to not only make multi-modal transit cheaper, quicker, and easier than passenger vehicle transit. Best practices for transportation options should include providing free public transit services for future residents and workers; implementing bus only lanes; optimizing bus routes to minimize overlap and ensure coverage across the city in line with demand; and providing high-frequency, reliable services with regular bus stops for easy access.

Studies indicate that free public transit services typically result in ridership increase from 20% to 60% in a matter of just a few months (Studenmund and Connor, 1982). Similarly, bus lanes that reduce total transit door-to-door travel times by 5%-15% will increase urban peak ridership 2%-9% (UCLA Institute of Transportation Studies, 2019). Lastly, ensuring accessibility and convenience is essential to increasing ridership. Providing more bus stops decreases the distance residents have to travel to access such services.

Instead of pursuing these common-sense solutions, this Project envisions continuing California's failed experiment of building car-centered infrastructure by creating a sprawling, low density, mass transit desert far from any existing services. This will result in the Project's residents being tethered to their cars for their every need for decades to come. The VMT analysis shows that the Project will induce over 100 million miles travelled per year. (RPFSEIR Appx. C-1 at 9.) This dramatic amount of automobile travel will result in an average of 1.38 of the Project's residents to die each year in vehicle accidents. (National Safety Council, 2026 [showing a death rate of 1.38 people per 100 million miles travelled].) Vehicle travel resulting from the Project will also emit 53,873 tons of CO_2 per year, 220 pounds of Nox per day, 657 pounds of carbon monoxide per day, and 237 pounds of particulate matter 10 per day. (Draft SEIR at 5.1-34, 5.7-26.) This Project will steer region in the opposite direction of local, county, and state policy, eroding community and environmental health to build yet more car-dependent infrastructure. The RPFSEIR fails to adequately assess and mitigate the VMT, GHG, air pollution impacts from the massive increase in car travel that will be caused by this Project.

Response to Comment No. C.5-14: The commenter claims the VMT analysis (and associated air quality and GHG impact analyses) are inadequate but fails to identify any errors or inadequacies. Most of the comment cites general information not related to the Project or its impacts. The commenter failed to submit any credible evidence of a VMT impact. Public Works reviewed and approved the VMT report and determination. (RPDSEIR Appendix C-2.)

Comment No. C.5-15:

A. The RPFSEIR'S VMT Analysis is Unsupported and Deficient

The County argues that this Project, which will add one hundred million VMT to the area's roadways each year, does not have a significant traffic impact. The Project's enormous VMT impacts are significant when compared to the County-established threshold. Yet instead of using its established threshold, the County instead used an inapposite environmental baseline and threshold of significance to preclude a finding of significance. These findings are not supported by substantial evidence. The County must recirculate the EIR to explain how it will mitigate its significant impacts to VMT.

Response to Comment No. C.5-15: The commenter questions the baseline used for the VMT analysis. The Project is a revision to the 1992 Project; as such, it is proper and legal to use the original project as the baseline for comparison. Public Works, the County's expert agency, approved the VMT report, including the methodology and impact determination. (RPDSEIR Appendix C-2).

Comment No. C.5-16:

i. The County Was Required to Perform a VMT Analysis in the RPFSEIR

Senate Bill 743, passed in 2013, amended CEQA to require lead agencies to replace the outdated level of service traffic metric with VMT. (See Guidelines § 15064.3). The level of service analysis focused on how a project would impact road congestion, a metric that does not factor in GHG emissions or air pollution. The purpose of SB 743 was to amend CEQA to be more "able to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution, [while] promoting the development of a multimodal transportation system, and providing clean, efficient access to destinations." (Steinberg, 2013). In other words, SB 743 aligns CEQA with California's climate goals by focusing the traffic analysis on how much a project will impact automobile use, rather than how a project will impact road congestion.

Though Senate Bill 743 was passed after the 1992 development was approved, CEQA requires the County to replace its outdated level of service analysis with a VMT analysis. CEQA Guidelines section 15007(b) states that "new requirements in amendments will apply to steps in the CEQA process not yet undertaken by the date when agencies must comply." This step in the CEQA process—the Revised Partial SEIR—could not have begun before the final judgment granting the Center's writ of mandate was filed by the Los Angeles County clerk. This filing occurred on February 1, 2021, well after the new VMT requirement took effect on July 1, 2020. (See Guideline § 15064.3.) As such, the VMT CEQA Guidelines apply to this RPFSEIR, and the County was required to redo its 1992 traffic analysis.

The County recognized this requirement and prepared a Transportation Analysis because the "level or service metric . . . is no longer the applicable metric for identifying significant impacts under CEQA." (RPFSEIR Appx C-1 at p. 1.) While the County appropriately decided to conduct this analysis, the analysis and its attendant findings were deficient.

ii. The Environmental Baseline Used in the VMT Analysis is Unsupported

The new traffic analysis found that VMT impacts were not significant. The County's conclusion is flawed for two reasons. First, the appropriate environmental baseline is the existing, undeveloped baseline. Instead, the Conty used the hypothetical baseline of the 1992 project at full buildout. Second, the threshold of significance chosen by the County is not supported by substantial evidence.

The County used the 1992 project and its 12,585 hypothetical residents as the environmental baseline, rather than the actual baseline, which is no residents. The County's attempt to obfuscate the significance of the Project's VMT impacts by inflating the environmental baseline violates CEQA. As evidenced thoroughly in the Center's May 29 letter, a foundational aspect of CEQA is to treat the *existing* environment as the baseline. The County provided no rebuttal to the abundant evidence provided by the Center, failing to cite a single case, provision of the Public Resources Code, CEQA Guideline, or County policy. Instead, the County relies on unsupported assertions that the previous project, which was never built, was not hypothetical.

Though the development had been approved in 1992, that approval does not constitute an acceptable baseline. The CEQA Guidelines and Supreme Court speak directly to this set of facts, detailing that permitted conditions are not the same as a CEQA baseline. The Guidelines detail that "an existing conditions baseline shall not include

hypothetical conditions, *such as those that might be allowed, but have never actually occurred*." (Guidelines § 15125(a)(3) [emphasis added].) The Supreme Court has held that "a long line of Court of Appeal decisions holds, in similar terms, that the impacts of a proposed project are ordinarily to be compared to the actual environmental conditions existing at the time of CEQA analysis, *rather than to allowable conditions defined by a plan* or regulatory framework." (*Communities for a Better Environment v. South Coast Air Quality Management Dist.*, 48 Cal. 4th 310, 320-321 [emphasis added].) Though the 34-year-old development approval set some "allowable conditions," those conditions never came to fruition. The "actual environmental conditions existing at the time of" this RPFSEIR are undeveloped land with no residences and minimal business activity. The environmental baseline must be set based on this reality, not the hypothetical project.

Using this appropriate, existing environmental baseline would undeniably lead to a finding of significance because the Project would add 275,141 VMT to the region each day compared to the negligible existing VMT associated with the Project area.

As described in the next subsection, even if the Project uses the generous Southern California Association of Governments environmental baseline of 22.3 VMT per capita, the Project will nonetheless result in significant VMT impacts.

Response to Comment No. C.5-16: See response to comment above. The commenter submitted no credible evidence of a VMT impact.

Comment No. C.5-17:

iii. The VMT Significance Threshold Used by the County is Unsupported

The appropriate threshold of significance of 18.5 VMT per capita has already been established by the County, yet the County failed to use this threshold for the Project.

Los Angeles County prepared a SB 743 Implementation and CEQA Updates Report ("County Guidance") in 2020 to help guide agencies through Senate Bill 743 VMT analyses for the purposes of CEQA review. This County Guidance sets the baseline VMT for North Los Angeles County, where the Project is located, for a residential project at 22.3 VMT per capita. (Los Angeles County, 2020, pp. 16, 30). The County Guidance sets the VMT significance threshold at 16.8% below this baseline. (Los Angeles County, 2020, pp. 16, 29). In this case, a 16.8% reduction from the 22.3 VMT per capita equals 18.5 VMT per capita. (Los Angeles County Public Works, 2020, p. 11).

The significance threshold of 18.5 VMT per capita is dramatically lower than the Project's 25.7 VMT per capita. (RPFSEIR Appx. C-1 at 9.) Since the per capita VMT will greatly exceed the County-established significance threshold for residential projects, the VMT impacts from the Project are significant and must be analyzed and mitigated as such.

Instead of using the County's own guidance for residential projects, the County declares that any decrease in VMT per *service population* compared to the 1992 project automatically results in insignificance. (RPFSEIR Appx. C-1 at p. 7.) As described in the County Guidance, VMT per service population is the correct metric only when a project is *not* a residential or office project. (SB 743 Implementation Report, 2020, p. 30). This is because VMT per service population is intended to include the VMT from both a development's residents and employees commuting to "service" the development's businesses. As such, the baseline for VMT per service population is higher than per capita because it includes these worker trips from outside the development.

Where, as here, a development has no businesses, this metric does not make sense. This Project is almost entirely residential, with only 22.9 acres of the 1329.7 acre Project zoned as commercial or industrial. (PRFSEIR at Ex. 1). Non-residential VMT makes up just 3.2% of the Project's overall VMT. (RPFSEIR Appx C-1 at 4 [showing commercial retail VMT at 3,670, recreation/park VMT at 2,640, and school VMT at 2,640].)

The County argues that the Project's impacts are not significant because VMT per service population decreased from 27 to 25.7 for the 1992 development compared to the 2018 Project. Yet the correct metric is VMT per capita, which is the exact same for both projects. The RPFSEIR must redo its analysis using this per capita metric rather than the unsupported per service population metric.

Response to Comment No. C.5-17: The Project is a type of land use plan (Specific Plan) and Section 3.1.3 – Impact Criteria of the County Guidance describes that total VMT per service population (the sum of residents and employees) is the appropriate metric to utilize for analyzing VMT impacts for a land use plan in the County. As the commenter notes above, the Project does include a mix of uses such as residential, retail, recreation/park and school uses, all of which would generate VMT. Therefore, VMT per service population is an appropriate metric to use of the VMT analysis. The comment accurately states that VMT per capita would be the same for both projects, which also would indicate a less-than-significant project impact in comparison to the previously approved project. The commenter questions the VMT analysis, claiming it was done incorrectly, yet failed to submit any credible evidence of a significant VMT impact. As noted in the responses above, Public Works, the County's expert agency, approved the VMT report including the methodology and impact determination. (RPDSEIR Appendix C-2).

Comment No. C.5-18:

iv. The Traffic Analysis's VMT Per Capita is Flawed

Beyond using an unsupported environmental baseline and significance threshold, the entire VMT analysis understates the amount of driving that the Project will cause. As noted in footnote 2 of the VMT and Service Population Calculation Worksheet, the only trips used in the analysis include "2 trips per employee (26.4 VMT per employee/2 trips per employee =13.2 miles." (RPFSEIR Appx C-1 at 9.) This meager VMT accounting ignores that the Project will require residents to drive to fulfill all their daily needs, not just to get to work. Unaccounted for are trips to the grocery store, to drop kids off at school, to medical appointments, to restaurants, to cultural and social events, and more. And since this Project sprawls into undeveloped lands without existing services, residents would need to travel miles to existing urban centers to fulfill these needs. If these unaccounted for trips were included in the VMT analysis, the overall VMT would no doubt be substantially higher As such, the VMT analysis is not supported by substantial evidence.

Response to Comment No. C.5-18: The "2 trips per employee" was used to estimate employee "commute VMT" for the Project's non-residential land uses (employees of the retail, recreation/park, and school). The trips the commenter notes above (resident trips shopping, dining, services, etc.) are accounted for separately in the "residential VMT". The residential VMT was estimated by using the residential population and the residential VMT per capita from the County's VMT tool. Per the County Guidance the residential VMT per capita captures Home-Based Work and Home-Based Other trip productions. Therefore, the VMT analysis does not understate the amount of trips. The commenter speculates that the VMT analysis understated the number/length of Project

trips, yet provides no credible evidence of a significant VMT impact. As noted above, Public Works, the County's expert agency, approved the VMT report, including the methodology and impact determination. (RPDSEIR Appendix C-2).

Comment No. C.5-19:

v. The RPFSEIR Fails to Incorporate All Feasible Measures to Mitigate VMT Impacts

Since the Project's VMT impacts are significant, the County must implement all feasible mitigation measures. The RPFSEIR fails to do so, requiring no mitigation for VMT. Even if the County succeeded in implementing the Project's "features that tend to reduce VMT" (which are not enforceable mitigation measures), the Project would still greatly exceed the VMT significance threshold. These features include building bike infrastructure (VMT reduction of 0.08%), expanding the transit network (4.6%), affordable housing (2.4%)[4], and pedestrian network (6.4%). Together, this would decrease VMT per capita by 13.4%, or 22.3 VMT per capita. This is number is still 20% higher than the significance threshold of 18.5 VMT per capita. Since the VMT would remain far above the significance threshold under any circumstance contemplated by the RPFSEIR, the County must consider all feasible measures to mitigate the Project's VMT impacts. Some of the short-term measures identified by the County in its guidance document, but not included in the RPFSEIR, include implementing a commute trip reduction program, providing ride-sharing programs, implementing subsidized or discounted transit programs, encouraging telecommuting and alternative work schedules, unbundling parking costs from property costs, implementing market price public on-street parking, providing traffic calming measures, and implementing car-sharing programs. (Los Angeles County, 2020, p. 34). The County guidance also identified two long-term mitigation measures, neither of which were contemplated by the Project. These measures include a VMT mitigation exchange and a VMT mitigation bank. (Los Angeles County, 2020, p. 36). The County must adopt enough of these additional, feasible mitigation measures to reduce the VMT per capita below the threshold of significance.

A decades-old EIR that fails to even calculate VMT is not sufficient to satisfy CEQA's requirements; the appropriate inquiry is "whether a proposed project or plan adequately reduces total VMT." (Los Angeles County Public Works, 2020). This Project clearly does not.

Response to Comment No. C.5-19: The commenter claims, without citing any credible evidence, that VMT impacts are significant and mitigation must be adopted. The VMT analysis, which Public Works approved, demonstrates that there is no significant VMT impact. The County is not required to impose mitigation measures where there is a less-than-significant impact. Applicable case law prohibits the imposition of mitigation measures unless they have a nexus to and are proportional to a project's significant impacts. (*Nollan v. California Coastal Comm.* (1987) 483 U.S. 825; *Dolan v. City of Tigard* (1994) 512 U.S. 374.)

Comment No. C.5-20:

V. Conclusion

The Center appreciates the Commission's consideration of these comments. Because the environmental review for the Project is inadequate for the foregoing reasons, the Center urges the Commission not to approve the Project unless and until these deficiencies are remedied.

[4] This reduction is based on a 28.6% decrease for the Project's 315 affordable units, assuming those units are multiple family residential units with an average of 2.79 inhabitants. (RPFSEIR Appx C-1 at 9.)

Given the possibility that the Center will be required to pursue legal remedies in order to ensure that the County complies with its legal obligations including those arising under CEQA, we would like to remind the County of its statutory duty to maintain and preserve all documents and communications that may constitute part of the "administrative record" of this proceeding. (Pub. Res. Code § 21167.6(e); *Golden Door Properties, LLC v. Superior Court* (2020) 53 Cal.App.5th 733.) Please include this letter and the provided references in the County's file for this Project, and continue to include the Center on the notice list for this Project using the contact information below.

Response to Comment No. C.5-20: This concluding comment is noted for the record and will be forwarded to the decision makers.

Response to Comment Letter C.6

Sydney Croasmun
Ridge Route Preservation Organization
January 27, 2026
Letter

Comment C.6-1:
In 1909, California was on the cutting edge of the Good Roads movement. $18 million of state bonds were passed to construct the revolutionary new highway system. Stagecoach roads would soon be a thing of the past and the automobile would take center stage.

When they set out to build the Ridge Route, they were entering uncharted territory. Built by a railroad contractor who believed in the future of the automobile, paved later by WW1 veterans with experimental road surfaces and designed with the purpose of uniting a rapidly splitting California. This road changed the course of history and eventually, its successor, the I-5, would become one of the most important trade routes in the country.

We say this to inform you that the Ridge Route isn't just another winding road. It has been a core part of our community since its opening in 1915 and a key part of our local history. Something worth honoring and protecting. While we understand that progress is inevitable, our organization exists to preserve what we can and document and recover what we can't.

Response to Comment C.6-1: This introductory comment is noted for the record and will be forwarded to the decision makers.

Comment C.6-2:

The proposed expansion of the Northlake Development will impact the Ridge Route, realigning 1.5 miles of the road and developing alongside nearly 4 miles of this historic corridor. Along the western border of the project site, hidden off to the edges of the road are C Blocks. Concrete markers placed by the California Highway Commission during the surveying and construction of the road (1913-1915) to mark the original right-of-way. The project site also covers the historic locations of "Queen Nell's Castle" - the homestead of Cornelia "Nellie" Martinez Callahan, and the Owl Garage. Both locations are no longer standing but could have artifacts such as bottles, plates and old car parts. Our organization would like to work with your archaeologists to ensure these markers and artifacts are collected and protected.

Of concern for the future, we worry about the impact of relying on one road to be the only exit for an entire community. The Ridge Route is no stranger to fires and the area was referred to as a "historic fire corridor" in the Northlake Environmental Impact Report. Fires reported at Templin Highway and the I-5 are ever prevalent. The project site burned in the 2022 Route Fire and was under evacuation as recently as the 2025 Hughes Fire. With the widening of the road to 4 lanes, there would now be two southbound lanes and one northbound lane available for evacuation and potentially only for 30 minutes in the case of the "Freeway Spot Scenario" (Northlake EIR).

It is out of concern for the future residents that we suggest looking into creating a secondary southern exit route for the community. Not only for evacuations, but to alleviate traffic on Ridge Route Road, which often functions as a bypass for the I-5 when there is an accident north of Castaic. Allowing residents to come and go unaffected by the freeway conditions.

Response to Comment C.6-2: Mitigation Measure 5.3-3 addresses the potential discovery of archaeological resources during Project construction:

> **MM 5.3-3**. For archeological sites accidentally discovered during future construction, there shall be an immediate evaluation of the find by a qualified archeologist. If the find is determined to be a historical or unique archeological resource, as defined under CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be provided. Construction work may continue on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i).
>
> With implementation of this mitigation measure, Project impacts to archeological resources would be less than significant. The commenters request to work with the Project archeologists is noted for the record is and will be forwarded to the decision makers and the applicant.

Comment C.6-3: Ridge Route Road is classified as a Limited Secondary Highway. Therefore it can accommodate primary access for the Project's three access points.

The Recirculated Partial Draft SEIR (RPDSEIR) wildfire analysis and the Wildfire Technical reports (RPDSEIR Appendices D-1, D-2, and K) fully comply with the requirements of CEQA and the California Attorney General's "Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act" guidelines. The Wildland Fire Risk Report took into account years of meteorological data, including wind data. It determined that under all ten modeled fire scenarios, evacuation would take place within the allowable time limit.

Therefore, no additional Project access is warranted.

Comment C.6-3:

The Ridge Route Preservation Organization hopes to work with your archaeologist to preserve and honor our local history and encourage your developer to take measures to ensure the safety of future residents. Thank you for your time and consideration.

Response to Comment C.6-3: This concluding comment is noted for the record and will be forwarded to the decision makers.

Response to Comment Letter C.7

Miguel Luna
Santa Monica Mountains Conservancy
January 26, 2026
Letter

Comment No. C.7-1:

The Santa Monica Mountains Conservancy, a trustee CEQA agency, offers the following comments on the Partial Recirculated Final Supplemental Environmental Impact Report (PRFSEIR) for the proposed North Lake project. The PRFSEIR remains inadequate in multiple areas and must again be revised and recirculated. The mass-graded 33 million cubic yard project next to State Park land is an embarrassment to the County's efforts to balance housing development with open space protection. Many options remain for the County to reduce the project impacts without violating any State housing laws and still meet the Project Objectives.

Response to Comment No. C.7-1: The introductory comment is noted for the record and will be forwarded to the decision makers.

Comment No. C.7-2:

Both the proposed project and the Partial Creek Avoidance Alternative (PCAA) would irreparably and significantly degrade regional wildlife population connectivity across Interstate 5 by virtually blocking all access to a key, large box culvert under the adjacent southbound lanes of Interstate 5. Since the Court ruling on this project, in concert, Caltrans and the California Department of Fish and Wildlife have designated the subject section of Interstate 5 as a Priority Barrier to Statewide wildlife movement. The EIR-shown routes of how wildlife could reach this culvert from the project are a scientific fantasy forcing wildlife to travel a quarter mile on traffic noise and headlight saturated slopes, including Caltrans rights-of-ways, between the freeway and Ridge Route Road before crossing into habitat free of busy roads.

Response to Comment No. C.7-2: See Response to Comment C.4-3. The PCAA pulls the Phase 2 development boundary further south on the Project Site. Thus, Phase 2 development is necessarily further away from the wildlife crossing of I-5 between Marple and Grasshopper Canyons and will not deter wildlife from using this crossing. The northernmost portion of Phase 2, the area above the development line, will remain undeveloped. This is depicted on the PCAA Wildlife Crossing Exhibit, which the Project is conditioned to implement. See CUP Condition of Approval No. 47.

Comment No. C.7-3:

If the County insists on approving a project with this avoidable, regionally significant biological impact, the PCAA is far better for all other environmental impacts and the public welfare; and being the feasible Environmentally Superior Alternative should be the approved project. The upper half of Grasshopper Canyon would not need to be filled in with 10 million cubic yards of fill pulled from ridgelines.

Response to Comment No. C.7-3: LA County Planning has recommended that the PCAA, the environmentally superior alternative, be adopted as the proposed project. The applicant has agreed to that.

Comment No. C.7-3:

However, with the PCAA footprint remaining intact, a relatively minor adjustment to the northern

project access road can avoid this regionally significant biological impact. That access road can be moved to the south such that wildlife crossing Ridge Route Road to and from the box culvert would no longer have to navigate through a signalized, street lit intersection, a four-lane road, and a 100-foot-tall, manufactured slope with concrete v-ditches. The attached figure shows the problem with the existing access road location and where that new road alignment should go. This adjustment will add some grading and expense, but the Interstate 5 box culvert cannot be moved.

Response to Comment No. C.7-3: Commenter is incorrect that there is a regionally significant impact regarding wildlife crossings. The SEIR determined a less than significant impact on wildlife crossings. As set forth in RPFSEIR Response to Comment B.4-11, collateral estoppel bars relitigation of the mountain lion/wildlife movement and connectivity issues. See Responses B.4-1, B.4-3, B.4-5, and B.4-6. The Court Ruling denied all of the commenter's claims regarding mountain lions and wildlife crossings finding that "The use of the undercrossings by large animals was thoroughly discussed in the SEIR … The County had the best available information on the topic when it approved the Project in April 2019. The County's implied determination that the Project will not interfere with mountain lion crossings of the I-5 is supported by substantial evidence. (RPDSEIR Appendix A (Court Ruling), pages 19 through 21.)"

Comment No. C.7-4:

It is disturbing that both this proposed northern access road, commercial pads, and manufactured slopes for pads occur on Los Angeles County fee simple property. Private land use is proposed on public property (see attached figure). How is the County compensated? In addition, the grading for the access road as shown would put Mountains Recreation and Conservation Authority (MRCA) property (APN 3247-017-906) into a manufactured slope with no MRCA permission.

Response to Comment No. C.7-4: Comment does not raise CEQA issues. Comment is noted for the record and will be forwarded to the decision makers.

Comment No. C.7-5:

A key deficiency of the CEQA environmental analysis to date is the failure to first analyze and disclose the rarity and regional ecological importance of the large box culvert under the adjacent southbound lanes of Interstate 5 to allow inter-mountain range wildlife movement. The second failure is for both the proposed project and the Partial Creek Avoidance Alternative (PCAA) to adequately avoid eliminating the habitat directly across Ridge Route Road that all wildlife species need to access the wildlife tunnel with enough regularity. The callousness and inadequacy of the analysis to date is reflected in the concluding PRDSEIR paragraph:

> The cumulative impact on biological resources would be considered greater than the Project alone. However, when considering all the proposed and existing projects in the Project area, the previously approved Project contributes a relatively small portion of the impacts in the area due to its relatively small impact acreage, and the location adjacent to existing development. The Project is not expected to contribute a significant impact to the Project area. Incremental impacts would not be cumulatively considerable, and no additional mitigation is required.

The CEQA environmental analysis to date makes a mockery of the ecological importance of the project property and Grasshopper Canyon. A key example is that the analysis says it is just possible that mountain lions could occur in the area. That analysis omits the fact that mountain lions use and/or occupy any connected habitat in Southern California including fingers of habitat that protrude into residential and commercial areas. Without any scientific question by any expert, all the project area is prime mountain lion habitat.

The Mountains Recreation and Conservation Authority's (MRCA) 2020 photo capture of a State-

listed mountain lion using the large box culvert adjacent to the project site is new substantial evidence supporting the importance of the North Lake property to maintain wildlife movement between the mountain ranges bisected by the freeway. Since 2020 the MRCA has also photographed bobcats, mule deer, coyotes, and long-tailed weasels using this undercrossing.

The MRCA is overseeing a State-funded multi-year study of all the existing and potential wildlife crossings of Interstate 5 between Highways 126 and 138 which includes the subject project site and subject tunnel under Interstate 5. Another ongoing study has documented a lion roadkill and collared lion presence between the proposed development footprint and Interstate 5. That second study also documents extensive radio collared mountain lion movement approximately a mile north of the project site in the same large habitat block which is uninterrupted by a paved or public road. This is substantial new evidence that is growing by the month. It will be submitted into the public project record by other entities prior to the January 28, 2026 Planning Commission hearing.

If a project with 33 million cubic yards of grading that extends development over three miles into core National Forest and State Park adjacent habitat is not cumulatively significant given the breakneck pace of the urban transformation of the Santa Clarita Valley, then what project could possibly be so? It is an avoidable tragedy to wildlands and the viewsheds of many public viewing areas.

Response to Comment No. C.7-5: See Responses to Comment Letter C.4 (MRCA), above, and RPFSEIR Response to Comment B-5-2 regarding cumulative impacts.

Comment No. C.7-6:

The Conservancy urges the County not to certify the PRFSEIR. If the County does certify the PRFSEIR, the Conservancy urges that only the Partial Creek Avoidance Alternative be considered for adoption as the environmentally superior alternative. The County should balance new housing in the Specific Plan area with the needs of the existing greater public such as--traffic reduction, open space, wildfire prevention, viewshed protection, air pollution avoidance, water supply, landfills, and access to quality nature.

The best and completely weak argument in the PRFSEIR against the PCAA is that there would 37 less acres of active recreational area. What short sighted thinking. Instead there actually would be hundreds of more acres of usable natural open space, less onsite residents, and any lost recreational area could simply be integrated into the development footprint of the PCAA. The upper half of Grasshopper Canyon would not need to be filled in with 10 million cubic yards of fill.

Response to Comment No. C.7-6: See above response.

Comment No. C.7-7:

New substantial evidence to add to the record is the blow out of a high-pressure gas line at the end of 2025 within a few hundred feet of the proposed project. Human proximity to such a blow out could cause multiple deaths and injury. The EIR to date has failed to address the public safety hazard of adding more development and road traffic next to this fragile high pressure gas line. It has also failed to address the safety hazards of potential similar blow outs of the multiple fragile gas lines that must be relocated on the eastern project boundary as part of the proposed project and the PCAA.

Response to Comment No. C.7-7: Regarding the recent gas line rupture, Northlake Associates has been working cooperatively with Southern California Gas Company to provide access to Northlake-owned property allowing SoCalGas the ability to undertake immediate geotechnical investigations necessary to design and implement a permanent repair solution. The Northlake development plans include the replacement or realignment of the existing gas line in conjunction

with the Ridge Route Road improvements, further enhancing safety and reliability as the relocation will be further away from the landslide area that caused the rupture. In addition, , as set forth in the RPDSEIR Project Description, “an existing crude oil pipeline easement containing two oil pipelines that traverse the entire north-south length of the Project Site would be relocated to an alignment along the eastern boundary of the proposed development area and within the identified grading footprint.) (RPDSEIR, page 1-2.)

Comment No. C.7-8:
The PRDSEIR shows land in Marple Canyon owned by the Mountains Recreation and Conservation Authority (MRCA) as potential mitigation areas. The MRCA has not provided any approval or made any arrangement with the applicant. Most likely that Marple Canyon property is the only feasible location to conduct Spiny Rush mitigation. The EIR is inadequate because most likely no Spiny Rush mitigation area will be available for the project.

Response to Comment No. C.7-5: See Responses to Comment Letter C.4 (MRCA), above.

Response to Comment Letter C.8

Victoria Yundt
Lozeau Drury LLP
Supporters Alliance for Environmental Responsibility
January 27, 2026
Letter

Comment No C.8.1:

This comment is submitted on behalf of Supporters Alliance for Environmental Responsibility ("SAFER") regarding the Recirculated Partial Final Supplemental Environmental Impact Report ("RPFSEIR" or "SEIR") for the NorthLake Specific Plan Project (SCH No. 2015031080, Project No. R2015-00408-(5), Vesting Tentative Tract Map No. 07336, Tentative Parcel Map No. 07335, Conditional Use Permit No. RPPL2023004316, Environmental Assessment No. RPPL2023004887), including all actions related or referring to the proposed development of 2,295 dwelling units, located east of Interstate (I) 5, west of Castaic Lake, and north of the community of Castaic, California in unincorporated Los Angeles County. ("Project"). The Project is scheduled to be heard as Agenda Item 7 at the Los Angeles County Regional Planning Commission's January 28, 2026 meeting.

Response to Comment No C.8.1: This introductory comment is noted for the record and wil be forwarded to the decision makers.

Comment No C.8.2:

SAFER is concerned that the RPFSEIR fails as an informational document and fails to impose all feasible mitigation measures to reduce the Project's impacts. Among other concerns, SAFER has identified the following issues:

1. A project will have a significant greenhouse gas ("GHG") impact if it conflicts with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (CEQA Guidelines, App. G, § VIII.) Here, the SEIR concludes that the Project will have a less than significant GHG impact. However, after reviewing the SEIR, SAFER found that the Project conflicts with the California Air Resources Board's 2022 Scoping Plan for Achieving Carbon Neutrality ("2022 Scoping Plan"), which identifies strategies for achieving California's long-term climate goal of carbon neutrality by 2045 or earlier. Any revised EIR must show how a project will conform to current statewide GHG reduction targets and adopt enforceable mitigation to achieve these goals. (Center for Biological Diversity v. Department of Fish & Wildlife (2015) 62 Cal.4th 204, 225-26; League to Save Lake Tahoe v. County of Placer (2022) 75 Cal.App.5th 63, 121-22.) As such, the Project's conflict with the 2022 Scoping Plan is a significant GHG impact that must be analyzed and mitigated in a revised RPFSEIR.

Response to Comment No C.8.2: With respect to the portions of the SEIR that were not recirculated, including greenhouse gas impacts, the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of those issues. See *Ione Valley Land, Air, and Water Defense Alliance, LLC v. County of Amador* (2019) 33 Cal.App.5th 165, 171 ("Res judicata bars all of LAWDA's objections to the partially recirculated EIR certification and project approval, except for those issues arising from the partially recirculated EIR concerning traffic impacts, because the remaining issues were litigated and resolved, or could have been litigated and resolved, in connection with the first petition, and the writ of mandate did not require the County to revisit issues other than traffic impacts."); *Sierra Club v. County of Fresno* (2020) 57 Cal.App.5th 979, 990 ("[A]n order of partial decertification is not necessary to protect Developer from relitigating the CEQA compliance of parts of the EIR not affected by the errors relating to air quality impacts. Instead, Developer is protected by res judicata, collateral estoppel and the

requirement for the exhaustion of administrative remedies."); *Citizens for Open Government v. City of Lodi* (2015) 205 Cal.App.4th 296, 325-327 (res judicata barred claim that EIR failed to disclose cumulative water supply impacts as that claim was based on the same conditions and facts in existence when the original action was filed.); *San Franciscans for Reasonable Growth v. City and County of San Francisco* (1989) 209 Cal.App.3d 1502, 1517–1518 (rejected a challenge to an EIR's impacts analysis after the issuance of a peremptory writ of mandate as beyond the scope of the additional environmental review ordered in the writ); *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 481 ("Because those challenges asserted in the new petition could have been asserted before the entry of judgment in the prior proceeding and the material facts have not changed, BEEP's challenges to the project description and to the finding on land use consistency asserted in its latest petition for writ of mandate are barred by res judicata."); *Town of Atherton v. California High-Speed Rail Authority* (2014) 228 Cal.App.4th 314, 354 ("Collateral estoppel precludes relitigation of issues argued and decided in prior proceedings."). The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Comment No C.8.3:

2. The RPFSEIR failed to adequately analyze vehicle miles traveled ("VMT") impacts because it applied an incorrect and outdated threshold of significance to measure impacts. The Department of Transportation's ("DOT") May 29, 2025 comment on the Draft SEIR states that the County applied an outdated threshold to measure VMT impacts. (RPFSEIR, p. A.2-3.) Specifically, the DOT explains that the County incorrectly applied the prior Northlake Specific Plan VMT per service population (27.03) as the significance threshold for determining an impact. However, the VMT per Service Population (27.03) is the baseline for comparison to the previously approved Project. The County was required to apply the VMT per Service Population (25.70) per the methodology required by the County Department of Public Works. Therefore, the RPFSEIR's less-than-significant conclusion for VMT impacts cannot be relied upon. A revised Draft SEIR should be prepared and recirculated that includes an adequate analysis of the Project's VMT impacts using the proper threshold of significance.

Response to Comment No C.8.3: See RPFSEIR Response A.2-4.

Comment No C.8.4:

3. Since the Project will have significant unmitigated impacts, the City must analyze whether the Project's economic benefits exceed its environmental impacts before adopting a statement of overriding considerations. (14 Cal. Code Regs. § 15043; Pub. Res. Code § 21081(B); *Sierra Club v. Contra Costa County* (1992) 10 Cal.App.4th 1212, 1222.) Key among the findings that the lead agency must make is that:

> "Specific economic, legal, social, technological, or other considerations, ***including the provision of employment opportunities for highly trained workers***, make infeasible the mitigation measures or alternatives identified in the environmental impact report…[and that those] benefits of the project outweigh the significant effects on the environment."(Pub. Res. Code §21081(a)(3), (b).)

Thus, the County must analyze whether the Project provides "employment opportunities for highly trained workers." The RPFSEIR contains no such analysis.

Response to Comment No C.8.4: Regarding the statement of overriding considerations, CEQA does not require the County to find that the Project will provide employment opportunities for highly trained workers. The cited text is merely an example of a benefit that could support a statement of overriding considerations. As set forth in the draft CEQA findings, the Project will provide other benefits, including providing needed housing for area workers, including

affordable housing and senior housing.

Comment No C.8.5:
4. SAFER also agrees with the expert findings of the Center for Biological Diversity ("CBD") regarding the Project's significant biological resources, VMT, GHG, and wildfire risk impacts, among others. CBD reviewed the Project and the Draft SEIR and prepared expert comments on the Draft SEIR, which were submitted on May 29, 2025. CBD's comments on the Draft SEIR also apply to the RPFSEIR. SAFER adopts by reference all comments filed by CBD in this matter. CBD concluded that the SEIR failed to adequately analyze and mitigate the Project's biological resources, VMT, GHG, and wildfire risk impacts, among others. Specifically, CBD found, inter alia, that:

a. The SEIR fails to consider new information regarding significant impacts to mountain lions, burrowing owls, and wildlife movement.

b. The SEIR's analysis of impacts to special-status species, including western spadefoot, is inadequate.

c. The Project will have significant wildfire risks not analyzed or mitigated by the SEIR.

d. The SEIR fails to adequately analyze and mitigate VMT impacts.

e. The SEIR fails to consider new scientific knowledge and state policy on climate change.

f. The SEIR fails to consider significant new information regarding California's water supply.

g. The SEIR's revised alternatives analysis continues to be inadequate.

Response to Comment No C.8.5: See RPFSEIR Response B.3.

Comment No C.8.6:

SAFER requests that the Planning Commission deny approving this Project, and instead, direct staff to address these shortcomings in a revised recirculated partial draft supplemental environmental impact report prior to considering approvals for the Project.

SAFER reserves the right to supplement these comments during the administrative process. (Galante Vineyards v. Monterey Peninsula Water Management Dist. (1997) 60 Cal.App.4th 1109, 1121.)

Response to Comment No C.8.6: This comment is noted for the record and will be forwarded to the decision makers.

Response to Comment Letter C.9

Tony Burke
January 27, 2026
Email

Comment No. C.9-1:

I'm a homeowner in Castaic and I vehemently oppose this project. I have lived here for 30 years and what makes this area desirable is the peace and small population. The loud construction, the influx of people I'm sure will drive current residents out. Castaic is a haven away from the bustle of Santa Clarita, that's part of what makes it so desirable to live here. This project will not only disrupt that but could lead to a mass exodus of people living here. I hope you will take this into consideration as you make your choice.

Response to Comment No. C.9-1: The comment does not address the content or adequacy of the RPDSEIR under CEQA or the State CEQA Guidelines. The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Response to Comment Letter C.10

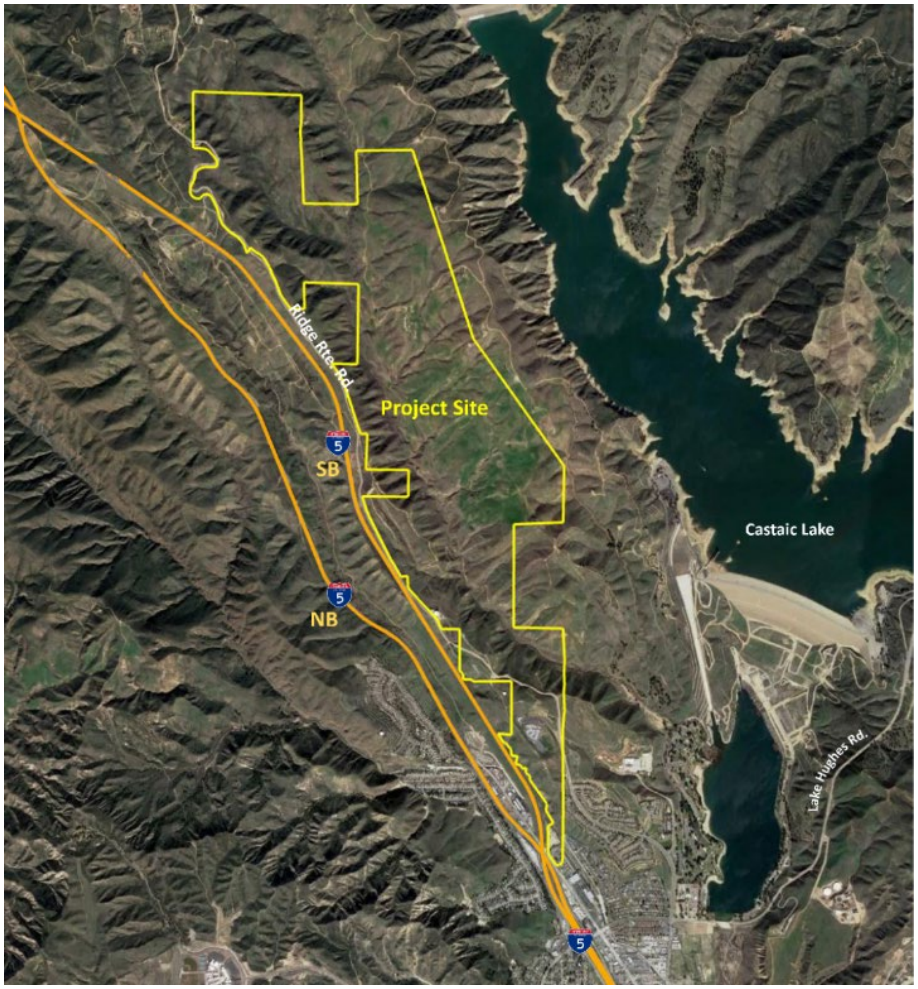
Heather Smokler
January 27, 2026
Email

Comment No. C.10-1:

I am writing express my statement against the Northlake Development Expansion. I am a resident at 28628 Cloverleaf Pl and Castaic is my home. As a resident I do not support this development. Not only is Castaic ill equipped to handle that many new residents but I fear the construction will be heavily disruptive to the community. Castaic is such a peaceful haven away from Santa Clarita. I would hate to see it ruined by traffic, noise and overcrowding. I sincerely hope you will consider the needs of the residents here as it would be a shame to drive the current residents out and ruin our peaceful home. I hope you will take this into consideration.

Response to Comment No. C.10-1: The comment does not address the content or adequacy of the RPDSEIR under CEQA or the State CEQA Guidelines. The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Wildland Fire Risk Report
NorthLake Project
Addendum #2



Prepared for:
Northlake Associates, LLC
10250 Constellation Boulevard, STE 2750
Los Angeles, CA 90067

and

Los Angeles County Fire Department

Prepared By:

firesafe PLANNING, INC.

The project site is located in the northern portion of Los Angeles County along the Interstate 5 Freeway corridor adjacent to the Castaic Reservoir as shown below (Figure 1).

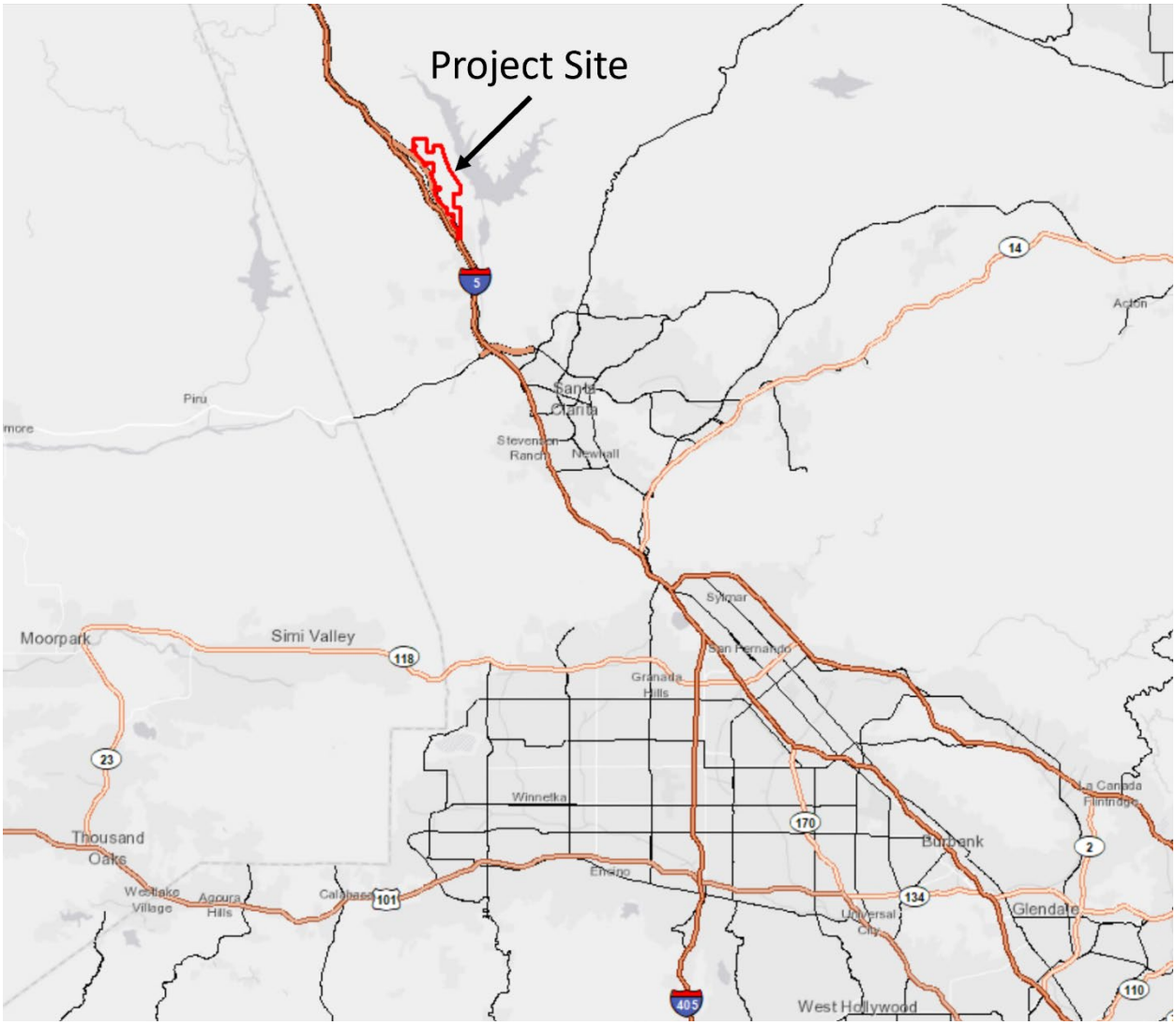


Figure 1 – Location Map

Evacuation from the area is almost entirely on the freeway with only a few alternatives present. The project site analysis has evaluated three configurations for possible development. These configurations are shown in Figure 2, on the next page, for reference.

The selection of a configuration does not directly impact the evacuation process but does have some operational impacts on the number of dwelling units, the distance to exits points and the street configurations. As can be seen in Figure 2, on the next page, the majority of the project site is the same regardless of the choice of configuration.

The freeway (I-5) and Lake (Castaic) create a condition where travel (circulation) is essentially north/south for ingress/egress. To the north is mostly undeveloped area with limited infrastructure and no services.

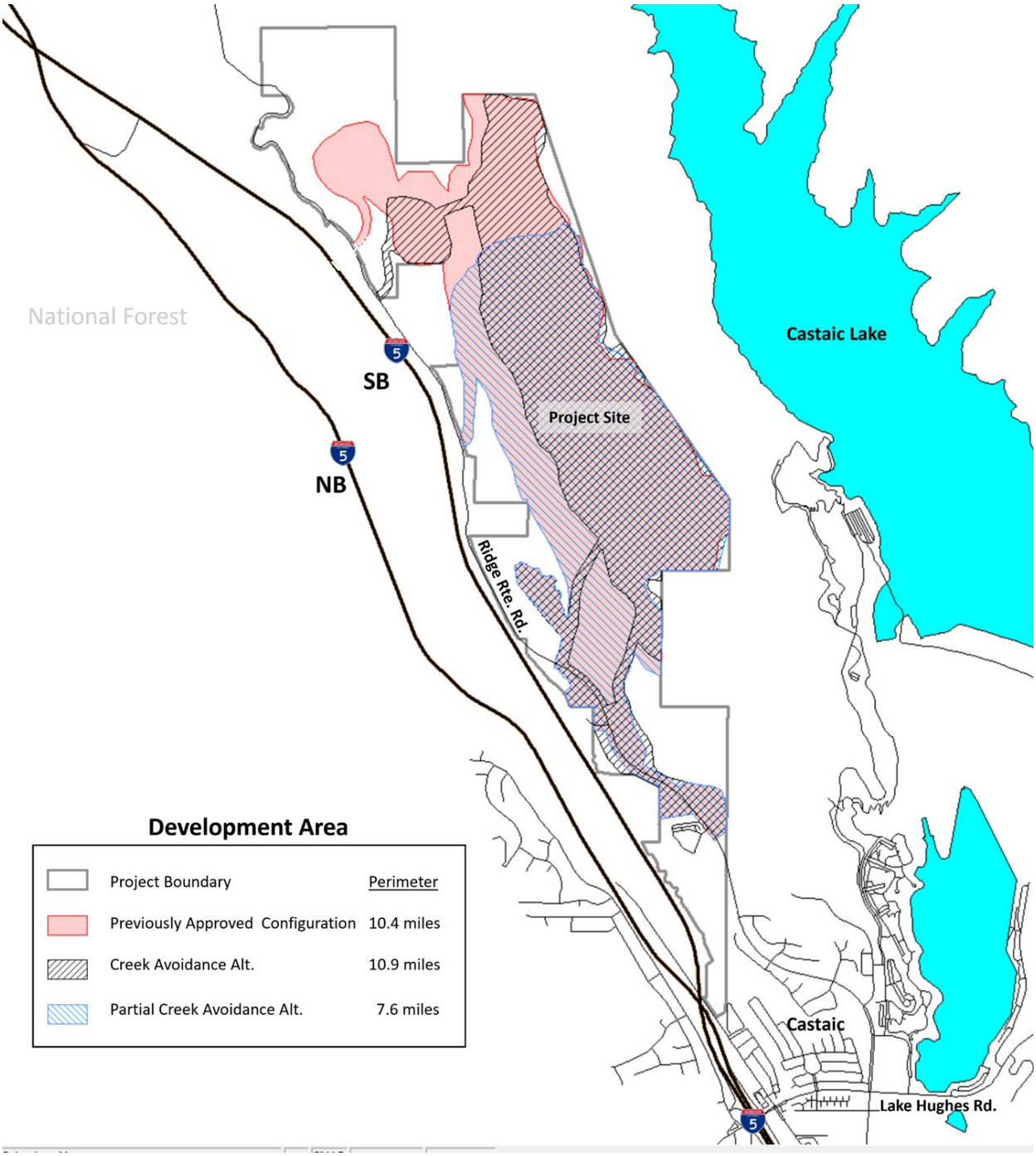


Figure 2 – Alternative Configurations

The County of Los Angeles has developed evacuation zones for use in "phased" evacuation when the need arises. Zones were developed based on topography, roads, historical weather and incidents, populations and known evacuation routes.

Zones are designed to be functional and effective emergency evacuation zones, which have the added benefit of giving all responding public safety agencies, mutual aid resources, and

cooperators a single shared reference point. The project site is in CAS-Ridge as shown in Figure 3, on the next page.

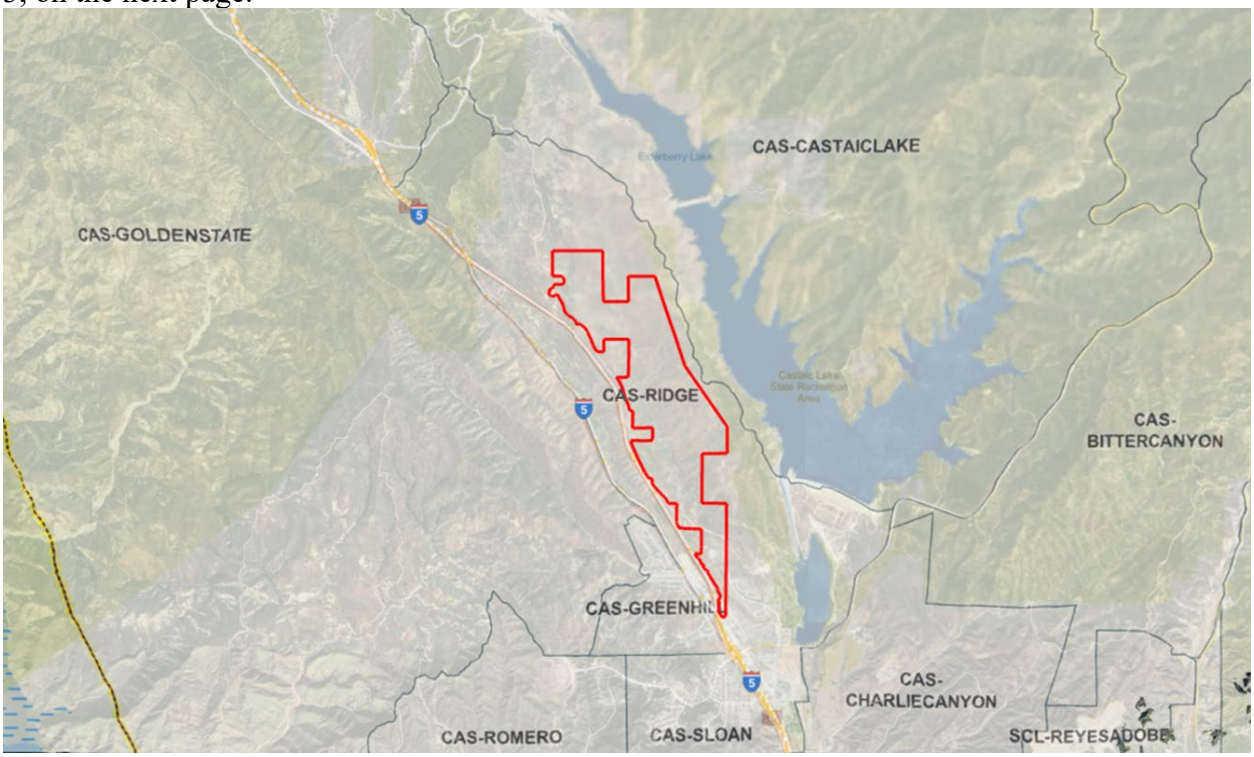


Figure 3 – Evaluation Zones

One important decision for this region is where to stop the northbound traffic on Interstate 5, once the decision to do so is made. In previous emergencies, traffic was stopped in Castaic, as has been done historically for snow or ice.

During an evacuation, this decision is extremely important. Dumping all of the northbound traffic from the freeway onto the two intersections in Castaic (Parker Road and Lake Hughes Road) creates a gridlock condition almost immediately. Closing the northbound freeway at Hasley Canyon or better yet SR126, keeps the local surface streets in Castaic free of through traffic which is being diverted. This action (closure farther south) also provides an opportunity for using the northbound lanes (at least some of them) for additional southbound egress and keeps the routes for most of the incoming emergency resources (from the south) open.

As depicted in Figure 5, on the next page, traffic from the project site is best routed south along Ridge Route Road to the southbound I-5 freeway (Green line). Alternatively, some of the flow could be routed west on Lake Hughes Road to the I-5 as a secondary route (this route is primary for southern portion of CAS-Ridge, CAS-Greenhill, CAS-Sloan and portions of CAS-Romero). This secondary route is shown in Figure 5 as a dark blue line. An alternative to the blue line is shown as an orange line on The Old Road.

Blue arrows on Figure 5 indicate additional areas that will be egressing onto Ridge Route Road as well from the east and south. These include the Castaic Lake Recreation Area and Lake Hughes Road (westbound from east of the lake), along with CAS-Charlie Canyon.

Management of key intersections along these routes is critical to effective evacuation.

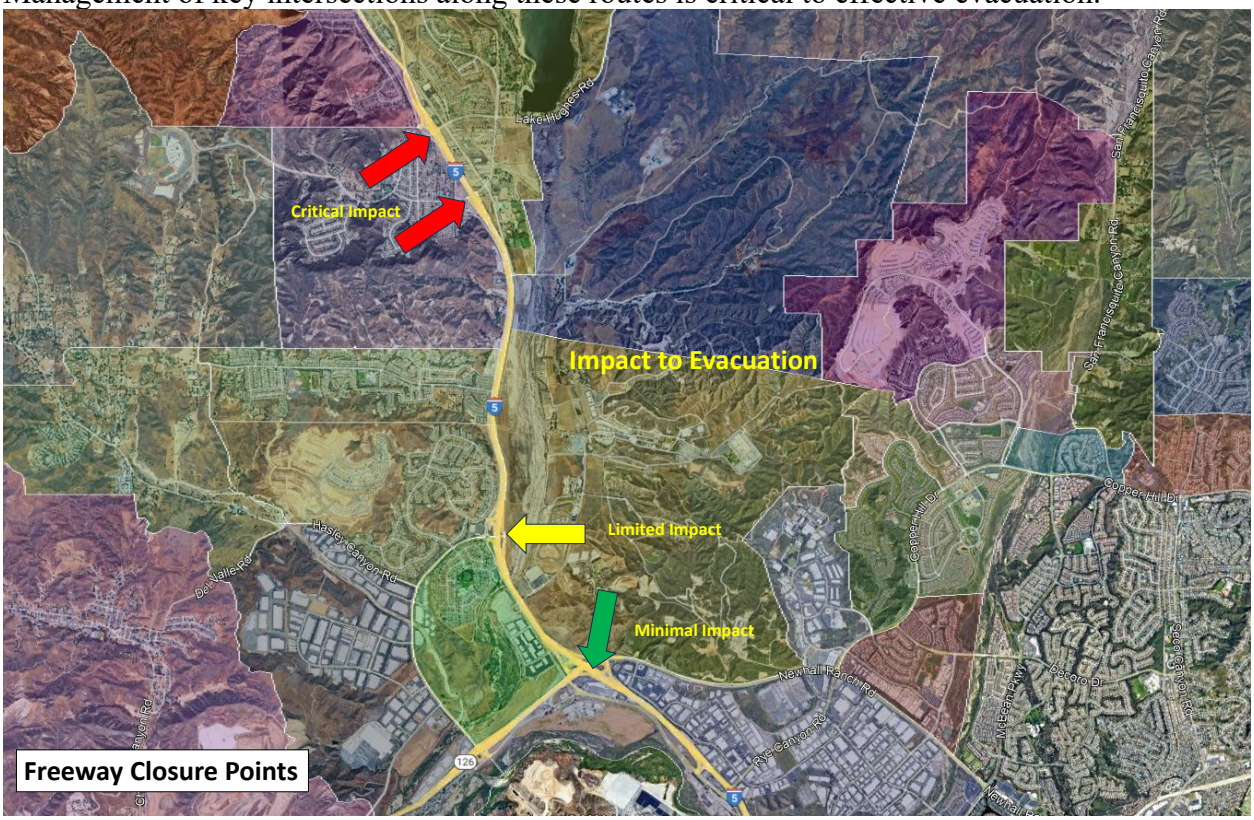


Figure 4 – Freeway Closure Points

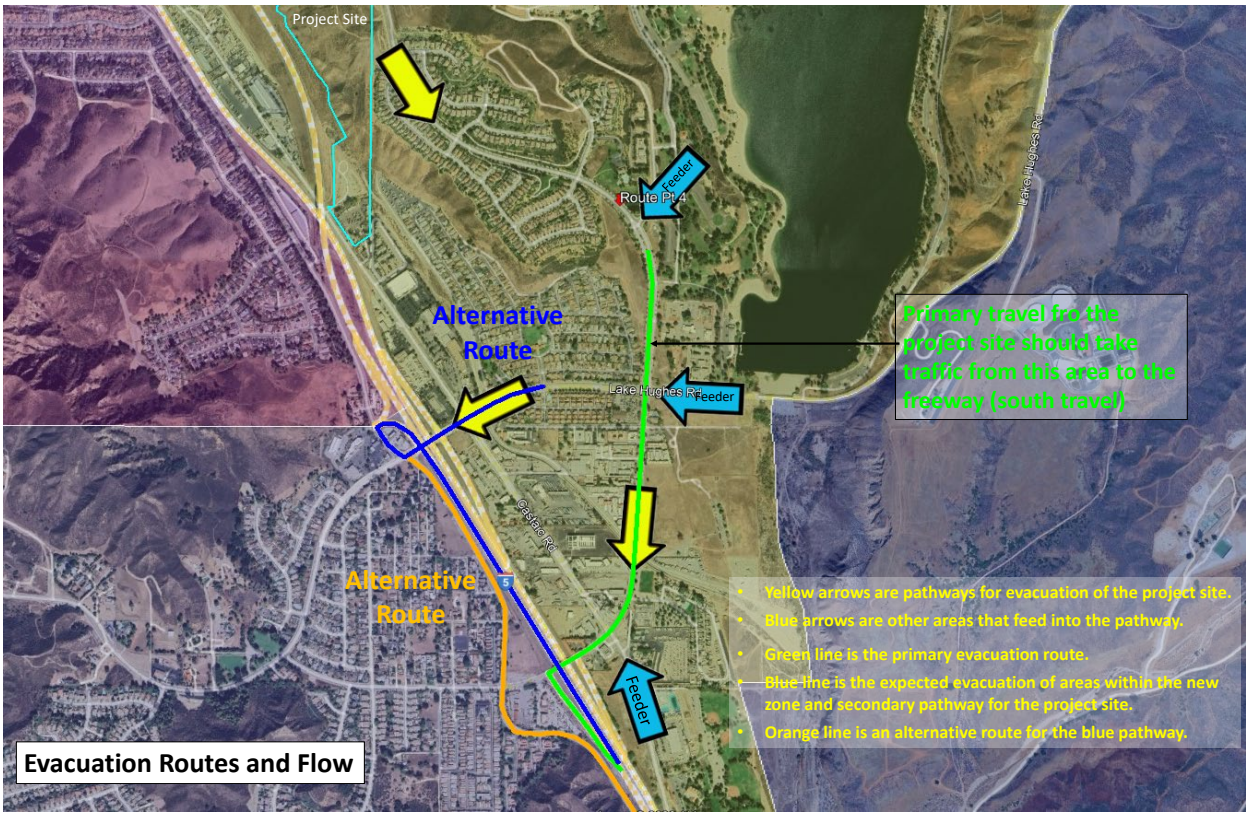
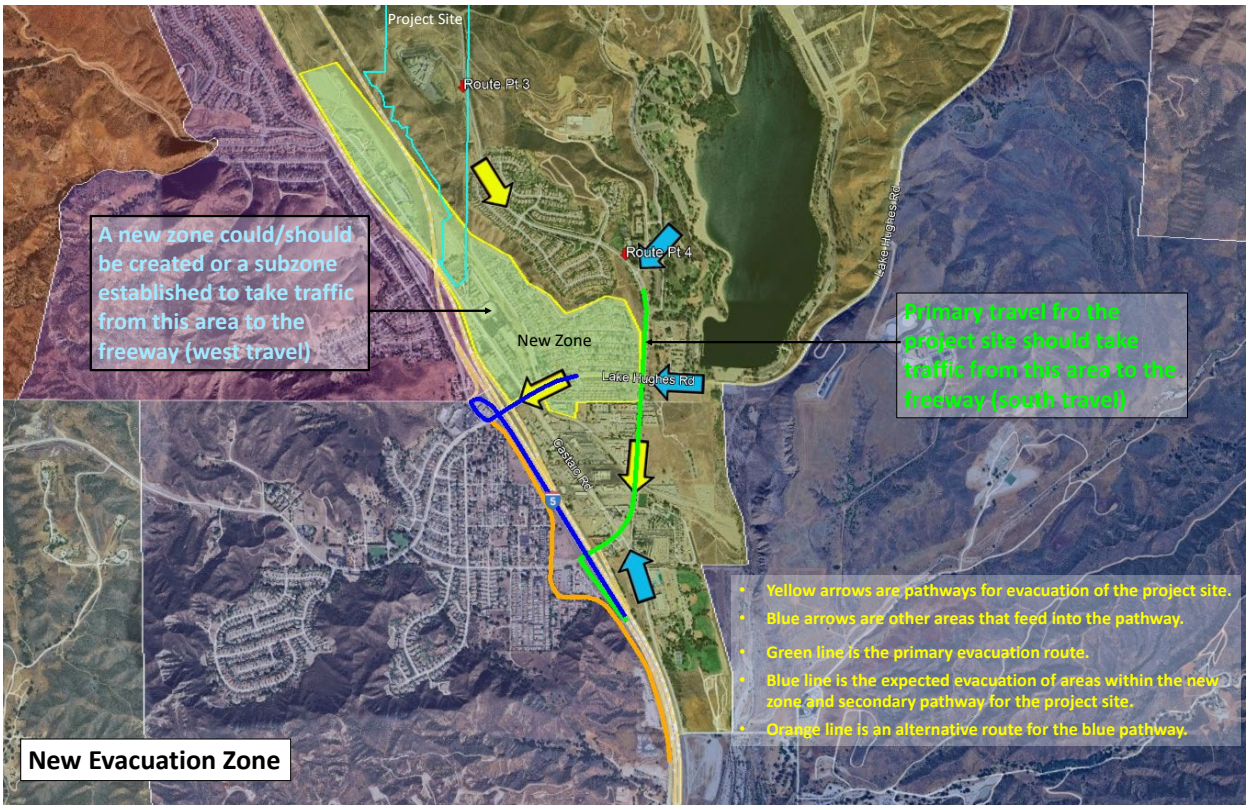


Figure 5 – Evacuation Routes and Traffic Flow

Once the project site is developed, it is likely that a new zone or a subzone will be created as shown in Figure 6, below. The area highlighted and outlined yellow below is best exited to the west at Lake Hughes Road and either onto the southbound I-5 or south on The Old Road whenever possible. Incident parameters will dictate the actual decisions but if possible and safe, this is the most effective use of egress capacity.



This addendum has been completed to provide additional information on practical egress routes, application and implementation during an evacuation of any kind. While a wildland fire is the most likely to occur, it could be any number of other scenarios which require an evacuation.

NorthLake Specific Plan Project Recirculated Partial Final Supplemental Environmental Impact Report

SCH No. 2015031080

Prepared for

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December 2025

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SECTION 1.0 INTRODUCTION AND SUMMARY

1.1 INTRODUCTION

The NorthLake Specific Plan Draft Supplemental EIR (2019 Draft SEIR) was eased on May 2, 2017, and circulated for a 45-day public review and comment period ending on June 15, 2017. Following the close of the public comment period on the 2019 Draft SEIR on June 15, 2017, detailed responses to all public agency comments and comments received from members of the general public received regarding the Project and the analyses of the 2019 Draft SEIR were prepared and are contained in the 2019 Final SEIR.

An Errata was released in February 2018, prior to the County Regional Planning Commission (Regional Planning Commission) hearing to make minor technical corrections to the 2019 SEIR and to provide further information in response to public comments received prior to the Regional Planning Commission meeting. The Errata included only minor technical changes to the SEIR and additional information to support the SEIR's conclusions, and the Errata merely clarified or amplified or made insignificant modifications to the adequate SEIR. At the February 21, 2018, public hearing, the Regional Planning Commission requested that the Applicant include an affordable housing component in the Project. Based on this request, the Applicant made minor revisions to the Project analyzed in the 2019 SEIR to include an affordable component. An Errata dated April 4, 2018 was prepared which concluded that the revisions involve only minor changes to the distribution of land uses and an overall reduction in density and intensity or use, and the Errata merely clarified or amplified or made insignificant modifications to the adequate 2019 SEIR. On April 18, 2018, the Regional Planning Commission adopted the required findings, certified the SEIR, and granted the requested Project approvals. On April 23, 2018, appeals were filed by the Center for Biological Diversity, the Santa Monica Mountains Conservancy, and the Golden State Environmental Justice Alliance. A Second Errata dated August 2018 was prepared to make minor technical corrections in the 2019 SEIR and to provide further information in response to public comments at the Regional Planning Commission meeting.

On September 25, 2018, the County Board of Supervisors (Board) held a public hearing on the Project and the appeals and voted to reject the appeals, uphold the Regional Planning Commission approvals, and certify the 2019 SEIR. On April 2, 2019, the Board adopted the Project entitlements, CEQA findings and Mitigation Monitoring and Reporting Program, and Project conditions.

A Petition for Writ of Mandate was filed in May 2019 challenging the Project. The Los Angeles Superior Court's ruling in the *Center For Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al*, Case No. 19STCP01610, dated January 11, 2021 (Court Ruling) granted in part and denied in part the petitioner's Petition for Writ of Mandate. Specifically, the Court Ruling held that the SEIR for the Northlake Specific Plan Project failed to comply with CEQA because it contained: (1) inadequate alternatives analysis (for failing to fully analyze a creek avoidance alternative); (2) inadequate Western Spadefoot Toad (WST) baseline assessment and, therefore, inadequate mitigation (to recreate baseline conditions; mitigation inadequate in detail and commitment); and (3) improper deferred mitigation as to rare plants (measure lacked sufficient detail). The Court denied the Petition for Writ of Mandate regarding: (1) impacts to mountain lions/wildlife crossings, (2) aesthetics, (3) air quality/public health, (4) wildfire impacts, and (5) recirculation.

The Los Angeles County Department of Regional Planning prepared a Recirculated Partial Draft SEIR (RPDSEIR). The RPDSIER did not revise the SEIR in any respect other than as directed by the Court and was limited to a few portions of the 2019 SEIR. Pursuant to CEQA Guidelines Section 15088.5(c), the County only needed to recirculate the portions of the 2019 SEIR that were

modified by the RPDSEIR. The County did not recirculate the other portions of the SEIR for public review and comment because those portions were not modified.

Before approving a project, CEQA requires that the Lead Agency prepare and certify a Final EIR per State CEQA Guidelines Section 15090. As Lead Agency, the County has the principal responsibility for approval of the project. According to Section 15132 of the State CEQA Guidelines, the Final EIR must include:

- The Draft EIR or a revision of the Draft EIR;
- Comments and recommendations received on the Draft EIR either verbatim or in summary;
- A list of persons, organizations, and public agencies commenting on the Draft EIR;
- The responses of the Lead Agency to significant environmental points raised in the review and consultation process; and
- Any other information added by the Lead Agency.

This Recirculated Partial Final Supplemental Environmental Impact Report (RPFSEIR) has been prepared by the County of Los Angeles Department of Regional Planning, acting in the capacity of "Lead Agency" under Los Angeles County's (County) Environmental Guidelines, for the NorthLake Specific Plan Project (Project). This RPFSEIR has been prepared consistent with California Environmental Quality Act (CEQA) statutes (Cal. Pub. Res. Code, Sections 21000 et seq., as amended) and implementing guidelines (Cal. Code Regs., Title 14, Sections 15000 et seq.).

1.2 PUBLIC REVIEW PROCESS

The RPDSEIR was made available for public review and comment pursuant to State CEQA Guidelines Section 15087. Copies of the RPDSEIR and appendices were available for a review period of 45 calendar days from April 14, 2025 to May 29, 2025. As CEQA Guidelines Section 15088.5, subdivision (f)(2) permits, the County requested that the scope of public comment be limited to the material that was addressed within the text of the revised portions and the appendices included in the RPDSEIR.

The RPDEIR was available to the general public for review at the following locations:

County of Los Angeles Building and Safety
Antelope Valley Field Office
335 East Avenue K-6 #A
Lancaster, CA 93535
Hours: Monday through Friday,
8:00 a.m.to 4:30 p.m.
Saturday and Sunday, Closed

Castaic Library
27971 Sloan Canyon Road
Castaic, CA 91384
Hours: Monday through Thursday, 10:00 a.m. to 8:00 p.m.
Friday and Saturday, 10:00 a.m. to 6:00 p.m.
Sunday, Closed.

The RPDSEIR was also available for review online at:

https://lacdrp.legistar.com/LegislationDetail.aspx?ID=7297239&GUID=8CCA3A7D-4458-4A58-970D-251E36B9454F&Options=ID|Text|&Search=25-092

Electronic files related to this Project were also made available for download from the Project website provided above. Written comments regarding the RPDSEIR were required to be submitted no later than May 29, 2025 at 5:00 p.m., and were able to be submitted in-person, by mail and by e-mail.

On April 14, at the beginning of the public review period, an electronic copy of the RPDSEIR with appendices, was submitted to the State Clearinghouse located in the Governor's Office of Land Use and Climate Innovation along with a Notice of Availability (NOA) of a RPDSEIR (Appendix A), Notice of Completion & Environmental Document Transmittal (NOC) form, and a Summary Form for Electronic Document Submittal (i.e., SCH Summary Form). Also on April 14, 2025, the NOA was mailed to public entities and interested parties and was filed with the Los Angeles County Clerk-Recorder and remained posted through the end of the public review period. The NOA described where the RPDSEIR was available and how to submit written comments on the RPDSEIR.

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SECTION 2.0 RESPONSE TO COMMENTS

The following is a list of public agencies, organizations, and persons that submitted comments on the RPDSEIR. Comments have been numbered and responses have been developed with corresponding letters/numbers. Appendix B, Comment Letters, contains all comments received from public agencies, persons, and organizations.

2.1 LIST OF WRITTEN COMMENTERS

A list of the public agencies and the persons and organizations that submitted written comments on the RPDSEIR is provided in Table 2-1. Public agency comments are provided below in Section 2.2 of this RPFSEIR.

TABLE 2-1
COMMENTS RECEIVED ON THE RPDSEIR FROM AGENCIES, ORGANIZATIONS, AND INDIVIDUALS

Comment Letter	Date	Name
Public Agencies		
A.1	May 28, 2025	California Department of Fish and Wildlife
A.2	May 29, 2025	Department of Transportation, District 7
A.3	May 29, 2025	County of Los Angeles, Office of the Sheriff
Persons and Organizations		
B.1	April 22, 2025	Reylene Borrego, Yuhaaviatam of San Manuel Nation
B.2	April 22, 2025	Dan Silver, Endangered Habitats League
B.3	May 14, 2025	Francis Tinney, Center for Biological Diversity
B.4	May 29, 2025	Francis Tinney and Tiffany Yap, Center for Biological Diversity
B.5	May 29, 2025	Paul Edelman, Santa Monica Mountains Conservancy

2.2 COMMENTS AND RESPONSES

All comment letters received by the County during the 45-day public review period for the RPDSEIR have been included and responded to in this RPFSEIR. Comments that raise environmental issues have been addressed in these responses. Comments that do not require a response include those that (1) do not address material within the text of the revised portions and the appendices included in the RPDSEIR, (2) do not address the adequacy or completeness of the RPDSEIR; (3) do not raise substantive environmental/CEQA issues; (4) do not address the Project; or (5) request the incorporation of additional information not relevant to environmental issues.

Regarding the evaluation and response to comments, Section 15088 of the State CEQA Guidelines states:

a) The lead agency shall evaluate comments on environmental issues received from persons who reviewed the Draft EIR and shall prepare a written response. The Lead Agency shall respond to comments raising significant environmental issues received during the noticed comment period and any extensions and may respond to late comments;

b) The Lead Agency shall provide a written proposed response, either in a printed copy or in an electronic format, to a public agency on comments made by that

public agency at least 10 days prior to certifying an environmental impact report;

c) The written response shall describe the disposition of significant environmental issues raised (e.g., revisions to the proposed project to mitigate anticipated impacts or objections). In particular, the major environmental issues raised when the Lead Agency's position is at variance with recommendations and objections raised in the comments must be addressed in detail giving reasons why specific comments and suggestions were not accepted. There must be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice. The level of detail contained in the response, however, may correspond to the level of detail provided in the comment (i.e., responses to general comments may be general). A general response may be appropriate when a comment does not contain or specifically refer to readily available information, or does not explain the relevance of evidence submitted with the comment; and

d) The response to comments may take the form of a revision to the Draft EIR or may be a separate section in the Final EIR. Where the response to comments makes important changes in the information contained in the text of the Draft EIR, the lead agency should either:

    1. Revise the text in the body of the EIR; or
    2. Include marginal notes showing that the information is revised in the response to comments.

With respect to comments letters received, aside from certain courtesy statements, introductions, and closings, individual comments within the body of each letter have been identified and numbered. A copy of each comment letter is included in Section 2.2 of this RPFSEIR, preceding the response. Brackets delineating the individual comments and a numeric identifier have been added to the right margin of the letter. The County's responses to each applicable comment are included in this section. Responses are delineated to match the numeric identifier of each comment letter. In the process of responding to the comments, there were minor revisions to the text of the RPDSEIR shown in this section and in Section 3.0, Corrections, Clarifications, and Additions to the RPDSEIR, of this RPFSEIR. None of the comments or responses constitute "significant new information," and none of the conditions set forth in Section 15088.5 of the State CEQA Guidelines that would require recirculation of the RPDSEIR have been met. Therefore, this Response to Comments section, the Corrections, Clarifications, and Additions to the RPDSEIR section, and the Mitigation Monitoring Program section are included as part of this RPFSEIR along with the RPDSEIR for consideration by the Regional Commission.

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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

May 28, 2025

Jodie Sackett
Los Angeles County
320 W Temple Street, Fl. 13
Los Angeles, CA 90012
jsackett@planning.lacounty.gov

SUBJECT: PARTIAL RECIRCULATED DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR THE NORTHLAKE SPECIFIC PLAN PROJECT, SCH NO. 2015031080, LOS ANGELES COUNTY, CA

Dear Jodie Sackett:

The California Department of Fish and Wildlife (CDFW) reviewed the Partial Recirculated Draft Supplemental Environmental Impact Report (RPDSEIR) from Los Angeles County (County) for the Northlake Specific Plan Project (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines[1].

A.1-1

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Fish & G. Code, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

A.1-2

CDFW may also act as a Responsible Agency under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law[2] of any species protected under the California Endangered Species Act (CESA; Fish & G. Code, § 2050 et seq.) or the Native Plant Protection Act (NPPA; Fish & G. Code, §1900 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

A.1-2 cont.

PROJECT DESCRIPTION SUMMARY

A.1-3

Proponent: Northlake Associates, LLC

Objective: The previously approved Project consists of development of Phase 1, Phase 2, and off-site external map improvements (65.14 acres), which include remedial grading, drainage features, and road and utility alignments. Project activities in Phase 1 would include the development of 2,295 dwelling units, commercial development, open space and parks, roadways, a school pad, and a fire station across 720 acres within the Project area. Phase 2 would consist of the development of single-family homes, parks, trails, open space, school uses, and associated roadway and infrastructure improvements across 545 acres.

Additional Project construction improvements include a 4.64-acre connection of Grasshopper Creek Park, a debris basin, 2.39 acres in trail connections, a 5.1-acre pad for a water tank, 29.79 acres of manufactured slopes, and 11.98 acres of natural open space. Lastly, an existing crude oil pipeline easement that traverses the entire north-south length of the Project area would be relocated to an alignment along the eastern boundary of the proposed development area.

Creek Avoidance Alternative (CAA): The design basis for the CAA is to avoid disturbing the Grasshopper Creek bottom that runs through the Project site and completing the proposed land plan. The CAA would remove and recompact the underlying landslides to provide suitable soil conditions for development; this is per standard engineering and design practices and Los Angeles County requirements, according to the RPDSEIR. A 300-foot setback from the creek bottom was determined to be the appropriate buffer due to several existing landslides directly underneath the creek bottom. The CAA would require construction of a new road, export of 8.2 million cubic yards of soil, and construction of three clear span bridges. The Project would decrease the developable acreage by approximately 78 acres and decrease the developable footprint by approximately 29 percent compared to the previously approved Project.

[2] "Take" is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

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A.1-3 cont.

The CAA would reduce impacts to sensitive vegetation communities and special-status species discussed in the RPDSEIR. Impacts to western spadefoot toad (*Spea hammondii*; Endangered Species Act (ESA) proposed threatened; California Species of Special Concern (SSC)) are proposed to be similar to the previously approved Project based on the location of the pond habitat. While the CAA would avoid direct impacts to Grasshopper Creek, the RPDSEIR claims that grading to remediate landslides would result in the loss of up to two-thirds of the creek's current tributary water and eliminate subsurface water. Additionally, the CAA is proposed to create significant indirect impacts to southwestern spiny rush (*Juncus acutus ssp. leopoldii*; California Rare Plant Rank (CRPR) 4.2) and other riparian phreatophytes in and near the creek. In conclusion, according to the RPDSEIR, the CAA would be considered infeasible.

Partial Creek Avoidance Alternative (PCAA): The PCAA would reduce the development scope of Phase 2 of the Project. The PCAA would avoid landslides in the northern portion and, therefore, avoid associated risk of additional loss of creek area. The disturbance area would be reduced in Phase 2 by 61 percent, reduce earthwork, and maintain similar land plan goals proposed by the Project. Lastly, the PCAA would provide approximately 37 fewer acres of active recreational and open space areas.

The PCAA would impact sensitive vegetation communities and special-status species in a similar manner to the previously proposed project. It would reduce impacts to Grasshopper Creek and associated phreatophyte vegetation by 20 percent compared to the previously approved Project. According to the RPDSEIR, the PCAA would be the environmentally superior alternative.

Location: The Project area encompasses approximately 1,330 acres of undeveloped land in unincorporated Los Angeles County. The Project area is located between Interstate 5 to the west, Castaic Lake to the east, and the Angeles National Forest to the west, north, and east. The town of Castaic is located to the south of the proposed Project.

Biological Setting: The Project area is bound by open space to the north and west, and residential development and Castaic Lagoon in the south. The Project area consists of a variety of vegetation communities which include, but is not limited to, California sagebrush, California annual grassland, Foothill needlegrass grassland, wildflower fields, riparian vegetation such as cottonwoods (Populus spp.) and willows (Salix spp.), and ephemeral ponds. Additionally, Grasshopper Creek flows north to south through the center of the Project area.

Updated surveys for western spadefoot toad were conducted by Glenn Lukos Associates (GLA) during the 2022/2023 and 2023/2024 rainfall seasons. Multiple western spadefoot toads were observed in three existing features within the Project area where the species had been detected previously. In April 2022, a GLA biologist conducted a site visit and observed paniculate tarplant (*Deinandra paniculata*; CRPR 4.2). Focused surveys for southwestern spiny rush (*Juncus acutus ssp. leopoldii*; CRPR

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4.2) were conducted in 2021 and was detected at Grasshopper Creek. Moreover, several individual Crotch's bumble bee (*Bombus crotchii*; CESA candidate endangered) were detected within the Project area during focused surveys, following protocol produced by GLA, in May and June 2024.

A.1-3 cont.

Sensitive species that are of concern for the Project include Crotch's bumble bee. The RPDSEIR provides mitigation measures relating to western spadefoot toad, round-leaved filaree, paniculate tarplant, southwestern spiny rush, slender mariposa lily (*Calochortus clavatus var. gracilis*; CRPR 1B.2) and club-haired mariposa lily (*C. clavatus var. clavatus*; CRPR 4.3), and compensatory mitigation for impacts to Crotch's bumble bee suitable habitat (i.e., coastal sage scrub, grassland, wildflower field, and needlegrass grassland).

Project History: CDFW previously reviewed the Notice of Preparation in 2015 and provided comments on the Draft Supplemental Environmental Impact Report (DSEIR) in 2017. Previous comments from the DSEIR include, but are not limited to, the range of alternatives considered, DSEIR analysis of wildlife crossing, western spadefoot toad presence and mitigation, impacts to Grasshopper Creek and its tributaries, and impacts to rare plants and vegetation communities.

The RPDSEIR was prepared by the County in accordance with the Los Angeles Superior Court ruling on the Center For Biological Diversity and Endangered Habitats League v. County Of Los Angeles, et al, and Real Parties in Interest, Northlake Associates, et al, Case No. 19STCPO1610 ruling (Court Ruling), dated January 11, 2021. The Court held the ruling that the DSEIR failed to comply with CEQA and required revision of the CEQA document. The Lead Agency drafted the RPDSEIR with revised and updated portions of the Project proposal. Lastly, as referenced in the RPDSEIR, CDFW has reviewed and approved the Habitat Mitigation and Monitoring Plan for special-status plants (July 2022 [Revised October and December 2022 and February 2023) and western spadefoot toad (July 2022 [Revised March and June 2023]).

COMMENTS AND RECOMMENDATIONS

A.1-4

CDFW offers the comments and recommendations below to assist the County in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources.

COMMENT # 1: Crotch's Bumble Bee

Issue: Mitigation Measures 5.2-6 through 5.2-8 for Crotch's bumble bee may be improved to ensure impacts to the species are appropriately mitigated.

Specific impact: CDFW is not included in the review and approval process for habitat restoration/enhancement that is proposed to be suitable for Crotch's bumble bee. CDFW is concerned that the selected habitat restoration/enhancement sites may not

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contain Crotch's bumble bee; therefore, the Project would not be mitigating impacts to a level less than significant.

A.1-4 cont.

Why impact would occur: According to the RPDSEIR and focused survey results, Crotch's bumble bee is present throughout the Project area. CDFW appreciates that the County has incorporated Mitigation Measures 5.2-6 through 5.2-8, which outlines habitat restoration/enhancement at a 2:1 ratio. CDFW is concerned that the RPDSEIR requires the County's review and approval of the mitigation measures but not CDFW's review and approval. Given that the Project proponent intends to obtain an Incidental Take Permit (ITP) for take authority of Crotch's bumble bee, CDFW should be involved alongside the County regarding the mitigation measures outlined in the RPDSEIR. Additionally, the habitat restoration or enhancement sites that would be proposed as compensatory mitigation should be surveyed to confirm presence of Crotch's bumble bee. Having mitigation sites with vegetation communities that support suitable habitat for the species, but no confirmed presence does not constitute as effective mitigation. Impacts due to Project activities have not been fully mitigated if the targeted species is not present and thriving successfully in the proposed mitigation sites.

Evidence impact may be significant: The California Fish and Game Commission accepted a petition to list the Crotch's bumble bee as endangered under CESA, determining the listing "may be warranted" and advancing the species to the candidacy stage of the CESA listing process. Take of any endangered, threatened, candidate species that results from the Project is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9). CDFW considers impacts to species that are candidates for CESA listing to be significant, under CEQA. Accordingly, the Project may have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or the United States Fish and Wildlife Service (USFWS).

Recommended Potentially Feasible Mitigation Measure(s)

Mitigation Measure #1: CDFW Survey Protocol

CDFW recommends the Project proponent retain a qualified biologist with the appropriate handling permits to conduct focused surveys within the proposed habitat restoration/enhancement sites prior to implementation of the HMMP. Focused surveys shall follow CDFW's Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023). Focused surveys shall also be conducted throughout the entire proposed mitigation areas and during the appropriate flying season to ensure no missed detection of Crotch's bumble bee occurs. Survey results, including negative findings, shall be submitted to CDFW and the County prior to the start of a monitoring program.

Mitigation Measure #2: MM 5.2-6 To MM 5.2-8 Revision

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Given that the Project proponent intends to obtain an ITP, CDFW would be involved in the review and approval process of compensatory mitigation. CDFW recommends the County revise Mitigation Measures 5.2-6 through 5.2-8 in the RPDSEIR to include review and approval from CDFW.

A.1-4 cont.

Recommendation #1: CDFW ITP

A.1-5

The focused surveys conducted by GLA were performed without coordination and review of the survey methodology by CDFW. Additionally, it is unclear from the survey report and RPDSEIR if the GLA biologists had the appropriate handling permits prior to conducting focused surveys for Crotch's bumble bee. CDFW strongly recommends that the Project proponent coordinates with CDFW to determine whether the focused surveys are valid to move forward in the ITP process.

Recommendation #2: CEQA

A.1-6

CDFW's issuance of an ITP for a Project is subject to CEQA. As a Responsible Agency, CDFW may consider the CEQA document from the lead agency/Project proponent for the Project. However, additional documentation may be required as part of an ITP application for the Project in order for CDFW to adequately develop an accurate take analysis and identify measures that would fully mitigate for take of CESA-listed species. To minimize additional requirements by CDFW pursuant to Fish and Game Code section 2081 and/or under CEQA, the Project's CEQA document should fully identify the potential impacts to Crotch's bumble bee and provide adequate avoidance, mitigation, monitoring, and reporting commitments for issuance of the ITP.

COMMENT # 2: Creek Avoidance Alternatives

A.1-7

Issue: The CAA and PCAA would impact Grasshopper Creek and its associated species.

Specific impact: CDFW is concerned that the CAA evaluated in the RPDSEIR did not include meaningful creek avoidance that leaves a hydrologically functioning Grasshopper Creek. Therefore, the RPDSEIR might have selected an alternative that may be more impactful to the environment.

Why impact would occur: The RPDSEIR defines Grasshopper Creek as an ephemeral drainage. By definition, ephemeral drainages only have flows during and immediately following precipitation and are primarily fed from surface runoff (CDFG 2010). The RPDSEIR erroneously states that some of the ephemeral channel is fed by surface and subsurface runoff from landslide formations, which contradicts the definition of ephemeral. Therefore, the RPDSEIR's claims of eliminating subsurface waters may not be a substantial impact to Grasshopper Creek; thus the CAA may be an environmentally superior alternative.

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In addition, the RPDSEIR claims that the CAA cannot sustain the hydrology necessary to support the riparian vegetation post-development. However, the RPDSEIR did not provide necessary details such as surface flow contributions from the tributaries that support the hydrology of Grasshopper Creek. Information specific to the contributions from the tributary channels are necessary to assess if removing those inputs would substantially alter the hydrology of Grasshopper Creek. Given the lack of necessary flow information and the ephemeral nature of Grasshopper Creek (whereby definition is not reliant on subsurface flow), reduction of subsurface flows through landslide remediation may not result in substantial impacts as claimed in the RPDSEIR. In addition, additional alternatives, as discussed below (Recommendation #3-7), may be considered to further reduce concerns of substantial impacts.

A.1-8

Finally, the technical memos (F2 and F3 of the RPDSEIR) state that the habitat in Grasshopper Creek is of “poor” habitat quality, thereby claiming that the ephemeral habitat is less valuable. Ephemeral streams naturally contain less vegetative cover and are typically dominated by shrubs, exposed substrate, and bedrock. Ephemeral habitat type is no more or less biologically valuable in an ecosystem than riparian vegetation or phreatophytic vegetation; instead, it serves a different ecological niche. Thus, CDFW advocates for the avoidance and preservation of ephemeral streams as provided by the CAA.

A.1-9

Evidence impact would be significant: Section 15126.6(a) of the State CEQA Guidelines requires an EIR to describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. Additionally, Section 15126.6(e)(2) of the State CEQA Guidelines requires that an EIR identify an environmentally superior alternative among the alternatives evaluated. The proposed environmentally superior alternative, PCAA, would have similar impacts to the previously approved Project. Therefore, the RPDSEIR does not entirely satisfy the avoidance of Grasshopper Creek and its potential associated species impacts.

A.1-10

Recommended Potentially Feasible Mitigation Measure(s)

Recommendation #3: Reevaluation of the CAA

CDFW recommends that the CAA be reevaluated in a manner that avoids Grasshopper Creek and avoids significant impacts to its associated species, while leaving the Creek hydrologically functioning. This may include the removal of extensive landslide remediation. Additionally, CDFW recommends the CAA be achieved through engineering solutions such as using swales throughout the development to deliver surface runoff to Grasshopper Creek or subsurface drains that retain flow to Grasshopper Creek consistent with current subsurface discharge. CDFW welcomes coordination with the County and Project proponent to lessen significant impacts to the maximum extent feasible.

A.1-11

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Recommendation #4: Riparian Habitat Compensatory Mitigation A.1-12

If preservation of the existing creek hydrology is not possible, the final CEQA document should contain an alternative that protects Grasshopper Creek in place. This alternative should identify the vegetation alliances and stream habitat acreages that would be avoided as well as the vegetation alliances and acreages that will be lost as a result of the change in hydrology. The vegetation alliances should be mitigated at a minimum 3:1 ratio in the same sub-watershed to mitigate the biological value it provides to resources in the area.

Recommendation #5: Figures and Maps A.1-13

The final CEQA document should include figures or maps that provide vegetation alliance information, locations of habitat created by the change in landslide hydrology, and meaningful comparisons between the PCAA, CAA, and the original Project in terms of these vegetation alliances.

Recommendation #6: CAA Project Redesign A.1-14

CDFW recommends eliminating the single-family housing, proposed to the northwest of Grasshopper Creek in the CAA, and the sports park proposed to the west of Grasshopper Creek in the PCAA. This is to reduce the edge effect and preserve more biologically valuable open space in this area. Additionally, this is to reduce the biological impacts to Grasshopper Creek and preserve more biologically valuable open space in this area.

Recommendation #7: Remediation of Landslides A.1-15

The final CEQA document should address why the CAA appears to include remediation of landslides that occur on the opposite side of Grasshopper Creek. In addition, the final CEQA document should address why landslide remediation would need to occur across the creek from where development is proposed and provide an avoidance alternative to reduce edge effect and impact to the proposed open space.

ADDITIONAL COMMENTS A.1-16

Fuel Modification. The final CEQA document should discuss how fuel modification requirements would impact any avoided stream and open space habitat and clarify if fuel modification requirements are included in the impact calculations and mitigation analysis.

Debris Basin Impacts to Creeks. Page 104 of the RPDSEIR includes a figure that includes turning Grasshopper Creek and unnamed tributaries into debris basins and other in-line water quality features. CDFW does not support turning streams into basins for water quality. Any feature designed to attenuate flow and/or improve water quality should be located outside of the stream with a 300-foot buffer. CDFW does not support A.1-17

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the use of in-line basins or type conversion of ephemeral streams to water quality features. The addition of urban runoff into ephemeral streams type converts them from ephemeral systems to intermittent or perennial systems. This changes the vegetation communities and hydrology, which allows invasive species such as Argentine ants, bullfrogs, crawfish, and invasive aquatic weeds to proliferate and damage the overall value of the surrounding habitat. The RPDSEIR should locate all water quality features outside of streams with a minimum 300-foot buffer. If water will be continually present in the basin from urban runoff, the basin should be located a minimum 500 feet from any stream to prevent the spread of Argentine ants into adjacent stream habitat (S.B Menke, et al. 2007 & Conservation Biology 2010).

A.1-17 cont.

Western Burrowing Owl. On October 10, 2024, the Fish and Game Commission voted unanimously to advance the western burrowing owl to candidacy under the CESA. As such, it is afforded all the legal protections of a CESA-listed species. CDFW considers adverse impacts to a species protected by CESA, for the purposes of CEQA, to be significant without mitigation. There is potential for burrowing owl to occur within the Project area, and burrowing owl was mentioned in the RPDSEIR in multiple Mitigation Measures. Burrowing owls use burrows dug by other species, such as the California ground squirrel (*Spermophilus beecheyi*), as well as natural rock cavities, debris piles, culverts, and pipes for nesting during the breeding season and for roosting and cover, year-round. We recommend coordinating with CDFW's CESA Program to determine if take authorization is necessary and discuss appropriate avoidance, minimization, and mitigation measures.

A.1-18

Mitigation and Monitoring Reporting Plan. CDFW recommends the Project's environmental document include mitigation measures recommended in this letter. CDFW has provided comments via a mitigation monitoring and reporting plan to assist in the development of feasible, specific, detailed (i.e., responsible party, timing, specific actions, location), and fully enforceable mitigation measures (CEQA Guidelines, § 15097; Pub. Resources Code, § 21081.6). The County is welcome to coordinate with CDFW to further review and refine the Project's mitigation measures. Per Public Resources Code section 21081.6(a)(1), CDFW has provided a summary of our suggested mitigation measures and recommendations in the form of an attached Draft Mitigation Monitoring and Reporting Plan (Attachment A).

A.1-19

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity

A.1-20

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Database (CNDDB). The CNDDB website[3] provides direction regarding the types of information that should be reported and allows on-line submittal of field survey forms.

A.1-20 cont.

In addition, information on special status native plant populations and sensitive natural communities, should be submitted to CDFW's Vegetation Classification and Mapping Program using the Combined Rapid Assessment and Relevé Form[4].

The County should ensure data collected for the preparation of the RPDSEIR is properly submitted.

FILING FEES

A.1-21

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the County and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

A.1-22

CDFW appreciates the opportunity to comment on the RPDSEIR to assist the County in identifying and mitigating Project impacts on biological resources. CDFW requests an opportunity to review and comment on any response that the County has to our comments and to receive notification of any forthcoming hearing date(s) for the Project (CEQA Guidelines, § 15073(e)).

Questions regarding this letter or further coordination should be directed to Joleena De La Fe[5], Environmental Scientist.

Sincerely,

DocuSigned by:
5991E19EF8094C3...

Victoria Tang
Environmental Program Manager
South Coast Region

[3] https://wildlife.ca.gov/Data/CNDDB
[4] https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Submit
[5] Phone: (858) 354-3527; Email: joleena.delafe@wildlife.ca.gov

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ATTACHMENTS

Attachment A: Draft Mitigation, Monitoring, and Reporting Program

ec: California Department of Fish and Wildlife
Victoria Tang, Environmental Program Manager
Frederic (Fritz) Rieman, Senior Environmental Scientist Supervisor
Joleena De La Fe, Environmental Scientist
Kelly Schmoker, Senior Environmental Scientist Specialist

Office of Planning and Research
State.Clearinghouse@opr.ca.gov

REFERENCES

[CDFG] California Department of Fish and Game. 2010. A Review of Stream Processes and Forms in Dryland Watersheds. Available from https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=25779

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ATTACHMENT A: DRAFT MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

CDFW provides the following language to be incorporated into the MMRP for the Project.

Mitigation Measure	Timing	Responsible Party
Mitigation Measure #1: CDFW Survey Protocol CDFW recommends the Project proponent retain a qualified biologist with the appropriate handling permits to conduct focused surveys within the proposed habitat restoration/enhancement sites prior to implementation of the HMMP. Focused surveys shall follow CDFW's Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023). Focused surveys shall also be conducted throughout the entire proposed mitigation areas and during the appropriate flying season to ensure no missed detection of Crotch's bumble bee occurs. Survey results, including negative findings, shall be submitted to CDFW and the County prior to the start of a monitoring program.	Prior to Project Initiation	Project Proponent/Qualified Biologist
Mitigation Measure #2: MM 5.2-6 To MM 5.2-8 Revision Given that the Project proponent intends to obtain an ITP, CDFW would be involved in the review and approval process of compensatory mitigation. CDFW recommends the County revise Mitigation Measures 5.2-6 through 5.2-8 in the RPDSEIR to include review and approval from CDFW.	Prior to Project Initiation	Lead Agency
Recommendation #1: CDFW ITP The focused surveys conducted by GLA were performed without coordination and review of the survey methodology by CDFW. Additionally, it is unclear from the survey report and RPDSEIR if the GLA biologists had the appropriate handling permits prior to conducting focused surveys for Crotch's bumble bee. CDFW	Prior to Project Initiation	Project Proponent/Qualified Biologist

Docusign Envelope ID: 5BFB120E-1690-47C7-85B1-1070F17EDB1D

Mitigation Measure	Timing	Responsible Party
strongly recommends that the Project proponent coordinates with CDFW to determine whether the focused surveys are valid to move forward in the ITP process.		
Recommendation #2: CEQA CDFW's issuance of an ITP for a Project is subject to CEQA. As a Responsible Agency, CDFW may consider the CEQA document from the lead agency/Project proponent for the Project. However, additional documentation may be required as part of an ITP application for the Project in order for CDFW to adequately develop an accurate take analysis and identify measures that would fully mitigate for take of CESA-listed species. To minimize additional requirements by CDFW pursuant to Fish and Game Code section 2081 and/or under CEQA, the Project's CEQA document should fully identify the potential impacts to Crotch's bumble bee and provide adequate avoidance, mitigation, monitoring, and reporting commitments for issuance of the ITP.	Prior to Project Initiation	Lead Agency
Recommendation #3: Reevaluation of the CAA CDFW recommends that the CAA be reevaluated in a manner that avoids Grasshopper Creek and avoids significant impacts to its associated species, while leaving the Creek hydrologically functioning. This may include the removal of extensive landslide remediation. Additionally, CDFW recommends the CAA be achieved through engineering solutions such as using swales throughout the development to deliver surface runoff to Grasshopper Creek or subsurface drains that retain flow to Grasshopper Creek consistent with current subsurface discharge. CDFW welcomes coordination with the County and Project proponent to lessen significant impacts to the maximum extent feasible.	Prior to Project Initiation	Lead Agency

Docusign Envelope ID: 5BFB120E-1690-47C7-85B1-1070F17EDB1D

Mitigation Measure	Timing	Responsible Party
Recommendation #4: Riparian Habitat Compensatory Mitigation If preservation of the existing creek hydrology is not possible, the final CEQA document should contain an alternative that protects Grasshopper Creek in place. This alternative should identify the vegetation alliances and stream habitat acreages that would be avoided as well as the vegetation alliances and acreages that will be lost as a result of the change in hydrology. The vegetation alliances should be mitigated at a minimum 3:1 ratio in the same sub-watershed to mitigate the biological value it provides to resources in the area.	Prior to Project Initiation	Lead Agency/Project Proponent
Recommendation #5: Figures and Maps The final CEQA document should include figures or maps that provide vegetation alliance information, locations of habitat created by the change in landslide hydrology, and meaningful comparisons between the PCAA, CAA, and the original Project in terms of these vegetation alliances.	Prior to Project Initiation	Lead Agency
Recommendation #6: CAA Project Redesign CDFW recommends eliminating the single-family housing, proposed to the northwest of Grasshopper Creek in the CAA, and the sports park proposed to the west of Grasshopper Creek in the PCAA. This is to reduce the edge effect and preserve more biologically valuable open space in this area. Additionally, this is to reduce the biological impacts to Grasshopper Creek and preserve more biologically valuable open space in this area.	Prior to Project Initiation	Lead Agency/Project Proponent

Docusign Envelope ID: 5BFB120E-1690-47C7-85B1-1070F17EDB1D

Mitigation Measure	Timing	Responsible Party
Recommendation #7: Remediation of Landslides The final CEQA document should address why the CAA appears to include remediation of landslides that occur on the opposite side of Grasshopper Creek. In addition, the final CEQA document should address why landslide remediation would need to occur across the creek from where development is proposed and provide an avoidance alternative to reduce edge effect and impact to the proposed open space.	Prior to Project Initiation	Lead Agency

Response to Comment Letter A.1

Victoria Tang, Environmental Program Manager
California Department of Fish and Wildlife
May 28, 2025

Response A.1-1

The comment acknowledges receipt of the RPDSEIR for review. The comment does not address the content or adequacy of the RPDSEIR under CEQA or the State CEQA Guidelines; no additional response is required. The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Response A.1-2

The comment contains introductory language regarding CDFW. The comment does not address the content or adequacy of the RPDSEIR under CEQA or the State CEQA Guidelines; no additional response is required. The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Response A.1-3

The comment contains introductory language regarding Project. The comment does not address the content or adequacy of the RPDSEIR under CEQA or the State CEQA Guidelines other than to note that "CDFW has reviewed and approved the Habitat Mitigation and Monitoring Plan for special-status plants (July 2022 [Revised October and December 2022 and February 2023) and western spadefoot toad (July 2022 [Revised March and June 2023])"; no additional response is required. The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Response A.1-4

The commenter requests CDFW be added to Mitigation Measures MM 5.2-6 through 5.2-8 for review and approval of the Habitat Mitigation and Monitoring Program (HMMP) regarding Crotch's bumble bee. Mitigation Measures MM 5.2-6 through 5.2-8 have been revised to include CDFW for review and approval of the HMMP. Cal. Code Regs., tit. 14, § 783.2, subd. (a)(8) requires the proposal of measures to minimize and fully mitigate the impacts of the proposed taking; implementation of measures MM 5.2-6 through 5.2-8 fully mitigate the impacts to Crotch's bumble bee**.** In addition, commenter requests that an additional mitigation measure be included requiring focused surveys by qualified biologists at mitigation sites for Crotch's bumble bee. This is not needed to fully mitigate impacts to Crotch's bumble bee. However, Mitigation Measure MM 5.2-22 has been added based on the commenter's recommendation.

As further discussed in Section 3.0, Corrections, Clarifications and Additions to the RPDSEIR, the following text is modified as part of the RPFSEIR. The change in text signified by strikeouts (~~strikeouts~~) where text has been removed and by bold underlining (**underline**) where text has been added. The revisions reflect minor updates or clarifications to the content of the RPDSEIR, and thus and do not represent material changes or revisions that modify the findings.

MM 5.2-6 The loss of sage scrub habitat within the impact area is considered a significant impact. Sage scrub habitat shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but shall be no less than 2:1 for habitat restoration, enhancement or preservation, or combination thereof. A total of 634.70

acres of sage scrub would be impacted by Project implementation, which includes Purple sage scrub, California sagebrush–California buckwheat scrub, Black sage scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, California sagebrush–California buckwheat scrub/California annual grassland, and the burned sage scrub areas: burned Purple sage scrub, burned California sagebrush–California buckwheat scrub, burned Black sage scrub, and burned California sagebrush–California buckwheat scrub/California annual grassland. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, and preservation shall depend on the initial quality of the habitat area to be restored, enhanced or preserved and would be determined by the Project Applicant and the LACDRP. Sage scrub habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. Where restoration or enhancement is the proposed mitigation, the Project Applicant shall develop a Habitat Mitigation and Monitoring Program (HMMP) and shall submit it to the LACDRP **and the California Department of Fish and Wildlife (CDFW)** for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to the issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants of suitable sage scrub species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), Peirson's morning-glory will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP **and CDFW** and according to its specified materials, methods, and performance criteria, which shall include the following items:

MM 5.2-7 The loss of California annual grassland/wildflower fields within the impact area is considered to be a significant impact. California annual grassland/wildflower fields shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 24.23 acres of Foothill needlegrass grassland and burned Foothill needle grass grassland would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). California annual grassland/wildflower fields habitat restoration/enhancement implementation shall begin not more than one year

following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP **and the California Department of Fish and Wildlife (CDFW)** for review and approval. The HMMP shall be developed by a qualified restoration ecologist submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for burrowing owls. Habitat restoration/enhancement shall consist of seeding of suitable California annual grassland/wildflower fields plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP **and CDFW** and according to its specified materials, methods, and performance criteria, which shall include the following items:

MM 5.2-8 The loss of foothill needlegrass grassland within the impact area is considered to be a significant impact. Foothill needlegrass grassland shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 342.85 acres of California annual grassland/Wildflower fields would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). Foothill needlegrass grassland habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP **and the California Department of Fish and Wildlife (CDFW)** for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for the burrowing owl. Habitat restoration/enhancement shall consist of seeding of suitable foothill needlegrass grassland plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP **and CDFW** and according to its specified materials, methods, and performance criteria, which shall include the following items:

MM 5.2-22 **The project applicant shall retain a qualified biologist with the appropriate handling permits to conduct focused surveys for Crotch's bumble bee within the proposed habitat restoration/enhancement sites prior to implementation of the HMMP as set forth in MM 5.2-6 through MM 5.2-8. Focused surveys shall follow California Department of Fish and Wildlife's (CDFW) Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023). Focused surveys shall also be conducted throughout the entire proposed mitigation areas and during the appropriate flying season to ensure no missed detection of Crotch's bumble bee occurs. Survey results, including negative findings, shall be submitted to CDFW and LACDRP prior to the start of a monitoring program.**

Response A.1-5

The comment states that focused surveys for Crotch's bumble bee were performed without coordination and review of the survey methodology by CDFW. The focused surveys conducted (see RPDSEIR Appendix J) were for the purpose of determining the presence of CBB and if mitigation was necessary in accordance with CEQA. The surveys were not performed specifically as part of the Incidental Take Permit (ITP) process but do provide baseline information that will be incorporated into the ITP permitting process. Focused surveys will be conducted following CDFW's protocols as part of the ITP process. Please note that GLA biologists have been approved by CDFW for conducting focused surveys for Crotch's bumble bee in support of ITPs, in coordination with CDFW on a case-by-case basis and that currently, three GLA biologists have valid Memorandums Of Understanding from CDFW for Crotch's bumble bee surveys. No further analysis is necessary or required.

Response A.1-6

The comment states that the Project's CEQA document should fully identify the potential impacts to Crotch's bumble bee to minimize additional requirements by CDFW as part of the ITP. RPDSEIR Appendix J fully identifies the potential impacts to CBB as set forth at pages 2-27 – 2-28 of the RPDSEIR. As set forth in Response A.1-4, mitigation measures MM 5.2-6 through MM 5.2-8 have been revised as per the commenter's direction and mitigation measure MM 5.2-22 has been added. Nothing more is required to comply with the requirements of CEQA. All ITP requirements will be followed when an ITP application is submitted. No further analysis is necessary or required.

Response A.1-7

The commenter claims the evaluation of the CAA did not include "meaningful creek avoidance that leaves a hydrologically functioning Grasshopper Creek." The Court Ruling (RPDSEIR Appendix A) required that the CAA be recirculated with a complete alternatives analysis. The CAA was previously screened out from full alternatives analysis as it was determined to be infeasible. The Court Ruling does not require any specific parameters of the CAA to be revised, including providing for a hydrologically functioning Grasshopper Creek. Rather, the Court Ruling only requires there to be a complete alternatives analysis. The RPDSEIR CAA analysis complies with the Court Ruling and the mandates of CEQA. The comment states that the RPDSEIR erroneously states that some of the ephemeral channels are fed by surface and subsurface runoff from landslide formations, which contradicts the definition of ephemeral. The commenter is incorrect that the RPDSEIR is inconsistent with the definition of ephemeral. As set forth in the Geotechnical/Hydrogeologic Review of the Creek Avoidance Alternative Design (RPDSEIR Appendix F-2), "Surface flows have become ephemeral with extended dry periods and only occasional flows ranging from a trickle following typical rain events to a torrent following extreme rain events. Sources of water to the creek include surface water directed by tributaries and transient groundwater / moisture stored

largely within landslide debris and, to a lesser extent, along bedding planes and other structure that is hydraulically favorable (see Glossary).” Thus, the subsurface flows are a result of rainfall events, consistent with the definition provided by the commenter. In any event, the CAA is infeasible for numerous reasons, including from an engineering geologic and geotechnical perspective. (See RPDSEIR pages 2-79 through 2-80.) No further analysis is necessary or required.

Response A.1-8

The comment states that the CAA cannot sustain the hydrology necessary to support the riparian vegetation post-development and RPDSEIR did not provide necessary details such as surface flow contributions from the tributaries that support the hydrology of Grasshopper Creek. The information requested is not necessary to conclude that the CAA is not a feasible alternative. The RPDSEIR and its supporting technical appendices provide substantial evidence that the CAA is not feasible from an engineering geologic, geotechnical, and hydrologic perspective. The comment regarding additional alternatives is addressed below. No further analysis is necessary or required.

Response A.1-9

The comment advocates for the avoidance and preservation of ephemeral streams as provided by the CAA. As set forth in Response A.1-7, above, the RPDSEIR is not inconsistent with the definition of ephemeral. With respect to habitat quality, the determination of poor habitat quality was based on an evaluation of existing conditions, not as to whether that are ephemeral streams. (See RPDSEIR Appendix F-2, pages 2-3 and Glossary Figure 2a-d.) Moreover, the CAA is infeasible for numerous reasons, including from an engineering geologic and geotechnical perspective. As per the Court Ruling (RPDSEIR Appendix A), the CAA was to be recirculated with a complete alternatives analysis. The RPDSEIR CAA analysis complies with the Court Ruling and the mandates of CEQA. CDFW’s support for the CAA is noted and will be forwarded to the decision-makers for review and consideration. No further analysis is necessary or required.

Response A.1-10

The comment claims the RPDSEIR does not “entirely satisfy” the avoidance of Grasshopper Creek and its potential associated species impacts. As noted in Response A.1-9, above, as per the Court Ruling (RPDSEIR Appendix A), the CAA was to be recirculated with a complete alternatives analysis. None of the project objectives was to avoid impacts to Grasshopper Creek. Moreover, all biology and hydrology impacts were determined to be Less Than Significant with mitigation. CEQA Guidelines Section 15126.6 is clear that alternatives to be considered need to be able to “feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.” The CAA, as compared to the previously approved Project would have reduced impacts regarding biological resources:

> In summary, impacts to Foothill needlegrass, black sage scrub, California annual grassland/Wildflower fields, California sagebrush–California buckwheat scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, slender/club-haired mariposa lily, and southern California walnut, California gnatcatcher, and an open water area would be reduced but would remain significant. Impacts to CBB would be reduced as impacts to suitable habitat would be less than the previously approved Project. Impacts to WST would be similar to the previously approved Project. Indirect impacts to Grasshopper Creek would remain significant. Impacts to southwestern spiny rush would remain the same as the previously approved Project. Impacts to paniculate tarplant would be avoided; therefore, implementation of MM 5.2-5(b), above, would not be required.

(RPDSEIR, page 2-79.) See also RPDSEIR Table 2-12 for a comparison of the CAA impacts compared to the previously approved Project. The analysis of the CAA contained in the RPDSEIR complies with the Court Ruling and the mandates of CEQA. See also Response A.1-11, below. No further analysis is necessary or required.

Response A.1-11

The comment requests reevaluation of the CAA and suggests various revisions to the CAA. The RPDSEIR provides a complete analysis of the CAA supported by numerous technical reports. Based on those technical reports, it was determined that the CAA was not feasible from an engineering geologic and geotechnical perspective, as well as hydrologic perspective. The commenter's redesign suggestions will not eliminate the significant geologic and geotechnical issues that render the CAA infeasible. Moreover, CEQA does not require analysis of modified versions of the same alternative. (See *Village Laguna of Laguna Beach, Inc. v. Board of Supervisors* (1982) 134 Cal.App.3d 1022, 1028-1029 [EIR not required to evaluate variation of an alternative that fell within the continuum of alternatives discussed in the EIR)]; *Planning & Conservation League v. Department of Water Resources* (2024) 98 Cal.App.5th 726, 760 [an EIR need not consider every conceivable alternative; rejecting request for analysis of an additional alternative that was a part of two analyzed alternatives]; *Salton-stall v. City of Sacramento* (2015) 234 Cal.App.4th 549, 577 [EIR not required to study alternative that would have impacts similar to another alternative that was studied in the EIR]; *Town of Atherton v. California High-Speed Rail Authority* (2014) 228 Cal.App.4th 314, 356 [EIR not required to evaluate additional alternative routes similar to those evaluated in EIR].) The alternatives analysis of the CAA contained in the RPDSEIR complies with the Court Ruling and the mandates of CEQA. No further analysis is necessary or required.

Response A.1-12

The comment states that the final CEQA document should contain an alternative that protects Grasshopper Creek in place. See Response to Comment A.1-11, above. Additional analysis or modification of the CAA is not required. The alternatives analysis of the CAA contained in the RPDSEIR complies with the Court Ruling and the mandates of CEQA. No further analysis is necessary or required.

Response A.1-13

The comment requests a comparison of vegetation alliances as between the CAA, PCAA, and the previously approved Project. Such information is not needed to compare potential vegetation impacts from the various alternatives. Extensive vegetation mapping was conducted across the entire Project Site, and the RPDSEIR contains biology resource impact analysis for the CAA and PCAA as compared to the previously approved Project. For example, regarding the CAA, "As with the previously approved Project, the CAA would continue to have the potential to significantly impact biological resources. However, due to the reduced development footprint, impacts to Foothill needlegrass, black sage scrub, California annual grassland/Wildflower fields, California sagebrush–California buckwheat scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, slender/club-haired mariposa lily, and southern California walnut as well as impacts to California gnatcatcher and an open water area would be reduced under this alternative." (RPDSEIR, page 2-78.) Regarding the PCAA, "as with the previously approved Project, the PCAA would continue to have the potential to significantly impact biological resources but due to the reduced development footprint, impacts to Foothill needlegrass, black sage scrub, California annual grassland/Wildflower fields, California sagebrush–California buckwheat scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, slender/club-haired mariposa lily, and southern California walnut as well as impacts to California gnatcatcher and an open water area would be reduced under this alternative. Impacts

to the paniculate tarplant would be similar to the previously approved Project." (RPDSEIR, page 2-90.) No further analysis is necessary or required.

Response A.1-14

The comment recommends design changes to the CAA to reduce the edge effect and preserve more biologically valuable open space. As set forth in Response A.1-11, the commenter's redesign suggestions will not eliminate the significant geologic and geotechnical issues that render the CAA infeasible. Moreover, CEQA does not require analysis of modified versions of the same alternative. The alternatives analysis of the CAA contained in the RPDSEIR complies with the Court Ruling and the mandates of CEQA. No further analysis is necessary or required.

Response A.1-15

The comment states that the final CEQA document should address why the CAA includes remediation of landslides on the western side of Grasshopper Creek. Landslide remediation only takes place on the eastern side of Grasshopper Creek, above the 300-foot setback from Grasshopper Creek. The proposed development only occurs on the eastern side of Grasshopper Creek, but for proposed bridges that span the creek. Regarding the suggestion for an additional avoidance alternative, as set forth in Response A.1-11, the commenter's redesign suggestions to reduce the edge effect and impacts to the proposed open space will not eliminate the significant geologic and geotechnical issues that render the CAA infeasible. Moreover, CEQA does not require analysis of modified versions of the same alternative. The alternatives analysis of the CAA contained in the RPDSEIR complies with the Court Ruling and the mandates of CEQA. No further analysis is necessary or required.

Response A.1-16

The comment states that the final CEQA document should discuss how fuel modification requirements would impact any avoided stream and open space habitat. The Los Angeles County Fire Department (LACFD) requires distances up to 200 feet of fuel modification, depending on the adjacent fire potential as measured by the slope, aspect, fuel characteristics, fire history and weather data (wind, temperature and relative humidity). (RPDSEIR Appendix D-1 (Wildfire Technical Report), page 81.) Based on the proposed Site Plan for the previously approved Project (RPDSEIR Figure 1, page 1-2), the 200-foot distance from proposed structures would not intrude into avoided stream and open space habitat. In addition, the determination of biological impacts, including mitigation, is based on the ultimate grading limits of the Project (disturbance area), which includes all construction activities (including staging, grading, equipment areas) and fuel-modification areas. (See 2019 Draft SEIR Appendix D (Biological Technical Report), page 58.) No further analysis is necessary or required.

Response A.1-17

The comment references Exhibit 3, NorthLake Partial Creek Avoidance Alternative (RPDSEIR page 2-87), to address the inclusion of debris basins and other in-line water quality features as part of the PCAA and recommends that these features be located outside of the stream with a 300-foot buffer. However, there is no rule or regulation that requires this. Moreover, as set forth in Response A.1-11, variations of an analyzed alternative do not need to be analyzed. The downstream basins are designed to attenuate volume-related discharge changes and mitigate potential hydromodification impacts to the downstream watercourse. Basin locations are determined by existing topographic constraints, and their effects have been evaluated and incorporated within the development's defined disturbance limits. The basins are a project feature and have been evaluated as part of the previously approved Project. No further analysis is necessary or required.

Response A.1-18

The comment suggests coordinating with CDFW's CEQA Program to determine if take authorization is necessary for the burrowing owl. The comment correctly notes that multiple mitigation measures address the burrowing owl (MM 5.2-7 through MM 5.2-9). Coordination with CDFW's CESA Program will be pursued if take authorization is necessary. No further analysis is necessary or required.

Response A.1-19

The comment recommends inclusion of mitigation measures identified in the comment letter. Please refer to Responses A.1-4 and A.1-6, above, that address each of the recommended mitigation measures. No further analysis is necessary or required.

Response A.1-20

The comment states that all information collected be reported to the appropriate repositories. All required survey reporting will be complied with, including submittal of information to the California Natural Diversity Database. No further analysis is necessary or required.

Response A.1-21

The comment states the Project is subject to CDFW fees upon filing the Notice of Determination. The project Applicant will pay the required fees at the appropriate time. No further analysis is necessary or required.

Response A.1-22

The comment acknowledges the opportunity to comment on the RPDSEIR. The commenter will be provided with this document, the RPFSEIR, containing the responses to the comment letter. Notice of project hearings will also be provided.

DEPARTMENT OF TRANSPORTATION
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Making Conservation a California Way of Life

May 29, 2025

Mr. Jodie Sackett, Subdivisions
Los Angeles County
Department of Regional Planning
320 W. Temple Street, FL. 13
Los Angeles, CA 90012

RE: Northlake Specific Plan Project-
Recirculated Partial DSEIR
SCH # 2015031080
Vic. LA-05/PM R59.0508 to R59.007
GTS # LA-2017-04795-DSEIR

A.2-1

Dear Mr. Jodie Sackett:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above-referenced environmental document. The previously approved Project (not certified) consists of development of Phase 1, Phase 2, and associated offsite map improvements for both Phase 1 and Phase 2. Phase 1, which includes the entitlements Vesting Tentative Tract Map ("VTTM") No. 073336, Vesting Tentative Parcel Map ("VTPM") No. 073335, and Conditional Use Permit ("CUP") No. RPPL2023004316, comprises development of a 720-acre portion of the Project Site with a total of 2,295 dwelling units, including 288 single family units on approximately 41 acres, 1,341 multi-family units on approximately 107 acres, 345 senior multifamily units on approximately 49 acres, and 315 affordable units and six market-rate live/work units (included within 20 acres of commercial use). Phase 1 also includes commercial uses (22 acres), open space and parks uses (412 acres), roadways (86 acres), a school pad (21 acres), water tank pad (5.1 acres), and a fire station pad (1.4 acres).

The remainder of the Project Site, referred to as the Phase 2 area, would be developed with 855 single family units; 386 acres of parks, trails, and open space; 23 acres of school uses; and 36 acres of associated roadway and infrastructure improvements. Phase 2 is not included in VTTM 073336 and will require a separate map number. VTPM 073335 requests 21 large lot parcels (40 acres or more) for future lease and finance purposes and covers both phases.

Associated off-site map improvements in both Phase 1 and Phase 2 total 65.13 acres, including remedial grading, drainage features, and road and utility alignments.

A.2-1 cont.

The Project improvements would consist of the construction of Ridge Route Road at the Project's main entrance to the south and a secondary access route to the northwest, construction of Northlake Parkway adjacent to and west of the Phase 2 portion of the Project Site, a 4.64 acre connection of Grasshopper Creek Park, a debris basin, 2.39 acres in trail connections, a 5.1-acre pad for a water tank, 29.79 acres of manufactured slopes, and 11.98 acres of natural open space. In addition, extensions of the existing electrical distribution circuitry would occur along the existing Ridge Route Road to reach the Project, and substation upgrades would occur on Southern California Edison property.

In addition to the above improvements, an existing crude oil pipeline easement containing two oil pipelines that traverse the entire north-south length of the Project Site and both Phases 1 and 2 would be relocated to an alignment along the eastern boundary of the proposed development area and within the identified grading footprint.

The SEIR concluded that impacts associated with the 2019 previously Approved Project (not certified) would result in significant and unavoidable environmental impacts related to Operational, Construction, and Cumulative Air Quality; Construction, Operational, and Cumulative Noise; and Project and Cumulative Traffic. The RPDSEIR evaluates the potential for environmental impacts based on the Court Order. The RPDSEIR provides supplemental analysis related to:

1) Revised biological impact analysis only as to the Western Spadefoot Toad, special-status plants, and crotches' Bumble Bee;
2) Updated Traffic Analysis as to Vehicle Miles Travelled pursuant to Senate Bill 743 and CEQA Guidelines Section 15064.3;
3) Updated Wildfire Analysis pursuant to Appendix G of the CEQA Guidelines; and
4) Revised alternatives analysis only as to the addition of a Creek Avoidance Alternative and a Partial Creek Avoidance Alternative.

The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. Senate Bill 743 (2013) has codified into CEQA law and mandated that CEQA review of transportation impacts of proposed development be modified by using Vehicle Miles Traveled (VMT) as the primary metric in identifying transportation impacts for all future development projects. As a reminder, all environmental document should

A.2-2

include Vehicle Miles Traveled. You may reference the Governor's Office of Planning and Research (OPR) for more information:

https://opr.ca.gov/ceqa/#guidelines-updates

A.2-2 cont.

The Final SEIR appropriately acknowledges significant impacts to multiple State transportation facilities along the I-5 corridor. Specifically, the impacted locations include the I-5 northbound ramps at Lake Hughes Road, the I-5 southbound ramps at Parker Road, the I-5 northbound off-ramp at Ridge Route Road, and the I-5 southbound ramps at The Old Road. These locations are projected to experience operational deficiencies under cumulative conditions. While the County does not have direct jurisdiction over State facilities, we support the County's recognition of these impacts and the County's stated intent to coordinate with Caltrans District 7 to advance potential mitigation strategies. Improvements may include ramp widening, geometric enhancements at ramp terminals, new traffic signals, and intersection control modifications to address queuing, delay, and safety concerns. Ongoing collaboration with Caltrans will be essential to ensure that these improvements are fully evaluated and implemented through the appropriate project development and funding processes. Caltrans concurs that funding mechanisms such as the County's Castaic Bridge and Major Thoroughfare District, along with the payment of applicable district fees, are appropriate to satisfy the project's fair share obligations for improvements to State transportation facilities.

A.2-3

We noticed that the analysis uses 27.0 VMT per service population, based on the previously approved Northlake Specific Plan, as the threshold for determining transportation impacts. We respectfully ask the lead agency to clarify why a reduction-based threshold was not considered in this case. Given the statewide shift under SB 743, it's important to understand how this approach supports the intent of CEQA moving forward.

As a reminder, the Governor's Office of Planning and Research (OPR) recommends using a threshold that reflects a 15% reduction below the regional or jurisdictional average VMT. This benchmark is intended to help projects contribute meaningfully to reducing vehicle travel, emissions, and other transportation-related impacts. We encourage the County to revisit the VMT threshold applied in the analysis and share its reasoning for not incorporating a reduction target, especially in light of the broader goals set by SB 743 and OPR guidance.

A.2-4

To further support VMT reduction and for the County's consideration, we recommend that the project incorporate a Transportation Demand Management (TDM) program. TDM strategies such as enhanced transit connectivity, subsidized transit passes, carpool/vanpool programs, employer-based trip reduction incentives, bicycle and pedestrian infrastructure, and telecommuting support can materially reduce project-level VMT. These measures should be quantified, monitored, and integrated into project conditions or mitigation measures to ensure accountability and effectiveness. A.2-5

Please be reminded that any work performed within the State Right-of-way will require an Encroachment Permit from Caltrans. Any modifications to State facilities must meet all mandatory design standard and specifications. A.2-6

Any transportation of heavy construction equipment and/or materials that require the use of oversized transport vehicles on State highways will need a Caltrans transportation permit. Any large-size truck trips be limited to off-peak commute periods for the construction phase and operation phase. Construction truck loads should be covered with a tarpaulin cover. A.2-7

Storm water run-off is a sensitive issue for Los Angeles County. Please be mindful that projects should be designed to discharge clean run-off water. Additionally, discharge of storm water run-off is not permitted onto State highway facilities without any storm water management plan. A.2-8

In addition, a truck/traffic construction management plan may be needed for this project because the project is near by Caltrans on/off-ramps. Traffic Management Plans involving lane closures or street detours which will impact the circulation system affecting traffic to and from freeway on/off-ramps should be coordinated with Caltrans. A.2-9

If you have any questions, please feel free to contact Mr. Alan Lin, the project coordinator, at (213) 269-1124 and refer to GTS # LA-2017-04795-DSEIR.

Sincerely,

Miya Edmonson

MIYA EDMONSON
LDR/CEQA Branch Chief

email: State Clearinghouse

Response to Comment Letter A.2

Miya Edmonson, LDR/CEQA Branch Chief
California Department of Transportation, District 7
May 29, 2025

Response A.2-1

The comment contains introductory language regarding the Project. The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Response A.2-2

The comment contains introductory language regarding Caltrans and Senate Bill 743 and the requirement to include a Vehicle Miles Traveled (VMT) analysis. As discussed in Section 2.2 of the RPDSEIR, a VMT analysis was prepared and is included as Appendix C-1 to the RPDSEIR.

Response A.2-3

The comment expresses support for the County's recognition of impacts on State transportation facilities in the 2019 Final SEIR traffic analysis. The County will coordinate and collaborate with Caltrans as needed. No further analysis is necessary or required.

Response A.2-4

The comment requests clarification for the basis of using the NorthLake Specific Plan (NLSP) VMT per service population (27.03) as the significance threshold for determining an impact. The NLSP VMT per Service Population (27.03) is the baseline for comparison to the previously approved Project VMT per Service Population (25.70) per the methodology required by the County Department of Public Works. Per the County Department of Public Works, this threshold is appropriate because the NLSP approval occurred before SB 743 and modifications are being made after SB 743. Therefore, the previously approved Project does not need to be evaluated against the County baseline like a brand new project. Because the previously approved Project VMT per Service Population is less than the NLSP, VMT impacts were determined to be less than significant. Public Works approved the VMT Transportation Analysis. (See RPDSEIR Appendix C-2 (Department of Public Works December 2, 2024 Transportation Impact Analysis Approval Letter).) No further analysis is necessary or required.

Response A.2-5

The comment recommends that the County incorporate a Transportation Demand Management (TDM) program and identifies potential TDM strategies. While TDM programs are effective in reducing VMT, here, VMT impacts were determined to be less than significant, and therefore no mitigation is necessary or required. As set forth in the Northlake Specific Plan Transportation Impact Analysis for CEQA (RPDSEIR Appendix C-1), there are a number of project features of the previously approved Project that tend to reduce VMT such as constructing a pedestrian network, integrating affordable housing, constructing bicycle trails and expanding the transit network which the previously approved Project is not taking quantitative credit for. No further analysis is necessary or required.

Response A.2-6

The comment states that an Encroachment Permit from Caltrans will be required for any work performed in the State right-of-way. As required, an Encroachment Permit will be applied for and

the work will meet all mandatory design standards and specifications. Commenter made a similar comment to the 2019 SEIR that was responded to. (2019 Final SEIR Response to Comment 3-12 (page 2-40).)

Response A.2-7

The comment states that any transportation of heavy construction equipment and/or materials that require use of oversized transport vehicles on State highways will need a Caltrans transportation permit. As discussed in Section 2.2 of the RPDSEIR, a Construction Traffic Control Plan would be required as detailed in Mitigation Measure MM 5.11-3, which includes scheduling construction activities that affect traffic flow to off-peak hours. Additionally, all construction truck loads would be covered with a tarpaulin cover. Commenter made a similar comment to the 2019 SEIR that was responded to. (2019 Final SEIR Response to Comment 3-11 (pages 2-39 to 2-40).)

Response A.2-8

The comment states that projects should be designed to discharge clean run-off water and that discharge of storm water is not permitted onto State highway facilities. In accordance with the Court Ruling and CEQA Guidelines section 15088(c), the RPDSEIR was not required to recirculate the impact analysis related to stormwater because those portions of the SEIR were not modified. As such, the SEIR contains the final analysis related to stormwater, and the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of that issue. (See *Ione Valley Land, Air, and Water Defense Alliance, LLC v. County of Amador* (2019) 33 Cal.App.5th 165, 171; *Sierra Club v. County of Fresno* (2020) 57 Cal.App.5th 979, 990-991; *Citizens For Open Government v. City of Lodi* (2015) 205 Cal.App.4th 296, 325; see also Response B.4-1.) Pursuant to CEQA Guidelines section 15088.5(f)(2), the County requested that reviewers limit their comments to the material included in the RPDSEIR and the County is not required to respond to comments that are not related to the material included in the RPDSEIR. The Project will implement a Storm Water Pollution Prevention Plan (see Mitigation Measure MM 5.2-21). Discharge will not be to State highway facilities. (2019 Draft SEIR page 5.8-75.) Commenter made a similar comment to the SEIR which was responded to. (2019 Final SEIR Response to Comment 3-10 (page 2-39).)

Response A.2-9

The comment states that a truck/traffic construction management plan may be needed for the Project. Please refer to Response A.2-7, above.

OFFICE OF THE SHERIFF

COUNTY OF LOS ANGELES

HALL OF JUSTICE

May 29, 2025

ROBERT G. LUNA, SHERIFF

Mr. Jodie Sackett, Senior Planner
County of Los Angeles
Department of Regional Planning
Subdivisions
320 West Temple Street, Room 1362
Los Angeles, California 90012

Dear Mr. Sackett:

NOTICE OF COMPLETION AND AVAILABILITY OF RECIRCULATED PARTIAL DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR THE NORTHLAKE SPECIFIC PLAN PROJECT NO. R2015-00408-(5) REVIEW COMMENTS

Thank you for inviting the Los Angeles County Sheriff's Department (Department) to review and comment on the April 14, 2025, Notice of Completion and Availability (NOC-NOA) of the Recirculated Partial Draft Supplemental Environmental Impact Report (Draft SEIR) for the Northlake Specific Plan Project No. R2015-00408-(5) (Project). The approximate 1,330-acre Project Site is located east of Interstate (I) 5, west of Castaic Lake, and north of the community of Castaic, California in unincorporated Los Angeles County. Regional access to the Project area is provided by I-5, and site access is provided via Parker Road and Lake Hughes Road exits from I-5. Local access to the Project Site is provided by Ridge Route Road, which traverses northerly along the western edge of the Project Site.

A.3-1

The proposed Project is located within the service area of the Department's Santa Clarita Valley Sheriff's Station (Station), which is now located at 26201 Golden Valley Road, about 14 miles southeast of the Project site, and no longer located at 23740 Magic Mountain Parkway, Valencia location.

The Station has concerns over the proposed development due to its location, which historically has experienced significant wildland fire incidents. Some examples of those large fires which have impacted and/or threatened the Santa

A.3-2

Clarita Valley area include the Ridge Route and Hughes Fires. The Station also notes that these specific incidents serve as critical reminders of the persistent and severe fire threat in this region. The inherent fire risk associated with the project location, underscored by the history of significant fires in the surrounding area, necessitates careful and thorough consideration during the project approval process and all phases of development. The Station advises that it is imperative to integrate robust precautionary measures into the project design and implementation to mitigate fire hazards and the need for emergency responses. Additionally, comprehensive and effective emergency management plans are essential to ensure the safety of future residents and the broader community in the event of a wildland fire are addressed.

A.3-2 cont.

The Department's Pitchess Detention Center (PDC) is located just southeasterly of this development. Specific details of the south portion of the Project would need to be further evaluated and may require mitigation in order to ensure that security for PDC is maintained.

A.3-3

With the expected demand for law enforcement services for this Project, which will include but not limited to residential, commercial, recreation, schools and infrastructure, as well as previously approved projects in the region, the cumulative areawide impacts of this Project and other development will likely require additional Sheriff personnel as well as facilities to support those services. The Specific Plan dated June 1992 indicates that funding associated with these additional services and facilities would be included in the Department's requested annual budget to be appropriated by the Board of Supervisors from the County General Fund. However, these funds are not guaranteed, and the proposed Project will warrant a Countywide assessment where the Department, CEO, and BOS will evaluate each development and discuss the funding required for facilities, personnel and/or associated operational equipment to mitigate the impacts. To the extent the Department is being considered as the provider of these law enforcement services, it should be noted/understood that our Department may not have the capacity to provide the necessary staff resources when this project is contemplated and/or completed. It is recommended that jurisdictional agencies evaluate the needs of the community as well as the availability of local law enforcement to provide these services prior to approving the project. The Project Applicant should be required to pay all development impact fees associated with the project.

A.3-4

For future reference, the Department provides the following updated address and contact information for all requests for review comments, law enforcement service information, California Environmental Quality Act documents, and other related correspondence:

Jennifer Fang, Acting Bureau Director
Facilities Planning Bureau, SBB-4th Floor
Los Angeles County Sheriff's Department
211 West Temple Street
Los Angeles, California 90012
Attention: Planning Section

Should you have any questions regarding this matter, please contact me, at (323) 526-5657, or your staff may contact Ms. Bee Bee Pee, of my staff, at (323) 526-5697.

Sincerely,

ROBERT G. LUNA, SHERIFF

Jennifer Fang, Acting Bureau Director
Facilities Planning Bureau

JF:BP

c: Richard Martinez, Assistant Division Director, ASD
Brandon Barclay, Acting Captain, Santa Clarita Valley Sheriff's Station (SVC)
Richard O'Neal, Lieutenant, SCV
Andrew B. Cruz, Captain, Contract Law Enforcement Bureau (CLEB)
Erick F. Martinez, Lieutenant, CLEB
Julie A. Lowe, Sergeant, CLEB
Kelly Chiu, Capital Projects Program Manager, Facilities Planning Bureau (FPB)
Bee Bee Pee, Departmental Facilities Planner I, FPB
Chrono
File
(EIR – Northlake SP NOC DSEIR Project)

Response to Comment Letter A.3

Robert Luna, Sheriff
County of Los Angeles, Office of the Sheriff
May 29, 2025

Response A.3-1

The comment acknowledges receipt of the RPDSEIR for review, and contains introductory language regarding the Project and the Los Angeles County Sheriff's Department (Sheriff's Department). The comment does not address the content or adequacy of the RPDSEIR under CEQA or the State CEQA Guidelines; no additional response is required.

Response A.3-2

The comment states concerns regarding potential for wildland fire incidents. The RPDSEIR wildfire analysis and the Wildfire Technical reports (RPDSEIR Appendices D-1, D-2 and K) comport with the requirements of CEQA and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act*" guidelines. The wildfire analysis includes assessment of the Ridge Route Fire which the Wildfire Technical Report referred to as the "Route Fire." (RPDSEIR Appendix D-1 (Wildfire Technical Report), pages 25-30.) The Wildland Fire Risk Report was prepared in December 2024, a month before the Hughes Fire. As such, it was not included in the fire history section of the report as it had not occurred at the time the report was prepared. Inclusion of that wildfire does not change any of the impact conclusions in the RPDSEIR or the Wildland Fire Risk Report. In fact, the Hughes Fire was predicted by Scenario 6 - LakeSpotsat40, with the origin within the County Recreation Area (RPDSEIR Appendix D-1, page 65, 68 and Appendix B), and the Evacuation Report determined that there would be sufficient time to evacuate the previously approved Project (RPDSEIR Appendix D-1, Table 6; see also RPDSEIR Appendix D-1, page 68) with no impediment to all three evacuation points. The fact that the Hughes Fire happened, which was predicted, does not change the analysis, conclusion, or determination that the wildfire impact is less than significant. The Wildfire Technical report contains numerous precautionary measures, regulatory compliance measures, and project design features that will be implemented as part of the Project to reduce fire hazards and the need for emergency responses. (RPDSEIR Appendix D-1 (Wildfire Technical Report), pages 77-78.) Impacts will be less than significant, and no further analysis is required.

Response A.3-3

The comment identifies that the Pitchess Detention Center is located southeasterly of the Project site and states mitigation may be required to ensure that facility security is maintained. In accordance with the Court Ruling and CEQA Guidelines section 15088.5(c), the RPDSEIR was not required to recirculate the impact analysis related to law enforcement services or impacts to surrounding land uses, including the Pitchess Detention Center, because those portions of the SEIR were not modified. As such, the SEIR contains the final analysis related to law enforcement services and impacts to surrounding land uses, and the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of that issue. (See *Ione Valley Land, Air, and Water Defense Alliance, LLC v. County of Amador* (2019) 33 Cal.App.5th 165, 171; *Sierra Club v. County of Fresno* (2020) 57 Cal.App.5th 979, 990-991; *Citizens For Open Government v. City of Lodi* (2015) 205 Cal.App.4th 296, 325; see also Response B.4-1.) Pursuant to CEQA Guidelines section 15088.5(f)(2), the County requested that reviewers limit their comments to the material included in the RPDSEIR and the County is not required to respond to comments that are not related to the material included in the RPDSEIR. The commenter states that impacts to the detention center would need to be further evaluated, but does not identify any impacts to this off-

site facility. To the extent required, these impacts were addressed in the SEIR. The comment is acknowledged; no further response is required.

Response A.3-4

The comment states that the Project would contribute to the cumulative areawide impacts related to law enforcement services. (See Response A.3-3.) Pursuant to CEQA Guidelines section 15088.5(f)(2), the County requested that reviewers limit their comments to the material included in the RPDSEIR and the County is not required to respond to comments that are not related to the material included in the RPDSEIR. These impacts were addressed in the SEIR to the extent required. The project Applicant will be conditioned to pay all required development impact fees. However, any increased costs on governmental agencies related to the provision of public services is not considered a project impact. In *City of Hayward v. Board of Trustee of California State University* (2015) 242 Cal. App. 4th 833, the court found that Section 35 of Article XIII of the California Constitution requires local agencies to provide public safety services, including police and fire protection and emergency medical services, and that it is reasonable to conclude that the city (here the County) will comply with that provision to ensure that public safety services are provided. The *Hayward* ruling also concluded that “assuming the city continues to perform its obligations, there is no basis to conclude that the project will cause a substantial adverse effect on human beings” and the “need for additional fire protection services is not an environmental impact that CEQA requires a project proponent to mitigate.”

From: Raylene Borrego
Sent: Tuesday, April 22, 2025 4:01 PM
To: Jodie Sackett <jsackett@planning.lacounty.gov>
Subject: Response to Notice of Completion and Availability of DSEIR: Northlake Specific Plan Project, Project No. R2015-00408-(5), Los Angeles County; [COU-LA-2025-7]

CAUTION: External Email. Proceed Responsibly.

Hello Jodie,

B.1-1

Thank you for contacting the Yuhaaviatam of San Manuel Nation (formerly the San Manuel Band of Mission Indians) regarding the above-referenced project. YSMN appreciates the opportunity to review the project documentation, which was received by the Cultural Resources Management Department on April 15th, 2025. The proposed project is located outside of Serrano ancestral territory and, as such, YSMN will not be requesting to receive consulting party status with the lead agency or to participate in the scoping, development, or review of documents created pursuant to legal and regulatory mandates.

Kind Regards,
Raylene

Raylene Borrego
Cultural Resources Technician

Response to Comment Letter B.1

Raylene Borrego, Cultural Resources Technician
Yuhaaviatam of San Manuel Nation
April 22, 2025

Response B.1-1

The comment acknowledges receipt of the RPDSEIR for review and states that the Project is located outside of Serrano ancestral territory. The comment does not address the content or adequacy of the RPDSEIR under CEQA or the State CEQA Guidelines; no additional response is required.

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From: Dan Silver
Sent: Tuesday, April 22, 2025 5:49 PM
To: Jodie Sackett <jsackett@planning.lacounty.gov>
Subject: NorthLake Specific Plan RPDSEIR

CAUTION: External Email. Proceed Responsibly.

April 22 2025

Jodie Sackett
County of Los Angeles, Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

RE: NorthLake Specific Plan RPDSEIR

Dear Mr. Sackett:

Endangered Habitats League has a question and comment pertaining to consistency with General Plan Policies S4.1, S4.20, and L1.10 relating to fire hazard. According to the RPDSEIR, this project's previous entitlements were "rescinded" by the County due to court order. Its zoning must have reverted to a prior baseline, meaning that the new project entails a density increase. Similarly, the rescinding of the prior Specific Plan entitlements means that there is now no "existing" Specific Plan. B.2-1

However, there is no analysis of these General Plan consistency issues in the RPDSEIR, which should be rectified. Or, is it the County's position that the project is exempt from Policies S4.1, S4.20, and L1.10, and if so, why? B.2-2

Yours truly,
Dan Silver, Executive Director
Endangered Habitats League

Response to Comment Letter B.2

Dan Silver
Endangered Habitats League
April 22, 2025

Response B.2-1

The comment states that, according to the RPDSEIR, the project's previous entitlements were "rescinded" by the County due to the Court Ruling, therefore, zoning must have reverted to a prior baseline. As a result, the comment states that the new project entails a density increase. Similarly, the comment states that rescission of the prior Specific Plan entitlements means that there is now no "existing" Specific Plan. The commenter is incorrect; the NLSP was not rescinded. The NLSP was approved in 1992; it was not part of the 2019 Project approvals. The County did not rescind the approval of the NLSP as part of its action on May 18, 2021, nor did the Court order the County to do so. (See RPDSEIR pages 1-4.) In accordance with the Court Ruling, the County's action on May 18, 2021, was limited to setting aside the 2019 Project approvals, and the NLSP remains in place. Thus, the correct baseline is the NLSP. The previously approved Project did not increase density from the NLSP.

Response B.2-2

The comment states that there is no analysis of consistency with General Plan Policies S4.1, S4.20 and L1.10 in the RPDSEIR, which should be rectified. The SEIR Land Use Section was not subject to legal challenge and was not modified. Accordingly, pursuant to the Court Ruling and CEQA Guidelines section 15088.5(c), the SEIR Land Use Section was not required to be recirculated. As such, the SEIR contains the final analysis related to land use impacts, and the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of that issue. (See *Ione Valley Land, Air, and Water Defense Alliance, LLC v. County of Amador* (2019) 33 Cal.App.5th 165, 171; *Sierra Club v. County of Fresno* (2020) 57 Cal.App.5th 979, 990–991; *Citizens For Open Government v. City of Lodi* (2015) 205 Cal.App.4th 296, 325; see also Response B.4-1.) Pursuant to CEQA Guidelines section 15088.5(f)(2), the County requested that reviewers limit their comments to the material included in the RPDSEIR and the County is not required to respond to comments that are not related to the material included in the RPDSEIR. This comment is beyond the scope of the RPDSEIR and the County does not need to respond to it. The following response is for informational purposes only.

Regarding Policy LU 1.10, that policy provides: "Prohibit plan amendments that increase density of residential land uses within mapped fire and flood hazard areas unless generally surrounded by existing built development and the County determines the adjoining major highways and street networks can accommodate evacuation as well as safe access for emergency responders under a range of emergency scenarios, as determined by the County." This policy is not applicable as the NLSP was not rescinded, and the proposed Project is not seeking a plan amendment. Additionally, the proposed Project is consistent with this policy in that the Project Site is generally surrounded by existing built development including the 5-freeway to the west, urban development to the south and State recreational areas to the east, and the RPDSEIR Wildfire Impact Analysis established that there is capacity for safe evacuation on the existing roadways under all modelled wildfire scenarios, as well as emergency access for first responders. See RPDSEIR Section 2.3, Wildfire, and RPDSEIR Appendices D-1, D-2 and K.

Regarding Policy S4.1, that policy provides: "Prohibit new subdivisions in VHFHSZs unless: (1) the new subdivision is generally surrounded by existing or entitled development or is located in an existing approved specific plan or is within the boundaries of a communities facility district adopted by the County prior to January 1, 2022, including any improvement areas and future

annexation areas identified in the County resolution approving such district; (2) the County determines there is sufficient secondary egress; and (3) the County determines the adjoining major highways and street networks are sufficient for evacuation as well as safe access for emergency responders under a range of emergency scenarios, as determined by the County. Discourage new subdivisions in all other FHSZs." The proposed Project is consistent with this policy as the NLSP is an existing approved specific plan approved in 1992, and the RPDSEIR Wildfire Impact Analysis confirms there is sufficient secondary egress as well as capacity on the highway and street network for safe evacuation, as well as access for first responders. See RPDSEIR Section 2.3, Wildfire, and RPDSEIR Appendices D-1, D-2 and K.

Regarding Policy S4.20, that policy provides: "Prohibit new and intensification of existing general assembly uses in VHFHSZs unless: (1) the use is located in an existing approved specific plan or (2) the County determines there is sufficient secondary egress and the County determines the adjoining major highways and street networks are sufficient for evacuation, as well as safe access for emergency responders under a range of emergency scenarios, as determined by the County. Discourage new general assembly uses in all other FHSZs." The proposed Project is consistent with this policy for the same reasons it is consistent with Policy S4.1, including that the proposed Project is located in an existing approved specific plan – the NLSP.

From: Frances Tinney
Sent: Wednesday, May 14, 2025 2:36 PM
To: Jodie Sackett <jsackett@planning.lacounty.gov>
Cc: DRP Info; Theresa Rettinghouse
Subject: Recirculated Portions of the Supplemental Draft EIR for the NorthLake Specific Plan

CAUTION: External Email. Proceed Responsibly.

Good afternoon,

I am aware that the County has published Recirculated Portions of the Supplemental Draft EIR for the NorthLake Specific Plan (SCH 201503180)and I am writing to clarify the County's actions.

Is the County planning to recirculate the Draft Supplemental EIR and the Final Supplemental EIR that the County certified on September 25, 2018, and then decertified on May 18, 2021, for public review and comment? If not, does the County plan to recertify those portions of the EIR without public review and comment? If the County does not intend to recirculate those documents, the Center will comment on them along with our comments on the RPSDEIR.

We also request an extension of the comment deadline for the RPSDEIR for at least thirty days given the document with appendices is over 1000 pages.

We request a response to this email by Friday, May 16.

B.3-1

Thank you,

Frances

Frances Tinney
she/her
Attorney
Urban Wildlands Program
CENTER *for* BIOLOGICAL DIVERSITY
509-432-9256

Response to Comment Letter B.3

Francis Tinney
Center for Biological Diversity
May 14, 2025

Response B.3-1

As set forth in the Notice of Completion and Availability, the County only circulated for review and comment the Recirculated Partial Draft Supplemental Environmental Impact Report ("RPDSEIR"), which revises the SEIR as directed by the Court. Given that the revision is limited to certain chapters and portions of the SEIR, CEQA Guidelines section 15088.5(c) only requires the County to recirculate the RPDSEIR.

Further, pursuant to CEQA Guidelines section 15088.5(f)(2), the County requested that reviewers limit their comments to the material included in the RPDSEIR.

The County does not agree to your request for an extension.

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May 29, 2025

Sent via email

Jodie Sackett
Senior Planner
320 W Temple Street, Fl. 13
Los Angeles, CA 90012
jsackett@planning.lacounty.gov

Re: Comments on the Partial Recirculated Draft Supplemental Environmental Impact Report NorthLake Specific Plan (State Clearinghouse No. 2015031080)

Dear Jodie Sackett:

This letter is submitted on behalf of the Center for Biological Diversity ("Center") regarding the Partial Recirculated Draft Supplemental Environmental Impact Report ("PRDSEIR") for the NorthLake Specific Plan ("Project") (State Clearinghouse No. 2015031080.) As you are aware, the Center successfully challenged this Project in 2019. As a result of that lawsuit, the Court ordered Los Angeles County ("County") to set aside its approval of the Project and decertify the 2018 Supplemental EIR ("2018 EIR" or "SEIR"). This PRDSEIR revises parts of the biological resources analysis, the VMT analysis, and the alternatives analysis in the County's next attempt to circulate a legally compliant EIR. But the revised EIR sections are still not adequate, and the sections that the County did not revise are seven years old and now must be updated to account for significant new information. The County must revise and recirculate a complete EIR that fully analyzes and mitigates the Project's impacts.

B.4-1

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 1.7 million members and online activists throughout California and the United States. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people throughout Los Angeles County.

B.4-2

I. THE COUNTY CANNOT LIMIT PUBLIC COMMENT TO THE REVISED PORTIONS OF THE EIR.

B.4-3

As a preliminary matter, the County cannot limit public comment to only the Recirculated Portions of the Draft EIR. Where an agency's actions violate CEQA, "it must do the environmental review process over if it wants to approve the project." (*Woodward Park Homeowners Assn., Inc. v. City of Fresno* (2007) 150 Cal.App.4th 683, 690.) Because the *entire* EIR was decertified in 2021, the County will need to again certify the completion of the revised EIR *as a whole*, not only the PRDSEIR's revised sections. (Guidelines § 21100.) If the County plans to recertify the entire EIR, it must follow the legal procedures to do so. Accordingly, before approving the Project, the County must prepare and circulate for public review a revised EIR that complies with CEQA. (*See, e.g., King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, 901 [where EIR inadequate, County must revise EIR, circulate it for public review and comment, and prepare responses to the comments before reapproving same or modified project].). Any revised draft EIR must comply with CEQA's mandatory requirements for public review, including completing and filing with the State Clearinghouse, providing a 45-day comment period, and consulting with public agencies. (Guidelines §§ 15082-88, 15105.) The County must also consider and respond in detail to the public's comments. (*See* § 21091(d) [requiring agency responses to comments on draft EIRs]; Guidelines § 15088(c) [requiring "good faith, reasoned analysis" in responses]); (*Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 Cal.App.4th 256, 266-67 ["recirculation and consideration of public comments" necessary before revised project approval].)

B.4-4

Moreover, as a matter of policy, nothing limits the County to correcting only the flaws the court identified. All modified projects such as this require revised environmental analysis, and any CEQA document must reflect the County's "independent judgment." (Guidelines §§ 21082.1 & 15090.) The County should take this opportunity to hear from the public on all project aspects and ensure that the Project complies with its policies and intentions for its citizens now, in 2025. And the County should ensure that environmental review contains the analysis needed to allow the public and decisionmakers to understand environmental consequences of the Project and fully comply with CEQA. Restricting the public's ability to comment on the 2018 EIR circumvents CEQA's core purposes to allow for public input on projects. (Pub. Res. Code § 21061.) Accordingly, the Center incorporates here via reference its June 15, 2017, April 16, 2018, April 1, 2019, and December 22, 2020 letters on the previously circulated SEIR. (Exhibits A, B, C, and D).

II. SIGNIFICANT NEW INFORMATION REQUIRES THE COUNTY TO REVISE AND RECIRCULATE NUMEROUS OTHER SECTIONS OF THE 2018 EIR.

B.4-5

CEQA makes plain that significant new information on a project prior to EIR certification requires revision and recirculation for public review. (Pub. Res. Code § 21092.1; CEQA Guidelines § 15088.5(a).) CEQA specifically provides that a supplemental EIR is required when "[n]ew information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available." (Pub. Res. Code § 21166(c).) CEQA defines significant new information as information showing: (1) "[a] new significant environmental impact would result from the project . . ."; or (2) "[a] substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance." (CEQA Guidelines § 15088.5(a).) Additionally, CEQA requires a revised EIR when "substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report." (Pub. Res. Code § 21166(b).)

B.4-5 cont.

In this instance, the original EIR was certified in 2018 and entirely decertified in 2021. In the seven years since, significant new information has emerged regarding the Project's wildfire risk, climate change impacts, and uncertain water supply. Not only have multiple devastating wildfire seasons changed our understanding of wildfire risk, but groundbreaking climate change research has emerged, California has committed to new ambitious climate targets, and the state's water regime has dramatically shifted towards both extreme drought and flooding. The County must take into account significant new information on all Project impacts and revise and recirculate the EIR before certification. (CEQA Guidelines § 15088.5(a).)

B.4-6

A. The County Must Revise the EIR to Consider New Scientific Knowledge and State Policy on Climate Change.

B.4-7

Substantial new information on the severity of the Project's contributions to climate change has become available in the past seven years. Not only has California set new GHG reduction targets, but groundbreaking climate change research sheds light on the critical need to reduce GHG emissions further than the EIR proposes. The County must take this significant information into account and require further mitigation measures aligned with statewide goals.

i. Substantial New Information on Climate Change Impacts Requires Revision.

B.4-8

First, since the County certified the original 2018 EIR, the Intergovernmental Panel on Climate Change (IPCC), the leading international scientific body for the assessment of climate change, concluded in its 2023 Sixth Assessment Report that: "[u]nsustainable and unequal energy and land use as well as more than a century of burning fossil fuels have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850-1900 in 2011-2020." (IPCC, 2023) The increase in global surface temperature has resulted in sea level

rise, more frequent extreme weather events, and "irreversible losses" at the species and ecosystem levels. (IPCC, 2023.) The United States' own 2023 Fifth National Climate Assessment, prepared by scientific experts and reviewed by the National Academy of Sciences and multiple federal agencies, echoed these findings. The 2023 Assessment concluded that "[t]he global warming observed over the industrial era is unequivocally caused by greenhouse gas emissions from human activities–primarily burning fossil fuels," and long-term responses include "sea level rise, ice sheet losses, and associated disruptions to human health, social systems, and ecosystems." (Climate Action Tracker, 2023)

B.4-8 cont.

This significant new information requires immediate and aggressive greenhouse gas emissions reductions to keep warming well below 2°C above pre-industrial levels. The IPCC Sixth Assessment Report and other expert assessments have established global carbon budgets, or the total amount of carbon that can be burned while maintaining some probability of staying below a given temperature target. According to the IPCC, "[t]he best estimates of the remaining carbon budgets from the beginning of 2020 are 500 GtCO2 for a 50% likelihood of limiting global warming to 1.5°C and 1150 GtCO2 for a 67% likelihood of limiting warming to 2°C." (IPCC 2023 at 19.) Additionally, "[i]f the annual CO2 emissions between 2020-2030 stayed, on average, at the same level as 2019, the resulting cumulative emissions would almost exhaust the remaining carbon budget for 1.5°C (50%), and deplete more than a third of the remaining carbon budget for 2°C (67%)." (IPCC 2023). As of 2023, climate policies by countries across the world would lead to an estimated 2.7°C of warming, and possibly up to 3.4°C of warming, well above the level needed to avoid the worst dangers of climate change. (Climate Action Tracker, 2023)

ii. The 2018 EIR's GHG Analysis Is Outdated.

B.4-9

The significant new information described *supra* leaves no doubt that climate change will transform California, resulting in increased temperature and frequency of wildfires, and a reduction in snowpack, precipitation levels, and water availability. (Turco et al., 2023) But the 2018 EIR does not take this into account, instead relying on an outdated GHG emissions calculation model, CalEEMod Version 2016.3.1. (SEIR at 5.7-1.) The significant new information regarding climate change impacts should be assessed under the new version of CalEEMod, which became available in 2020, and again in 2022, intended to incorporate the latest science on GHG emissions. (California Air Pollution Control Officers Association, 2021, 2022) Specifically, the newer models take into account critical sources of GHG emissions prior models did not, such as CARB's EMFAC2017 N2O emissions, and they incorporate the 2019 update to Title 24 (building efficiency percentage reduction). (CAPCOA 2021.) The County offers no justification for using a version two cycles and six years out of date that overlooks several aspects of GHG emissions. The analysis is therefore inadequate and must be revised and recirculated.

B.4-9 cont.

Further, the 2018 EIR fails to analyze the GHG emissions against a legally adequate threshold of significance. Any revised EIR must show how a project will conform to *current* statewide GHG reduction targets and adopt enforceable mitigation to achieve these goals. (*Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 62 Cal.4th 204, 225-26; *League to Save Lake Tahoe v. County of Placer* (2022) 75 Cal.App.5th 63, 121-22.)

Since 2018, the State has released new GHG reduction targets. In 2022 California enacted AB 1279, the California Climate Crisis Act, requiring the state to achieve net zero GHG emissions by no later than 2045 and maintain net negative GHG emissions thereafter. (AB 1279 2022.) To achieve that goal, CARB released a new Scoping Plan in November 2022 that requires "aggressive reduction of fossil fuels" and "rapidly moving to zero emission transportation," and identifies "a technologically feasible and cost-effective path to achieve carbon neutrality by 2045." (2022 Scoping Plan for Achieving Carbon Neutrality, 2022) Newsom has continued to issue climate-related executive orders, such as a 2020 order requiring that, by 2035, all passenger vehicles will be zero-emission, in addition to other motor vehicle emission goals. (Executive Order N-79-20 (2020).). Enforcement of and compliance with these steps are essential to stabilize the climate and avoid catastrophic impacts to our environment.

The 2018 EIR purports to evaluate the significance of GHG emissions based on consistency with regulatory programs adopted for the purpose of reducing GHG emissions. (SDEIR at 5.7-22.) But, because it was written in 2018, it does not analyze consistency with relevant regulatory programs. Using 2018 regulatory programs as the basis for a threshold of significance in 2025 is not supported by substantial evidence. The GHG significance determination is therefore inadequate and must be revised and recirculated with an updated threshold of significance.

Once the County has revised the GHG analysis, it must consider current best practices in GHG mitigation and adopt all feasible mitigation. Appendix D of CARB's 2022 Scoping Plan includes on-site GHG-reducing design features and mitigation measures, as well as offsite measures the County should consider to conform to these new targets. Other feasible measures can be found in the California Air Pollution Control Officers Association 2022 Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity. (California Air Pollution Control Officers Association, 2024) The Center urges the County to take all feasible steps to reduce GHG emissions in light of the recent climate change research outlined *supra*.

B.4-10

B. The County Must Revise the EIR to Consider Significant New Information Regarding California's Water Supply.

Since the 2018 EIR's preparation and certification, significant new information reveals that California's water supply has become more uncertain. Indeed, climate change and

population growth pose unprecedented challenges to California's efforts to allocate and conserve limited water resources. New studies predict that in the next 35 to 60 years, if GHG emissions continue unchecked, the American West's snowpack will continuously shrink, disappearing for a decade or more at a time. (Siirila-Woodburn et al., 2021) In 2022, the IPCC specifically identified the American West as vulnerable, warning that with projected warming in the western mountains, accumulated snowpack is "virtually certain to decline." (IPCC, 2022) This warning informed a recent Executive Order from Governor Newsom, declaring that California must "redouble near-, medium-, and long-term efforts to adapt its water management to a changing climate, shifting precipitation patterns, and water scarcity." (Executive Order N-7-22 (2022).)

B.4-10 cont.

Climate change has caused increased water extremes—a boom and bust cycle between flooding and drought—that scientists predict will only get worse. (Polade et al., 2017; Swain et al., 2018) During wet years, California has experienced increased run-off as more water falls than can recharge groundwater. (Becker, 2024) In this context, the 2018 EIR's assumption that precipitation averages will be consistent with pre-2018 averages and its reliance on safe groundwater yields established in 2015 ignores reality. (See SDEIR at 5.12-4.) The significant new information is relevant to understanding whether a water supply shortfall is likely and must be considered.

B.4-11

C. The County Must Revise the EIR to Consider Significant New Information Regarding Mountain Lions.

i. CEQA and CESA Require Analysis and Mitigation for Impacts to Mountain Lions.

Relevant authorities require preparation of a subsequent EIR in these circumstances. The California Environmental Quality Act ("CEQA") states that a subsequent or supplemental EIR may be required when either (1) substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report or (2) new information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available. (Pub. Res. Code § 21166.)

New information since the EIR was approved in 2018 that mountain lions in the Project area are facing an extinction vortex fits within both of these categories. Mountain lions in the Project area are part of the Central Coast South (CCS) population, which were granted "candidacy status" in April 2020 under CESA, such that they are afforded the same protections as other CESA-listed species. CEQA requires a "mandatory finding of significance" when a project has the potential to impact a CESA-listed species. (CEQA Guidelines § 15065(a)(1); *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 792 fn. 12.) And such a finding triggers a duty to consider and adopt all feasible alternatives or mitigation

B.4-11 cont.

measures to reduce such impacts. (Pub. Res. Code § 21002.) Moreover, under CESA, the County may not approve projects that could jeopardize the continued existence of these populations or result in destruction of essential habitat (Fish & Game Code § 2053(a)) and agencies must require that appropriate mitigation measures be implemented for projects that could destroy mountain lion habitat or impair connectivity (Fish & Game Code § 2054). Neither the 2018 EIR nor the 2025 PRDSEIR address these issues. Given that at least one mountain lion has been documented using a box culvert under the I-5 adjacent to the Project area (Exhibit E) moving from Grasshopper Canyon westerly into Marple Canyon, and there is other evidence of mountain lion presence in the vicinity,[1] adequate analyses and mitigation regarding the Project's impacts to mountain lions should be provided in a recirculated EIR.

ii. Numerous Scientific Studies Reveal That Mountain Lions in the Project Area are Threatened and the Project will Impact Their Long-term Survival

By way of background, continued habitat loss and fragmentation has led to 10 genetically isolated populations within California (Gustafson et al., 2018, 2021). There are six identified mountain lion populations in the Southern California and Central Coast Evolutionarily Significant Unit ("ESU"), and several are facing an extinction vortex due to high levels of inbreeding, low genetic diversity, high human-caused mortality rates from car strikes on roads, depredation kills, rodenticide poisoning, poaching, disease, and increased human-caused wildfires (Benson et al., 2016, 2019; Ernest et al., 2003, 2014; Gustafson et al., 2018; Riley et al., 2014; Vickers et al., 2015). This is detailed in the Center's petition to the California Fish and Game Commission to protect Southern California and Central Coast mountain lions under the California Endangered Species Act (Yap et al., 2019).

The effective population sizes (N_e) of the six populations within the ESU range from 2.3 to 26.9 (Gustafson et al., 2021). An effective population size of 50 is assumed to be sufficient to prevent inbreeding depression over five generations, while an effective population size of 500 is considered sufficient to retain evolutionary potential in perpetuity (Frankham et al., 2014; Traill et al., 2010). All six populations are well below that minimum threshold of 50 and none have an effective population size anywhere near 500, which indicates that these populations are at serious risk of becoming extirpated. Local mountain lions are located at the boundary of two ESU populations, the Central Coast South (CCS) and San Gabriel/San Bernardino (SGSB) populations. These southern California mountain lion populations are severely struggling. Low genetic diversity and high human-caused mortalities are driving mountain lions in the CCS and Santa Ana Mountains towards an extinction vortex (Benson et al., 2019). Scientists predict that the CCS populations is likely to become extinct within 50 years if gene flow with other mountain lion populations is not improved (Benson et al., 2019; Gustafson et al., 2021). Researchers have found that, of the California mountain lion subpopulations, the SGSB population has the smallest

[1] https://www.inaturalist.org/observations/70048855

B.4-11 cont.

effective population size and the smallest area of available habitat (Dellinger et al., 2020; Gustafson et al., 2021). Scientists suggest that the SGSB population "may be approaching levels of genetic drift and inbreeding similar to the well-monitored and genetically depauperate Santa Ana and Central Coast South populations" (Gustafson et al., 2021). Alarmingly, scientists have documented physical and reproductive signs of inbreeding depression in local mountain lions due to being boxed in by roads and development (Huffmeyer et al., 2021). If inbreeding depression sets in, the CCS population is predicted to have a 99% chance of becoming locally extinct within 50 years (Benson et al., 2019).

The Project area is located in the Sierra Pelona Mountains, an area that researchers have identified as one of the last remaining linkages for statewide genetic connectivity that is critical for the overall genetic health of Southern California and Central Coast mountain lions (Gustafson et al., 2021). It is in a sensitive and highly constrained area where the CCS, SGSB, and Western Sierra Nevada mountain lion populations converge (Yap et al., 2019). And, as mentioned, above, mountain lions have been recorded in the vicinity of the Project area and likely move through the area, as evidenced by the use of a nearby underpass to cross the I-5 going east to west (Exhibit E). One study found a single migrant improved the genetics of a small, isolated and inbred puma population in California (Gustafson et al., 2017), therefore any movement in and near the Project area, especially through adjacent crossings, is critical for gene flow and the long-term survival of local mountain lions. This emphasizes the importance of the Project area for maintaining and enhancing connectivity among and between the subpopulations and preserving habitat in the region. The SEIR fails to disclose this information and therefore fails to comply with CEQA.

Numerous studies highlight the impacts of human activities on mountain lions. Human-caused mortalities—including vehicle strikes, rodenticide poisoning, depredation kills, poaching, and wildfire—are the leading cause of death for mountain lions across California, exceeding natural mortality rates (Benson et al., 2020, 2023; Nisi et al., 2023; Vickers et al., 2015). In addition, human activities also alter these large carnivores' behavior in ways that likely further impede important movement and gene flow. For example, researchers found that mountain lions are so fearful of humans and noise generated by humans that they will abandon the carcass of a deer and forgo the feeding opportunity just to avoid humans (J. A. Smith et al., 2017). The authors concluded that even "non-consumptive forms of human disturbance may alter the ecological role of large carnivores by affecting the link between these top predators and their prey" (J. A. Smith et al., 2017). In addition, mountain lions have been found to respond fearfully upon hearing human vocalizations, avoiding the area and moving more cautiously when hearing humans (J. A. Smith et al., 2017; Suraci et al., 2019).

Other studies have demonstrated other shifts in behavior and movement patterns of pumas in response to human activities, like increased avoidance behavior in areas with more

B.4-11 cont.

roads and higher development densities and increased nocturnal activity as human presence increases (Bolas et al., 2025; Dougherty et al., 2025; Lucas, 2020; Nickel et al., 2020, 2021; Nisi et al., 2022, 2023; J. A. Smith et al., 2015, 2019; Y. Wang et al., 2017; Wilmers et al., 2013, 2021; Yovovich et al., 2020). Pumas have also been found to generally avoid areas with nearby night lighting (Barrientos et al., 2023). Thus, the increased human presence due to the Project's new roads and development could have significant negative impacts on puma survival and behavior, which could reduce the genetic health of the local population and ultimately diminish the long-term survival of the CCC population as well as the neighboring CCN and CCS populations. CEQA requires a recirculated EIR that adequately analyzes these potential impacts.

Another study further documented the impacts of human activities on mountain lions specifically on communication and reproductive behaviors important for their survival (Yovovich et al., 2020). Males use scrapes to delineate territories as well as attract potential mates (Allen et al., 2015, 2016), and the males in the study preferred to use relatively flat areas away from human influence as scrape habitat (Yovovich et al., 2020). Similarly, when nursing females (with kittens less than 8 weeks old) shrank their home ranges to an average of 9 km^2 while their young were most vulnerable, they also selected undeveloped lands away from human disturbance, opting for habitat with protective cover and sufficient water and prey availability (Yovovich et al., 2020). The loss of adequate undisturbed communication and nursery habitat could disrupt important communication and reproductive behaviors that facilitate social structure and overall survival. The authors predicted that future development within the Santa Cruz Mountains could reduce nursery and communication habitat by 20% and 50%, respectively, while further fragmenting the landscape. Such patterns likely extend to other regions within the proposed Southern California/Central Coast ESU.

Other studies document nuanced sensitivities of California mountain lions to human presence, activities, and infrastructure while also providing glimpses of how humans and mountain lions can safely coexist. Pumas in the Santa Cruz Mountains were found to less likely occur in areas with higher development densities (*i.e.*, areas with greater road and/or building densities) (Nickel et al., 2020). This aligns with other studies that have demonstrated that mountain lion avoidance behavior increases with greater development densities (J. A. Smith et al., 2015, 2019; Y. Wang et al., 2017; Wilmers et al., 2013). In addition, researchers found that in open space areas where recreational activities are allowed (*e.g.*, hiking, biking), mountain lions generally avoided human presence and became more nocturnal as human presence increased (Nickel et al., 2020). Similar shifts in puma behavior in response to human activities have been documented in other studies (Lucas, 2020; Suraci et al., 2019; Y. Wang et al., 2015, 2017). There is often a cost of these behavioral shifts, such as increased energy expenditure that could potentially reduce fitness. Studies have found that pumas expend more energy by increasing their kill rates in high housing density areas (J. A. Smith et al., 2017) and having higher nighttime activity in developed areas (Y. Wang et al., 2017). This is further supported by

B.4-11 cont.

a study that found mountain lions increased movement efficiency during the Covid-19 shutdown, which suggests that they incur energetic costs by increasing movement and space-use when avoiding human activity (Benson et al., 2021).

Although pumas have been found to have some flexibility to navigate urbanized landscapes, they spent more than 95% of their time away from developed areas and actively avoided open areas like golf courses, cemeteries, and other altered landscaped spaces (Riley et al., 2021). Mountain lions prefer larger habitat patches that are closer together and further away from buildings (Suraci et al., 2020), and they consistently select native vegetation types with dense cover, like chaparral, riparian woodland, and coastal sage scrub, with shrublands being their preferred habitat (Riley et al., 2021). This highlights the importance of intact and connected natural heterogeneous landscapes to the long-term health and persistence of constrained mountain lion populations. The authors state, "An important requirement for the effective conservation of at-risk mountain lion populations in southern California is preserving and enhancing connectivity between larger natural areas." (Riley et al., 2021). In addition, especially in areas where pumas are severely isolated and wildlife connectivity is already constrained, like in and near the Project area, it is important to note that even a single migrant from a different population can help enhance genetic diversity in inbred puma populations (Gustafson et al., 2017). This suggests that any area with important connectivity is critical for the long-term survival of local pumas. The proposed Project could drive local puma populations towards extinction while harming other wildlife.

There are many scientific studies that provide insights on the profound impacts human activities and infrastructure have on mountain lion survival, and they emphasize the need to adequately assess and mitigate impacts to these CESA candidate species in the Project area. These studies add to the accumulating evidence that mountain lions require a habitat mosaic that provides sufficient room to roam away from human-disturbed areas and connected to expansive, intact, heterogeneous habitats (Beier et al., 1995; Dickson et al., 2005; Dickson & Beier, 2002; Kertson et al., 2011; Zeller et al., 2017). Continued construction of roads and development in mountain lion habitat with little regard for their movement and behavioral needs, especially in an area where mountain lions have been detected and movement is already constrained, has significant direct and indirect lethal and sublethal impacts that threaten the persistence of Southern California and Central Coast puma populations. The SEIR fails to adequately assess and mitigate the Project's impacts to local mountain lions.

Mountain lions are a key indicator species of wildlife connectivity and healthy ecosystems. As the last remaining wide-ranging top predator in the region, the ability to move through large swaths of interconnected habitat is vital for genetic connectivity and their long-term survival. In addition, impacts to mountain lions in the region could have severe ecological consequences; loss of the ecosystem engineer could have ripple effects on other plant and animal

species, potentially leading to a decrease in biodiversity and diminished overall ecosystem function. Many scavengers, including California condors, kit foxes, raptors, and numerous insects, would lose a reliable food source (Barry et al., 2019; Ruth & Elbroch, 2014). Fish, birds, amphibians, reptiles, rare native plants, and butterflies would potentially diminish if this apex predator were lost (Ripple et al., 2014; Ripple & Beschta, 2006, 2008). In fact, a recent literature review found that mountain lions are important ecosystem engineers and have been documented to have ecological interactions with at least 485 plant and animal species (Labarge et al., 2022). Adequate assessment and mitigation of the Project's impacts to mountain lions is necessary to ensure their long-term survival as well as the long-term health of the area's biodiversity and ecosystems. The SEIR fails to adequately analyze and mitigate the Project's impacts to pumas.

B.4-11 cont.

Wildlife connectivity in this region is paramount for the survival of the Southern California mountain lions. Any project that does not adequately assess and address impacts to mountain lions and wildlife connectivity could lead to the extirpation of local mountain lions and severe loss of biodiversity and ecosystem function in the region. Further destruction of wildlife connectivity in the area will push local mountain lions closer towards extinction. See further discussion below regarding the SEIR's requirement to adequately describe, assess, and mitigate impacts to wildlife movement and connectivity.

D. The County Must Revise the EIR to Consider Significant New Information Regarding Burrowing Owls.

B.4-12

i. CEQA and CESA Require Analysis and Mitigation for Impacts to Burrowing Owls.

The previous EIR for the Project noted numerous burrowing owls have been documented in the Project area. Therefore, relevant authorities require preparation of a subsequent EIR in these circumstances to ensure potential impacts to burrowing owls are fully analyzed and, if needed, mitigated. The California Environmental Quality Act ("CEQA") states that a subsequent or supplemental EIR may be required when either (1) substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report or (2) new information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available. (Pub. Res. Code § 21166.)

New information since the EIR was approved in 2018 shows that western burrowing owls continuing to decline in California. On October 10, 2024, the California Department of Fish and Wildlife (CDFW) accepted a petition to list the Western Burrowing Owl as endangered under the California Endangered Species Act (CESA), determining the listing "may be warranted" and

advancing the species to the candidacy stage of the CESA listing process.[2] As a candidate species, the western burrowing owl now has full protection of a threatened species under CESA. (See Cal. Fish & Game Code §§ 2074.4, 2085; Cal. Code Regs. tit. 14 § 783.1(b).) "Take" of any endangered, threatened, or candidate species that results from a project is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9.) Take of individual burrowing owls and their nests is defined as "hunt, pursue, catch, capture or kill, or attempt to hunt, pursue, catch, capture or kill," and is prohibited by sections 3503, 3503.5 and 3513.

B.4-12 cont.

CESA's purpose is "to conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat." (Fish & Game Code § 2052.) As such, CESA protects not only species facing imminent risk of extinction, but also those on a trajectory towards eventual extinction. An "endangered" species is one that is "in serious danger of becoming extinct throughout all, or a significant portion, of its range." (*Id*. § 2062.) In contrast, a "threatened" species is one that, "although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of . . . special protection and management efforts." (*Id*. § 2067.) And "candidate" species are those noticed for review for future listing or proposed to be added as endangered or threatened species, (Cal. Fish & Game Code §§ 2068, 2074.4), while also receiving protection under CESA. (Cal. Fish & Game Code §§ 2074.4, 2085; *see also* Cal. Code Regs. tit. 14 § 783.1(b).)

CESA requires development of "reasonable and prudent alternatives" that will not jeopardize the existence of a listed species but will maintain the project purpose to the greatest extent feasible. (Cal. Fish & Game Code § 2053(b).) In the event that such alternatives are infeasible, agencies may still approve individual projects if appropriate mitigation measures are implemented. (Cal. Fish & Game Code § 2054.)

CESA envisions these mandates will be incorporated into the CEQA process. (Cal. Fish & Game Code §§ 2064-2065; Cal. Code Regs., tit. 14, §§ 783.3 & 783.5.) CEQA requires a "mandatory finding of significance" if substantial evidence indicates that a Project may cause a "wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species[.]" (CEQA Guidelines § 15065(a)(1).) This means that projects that reduce a listed species' habitat or reduce the number or range of a listed species are deemed to have significant impacts on the environment as a matter of law. (See *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 792 fn. 12 [citing *Defend the Bay v. City of Irvine* (2004) 119 Cal.App.4th 1261, 1273–1274].)

[2] https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=227089&inline

CEQA requires a "mandatory finding of significance" when a project has the potential to impact a CESA-listed species. (CEQA Guidelines § 15065(a)(1); *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 792 fn. 12.) And such a finding triggers a duty to consider and adopt all feasible alternatives or mitigation measures to reduce such impacts. (Pub. Res. Code § 21002.) Moreover, under CESA, the County may not approve projects that could jeopardize the continued existence of these populations or result in destruction of essential habitat (Fish & Game Code § 2053(a)) and agencies must require that appropriate mitigation measures be implemented for projects that could destroy mountain lion habitat or impair connectivity (Fish & Game Code § 2054). Neither the 2018 EIR nor the 2025 SEIR address these issues. Given that numerous burrowing owls have been documented in the Project area (2018 EIR Exhibit 5), adequate analyses and mitigation regarding the Project's impacts to burrowing should be provided in a recirculated EIR.

B.4-12 cont.

E. The County Must Revise the EIR to Consider Significant New Information Regarding Habitat Connectivity.

B.4-13

The California Environmental Quality Act (CEQA) requires an EIR to provide decision-making bodies and the public with detailed information about the effect a proposed project is likely to have on the environment, to list ways in which the significant effects of a project might be minimized, and to indicate alternatives to the project. (Pub. Res. Code § 21061.) CEQA further requires a lead agency to mitigate to the extent feasible significant impacts. (CEQA Guidelines § 15064.4.) The SEIR fails to provide sufficient analyses and mitigation for the Project's potential impacts to wildlife connectivity and special-status species that rely on connected habitats in and near the Project area, including mountain lions, and therefore fails to comply with CEQA. A recirculated EIR that complies with CEQA must be prepared.

New information since the EIR was approved in 2018 that mountain lions in the Project area are facing an extinction vortex and have been documented in the vicinity of the Project area, including an individual using an underpass adjacent to the Project area moving from Grasshopper Canyon westerly into Marple Canyon (Exhibit E), qualifies as (1) a substantial change with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report and (2) new information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available. (Pub. Res. Code § 21166.). Given that mountain lions in the Project area are part of the Southern California and Central Coast proposed ESU that was granted "candidacy status" in April 2020 under CESA and mountain lions require ample amounts of intact, heterogeneous habitats to move freely and find the resources they need to survive, CEQA requires a supplemental EIR that adequately assesses and mitigates the Project's impacts to wildlife connectivity and special-status species.

B.4-14

ii. The SEIR Fails to Adequately Assess and Mitigate the Project's Impacts to Regional Wildlife Connectivity.

The 2018 EIR fails to consider the critical importance of regional wildlife connectivity for the long-term survival of mountain lions and many other species in the area. The 2018 EIR also fails to adequately disclose, assess, and mitigate the Project's impacts to wildlife connectivity. As mentioned above, the Project area is located in the Sierra Pelona Mountains, a mountain range within the Transverse Ranges that scientists have highlighted as "a critical conservation priority in order to maintain gene flow between the Southern Coast [mountain lion] populations and the Sierra Nevada or Central Coast groups" (Gustafson et al., 2021). The Project would remove mountain lion habitat and extend and fortify a movement barrier (i.e., the I-5) in an area where connectivity is already tenuous, as shown by numerous mountain lion genetics studies (e.g., Benson et al., 2019; Ernest et al., 2003; Gustafson et al., 2018, 2021). New roads and development and increased human activities in the area will further degrade any future connectivity restoration work at this barrier. The Project will significantly impact the area's rich biodiversity and could push the local mountain lions, particular the CCS and SGSB populations, further toward local extinction.

B.4-15

ii. The SEIR Fails to Adequately Assess and Mitigate the Project's Impacts to Wildlife Connectivity in and Adjacent to the Project Area.

The County relies on the inadequate and outdated 2018 EIR, which dismisses and diminishes the importance of the Project area for wildlife movement because of the presence of a dam, lagoon, and some development west of the lagoon, stating that "[o]nly local movement of species habituated to an urban landscape (e.g., coyote) are expected to navigate the extensive set of existing barriers. However, the SEIR fails to provide substantial evidence to support such claims. The 2018 EIR reports almost 900 acres of sage scrub communities, more than 450 acres of grasslands (which includes a significant amount of native grasslands), and almost 15 acres of riparian and open water communities (2018 EIR Table 5.2-1), and numerous sensitive and special-status species are known to occur in the Project area, including but not limited to western spadefoots, western toads, gopher snakes, common kingsnakes, coastal California gnatcatchers, burrowing owls, golden eagles, white-tailed kites, badgers, and mountain lions. And the Project area is surrounded by public lands and other undeveloped wildlands. Clearly numerous wildlife species are using and moving through the Project area. Yet no wildlife movement studies or adequate analyses were conducted. The SEIR fails to adequately disclose, assess, and mitigate the Project's impacts to wildlife connectivity.

The 2018 EIR fails to adequately assess and mitigate the Project's impacts to wildlife movement that is reliant on more than three miles of blue-line stream, ephemeral waters, and

B.4-15 cont.

almost 15 acres of riparian and open water habitat in the Project area. In fact, the 2018 EIR and the current EIR fail to mention Grasshopper Creek and its tributaries in its wildlife movement discussion at all, merely referring to Castaic Creek and Castaic Dam. This is a serious misrepresentation of the Project area's importance for wildlife connectivity.

Permanent and ephemeral streams and wetlands provide important live-in and move-through habitat for a wide variety of species. For example, riparian habitats associated with streams provide important connectivity for a wide variety of species, including numerous resident and migratory birds, monarch butterflies (which have been documented nearby[3]), wide-ranging animals like bobcats and mountain lions.

Intermittent and ephemeral rivers and streams are often underestimated habitats despite their importance as live-in and move-through habitat. Recent scientific literature states that "[i]n many intermittent streams, remnant pools persist after flow ceases and provide refuge for aquatic organisms"(Bogan et al., 2019). The researchers state:

> Remnant pools in intermittent streams should be a focus of conservation efforts in regions with a Mediterranean climate, especially during extreme droughts. Native fauna adapted to harsh intermittent flow regimes can thrive in these habitats, whereas non-native taxa may fare poorly. Furthermore, remnant pools supported by deep groundwater sources, such as those along geological faults, may provide both ecological refuge and evolutionary refugia for freshwater biota. (Bogan et al., 2019)

Hydroperiod diversity is important for native amphibian population stability. Intermittent and ephemeral habitats are important refugia from invasive fish and American bullfrogs that outcompete and prey upon native amphibians in permanent waterbodies. They may also be important refuge and recovery sites for native amphibian species after extreme drought. Many native amphibian species, like western spadefoot and western toads that have been documented in the Project area, are adapted to successfully reproduce in seasonally-drying wetlands, including intermittent streams and vernal pools. But during dry years some species may go to permanent waterbodies to breed while species with long-lived adult forms may be able to recover quickly from a skipped breeding season. Although amphibian population declines due to drought have been observed, these adaptations make them more resilient than invasive species to rebound and recover (Moss et al., 2021). In fact, researchers have found that invasive fish and bullfrogs were extirpated from several permanent ponds that had completely dried out during extreme drought, which, once refilled with water, opened up new sites for native species to re-colonize

[3] https://www.inaturalist.org/observations?subview=map&taxon_id=48662

(Moss et al., 2021). This indicates that conserving intermittent and ephemeral waterways is vital for native amphibians to persist, particularly in areas where invasive species may occur or have the potential to occur. As climate change intensifies, preservation of connected habitats with diverse hydroperiods is vital for the persistence and metapopulation dynamics of native amphibians.

B.4-15 cont.

Around 90% to 95% of historic riparian habitat in the state has been lost. Continued destruction and degradation of what little is left will have severe, harmful impacts on overall biodiversity, ecosystem function and climate change resilience. Yet the SEIR ignores and fails to adequately assess and mitigate the Project's impacts to permanent and ephemeral streams and wetlands that both facilitate wildlife movement and need connectivity to upland habitat.

The SEIR's inadequate description of the baseline environmental conditions on the Project site and vicinity undermine its effectiveness as an informational document. It is critical for the SEIR to clearly disclose and adequately assess the importance and function of the habitats that occur in the Project area and the special-status species that are known or have the potential to occur or historically occurred in these habitats so that the public can determine whether the EIR adequately assesses and mitigates the Project's impacts. The SEIR effectively dismisses and downplays the Project area's importance supporting high levels of biodiversity and wildlife connectivity and ultimately fails to adequately describe and assess existing conditions while contradicting the best available science. The SEIR fails to mitigate impacts to wildlife connectivity, mountain lions, and other sensitive species to less than significant and fails to comply with CEQA.

As detailed in a 2021 Center Report (Yap, Rose, Anderson, et al., 2021), roads and development create barriers that lead to habitat loss and fragmentation, which harms native wildlife, plants, and people. As barriers to wildlife movement, poorly-planned development and roads can affect an animal's behavior, movement patterns, reproductive success, and physiological state, which can lead to significant impacts on individual wildlife, populations, communities, landscapes, and ecosystem function (Brehme et al., 2013; Ceia-Hasse et al., 2018; Haddad et al., 2015; Marsh & Jaeger, 2015; Mitsch & Wilson, 1996; Trombulak & Frissell, 2000; van der Ree et al., 2011). For example, habitat fragmentation from roads and development has been shown to cause mortalities and harmful genetic isolation in mountain lions in Southern California and along the Central Coast (Ernest et al., 2014; Gustafson et al., 2021; Riley et al., 2014; Vickers et al., 2015), increase local extinction risk in amphibians and reptiles (Brehme et al., 2018; Cushman, 2006)., cause high levels of avoidance behavior and mortality in birds and insects (Benítez-López et al., 2010; Kantola et al., 2019; Loss et al., 2014), and alter pollinator behavior and degrade habitats (Aguilar et al., 2008; Goverde et al., 2002; Trombulak & Frissell, 2000).

B.4-15 cont.

Habitat loss and fragmentation also severely impacts plant communities. An 18-year study found that reconnected landscapes had nearly 14% more plant species compared to fragmented habitats, and that number is likely to continue to rise as time passes (Damschen et al., 2019). The authors conclude that efforts to preserve and enhance connectivity will pay off over the long-term (Damschen et al., 2019). In addition, connectivity is important to allow for range shifts and species migrations as climate changes (Cushman et al., 2013; Heller & Zavaleta, 2009; Krosby et al., 2018). Loss of wildlife connectivity decreases biodiversity and degrades ecosystems. It also prevents the reestablishment of native species, like bald eagles, vernal pool fairy shrimp, and valley elderberry longhorn beetles that may occur in or near the Project area.

Edge effects like traffic, noise, and light from Project construction and operation will have impacts on wildlife and wildlife movement in an area that is already constrained. This is important to consider when open space and connectivity enhancement projects (i.e., a wildlife crossing project in the CDFW priority barrier at El Casco Creek) are nearby, as numerous wildlife have been found to be sensitive to edge effects. For example, field observations and controlled laboratory experiments have shown that traffic noise can significantly degrade habitat value for migrating songbirds (Ware et al., 2015). Subjects exposed to 55 and 61 dBA (simulated traffic noise) exhibited decreased feeding behavior and duration, as well as increased vigilance behavior (Ware et al. 2015). Such behavioral shifts increase the risk of starvation, thus decreasing survival rates. Another study found a 28% decrease in bird abundance in areas when traffic noise was present compared to when there was no traffic noise (McClure et al., 2013). Negative edge effects of roads and development have been documented in wide-ranging predators, such as mountain lions and bobcats (Crooks, 2002; Delaney et al., 2010, 2021; Lee et al., 2012; Riley et al., 2006; J. A. Smith et al., 2015), as well as smaller species with poor dispersal abilities, such as song birds, small mammals, and herpetofauna (Benítez-López et al., 2010; Cushman, 2006; Kociolek et al., 2011; Slabbekoorn & Ripmeester, 2008).

It is widely recognized that the continuing fragmentation of habitat by humans threatens biodiversity and diminishes our (humans, plants, and animals) ability to adapt to climate change. In a report for the International Union for Conservation of Nature (IUCN), world-renown scientists from around the world stated that "[s]cience overwhelmingly shows that interconnected protected areas and other areas for biological diversity conservation are much more effective than disconnected areas in human-dominated systems, especially in the face of climate change" and "[i]t is imperative that the world moves toward a coherent global approach for ecological connectivity conservation, and begins to measure and monitor the effectiveness of efforts to protect connectivity and thereby achieve functional ecological networks" (Hilty et al., 2020). New roads and development and increased human activities in the Project area will significantly impact wildlife connectivity and the rich biodiversity in the region. The SEIR fails to adequately disclose, assess, and mitigate the Project's impacts to wildlife connectivity.

B.4-16

III. THE PRDSEIR'S NEW ANALYSIS OF WILDFIRE RISK REMAINS INADEQUATE.

Wildfires are a natural and necessary process in many of California's ecosystems, and many areas need beneficial fire to restore ecosystem health and cultural connection to the land. However, the last decade of unprecedented wildfires in the wildland urban interface (WUI)—where homes extend into the natural landscape—has been devastating for people and wildlife. Poor land-use planning plays a primary role in destructive wildfire.

Since 2015, California wildfires have killed more than 230 people and destroyed more than 75,000 structures in the wildland urban interface (WUI), where homes extend into the natural landscape. Hundreds of thousands of people have had to evacuate their homes and endure power outages, and millions have been exposed to unhealthy levels of smoke and toxic air, soil, and water pollution. Meanwhile costs for fire suppression, loss of life, medical expenses, property damage, and indirect economic losses are in the hundreds of billions of dollars.

On January 7, 2025, the world watched Los Angeles go up in flames. In a matter of just three days, fires killed at least 29 people, destroyed more than 16,000 structures, and burned more than 34,000 acres of shrublands and oak woodlands. Post-fire rains caused flooding, mudslides, and debris flows, which threatened communities and polluted nearby waters. Toxic debris plagues the landscape, with dangerously high levels of lead, arsenic, and other metals in soils within and near the fire footprint.

Costs of wildfires are skyrocketing. Researchers found that the 2018 California wildfires, which included the Camp Fire that burned through Paradise and the Woolsey Fire that burned through Ventura and Santa Barbara, resulted in $148.5 billion in in capital losses, health costs related to air pollution exposure, and indirect losses due to broader economic disruption cascading along regional and national supply chains (D. Wang et al., 2021).

Experts estimate the costs of the 2025 Los Angeles fires could be as high as $432 billion when considering property and capital losses, wages lost by local businesses and employees, and a decline in county-level GDP (Li & Yu, 2025). These estimates do not include the costs of health impacts; costs could continue to rise as we learn more about the extent of the damage and the long-term impacts of exposure to toxic air pollutants, soil pollutants, contaminated water, and the trauma of fleeing wildfires and/or losing homes, schools, and communities.

The science is irrefutable. Almost all destructive wildfires are accidentally ignited by humans or human infrastructure near roads and development (Balch et al., 2024; Chen & Jin, 2022; Syphard, Rustigian-Romsos, et al., 2019). Development in fire-prone landscapes increases ignition risk while climate change is amplifying fire conditions. Meanwhile, developers make

money by selling risky homes, leaving the burden of recovery on homeowners and taxpayers. Yet the SEIR fails to adequately assess and mitigate the Project's impacts to wildfire risk and instead downplays the Project area's existing conditions and creates a false sense of security with minimal and inadequate mitigation.

B.4-16 cont.

CEQA requires an EIR to identify and analyze a project's significant environmental impacts, including those impacts caused or exacerbated "by bringing development and people into the area affected." (Pub. Resources Code, §§ 21002, 21002.1, subd. (a); CEQA Guidelines, § 15126.2, subd. (a).) The impacts of development in areas prone to wildfire specifically require consideration: "the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, *wildfire risk areas*), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazard areas." (CEQA Guidelines, § 15126.2, subd. (a), emphasis added.)

In 2018, the State officially recognized that introduction of development in the WUI increases ignition risk. (OPR 2018 Final Statement of Reasons – Update to CEQA Guidelines Checklist]; see also *Clews Land & Livestock, LLC v. City of San Diego* (2017) 19 Cal.App.5th 161, 193 [recognizing potential for significant environment effects when project brings new development to a wildfire prone area].) Moreover, as discussed in a 2021 Center Report, "*Built to Burn: California's Wildlands Developments are Playing with Fire*," policymakers must reckon with California's wildfire history and acknowledge that reckless land-use policies are increasing wildfire risk and putting more people in harm's way (Yap, Rose, Broderick, et al., 2021).

A. The PRDSEIR Fails to Adequately Describe and Assess the Project's Wildfire Ignition Risk.

B.4-17

A California Court of Appeal recently blocked development over wildfire concerns because the county failed to assess wildfire ignition risk. (See *People ex rel. Bonta v. County of Lake* (2024) 105 Cal.App.5th 1222, 1235 [finding that EIR must sufficiently discuss the project's potential adverse effect of human-cause ignitions and analyze in some detail how the project's design or mitigation measures alleviates such risks, and lead agency failed to utilize industry standard modeling tools or appropriate methodologies for its conclusory findings]). The PRDSEIR fails to do this.

The PRDSEIR falsely and erroneously states that "[n]either construction nor operation of the Project would exacerbate wildfire risks, thereby exposing occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire" (PRDSEIR at 2-67) without providing substantial evidence to support such a claim. The PRDSEIR further dismisses wildfire

B.4-17 cont.

risk, stating that the "level of risk is no greater than similar communities in the area and generally better than projects constructed prior to the current regulatory standards" (PRDSEIR at 2-66), without adequately disclosing or assessing the area's baseline conditions. The wildfire risk of existing communities in fire-prone areas is exceptionally high, as is evidenced by the numerous accidental ignitions in the WUI that have caused unprecedented levels of destruction and death in the last decade, and the risk of these existing communities is irrelevant to the Project's needed wildfire risk assessment. The science clearly shows that placing any new human presence in high fire-prone areas inevitably increases ignition risk. The Project would bring more roads and development and increased human activity into fire-prone areas, thereby increasing ignition risk and endangering the lives of new residents and existing communities.

According to a report from Governor Gavin Newsom's Office, construction of more homes in the wildland-urban interface is one of the main factors that "magnify the wildfire threat and place substantially more people and property at risk than ever before" (Governor Newsom's Strike Force, 2019). Another 2019 study found that housing and human infrastructure in fire-prone wildlands are the main drivers of fire ignitions and structure loss (Syphard et al., 2019). Sprawl developments extending into habitats that are prone to fire have led to more frequent wildfires caused by human ignitions, like power lines, arson, improperly disposed cigarette butts, debris burning, fireworks, campfires, or sparks from cars or equipment (Alexandre, Stewart, Keuler, et al., 2016; Alexandre, Stewart, Mockrin, et al., 2016; Balch et al., 2017; Bistinas et al., 2013; Keeley et al., 1999; Keeley & Fotheringham, 2003; Keeley & Syphard, 2018; Radeloff et al., 2018; Syphard et al., 2007, 2012; Syphard, Rustigian-Romsos, et al., 2019).

Reckless land-use planning that extends the WUI further into California's fire-prone landscape is causing fires to be more destructive. Almost all destructive wildfires are accidentally ignited by humans or human infrastructure near roads and development (Balch et al., 2024; Chen & Jin, 2022; Syphard, Rustigian-Romsos, et al., 2019). For example, the 2018 Camp and Woolsey fires and 2017 Tubbs and Thomas fires were sparked by powerlines or electrical equipment and the 2017 Carr fire was caused by car sparks. Exhibit 3.2-6 in the EIR shows the increased ignitions along roads. And although still under investigation, embers from a previous fire ignited by fireworks is suspected to have caused the Palisades Fire and a spark from a southern California Edison powerline likely caused the Eaton Fire. Placing more homes and people in high fire-prone areas would only increase the potential likelihood of these ignition sources, as has been documented in multiple scientific studies (Balch et al., 2017; Bistinas et al., 2013; Keeley et al., 1999; Keeley & Fotheringham, 2003; Keeley & Syphard, 2018; Radeloff et al., 2018; Syphard et al., 2007, 2012; Syphard, Rustigian-Romsos, et al., 2019).

The PRDSEIR also fails to adequately discuss the role of climate as it pertains to wildfire risk in the Project area. California's climate facilitates wildfire. With typically cool wet winters and hot dry summers, vegetation will grow and then dry out over the course of the year. Strong

seasonal winds, known as the Santa Ana winds in the Project area, occur in the fall and winter. If there is little or no precipitation prior to a strong wind event and a fire has been ignited, the winds can spread the fire dangerously fast (Cayan et al., 2022; Keeley et al., 2024).

B.4-17 cont.

Winds drive the fastest, deadliest, and most destructive wildfires in the U.S. (Balch et al., 2024). And researchers have found that fires are spreading faster. Between 2001 and 2020 the maximum daily growth rate of wildfires in the U.S. more than doubled, and California fires grew almost 400% faster (Balch et al., 2024). Experts suggest that this trend could be due to warming temperatures, habitat conversion to more flammable vegetation (i.e., nonnative grasses), and/or the co-occurrence of high winds with increasing human-related ignitions (Balch et al., 2024). Although the winds do not ignite the fires, ignitions in the WUI often coincide with strong wind events (Abatzoglou et al., 2018; Hantson et al., 2022; Mietkiewicz et al., 2020). Almost always ignited by humans and human infrastructure in dry shrublands and grasslands, these wildfires spread quickly and are difficult to contain during windy conditions, which amplifies their negative impacts to people and ecosystems (Hantson et al., 2022).

The three most destructive wildfires in California were driven by wind. Earlier this year, the Eaton Fire burned more than 10,000 acres within just 16 hours of ignition, damaging more than 9,000 structures and killing at least 18 people. The Palisades Fire burned more than 17,000 acres in the first 36 hours of ignition and resulted in almost 7,000 structures burning and at least 12 people dying. And in 2018 the Camp Fire burned more than 50,000 acres in its first day, eventually becoming California's deadliest and most destructive wildfire, killing 85 people and destroying almost 19,000 structures.

B.4-18

The Hughes Fire, which ignited on January 22, 2025 just east of the Project area, burned through more than 10,000 acres of land in less than 11 hours.[4] Although no one was injured, 31,000 people were under mandatory evacuations and more than 14,000 structures were at risk of burning. Yet the SEIR fails to mention this nearby fair and fails to adequately disclose and assess the prevailing winds in the Project area that influence and exacerbate the Project's wildfire ignition risk. The SEIR fails to comply with CEQA.

The PRDSEIR also fails to adequately assess the impacts climate change on wildfire risk. Climate change is exacerbating extreme weather conditions and wildfire impacts (Williams et al., 2019). The number of days with extreme fire weather conditions in California has doubled since 1980, and further climate change will amplify that trend (Goss et al., 2020). Hotter and drier conditions combined with later and shorter rainy seasons are making the landscape more conducive to wildfire ignitions and spread while lengthening the fire season (Dong et al., 2022; Goss et al., 2020; Luković et al., 2021; Ma et al., 2021; Swain, 2021). Wildfire risk is now year-

[4] CalFire (2025). Hughes Fire Status Update Reports. Available at: https://www.fire.ca.gov/incidents/2025/1/22/hughes-fire/updates.

round. Continued climate change and increasing fire conditions will lead to more intense and more destructive wildfires (MacDonald et al., 2023). The SEIR fails to adequately assess the Project's wildfire risk.

B.4-18 cont.

B.4-19

B. The PRDSEIR Fails to Adequately Mitigate the Project's Wildfire Risk.

The PRDSEIR fails to adequately mitigate wildfire ignition risk in the Project area while attempting to instill a false sense of security. The PRDSEIR erroneously concludes that the Project would have a "less than significant impact" before mitigation and "no mitigation is necessary" (PRDSEIR at 2-69) despite the best available science and numerous fire science experts demonstrating study after study that any increase extension of development into fire-prone areas increases ignition risk. Instead, the PRDSEIR relies on "project design features" for wildfire prevention and protection (PRDSEIR at 2-67); however, these measures are inadequate. As courts have repeatedly held, project design features cannot be used to avoid thorough analysis of a project's environmental impacts and adoption of adequate mitigation. (*Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645.) In particular, the efficacy of project design features cannot be assessed against an undefined wildfire impact and lack the enforceability of mitigation measures. Therefore, the Project's wildlife analysis is inadequate and violates CEQA.

The science clearly shows that placing any new human presence in high fire-prone areas inevitably increases ignition risk, yet the PRDSEIR simply relies on "project design features" that include compliance with Chapter 7A of the California Building Code, internal sprinklers, fuel breaks and fuel modification zones, a new fire station location (not an actual fire station with funded equipment and personnel) (PRDSEIR at 2-67). These measures do not guarantee safety when (not if) a fire burns through the area. While fire-resistant measures can reduce wildfire risk, they cannot make structures or communities fireproof. In an analysis that included more than 40,000 structures exposed to wildfire between 2013 and 2018 in California, many structures deemed "firesafe" were destroyed. And while an analysis conducted in the aftermath of the 2018 Camp Fire showed that new building codes improved home survival, with 38.5% of homes built to code undamaged compared to 11.5% of homes built prior to 2008, 61.5% of the homes built to fire-safety codes were still destroyed (Knapp et al., 2021).

In addition, even if the Project includes "a new fire station location" (PRDSEIR at 2-67), there is no guarantee that a fire station would actually be built. And even if it were to be built, it is unclear if human and monetary capital will be sufficient to sustain and maintain a new fire station. There is no requirement that the developer pay for the county's costs of building or operating a station, nor is there any guarantee that sufficient firefighting personnel and equipment will be available. During the LA wildfires in January 2025, firefighters lacked enough personnel and fire engines to keep all communities safe (Fuller et al., 2025; Toohey & Fry, 2025). The personnel cost over the life of the Project (essentially forever) will likely be hundreds

of millions of dollars. Funding is already lacking for the increasing costs of fire suppression and property damage from wildfires in California, and the developer is not required to reimburse the California Department of Forestry and Fire Protection (CalFire) for the many millions (or billions) of dollars CalFire will likely expense when (not if) Centennial needs to be defended from wildfire. The cost of fire suppression in areas managed by CalFire has skyrocketed from $114 million in the 2000-2001 fiscal year to close to $3 billion for the 2020-2021 and 2021-2022 fiscal years combined (CalFire 2022). The Legislative Analyst's Office (LAO) reported that CalFire used an estimated $3.3 billion for wildfire protection and suppression in the 2022-2023 fiscal year (LAO 2023). And as mentioned previously, climate change is amplifying extreme weather conditions and wildfire risk (Goss et al., 2020; Swain, 2021; Swain et al., 2018, 2025), which is making it more challenging to protect communities from wildfire. Such information must be analyzed when assessing wildfire risk. The PRDSEIR fails to adequately assess and mitigate the Project's impacts to wildfire risk to less than significant.

B.4-19 cont.

Development in and near fire-prone areas should be avoided. If unavoidable, mitigation measures should require structures to have ember-resistant vents, fire-resistant roofs, fire-resistant siding, double-paned windows, and irrigated defensible space immediately adjacent to structures and around communities. External sprinklers (not internal sprinklers, which are proposed in the SEIR) with an independent water source could reduce structures' flammability. Rooftop solar and clean energy microgrids could reduce fire risk from utilities' infrastructure during extreme weather. In addition, mitigation measures should include equitably retrofitting existing communities near the Project area with similar fire-resilient measures, providing wildfire personal protective equipment (e.g., N95 masks, air purifiers), and shelter-in-place facilities. Education and awareness for workers, new residents, and nearby communities should be provided and include how to reduce ignition risk. Maintenance and enforcement of ignition reduction measures should be funded and implemented in perpetuity. In addition, developers should be responsible for the insurability of homes and structures as well as recovery and remediation costs when (not if) a fire occurs in or near the Project area.

C. The EIR Must Incorporate Traditional Ecological Knowledge and Indigenous Science into Its Wildfire Analysis.

B.4-20

The PRDSEIR fails to mention or discuss the area's historical fire regimes and the role Indigenous communities likely played in shaping the fire ecology of habitats in and adjacent to the Project area. Indigenous communities should be included in discourse over climate change and wildfire. They are disproportionately impacted by wildfire. Native Americans were found to be six times more likely than other groups to live in high fire-prone areas, and high vulnerability due to socioeconomic barriers makes it more difficult for these communities to recover after a large wildfire (Davies et al., 2018). In addition, farmworkers, who are majority people of color

and often include migrant workers that come from Indigenous communities, often have less access to healthcare due to immigration or economic status. They are more vulnerable to the health impacts of poor air quality due to increased exposure to air pollution as they work. Yet farmworkers often have to continue working while fires burn, and smoke fills the air, or risk not getting paid (Herrera, 2018; Kardas-Nelson et al., 2020; Parshley, 2018).

B.4-20 cont.

Ramos (2022) states, "Indigenous communities have often been marginalized in the sciences through research approaches that are not inclusive of their cultures and histories." Traditional ecological knowledge ("TEK") is often excluded from analyses or distilled to conform to Western science (Ramos, 2022). EIRs, like this one, often fail to acknowledge that Indigenous communities and cultural burning played a role in California's historical fire activity and often only mention previous wildfires in the area in CalFire records. This perpetuates the exclusion and marginalization of Indigenous communities and TEK. Consultation with local Native Tribes and incorporation of Indigenous science, including but not limited to oral histories, ethnographies (that may include burn scars and charcoal records), and archeological data should be incorporated in fire history analysis. As a society, we need to work towards integrative research that "transcends disciplinary boundaries" and employs a range of methodological options to get a deeper understanding of the relationship between people and ecosystems (Ramos, 2022). Doing so will help inform fire management strategies and mitigation measures that work towards reducing harms of wildfire to people while facilitating beneficial fire for the appropriate ecosystems.

D. Increased Development in Fire Zones Disrupts Natural Fire Regimes and Harms California's Ecosystems and Wildlife.

B.4-21

Wildlife and the habitats they rely on have also suffered from the last decade of unprecedented fires in the WUI. Fragmented populations of sensitive species, like mountain lions, California condors, and San Joaquin kit foxes, are vulnerable to further habitat loss and fragmentation as well as the fires themselves, smoke inhalation and air pollution, post-fire landslides, and toxic runoff. The Project could amplify harms by increasing unintentional human-driven wildfires that disrupt natural fire regimes, further degrade ecosystems, and threaten California's wildlife.

E. Unintentional Wildfires Caused by Poorly Sited Development Cause Poor Air Quality and Harm People.

B.4-22

As discussed in the Center for Biological Diversity's report, *The True Cost of Sprawl: Bad Planning Harms People, Wildlife and the Climate* (Reid-Wainscoat et al., 2024), unintentional wildfires due to human activity and ill-placed developments lead to increased occurrences of poor outdoor and indoor air quality from $PM_{2.5}$ from smoke (*e.g.*, Phuleria et al.,

2005), which can have both acute and long-term health effects that disproportionately affect vulnerable populations, like children, the elderly, those with underlying chronic disease, low-income communities, and communities of color. Hospital visits for respiratory symptoms (*e.g.*, asthma, acute bronchitis, pneumonia, or chronic obstructive pulmonary disease) and cardiovascular symptoms (*e.g.*, congestive heart failure, ischemic heart disease, and myocardial infarction) have been shown to increase during and/or after fire events (Delfino et al., 2009; Künzli et al., 2006; Liu et al., 2015; Rappold et al., 2012; Reid, Brauer, et al., 2016; Viswanathan et al., 2006). In addition, epidemiologists have found that increased exposure to wildfire smoke may also be linked to higher rates of dementia (B. Zhang et al., 2023; Z. Zhang et al., 2023). Researchers estimated that between 2008 and 2018 more than 50,000 premature deaths were caused by California wildfire smoke (Connolly et al., 2024). And wildland firefighters are suffering disproportionately high rates of cancer and other serious diseases, likely due to extreme smoke exposure (Hwang et al., 2023; Johnson & Lam, 2023), as well as mental health issues due to extended fire seasons and working extended shifts away from their families (Ashton et al., 2018; Bransford et al., 2018; Del Real & Kang, 2018; Greene, 2018; Gutierrez, 2018; Simon, 2018).

B.4-22 cont.

Increases in wildfire also result in higher frequency and toxicity of smoke exposure to communities in the path of and downwind of the fires. This has become evident especially with the 2025 LA wildfires, where toxic air pollution and runoff from burned buildings and urban infrastructure are a growing concern. This can lead to harmful public health impacts due to increased air pollution not only from burned vegetation, but also from burned homes, commercial buildings, cars, etc. Buildings and structures often contain plastic materials, metals, and various stored chemicals that release toxic chemicals when burned, such as pesticides, solvents, paints, and cleaning solutions (Weinhold, 2011). During the 2018 Camp Fire that burned 19,000 structures, the smoke caused dangerously high levels of air pollution in the Sacramento Valley and Bay Area and the California Air Resources Board found that high levels of heavy metals like lead and zinc traveled more than 150 miles (CARB, 2021). And unsafe levels of lead, arsenic, and other dangerous metals have been documented in and downwind of the Eaton and Palisades fire footprints (Champlin, 2025; H. Smith & Briscoe, 2025).

F. More Unintentional Ignitions Due to Development in Fire Zones Increases Firefighting Costs and Strain on Firefighters.

B.4-23

More development in fire-prone areas will necessitate significant firefighting costs from both state and local authorities. CalFire is primarily responsible for addressing wildfires when they occur, and its costs have continued to increase as wildfires in the wildland-urban interface have grown more destructive. As mentioned above, the cost of fire suppression in areas managed by CalFire has skyrocketed from $114 million in the 2000-2001 fiscal year to close to $3 billion for the 2020-2021 and 2021-2022 fiscal years combined (CalFire 2022). The Legislative

Analyst's Office (LAO) reported that CalFire used an estimated $3.3 billion for wildfire protection and suppression in the 2022-2023 fiscal year (LAO 2023). This does not include the cost of lives lost, property damages, or clean up. As noted above, the vast majority of wildfires in California are unintentionally ignited by people in poorly-planned development in high fire prone areas (Balch et al., 2017; Keeley & Syphard, 2018). More development in high fire hazard areas will increase unintentional ignitions and associated fire suppression costs.

B.4-23 cont.

Climate change is increasing extreme weather and fire conditions, which, in combination with poorly planned development, has led to more ignitions and longer fire seasons that are increasing strain on over-burdened firefighters and first responders. According to Captain Michael Feyh of the Sacramento Fire Department, California no longer has a fire season (Simon, 2018); wildfires in California are now year-round because of increased human ignitions in fire-prone areas. Emergency calls to fire departments have tripled since the 1980s (Gutierrez & Cassidy, 2018), and firefighters (and equipment) are being spread thin throughout the state. Firefighters often work 24- to 36-hour shifts for extended periods of time (often weeks at a time), and are being kept away from their homes and families for more and more days out of the year (Ashton et al., 2018; Bransford et al., 2018; Del Real & Kang, 2018; Greene, 2018; Gutierrez, 2018; Simon, 2018). In addition, the firefighting force often must rely on volunteers to battle fires year-round. At its peak, more than 16,000 firefighters from the U.S., Canada, and Mexico, including from prison systems, were combatting the 2025 LA wildfires.

The extended fire season is taking a toll on the physical, mental, and emotional health of firefighters, as well as the emotional health of their families (Ashton et al., 2018; Del Real & Kang, 2018; Simon, 2018). As mentioned above, wildland firefighters are suffering disproportionately high rates of cancer and other serious diseases, likely due to extreme smoke exposure (Hwang et al., 2023; Johnson & Lam, 2023). For those fighting urban conflagrations, exposure to hazardous pollutants are even higher. In a preliminary study conducted on firefighters who fought the LA wildfires, lead and mercury blood levels were five and three times higher compared to firefighters who fought vegetation wildfires (Hernandez, 2025). In addition, the physical and mental fatigue of endlessly fighting fires and experiencing trauma can lead to exhaustion, which can cause mistakes in life-or-death situations while on duty, and the constant worry and aftermath that family members endure when their loved ones are away working in life-threatening conditions can be harrowing (Ashton et al., 2018). According to psychologist Dr. Nancy Bohl-Penrod, the strain of fighting fires without having sufficient breaks can impact firefighters' interactions with their families, their emotions, and their personalities (Bransford et al., 2018). There have also been reports that suicide rates and substance abuse have increased among firefighters (Cart, 2022; Greene, 2018; Simon, 2018).

G. Wildfire Disproportionately Affects Low-Income and Minority Communities.

B.4-24

B.4-24 cont.

Wildfire impacts disproportionately affect low-income and minority communities. As discussed in the Center's 2021 Built to Burn report (Yap, Rose, Broderick, et al., 2021):

> Past environmental hazards have shown that those in at-risk populations (*e.g.,* low-income, elderly, disabled, non-English-speaking, homeless) often have limited resources for disaster planning and preparedness (Richards, 2019). Vulnerable groups also have fewer resources to have cars to evacuate, buy fire insurance, implement defensible space around their homes, or rebuild, and they have less access to disaster relief during recovery (Davis, 2018; Fothergill & Peak, 2004; Harnett, 2018; Morris, 2019; Richards, 2019).
>
> In addition, emergency services often miss at-risk individuals when disasters happen because of limited capacity or language constraints (Richards, 2019). For example, evacuation warnings are often not conveyed to disadvantaged communities (Davies et al., 2018). In the aftermath of wildfires and other environmental disasters, news stories have repeatedly documented the lack of multilingual evacuation warnings leaving non-English speakers in danger. (Axelrod, 2017; Banse, 2018; Gerety, 2015; Richards, 2019). Survivors are left without resources to cope with the death of loved ones, physical injuries and emotional trauma from the chaos that wildfires have inflicted on their communities.
>
> Health impacts from wildfires, particularly increased air pollution from fine particulates ($PM_{2.5}$) in smoke, also disproportionately affect vulnerable populations, including low-income communities, people of color, children, the elderly and people with pre-existing medical conditions (Delfino et al., 2009; Hutchinson et al., 2018; Jones et al., 2020; Künzli et al., 2006; Reid, Jerrett, et al., 2016).
>
> Increased $PM_{2.5}$ levels during wildfire events have been associated with increased respiratory and cardiovascular emergency room visits and hospitalizations, which were disproportionately higher for low socioeconomic status communities and people of color (Hutchinson et al., 2018; Jones et al., 2020; Liu et al., 2017; Reid, Jerrett, et al., 2016). Similarly, asthma admissions were found to have increased by 34% due to smoke exposure from the 2003 wildfires in Southern California, with elderly and child age groups being the most affected (Künzli et al., 2006).
>
> Farmworkers, who are majority people of color, often have less access to healthcare due to immigration or economic status. They are more vulnerable to the health impacts of poor air quality due to increased exposure to air pollution as

they work. Yet farmworkers often have to continue working while fires burn, and smoke fills the air, or risk not getting paid (Herrera, 2018; Kardas-Nelson et al., 2020; Parshley, 2018).

B.4-24 cont.

When wildfires burn through communities, they threaten homes, livelihoods, lives, and health. In addition to the immediate impacts of lives and homes lost, evacuations and displacement, impacts from air pollution, soil contamination, lost jobs, and the trauma of escape and recovery extend well beyond the fire footprint and last long after the fire is extinguished. The SEIR fails to adequately assess and mitigate the Project's impacts to wildfire risk and the aftermath of a wildfire when it burns through communities in and near the Project area.

IV. THE PRDSEIR'S REVISED SECTIONS REGARDING IMPACTS TO WESTERN SPADEFOOT REMAIN INADEQUATE.

B.4-25

Due to their dependence on ephemeral aquatic breeding sites connected to suitable upland habitat, western spadefoots are particularly sensitive to habitat disruption. Increasingly fragmented habitats can create isolated subpopulations that have higher risks of local extinction (Neal et al., 2020). In southern California, western spadefoot populations have become extremely fragmented, and persistence of remaining subpopulations of is fragile (Halstead et al., 2021; Neal, 2019; Neal et al., 2020).

Additionally, western spadefoots are demographically unstable, meaning their population recruitment varies from year to year depending on environmental conditions, especially rainfall (Fisher & Shaffer, 1996). The species therefore experiences large annual fluctuations in population sizes, as breeding and recruitment can boom during exceptionally wet years and be impossible in dry/drought years. This high demographic instability makes them particularly sensitive to habitat alterations that may interfere with recolonization and reestablishment after unsuccessful recruitment years (Fisher & Shaffer, 1996).

Western spadefoot populations are often able to persist in the face of environmental variability due to metapopulation connectivity; when one population experiences declines, migrants from surrounding populations can bolster the population and prevent local extirpation. As climate change impacts become more severe and extreme weather events continue to occur, shifts in hydroperiod and increased temperatures expected to become more extreme (Montrone et al., 2019; Pyke, 2004; Thomson et al., 2016), and such population dynamics are likely to be increasingly important for species persistence. Due to reduced connectivity between suitable habitats, populations that are unable to successfully breed may decline and disappear and will be unable to be re-established by neighboring populations, leading to further permanent species decline. It is therefore highly important to consider habitat connectivity between upland and aquatic habitat as well as between different pools and pool complexes.

The PRDSEIR's analysis fails to take these important factors into account and therefore fails to provide sufficient mitigation that would ensure the local population persists into the future.

B.4-25 cont.

A. The PRDSEIR does not provide an adequate baseline regarding western spadefoot presence.

B.4-26

We appreciate that the PRDSEIR clarifies the pond descriptions and pond names in the various previous surveys and environmental review documents. However, the PRDSEIR still provides conflicting evidence regarding VP6/Pond 3. First, the PRDSEIR states that the initial fairy shrimp surveys in 2004/2005 showed that VP6 "did not support WST at the same time they were observed in SP 1 and VP 1 but did support western toad larvae leading to the conclusion that the habitat is at least potentially suitable during such above-average years." (Draft Western Spadefoot Toad (*Spea hammondii*) Impact Assessment and Habitat Mitigation and Monitoring Plan, or "WST Plan," p.8). Later, the SEIR states that "the feature designated VP 6 by BonTerra exhibited suitable ponding but WST were not detected." (WST Plan, p.10). It is not clear why the presence of tadpoles is not considered to be a detection of WST, or why the EIR would conclude that the habitat is "potentially suitable" and not "occupied." Despite claims that the pond does not support western spadefoot, the SEIR does acknowledge that it provides suitable habitat, and the proposed mitigation does include VP6/Pond 3 in its calculation of pond acreage that must be mitigated (WST Plan, p.13). Nonetheless, the characterization of VP 6/Pond 3 as unoccupied is unfounded, and downplays the importance of the existing pools to the spadefoot population present on the Project site.

B.4-27

The PRDSEIR also minimizes the importance of the western spadefoot population present at the Project site. The PRDSEIR states that the Court Ruling "suggests that WST are very rare within the Castaic area and the surrounding areas of northern Los Angeles County." (WST Plan, p.7). However, the Court Ruling merely echoes the comment letter submitted by CDFW,[5] which itself cites the Applicant's own previous environmental review document, specifically the SEIR. As quoted in the letter, the PRDSEIR states: "the Grasshopper Canyon population is one of few known populations in the region."

The PRDSEIR provides CNDDB records to show that numerous observations (35+) of western spadefoot occur in the region near the Project site and therefore claims that "WST populations are not rare in the nearby areas." (WST Plan, p.7). However, it is important to note that CNDDB observations do not necessarily represent whole populations, merely element occurrences. In fact, many western spadefoot CNDDB observations in the region are clustered and likely represent the same population. To better understand the occurrences discussed in the

[5] Courtney, Betty J. June 15, 2017. Northlake Specific Plan Project (PROJECT), DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT (DSEIR), SCH# 2015031080.

PRDSEIR, we conducted a query of CNDDB western spadefoot occurrences on May 21, 2025 including the Mint Canyon, Newhall, Val Verde, and Whitaker Peak, and San Fernando 7.5 Minute Quadrangles ("quads") (note that we included additional quads that were further from the Project site than those displayed in the PRDSEIR to capture the entire Santa Clarita Valley). Our search resulted in 44 total observations, including those at the Project site in the Whitaker Peak quad. Of these observations, only 10 had occurrence ranks (a ranking of the quality of the habitat and the condition of the population at that location) of "Good" or "Excellent;" 10 others were "Fair," 10 were "Poor," 14 were "Unknown" and one was "Possibly extirpated." The CNDDB results therefore do not necessarily indicate a healthy, widespread population—rather, they show that western spadefoot do occur in the area, but while numerous populations appear healthy, numerous others are likely struggling. We do not dispute the fact that western spadefoot occur south and west of the project, but this does not mean they are common, and it certainly does not mean they are free from risk of regional decline.

B.4-27 cont.

Additionally, the population at the Project site lies in an important location in the species' range, considering western spadefoot biogeography. Western spadefoot in southern California (south of the Transverse Ranges) are genetically distinct from western spadefoots in central and northern California (Neal et al., 2018). The western spadefoot present in the Project area belong to the southern population, which has experienced more severe declines than the northern population (although both populations have been heavily impacted by habitat loss and continue to decline). It is of course important to protect all existing western spadefoot populations, but the population present at the Project site lies at the northernmost extent of the southern western spadefoot population. If the westerns spadefoot currently present at the Project site are lost, the range of the southern population will shrink, furthering the pattern of regional decline. Thus, while the SEIR is correct in observing that other populations occur in and around the Santa Clarita Valley (Exhibit 3), it is important to recognize that this does not diminish the importance of the population at the Project site, especially considering its place at the northern edge of the southern population's range.

B. The proposed mitigation for impacts to western spadefoot is insufficient.

B.4-28

The mitigation for impacts to western spadefoot in the form of mitigation ponds is improved from previous environmental review documents but is still not sufficient to ensure long-term population persistence.

First, the PRDSEIR's analysis of previous studies misrepresents the efficacy of artificial pools as mitigation for impacts to existing aquatic habitat. The PRDSEIR cites Baumberger (2020) as evidence that artificial ponds can successfully provide habitat to western spadefoot, which we do not dispute. However, the SEIR misrepresents the results of this study, claiming that the mitigation was more successful than it was.

B.4-28 cont.

Baumberger (2020) investigated the success of artificial breeding pools that were created in 2006 as mitigation for impacts to ten breeding pools at a site in East Orange. The mitigation for this project included the creation of 21 pools to mitigate for the 10 affected pools, providing a total mitigation ratio of 2.1:1. Fifteen of these pools (which became 14 when two pools merged together) were in Irvine Mesa, and six were in Shoestring Canyon.

The PRDSEIR focuses only on the results related to Irvine Mesa, ignoring the results from pools at Shoestring Canyon. In Shoestring Canyon, all six mitigation pools failed to hold water and breeding western spadefoot were completely absent from the pools and the nearby creek bed during the 2016 survey period (Baumberger et al., 2020). The PRDSEIR omits this information, focusing only on the pools in Irvine Mesa, which had higher rates of success, thereby misrepresenting the success of the mitigation and making it appear to be more successful than it was.

Further, the results of Irvine Mesa are also misstated. The PRDSEIR quotes the following excerpt of the study itself, claiming that this excerpt shows WST breeding in 12 of the 14 pools on Irvine Mesa (WST Plan, p.31):

> Twelve of the 14 mitigation pools at Irvine Mesa held water for >30 d. During our 2016 surveys, two of the mitigation pools built by Glenn Lukos Associates, Inc. merged (Pools 5 and 9) and we considered them as one pool (Pool 9). We detected *S. hammondii* tadpoles in eight of the Irvine Mesa mitigation pools but documented successful breeding through metamorphosis at only seven of these pools in April 2016 due to desiccation and/or water quality.

However, this excerpt only says that 12 of the 14 pools held water for >30 days. It does not say that western spadefoot were breeding in those pools. In fact, the sentence following this excerpt states "*Spea hammondii* did not breed in all the pools with hydroperiods >30 d (Table 3)." (Baumberger et al., 2020). The excerpt itself states that tadpoles were only detected in eight of the pools, and breeding through metamorphosis was only observed at seven of the pools. It is difficult to understand therefore why the PRDSEIR claims that western spadefoot were breeding in 12 of the 14 pools in 2016, when the very excerpt they cite to support this statement says WST only bred in seven of these pools.

This misrepresentation makes it appear that the artificial mitigation pools were more successful during the drought year of 2016 than the reality. In fact, only ½ of the pools in Irvine Mesa showed successful breeding in 2016, and 0/6 of the pools in Shoestring Canyon showed successful breeding, leading to an overall success rate of just 33%. Thus the mitigation ratio of 2.1:1 did not even successfully mitigate for the full impacts to the ten original pools.

B.4-28 cont.

The EIR notes that the 2016 study occurred during a drought year, and that monitoring of the following 2016/2017 season showed tadpoles in 12 of the pools and "extensive breeding was present" (WST Plan p.31). The reference cited to support this claim is not published and is not publicly available (as far as we can ascertain), so it is impossible to determine whether the "12 pools" refers to pools in Irvine Mesa only or in Irvine Mesa and Shoestring Canyon, and therefore it is impossible to determine the overall efficacy of the mitigation during this "ideal" wet year. It appears likely that the study refers only to Irvine Mesa, in which case the population did show a notable increase in pool occupation, but the exclusion of Shoestring Canyon remains unexplained.

The PRDSEIR goes on to conclude that this observed change in number of pools occupied (from seven in the drought year to 12 the following wet year) shows that given adequate pool quality, "WST will increase in such ponds until a level of equilibrium is achieved (i.e., self-sustaining population), and the pools arrive at their carrying capacity" (p.31). This conclusion is unfounded and has no bearing on the adequacy of mitigation. Even if the study is limited to Irvine Mesa, it is unclear why occupancy of just 12 of the 14 pools would indicate that carrying capacity was reached. The PRDSEIR provides no explanation for this cutoff.

Further, occupancy of pools (which is what the PRDSEIR relies on in making this claim) is not enough to determine carrying capacity. Carrying capacity is the maximum population size that an area can support and sustain. Carrying capacity is therefore a demographic measure, and depends on many population factors including the number, age, and behavior of individuals, among others. Whether a pond is occupied or not does not provide this information. It is possible for ponds to be occupied by many individuals or few, and without actual demographic data it is impossible to say whether a population has reached carrying capacity. It is encouraging to see that the WST Plan includes some demographic monitoring, including counts of egg masses, larvae, and metamorphs (WST Plan, p.27). Such data collected over the ten-year monitoring period would no doubt be informative and aid in our understanding of western spadefoot ecology and demography. But without such data, claims about carrying capacity lack evidence.
Rather, what the data on increased pool occupancy during the 2016/2017 rainy season show is that the western spadefoot population size and pool occupancy varies depending on climatic conditions, as is well known. Changes in abundance between drought years and breeding years are common for western spadefoot (Fisher & Shaffer, 1996). Importantly, mitigation measures must be sufficient to support populations during drought years, not only during average or rainy years. If mitigation ratios and/or mitigation measures are designed with average or wet years in mind, they are likely to underperform during drought years and therefore leave western spadefoots vulnerable to extirpation. Given the variable conditions experienced by vernal pools including drought—which can last for years in California and is expected to become more common in the future (Diffenbaugh et al., 2015)—reliance on a simple 1:1 replacement is not sufficient to mitigate for impacts to breeding habitat by creating artificial pools.

However, this is essentially what the EIR does. The EIR proposes to create 1.07 acres of artificial ponds to mitigate for 0.95 acres of impacted ponds, which amounts to a mitigation ratio of just 1.1:1 (WST Plan, p.13, p.18). Given the success rate of the very study that is cited in the EIR (Baumberger et al., 2020), this mitigation ratio is unlikely to successfully replace the breeding habitat currently present on the property, and leaves the population at risk of decline or extirpation during extended droughts.

B.4-28 cont.

Further, the proposed mitigation ponds are very clustered, unlike the current pond arrangement. Currently, the stock pond is approximately 4,000ft away from the seasonal ponds, which are all within approximately 100-400ft of one another (including VP-6/Pond 3) (WST Plan, Exhibit 4). However, the proposed mitigation ponds are all clustered very close together on the west side of the property, within 50ft of one another (WST Plan, Exhibit 5). The EIR claims that "total acreage as opposed to number of ponds is all that is relevant" (WST Plan, p.18). However, this claim does not consider the importance of landscape connectivity and potential metapopulation dynamics. As discussed above, the natural history of western spadefoots makes them vulnerable to climate and habitat disturbances. Given the variation in geology, hydrology, climate, and habitat across a landscape, if one population declines or becomes extirpated, it is possible that others nearby can survive and re-colonize. If the ponds are all clustered, any extreme climatic events or random disturbances are likely to impact all of them in similar ways. On the contrary, if ponds are more spread out across the landscape, the local population is more resilient to random disturbance and potential climatic, hydrological, and ecological changes as well.

B.4-29

The proposed mitigation is therefore insufficient because a) the mitigation ratio is too low, and does not provide sufficient replacement habitat in the form of artificial pools and b) the ponds are too close together, increasing the risk of extirpation compared to more dispersed aquatic habitat. The EIR must remedy these deficiencies by a) increasing the mitigation ratio to at least 3:1, thereby providing increased acreage of artificial breeding ponds and b) placing additional mitigation ponds further from the three currently proposed ponds to provide landscape-level population resilience.

B.4-30

The WST Plan notes in its discussion of contingency mitigation that there are "nearby sites which can be utilized as replacement site(as) (*sic*) such that the mitigation criteria are fulfilled," including locations at the north end of the Project site and in nearby Marple Canyon (WST Plan p.30). A revised EIR should include these sites not as contingency sites, but as enforceable mitigation sites for additional artificial pools.

B.4-31

V. THE PROJECT DOES NOT ADEQUATELY DEFINE AFFORDABILITY, NOR DOES IT GUARANTEE THE LONGEVITY OF THE DESIGNATED AFFORDABLE UNITS.

B.4-32

California is experiencing an affordable housing crisis (Kimberlin, 2019). In October 2021, about half of Americans (49%) said housing affordability was a major problem where they live, up 10 percentage points from early 2018. In the same 2021 survey, 70% of Americans said young adults today have a harder time buying a home than their parents' generation did.[6]

These perceptions are backed by data. The national median sale price for a single-family home jumped 25% from $327,100 in the fourth quarter of 2019 (the last full quarter unaffected by the COVID-19 recession) to $408,100 in the fourth quarter of 2021.[6] These impacts also extend to those that are renting their homes. In 2020, 30% of all households had "unaffordable" rent or mortgage payments, defined as exceeding 30% of monthly household income. This is up 1.5 percentage points from 2019. More than 1 in 7 households paid over half of their income on housing.[7]

A variety of factors have set the stage for the financial challenges American homeowners and renters have been facing in the housing market. These include incomes that haven't kept up with inflation, a surge in investor owned properties, rising interests rates, and short term rentals. [7]

To change these trends, it is critical that the County invest in building units that are permanently designated as affordable. While this project does include affordable units at the request of the County, the PRDSEIR does not define affordability, nor does it guarantee these units will remain affordable in perpetuity.

Currently 10% of the units in the NLSP are designated as affordable (PRDSEIR, page 2-56). We encourage the County to set specific targets of either 15% of all units, designated for those that make 50% of the average median income or 20% of all units, designated for those that make 60% of average median income. Additionally, these units should never term out. They can be adjusted if the AMI changes, but they should be affordable in perpetuity.

B.4-32 cont.

VI. THE PRDSEIR'S TRANSPORTATION SECTION FAILS TO SUFFICIENTLY ANALYZE THE PROJECT'S VMTS AND MITIGATE IMPACTS.

B.4-33

Increasing a region's VMTs isn't just bad planning, it also undermines community health. Increased VMT increases emissions of air pollutants such as nitrogen oxides (NO_x), volatile organic compounds (VOCs), carbon monoxide, heavy metals, carbon dioxide and respirable particulate matter ($PM_{2.5}$). Increased VMT also leads to more ozone (O_3) production through the photochemical reactions of NO_x and VOCs emitted by vehicles (Lurmann et al., 2015). Short- and long-term exposure to several of these pollutants has been linked to premature mortality,

[6] https://www.pewresearch.org/fact-tank/2022/03/23/key-facts-about-housing-affordability-in-the-u-s/
[7] https://www.habitat.org/costofhome/2022-state-nations-housing-report-lack-affordable-housing

B.4-34

compromised birth outcomes, heart disease and a host of respiratory illnesses (Mujtaba & Shahzad, 2021).

B.4-33 cont.

Another serious direct impact of increasing the number of cars on roads is automobile crashes, which are the leading cause of death among young people (15 to 19 years old) in the United States.[8] An estimated 42,915 people in the U.S. died in car crashes in 2021 alone and 3.4 million people are injured each year, which costs an estimated $473.2 billion annually as measured by wage and productivity losses, medical expenses, motor-vehicle damage, and employers' uninsured costs (Frumkin et al., 2004; U.S. Department of Transportation, 2022).[9]

Beyond the direct impacts, increased VMT has long term impacts on commuters. In 2019, the duration of the average daily commute in the United States increased to a new high of 55.2 minutes, and a record 9.8 percent of commuters reported daily commutes of at least 2 hours (Burd et al., 2021). These long commutes reduce time available to spend with family, friends, and community, and reduce opportunities for healthy recreation. The increase in inactivity and isolation can also lead to long-term health complications such as pre-diabetes, diabetes, obesity, asthma, isolation, stress and depression (Ewing et al., 2003; Leyden, 2003).

iii. The PRDSEIR's Unsupported Baseline Invalidates the Traffic Analysis.

B.4-34

The PRDSEIR incorrectly concludes that there will be no significant transportation impacts associated with the project. The PRDSEIR's revised traffic analysis is invalid because of its reliance on an inaccurate baseline that does not reflect current environmental conditions. The EIR's resulting conclusion that this development—a sprawl development surrounded by vacant land on two sides, five miles from the nearest town—will have insignificant VMT impacts is incorrect. (SEIR at 3-1.)

CEQA requires that an EIR identify the environmental baseline against which project impacts will be assessed. (Guidelines § 15125(a) [agency must describe "baseline physical conditions by which a lead agency determines whether an impact is significant"].) "Establishing a baseline at the beginning of the CEQA process is a fundamental requirement so that changes brought about by a project can be seen in context and significant effects can be accurately identified." (*Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 89 [emphasis added].) An accurate environmental baseline is critical to the CEQA process because it forms the foundation for the entire EIR, serving as the point of comparison for

[8] Center for Disease Control and Prevention. "Underlying Cause of Death, 2018-2021." https://wonder.cdc.gov

[9] NSC Injury Facts. "Costs of Motor-Vehicle Injuries." 2021. https://injuryfacts.nsc.org/all-injuries/costs/guide-to-calculating-costs/data-details/

evaluating the significance of impacts. (*County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 953-54.) Accordingly, an EIR does not comply with CEQA where the environmental baseline is "inaccurate, incomplete, or misleading." (*Clover Valley Foundation v. City of Rocklin* (2011) 197 Cal.App.4th 200, 219 (citation omitted).)

B.4-34 cont.

An EIR must evaluate the significance of an environmental impact and the effectiveness of mitigation against a baseline of existing conditions, not against hypothetical conditions that might be allowed but have never actually occurred. (14 Cal Code Regs §15125(a)(3). See *Woodward Park Homeowners Ass'n v City of Fresno* (2007) 150 CA4th 683, 707 (EIR for planning and zoning changes for new commercial development rejected because EIR compared proposed development only to hypothetical office park that could be developed under preexisting plan but did not compare proposed development with existing physical conditions on site); *Environmental Planning & Info. Council v County of El Dorado* (1982) 131 CA3d 350 (EIR on proposed new general plan must address existing level of physical development as baseline for impact analysis, not existing plan, even though new plan would allow less growth than existing plan).)

The project site is currently undeveloped (SEIR at 2-81; 2-88; 2-92). But the PRDSEIR evaluates traffic impacts of the project not against the site's current environmental condition, as required by law, but against the hypothetical full buildout of a specific plan that was adopted in 1992 but never actually built. (PRDSEIR at 2-53, 55.) That specific plan authorized 2,337 single family units, 1,286 multi-family units, commercial and industrial space, and an 18-hole golf course. (*Id.* at 2-53.) The PRDSEIR estimates that the plan being considered here will have lower VMT than the 1992 plan. (*Id*. at 2-56.) But what might have been approved in 1992 is not the current environmental condition of the site, is not the correct baseline, and is not relevant to whether this Project has significant impacts. (14 Cal Code Regs §15125(a)(3). See *Woodward Park Homeowners Ass'n v City of Fresno* (2007) 150 CA4th 683, 707.) The traffic analysis must be revised and recirculated.

B.4-35

iv. The SEIR Fails to Mitigate for VMT Impacts.

The County must impose mitigation measures to reduce impacts associated with increasing the County's vehicle miles travelled. CEQA requires that mitigation must include concrete, specific, and enforceable actions. (*California Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173 [City's urban decay mitigation measures were inadequate under CEQA to address the impact from the development of a 234-acre regional shopping center on undeveloped agricultural land because the measures did not ensure the city would take concrete, measurable actions].) The County may not defer mitigation measures to a later date unless the EIR provides specific reasons why they cannot be developed now and provides specific performance measures to evaluate their success. (*Preserve Wild Santee v. City of Santee*

(2012) 210 CA 4th 260, 281 [mitigation measures that are so undefined that their effectiveness is impossible to determine are legally inadequate].)

B.4-35 cont.

There are many mitigation measures that can and should be incorporated. Specifically, investment in public transit should be a priority of the project. Providing alternatives to single occupancy vehicle travel is essential to building an efficient, sustainable and equitable transportation system. Unfortunately, we have a long way to go if we are going to achieve this vision in the U.S. In 2013, it was reported that of all the U.S. daily commutes to work, 76.4% are of people driving alone (McKenzie, 2015). According to the Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2015, our collective daily transportation in the U.S. constitutes about 27% of the total greenhouse gasses released (U.S. Environmental Protection Agency, 2017) California's annual average emissions associated with passenger vehicles between 2000 and 2020 was approximately 110 million metric tons of CO2e.

To change these trends, government agencies need to invest in alternative modes of transportation to not only make them cheaper to use, but more efficient than driving. **Best practices for transportation options should include providing free public transit services for future residents and workers; implementing bus only lanes; optimizing bus routes to minimize overlap and ensuring coverage across the city in line with demand; and providing high-frequency, reliable services with regular bus stops for easy access.**

Studies indicate that free public transit services typically result in ridership increase from 20% to 60% in a matter of just a few months (Studenmund and Connor, 1982). Similarly, bus lanes that reduce total transit door-to-door travel times by 5%-15% will increase urban peak ridership 2%-9% (UCLA Institute of Transportation Studies, 2019). Lastly, ensuring accessibility and convenience is essential to increasing ridership. Providing more bus stops decreases the distance residents have to travel to access such services.

It should be a priority of all governments to reduce VMTs with every new project, but instead this proposed sprawl development would steer the region in the opposite direction, eroding community and environmental health to build more sprawl development that relies on single-occupancy vehicle infrastructure. It is the "policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures which will avoid or substantially lessen the significant environmental effects of such projects." (Pub. Res. Code § 21002.)

An accurate analysis of the Project's VMT impacts is needed and adoption of feasible mitigation measures that lower the Project's overall transportation impacts and its associated contribution to climate change, bad air quality and overall decreases community health are necessary.

v. The Project Does Not Comply with the General Plan's Goal to Reduce Vehicle Miles Travelled.

B.4-36

Los Angeles County's General Plan states that the county should "support land uses that promote bicycling and walking, and reduce VMTs (Policy LU 5.3, Land-Use Element, Page 75). The Los Angeles County Sustainability Plan states that "reducing vehicle miles traveled by prioritizing alternatives to single occupancy vehicles" is a key strategy (Strategy 8A, page 118). Additionally, the Southern California Association of Government's Regional Transportation plan states that a "more compact and sustainable land use pattern, combined with the transportation network improvements and strategies identified in Connect SoCal, will result in an improved pedestrian and bicycle environment, access to more community amenities, shorter average trip lengths, reduced VMT and better regional air quality" (Connect SoCal, page 144). The RPSDEIR concludes that "the Project does not conflict with the General Plan, any program plan, ordinance, or policy addressing the circulation system" (PRDSEIR, page 2-57).

However, this again relies on the false assumption that the VMT calculation does not need to rely on the County baseline. Research shows that suburban and exurban sprawl increases a region's VMTs (Rubiera-Morollón & Garrido-Yserte, 2020; Mujtaba & Shahzad, 2021). The NLSP represents sprawl and thus it will clearly increase the regions VMTs. This makes it in conflict with the County's General Plan, Sustainability Plan and Regional Transportation Plan.

The County should divest from such poor planning practices and instead focus on development of infill areas that already have critical community infrastructure.

VII. THE REVISED ALTERNATIVES ANALYSIS REMAINS INADEQUATE.

B.4-37

The PRDSEIR's alternatives analysis is conclusory and incorrectly asserts that the environmentally superior alternative would not meet Project objectives. CEQA mandates that significant environmental damage be avoided or substantially lessened where feasible. (Pub. Res. Code § 21002; Guidelines §§ 15002(a)(3), 15021(a)(2), 15126(d).) Moreover, although "an EIR need not consider every conceivable alternative to a project . . . it must consider a reasonable range of potentially feasible alternatives that will foster informed decision decision-making and public participation." (Guidelines § 15126.6(a).) Additionally, the "key to the selection of the range of alternatives is to identify alternatives that meet most of the project's objectives but have a reduced level of environmental impacts." (*Watsonville Pilots Assn. v. City of Watsonville* (2010) 183 Cal.App.4th 1059, 1089.) Accordingly, a rigorous analysis of reasonable alternatives to the Project must be provided to comply with this strict mandate. Unfortunately, the SEIR fails to meet this requirement because its analysis of the alternatives proposed is inadequate.

CEQA requires that before approving a project with significant environmental impacts, the agency must make findings identifying the specific considerations that make the environmentally superior alternative infeasible. (Pub. Res. Code § 21081; *Preservation Action Council v. City of San Jose* (2006) 141 Cal.App.4th 1336, 1351-52.) As the Center commented in 2020, the County improperly rejected Alternative C for not meeting "all the project objectives." (DEIR, Appendix D [FEIR at 5-15].) Specifically, it determined that Alternative C would not be financially and economically feasible. (*Ibid*. ["Alternative C would not provide enough resort amenities or large enough lots for a financially viable luxury resort."].) But under CEQA, determining that an alternative "may be more expensive or less profitable is not sufficient to show that the alternative is financially infeasible." (*Preservation Action Council, supra,* 141 Cal.App.4th at 1352.) Instead, the agency must present "evidence that the additional costs or lost profitability are sufficiently severe as to render it impractical to proceed with the [alternative]." (*Id.*) This evidence may include, for example: total estimated costs, total projected income, total expenses, and the change in the per unit cost of a project that results from a project alternative or mitigation measure. (*Citizens of Goleta Valley*, *supra*, 197 Cal.App.3d at 1180.) The findings of infeasibility must be supported by substantial evidence. (*Id*. at 1176-77.)

B.4-37 cont.

The PRDSEIR failed to conduct this analysis for the Creek Avoidance Alternative, instead simply stating that it would not be feasible, without elaboration. (PRDSEIR at 2-86.) For the Partial Creek Avoidance Alternative, the PRDSEIR concludes that it would not meet the project objective of improving opportunities for outdoor recreational experiences simply because it provides 37 fewer acres of open space than the Project. However, the PRDSEIR does not establish that providing 37 fewer acres is a significant impairment of the project objective, especially given that the changed footprint would protect the health of the creek and thereby preserve its use for recreation.

B.4-38

V. CONCLUSION

B.4-39

Thank you for the opportunity to submit comments on the PRDSEIR for the Partial Recirculated Draft Supplemental Environmental Impact Report NorthLake Specific Plan. We urge the County to prepare a new EIR for the Project that fully complies with CEQA and recirculate. Because significant new information has become available on many other impacts, the County must also reevaluate and incorporate new circumstances as well as new research and studies on those impacts that have become available in the last seven years.

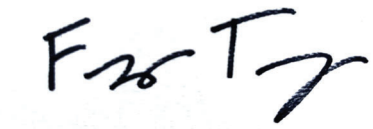
Given the possibility that the Center will be required to pursue legal remedies in order to ensure that the County complies with its legal obligations including those arising under CEQA, we would like to remind the County of its statutory duty to maintain and preserve all documents and communications that may constitute part of the "administrative record" of this proceeding. (§ 21167.6(e); *Golden Door Properties, LLC v. Superior Court* (2020) 53 Cal.App.5th 733, 762.)

The administrative record encompasses any and all documents and communications that relate to any and all actions taken by the County with respect to the Project, and includes "pretty much everything that ever came near a proposed [project] or [] the agency's compliance with CEQA . . . ." (*County of Orange v. Superior Court* (2003) 113 Cal.App.4th 1, 8.) The administrative record further includes all correspondence, emails, and text messages sent to or received by the County's representatives or employees, that relate to the Project, including any correspondence, emails, and text messages sent between the County's representatives or employees and the Applicant's representatives or employees. Maintenance and preservation of the administrative record requires that, inter alia, the County (1) suspend all data destruction policies; and (2) preserve all relevant hardware unless an exact replica of each file is made.

B.4-39 cont.

Please add the Center to your notice list for all future updates to the Project and do not hesitate to contact the Center with any questions at the number or email listed below.

Sincerely,





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ATTACHMENT A



Via Electronic Mail and USPS (w/attachments)

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Los Angeles, CA 90012
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Re: NorthLake Specific Plan, Draft Environmental Impact Report

Dear Ms. Sackett:

These comments are submitted on behalf of the Center for Biological Diversity ("Center") on the Draft Environmental Impact Report ("DEIR") for the proposed NorthLake Specific Plan Project ("Project"). The California Environmental Quality Act ("CEQA") mandated environmental review for the Project is inadequate and fails to comply with the requirements of the statute. The DEIR fails to adequately analyze a range of environmental impacts, mitigation measures, and alternatives. For the reasons detailed below, we urge that the Project be denied, or at a minimum, the DEIR must be revised and recirculated to remedy these deficiencies.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over one million members and online activists throughout California and the United Sates. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County.

I. The Current Project Description Does Not Represent The True Scope of the Project and is Misleading.

Under CEQA, a "project" is defined as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment . . . ." (*Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora* (2007) 155 Cal.App.4th 1214, 1222 (citing CEQA Guidelines § 15378, subd. (a).) An "accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR." (*Cnty. of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193; (*San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149

Cal.App.4th 645, 655 (project description held unstable and misleading) [hereinafter "*San Joaquin Raptor*"].) "However, a curtailed, enigmatic or unstable project description draws a red herring across the path of public input." (*San Joaquin Raptor*, 149 Cal.App.4th, at 655.).

An inaccurate or truncated project description is prejudicial error because it fails to "adequately apprise all interested parties of the true scope of the project." (*See City of Santee v. Cnty. of San Diego* (1989) 214 Cal.App.3d 1438, 1454-55 [hereinafter "*City of Santee*"].) "Only through an accurate view of the project may the public and interested parties and public agencies balance the proposed project's benefits against its environmental cost, consider appropriate mitigation measures, assess the advantages of terminating the proposal and properly weigh other alternatives." (*San Joaquin Raptor*, 149 Cal.App.4th, at 655.)

As a general matter, the DEIR needs to be clearer about distinguishing between the 1992 NorthLake Plan and the current Project. Adopting a clearer naming system would aid the public by eliminating confusion and helping to more easily identify which plan is being referenced.

There are also numerous deficiencies in the Project Description. The Project Description provides objectives that erroneously rely on outside data which is not provided in the DEIR. There is no way for the public to assess whether the objectives rely on meaningful studies or if a legitimate need exists in the community for this development. For example, one objective states a goal of enhancing local economic well-being by ostensibly providing jobs for the same people who will live in the new housing. (DEIR at 4-3.) This is insufficient for two reasons. First, it is unclear whether there is in fact a need for housing and the DEIR provides no evidence to support this claim. Second, there is no evidence supporting the contention that those purchasing homes will stay within the community for their employment. There are no assurances that those living in the housing development will also work on-site. This has additional implications on GHG/air quality analyses if residents will be traveling outside of community for work, yet the DEIR assumes they will remain on-site. There is also insufficient evidence to support the conclusion that this project will alleviate some need for stability within the community. Simply stating that there are new housing demands or instability in the County is insufficient without further studies or data. The DEIR mentions that this development will generate 9,734 new residents but fails to indicate the anticipated demographics of new residences, especially regarding their ability to afford the housing and their employment objectives (this also impacts the DEIR's purported need for schools and the DEIR's analysis of transportation/GHG issues from due to travel for education and employment).

The DEIR mentions several pending realignments and utility sub-projects which are conditional to development. (DEIR at 4-4; 4-17.) These include the need to build sufficient water supply, wastewater and sewer infrastructure. However, the DEIR fails to clearly indicate the siting, existing conditions, and environmental impacts of these large infrastructure projects, which are, as the DEIR stated, conditional to development. (DEIR at 4-3 – 4-5; Table at 4-1.) The DEIR also mentions the need for realignment of an oil pipeline and electrical transmission lines. (DEIR at 4-4.) Yet the DEIR fails to clearly illustrate how exactly they will realign the pipeline or electrical transmission lines, where they will move these lines, or analyze the environmental impacts of this realignment.

The DEIR's discussion of a school conflicts with the Project's objectives regarding transportation and emissions reductions. The DEIR contains a section dedicated to discussing

the inclusion of a school, yet this is only potentially part of Phase 2; there is no guarantee another school will be built. Although NorthLake Elementary School already exists, the DEIR does not contemplate the reality that school-aged residents would need to travel outside the community to attend middle and high school. Nor does the DEIR consider that some school-aged residents may attend private schools outside of the Project area.

The DEIR states that the development will "remediate" environmental hazards. (DEIR at 4-10.) This statement is problematic because it mischaracterizes the Project's interaction with environmental hazards so as to misleadingly indicate that the project is *improving* the environment through development. It is also unclear whether there will be other hazardous activities associated with the project, which are never mentioned in the Project Description.

The DEIR states that the Project requires "minimum landscaping requirements," (DEIR at 4-12) yet fails to give specifics as to what those requirements are, fails to analyze these requirements in the context of water or non-invasive plant use, and fails to provide assurances that these requirements would comply with Los Angeles County Green Building Standards. The DEIR also fails to explain *how* the Project will meet California's solid waste goals other than a cursory statement that they will do so. Mere conclusory responses are inadequate. (*See Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 935 ("To facilitate CEQA's informational role, the EIR must contain facts and analysis, not just the agency's bare conclusions or opinions."). Nor does the DEIR explain what is meant by solar panel equivalent.

The DEIR inconsistently references cattle grazing. (*See* DEIR at 1-2; *cf*. DEIR at 7-12.) The DEIR switches between referring to cattle grazing as a "historic" use and a current use of the land. (*Id.*) The DEIR also states that no cattle grazing will be permitted in the new development but fails to clarify where the cattle that currently graze will go. (DEIR at 4-19.) If the cattle are going to be moved to another location, the DEIR needs to analyze the environmental impact on the new location. The DEIR also mentions animal care and handling facilities yet never describes what types of animals will be handled or how this fits into the project as a whole. DEIR at 4-19, 5.8-40.)

The DEIR fails to analyze or disclose any of the impacts of the previously named foreseeable uses and consequently provides no firm basis to assess the environmental costs and appropriate mitigation measures of the Project. (*San Joaquin Raptor*, 149 Cal.App.4th at 655.) As such, the DEIR fails to inform decision-makers and the public of the true scope of the Project from which all interested parties could assess the direct and indirect environmental effects of the Project. (*City of Santee*, 214 Cal.App.3d, at 1454-55; *San Joaquin Raptor*, 149 Cal.App.4th, 655; *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 83-86.)

II. The Alternatives Analysis in the DEIR is Inadequate and Fails to Comply with CEQA.

CEQA mandates that significant environmental damage be avoided or substantially lessened where feasible. (Pub. Res. Code § 21002; Guidelines §§ 15002(a)(3), 15021(a)(2),

15126(d).) Moreover, although "an EIR need not consider every conceivable alternative to a project . . . it must consider a reasonable range of potentially feasible alternatives that will foster informed decision decision-making and public participation." (Guidelines § 15126.6(a).) Additionally, the "key to the selection of the range of alternatives is to identify alternatives that meet most of the project's objectives but have a reduced level of environmental impacts." (*Watsonville Pilots Assn. v. City of Watsonville* (2010) 183 Cal. App. 4th 1059, 1089.) Accordingly, a rigorous analysis of reasonable alternatives to the Project must be provided to comply with this strict mandate. Unfortunately, the DEIR fails to meet this requirement on two levels: the DEIR analysis of the alternatives proposed is inadequate and the DEIR fails to include a reasonable range of alternative.

In rejecting the Creek Avoidance Alternative, the DEIR provides insufficient explanation as to why creek avoidance was eliminated from further consideration. (*See* DEIR at 6-7.) No explanation was given for why, contrary to common sense, eliminating more than half of the residential units would still necessitate the same amount of curbs, streetlights, utilities, etc. The DEIR attempts to bolster this rejection by arguing that the development would require schools, which would need to be built regardless of the number of houses in the development. (DEIR at 6-7.) However, as the DEIR itself stated above, the school is only potentially part of Phase 2 and not integral to the Project.

In analyzing the No Project Alternative, the DEIR impermissibly rejected this alternative in a conclusory fashion. (*See Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 935 ("To facilitate CEQA's informational role, the EIR must contain facts and analysis, not just the agency's bare conclusions or opinions."). Additionally, if the reasons for rejection the No Project Alternative is for feasibility reasons, case law indicates the standard for feasibility is high. Whether a project is economically unfeasible "is not measured by increased cost or lost profit, but upon whether the effect of the proposed mitigation is such that the project is rendered impractical." (*Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 600 (internal citation omitted).) In *Citizens of Goleta Valley v. Board of Supervisors* (1988) 197 Cal.App.3d 1167, 1180, the Court agreed with the trial court that the administrative record did not contain analysis of the project alternatives in terms of comparative costs, comparative profit or losses, or comparative economic benefit to the project applicant or the community at large.

In analyzing the No Project Alternative and Alternative Site, the DEIR should have discussed the need for the Project and whether the uses that would potentially utilize the Project can be accommodated in existing areas. As CAPCOA states in its white paper, one way local governments can avoid significant increases in GHG emissions and help solve the problem of climate change is to "facilitate more efficient and economic use of the lands" already developed within the community. (CAPCOA 2008.) Reinvesting in existing communities is "appreciably" more efficient than new development and may even result in a net reduction of greenhouse gases. (CAPCOA 2008.) The DEIR should consider an alternative that relies more on higher-density mixed commercial/residential development projects on existing disturbed lands in order to support the reduction of vehicle trips, promote alternatives to individual vehicle travel, and encourage efficient delivery of services and goods. (Office of the California Attorney General 2008.). Here, the objectives do not indicate that this specific site is necessary to accomplish the project goals.

In analyzing the Project pursuant to the Specific Plan, the DEIR fails to give any detail about what species would be impacted by the development.

In analyzing the No Industrial Alternative, the DEIR indicates that this alternative actually provides no fewer environmental impacts than the Proposed Project. (DEIR at 6-21). The DEIR also concludes that this alternative that would lead to an increase in driving due to removal of on-site employment opportunities (DEIR at 6-20); however, this erroneously assumes that those living in the development would seek out industrial employment (this assumption also implicates the Project's GHG emissions). Intensive industrial uses next to a national forest will likely be problematic yet this alternative does not discuss this at all. The DEIR fails to specify what industrial uses the developers are considering; these could have huge range of impacts and analyses given the potential different uses.

In analyzing all of the alternatives, the DEIR relies on 1992 NorthLake Specific Plan for guideline conformity as though the old plan holds legal weight. The DEIR has not explained why conformance with the 1992 Plan has any relevance to the current project in 2017. Just because the earlier specific plan was approved does not mean that it necessarily is legally adequate under CEQA. Any environmental conditions or mitigation measures detailed for that plan are not necessarily reflective of current conditions and CEQA requires an analysis based upon actual physical conditions. (Guidelines § 15126.2(a); *Communities for a Better Environment v. City of Richm*ond (2010) 184 Cal.App.4th 70, 83-86.) Environmental laws and regulations as well as CEQA-specific requirements have become significantly stronger in California since 1992 such that mitigation that might have been adequate then may not be sufficient now. CEQA requires adoption of all "feasible" mitigation measures and measures which may have not been feasible in 1992 may be feasible now (such as technologically sophisticated air pollution control equipment or solar power). Additionally, the County's General Plan in 1992 is likely different than current general plan. Recent land use trends indicate a movement towards consolidating sprawl, and a valid development in 1992 might not be an acceptable land use decision in 2017.

The DEIR provides no explanation for why the applicant chose not to make this their preferred alternative given that this is deemed the environmentally superior option. Moreover, Table 6-5 provides no way to quantifiably, and therefore meaningfully, compare the options. Table 6-2 ostensibly provides some detail on which to compare the 1992 NorthLake Specific Plan and the Proposed Plan, but this table excludes all of the other alternatives and is not helpful without having the 1992 NorthLake Specific Plan or EIR. (DEIR at 6-12.) The DEIR should include quantitative and meaningful comparisons between the Project's impacts and proposed alternatives' likely impacts, including analysis of estimated GHG emissions, quantified impacts to biological resources, water resources including water quality and water availability, and traffic resulting from each proposed alternative. Under CEQA, "the public agency bears the burden of affirmatively demonstrating that, notwithstanding a project's impact on the environment, the agency's approval of the proposed project followed meaningful consideration of alternatives and mitigation measures." (*Mountain Lion Foundation v. Fish & Game Com*. (1997), 16 Cal. 4th 105, 134.) The DEIR's general statements regarding these topics are insufficient.

A. The DEIR should have analyzed a wider range of alternatives.

As illustrated above, the DEIR did not analyze a reasonable range of alternatives including, but not limited to, the following: increased density with a substantially smaller project footprint; transportation-oriented design surrounding existing transit nodes or transit corridors within or adjacent to the Project area; a low carbon alternative that would actually result in lower emissions; conversion of the land into a conservation or mitigation bank; and mixed use development combined with greater preservation and enhancement of existing wildlife habitat. As courts have made clear, "[a] potential alternative should not be excluded from consideration merely because it would impede to some degree the attainment of the project objectives, or would be more costly." (*Save Round Valley Alliance v. County of Inyo* (2007) 157 Cal. App. 4th 1437, 1456-57 (quotations omitted).) The DEIR should have included a larger range of alternatives from which decision-makers could choose.

III. The DEIR's Analysis of Surface Water is Flawed.

The DEIR indicates that the Project would have no significant impacts and no mitigation measures required for water quality and hydrology issues. (DEIR at 5.8-81) Given the proximity of the Project to bodies of water, such as Castaic Lagoon, and the projects infill of Grasshopper Creek, this conclusion is not supportable. Additionally, discussion of Marble Creek and the Santa Clara River are absent from the Project Description. Yet it is clear the Project will have impacts on both of these waterways.

While the DEIR provides a list of Best Management Practices ("BMPs") that may reduce impacts (DEIR at 5.8-38 – 5.8-40), none of BMPs listed are specified as enforceable mitigation measures, which is required under CEQA. The DEIR does not indicate that these mitigation measures are binding on the project or that the applicant is required to comply.

Moreover, the water quality and hydrology section appears to contain significant amounts of "boilerplate" information that does not necessarily assist the public in understanding the impacts of the Project. In particular, the DEIR begins its hydrology and water quality analysis on page 5.8-1 of the DEIR, yet delays any CEQA-required discussion of environmental impacts as they relate to the project until page 58-47 – in other words, 47 pages of the section do not discuss or analyze actual impacts of the Project. And substantive information and studies regarding impact are only included in two separate thousand-page documents.

A. The DEIR does not adequately analyze impacts on wildlife on aquatic wildlife.

CEQA requires the County to require all feasible mitigation measures. (Pub. Res. Code §§21002, 21081(a); CEQA Guidelines §§ 15002(a)(3), 15021(a)(2), 15091(a)(1).) In its DEIR, the County failed to justify why a 100-percent avoidance mitigation measure of Grasshopper Creek would be infeasible. The mitigation measures provided to resolve infilling the aquatic habitat only consider relocating the respective species. Relocation is generally expensive and unsuccessful, which is well documented in the scientific literature.[1] There is no mention of

[1] Fischer, J. and D.B Lindenmayer 2000. An assessment of the published results of animal relocations. Biological Conservation 96:1-11.

avoiding the creek or providing a buffer and this would be a reasonable avoidance and minimization strategy. Additionally, the County should prohibit herbicide use that may run or drift onto Spadefoot Toad habitat, because herbicides are proven to disrupt amphibian reproduction.[2] Moreover, the Project will likely impact wildlife movement by filling in a portion of Grasshopper Creek Canyon, through which a tributary flows. A recirculated EIR needs to include an alternative to avoid Grasshopper Creek and Canyon in order to avoid and minimize impacts to onsite wildlife as well as connectivity.

The DEIR describes an Integrated Pest Management ("IPM") Plan but declines to actually list pesticides that will be used or provide the IPM in the public review. Nor is this plan binding on the Project. The DEIR states that "[p]esticides in runoff may or may not increase in the post-development phase" (DEIR at 5.8-61) yet fails to address issues that may result regarding runoff and bioaccumulation. The DEIR's reliance on IPM is ill-placed. IPM is entirely voluntary; it does not legally bind the Applicant to employ IPM strategies, and fails to define which products the Applicant has promised not to use. (*Appendix H-1 Water Quality Technical Report.*) Because the Applicant is under no legal compulsion to adhere to this promise, the County cannot and should not rely on this mitigation measure to reduce harm to individuals on or near the Project property. (CEQA Guidelines § 15126.4(a)(2); *Federation of Hillside & Canyon Ass'ns v. City of Los Angeles* (2000) 83 Cal.App.4th 1252, 1261 (mitigation measures must be "fully enforceable through permit conditions, agreements, or other measures" so "that feasible mitigation measures will actually be implemented as a condition of development").) Additionally, the DEIR does not point to any study or analysis that would suggest IPM is an effective means to mitigate harm to sensitive species, such as amphibians. Thus, the DEIR fails to present IPM for the Project to interested members of the community from becoming fully informed of the benefits and risks of this form of mitigation. (Cal. Pub. Res. Code § 21002, 21003.)

The DEIR's failure to prohibit certain pesticides is all the more glaring in light of the threats facing the Santa Clara River. The DEIR admits that the Santa Clara River is considered impaired (DEIR at 5.8-20) and designated as a Significant Ecological Area ("SEA") and it is clear that the Project will impact tributaries, particularly Castaic Creek, that lead to the Santa Clara River. (DEIR at 5.2-27.) This seems likely problematic given that the Santa Clara River is home to numerous endangered wildlife. Yet the DEIR contradicts itself by stating that the Santa Clara River has remained "stable" despite increased urban growth and water use. (DEIR at 5.8-81.)

B. The DEIR Does not ensure TMDL and NPDES Permit compliance.

The DEIR fails to and must implement additional mitigation measures in order to comply with the TMDL requirements. The DEIR has not assessed how the Project will meet these mandatory requirements and must provide more than simply stating that the project will be subject to and comply with jurisdictional waters. (*Californians for Alternatives to Toxics v. Dept. of Food & Agric.* (2005) 136 Cal.App.4th 1, 17 (compliance with existing environmental laws or regulations is not sufficient to support a finding that a project will not have significant

[2] Hayes et al. 2002. Herbicides: Feminization of male frogs in the wild. Nature 419: 895-896. http://palgrave.nature.com/nature/journal/v419/n6910/full/419895a.html

environmental impacts).) None of the recommended mitigation measures explain *how* the Project will comply or provide quantifiable and binding measures to be taken.

C. The DEIR provides conflicting and inadequate information regarding runoff and sedimentation impacts.

The DEIR provides an inadequate description of mitigation measures for alleviating significant sedimentation impacts because of both construction as well as implementation of the Project. The DEIR also fails to demonstrate that these mitigation measures would be effective in reducing impacts to less than significant. The DEIR indicates that the by eliminating cattle grazing, the project will improve existing sediment loads in Castaic Lagoon. (DEIR at 5.8-2.) While cattle grazing does have some impact on water quality, there is no evidence that a project which introduces thousands of people to a previously undeveloped area will have fewer impacts than cattle grazing.

The proposed Project could result in significant nutrient loading into waterways. Yet the DEIR appears to state that the Project may reduce the volume of runoff containing sedimentation from current levels and suggests that in fact Castaic Lagoon possesses an "assimilative capacity for nutrients" so that nutrient loading from the project would not affect the water quality. (DEIR at 5.8-55.)

Thus, the DEIR casts a blanket statement that mitigation measures will reduce peak runoff and total runoff volume for the entire project that is overbroad and misleading, does not provide decision-makers the ability to assess whether mitigation measures that will result in net sedimentation reductions in compliance with existing law, and leaves out essential information like recommended mitigation measures to reduce environmental impacts. The DEIR is contrary to CEQA requirements of full disclosure and intelligent decision-making. (Cal. Pub. Res. Code § 21002, 21003.)

D. The DEIR does not adequately analyze or mitigate impacts arising from hazardous substances.

The DEIR provides that a combination of setbacks from drainage features and hazardous material management measures would minimize the potential for pesticides to enter the many waterways on the project site. (DEIR at 5.8-65.) However, the DEIR fails to provide further details on the hazardous materials business plan, including specific mitigation measures and the enforceability of the measures, which would be controlling for how hazardous materials and potential spills will be managed on the Project site. Instead, the DEIR defers this mitigation measure, an error that must be corrected in the final EIR. Additionally, the pipeline relocation analysis regarding impacts to water quality is insufficient and fails to provide more than cursory mention of compliance with BMPs and Low Impact Development ("LID") strategies. (DEIR at 5.8-66.)

IV. The DEIR Does Not Adequately Analyze or Mitigate Impacts To Groundwater.

The DEIR provides conclusory and inaccurate statements regarding impacts to groundwater. The DEIR states that increasing impervious surface will limit precipitation recharge but that this is counteracted by the increase runoff to Castaic Lagoon. (DEIR at 5.8-73

– 74.) Not only does this not make sense, but the DEIR fails to consider the fact that the runoff from the impervious surfaces will contain contaminants and fails to analyze those impacts.

The DEIR also states that the Project will recharge the Alluvial aquiver, thereby benefiting the groundwater supplies for the Project (DEIR at 58-50.) The DEIR should provide further information as to how an increase in impervious surfaces associated with development will actually benefit groundwater supplies.

V. The DEIR Fails to Adequately Analyze the Growth-Inducing Impacts of the Project.

EIRs are required to provide a detailed discussion regarding the growth-inducing impacts of a project. (Guidelines §§ 21100(b)(5); 21156.) *Napa Citizens for Honest Government v. Napa County Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 369 sets forth three factors to determine the level of detail required in a growth-inducing impacts analysis: (a) the nature of the project; (b) the directness or indirectness of the contemplated impact; and (c) the ability to forecast the actual effects the project will have on the physical environment. (*Id*.) Applying these factors here, the DEIR should have contained a detailed analysis regarding growth-inducing impacts because (a) the Project at issue is extremely large, is sited in an area with no existing development, and includes infrastructure that will undoubtedly act as a catalyst for future development in the area; (b) the Project will result in direct impacts in the area by paving the way for future development through infrastructure; (c) the County already has lists of potential proposed developments (*see* DEIR at 5.12-43)), such that the County can forecast the nature and extent of growth inducing impacts. Despite these requirements, the DEIR spends less than two pages analyzing the growth-inducing impacts of the Project. This is plainly inadequate under *Napa Citizens.*

The DEIR states that property west of I-5 may be developed but not as the result of this Project (DEIR at 7-14) but this conclusion fails to consider how the current Project will pave the way to induce more development. The DEIR relies on a flawed argument that somehow because this Project was previously approved in 1992 that means the DEIR now does not need to analyze growth-inducing impacts.

The DEIR purports to accommodate a housing crisis in Los Angeles (although the proposed development is not close enough to Los Angeles to legitimately provide housing for residents living in the city) and based on this assumption, mistakenly concludes that this somehow counteracts any growth-inducing capabilities of the Project. (DEIR at 7-14.)

Finally, the DEIR claims that it requires no changes to current zoning or codes. This statement is both inaccurate [*see* DIER at 4-8 (description of necessary Conditional Use Permit for development)] and confuses "precedent-setting action" with garden variety development that nonetheless induces growth in an otherwise undeveloped area of land and requires CEQA analysis. (DEIR at 7-15.)

VI. The DEIR Does Not Adequately Analyze Or Mitigate The Air Quality Impacts of the Project.

The DEIR's air quality impacts analysis is flawed because it underestimates the air quality impacts likely resulting from the Project and fails to adopt all feasible mitigation

measures. Californians experience the worst air quality in the nation, with annual health and economic impacts estimated at 8,800 deaths and $71 billion per year. (ALA 2013.) The Project will further degrade the region's air quality by generating considerable emissions from the construction phase through ongoing operations.

Regarding criteria pollutants, the DEIR's significance analysis is flawed because it uses the "Localized Significance Threshold" or "LST" methodology. (DEIR at 5.1-38.) This is not a proper threshold for this Project. According to South Coast Air Quality Management District ("SCAQMD"), LSTs only apply to projects that must undergo CEQA or NEPA review and "are five acres or less."[3] In contrast, the Project would develop approximately 1,330 acres. Additionally, the DEIR states that specific emissions based on land uses cannot be characterized (and therefore analyzed) without knowing the nature of the use. (DEIR at 5.1-38.) However, the DEIR cannot avoid analysis or disclosure by simply stating that future uses will comply with SCAQMD rules.

The DEIR states that industrial and commercial land uses will be potentially significant (DEIR at 5.1-40) but fails to address mitigation measures by impermissibly concluding that any potential facilities would comply with SCAQMD requirements. The DEIR also makes conclusory and erroneous statements that health risks from off-site sources would be less than significant, requiring no mitigation measures, because a study from the early 2000s set a "conservative" baseline and diesel emissions from heavy trucks have declined since then. The DEIR provides no evidence to support this conclusion.

There are numerous other inadequacies with the DEIR's air quality analysis, including the following:

- Regarding Carbon Monoxide, the DEIR uses outdated studies to conduct an analysis (*See* DEIR at 5.1-37 [citing plans from 1992 and 2003].) The DEIR also includes references to the 1992 and 2012 EIRs as though either of these provide relevant or binding data on the current Project. (DEIR at 5.1-5.)

- None of the County of Los Angeles General Plan Goals or Policies appears to be binding on the Project. (DEIR at 5.1-17.) Nor do any of the BMPs regarding construction activities. (DEIR at 5.1-21.)

- The DEIR references Best Available Control Mechanisms ("BACMs") listed in Appendix C yet this information does not appear anywhere in that appendix. (DEIR at 5.1-17.)

Regarding operational activities, the DEIR states that "[mitigation] measures provide incentives but do not guarantee any reductions [in emissions of mobile source pollutants]." (DEIR at 5.1-33.) The DEIR then goes on to list possible measures, including a suggestion from the 1992 Plan for a "commuter computer program." (*Id.*) The DEIR does not explain what this means or how it would reduce impacts.

[3] South Coast Air Quality Management District, "Localized Significance Thresholds," (available at http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds).

The DEIR makes a confusing and incorrect argument that the 2012 Air Quality Management Plan ("AQMP") took the 1992 Plan into consideration because it came many years after the creation of the 1992 Plan; the DEIR then improperly concludes that compliance with the 2012 AQMP indicates that there are no significant impacts regarding obstruction of the AQMP. (DEIR at 5.1-20.)

VII. The DEIR Fails To Adequately Analyze Or Mitigate The Impacts Of The Project On Biological Resources.

A. Habitat destruction is a leading cause of extinction.

Species diversity is critical for healthy ecosystems, and ensuring habitat integrity if a key component to species survival. (Dobson 1997.) Habitat destruct or alteration can increase incidents of wildfire and flooding as the ecosystem becomes imbalanced, making it more susceptible to these events. (Brooks 2004; Nilsson 2000.) Developments that convert open space into another use, such as housing, industry, energy or agriculture, negatively impact the species that live in these areas, and the ecosystem as a whole. (Walston 2016; Chaplin-Kramer 2015; Minnich 1998.) Many of the species that have potential to occur in the project area are already imperiled or endangered, and further encroachment onto their habitat worsens the threat to their success and survival.

While the entire habitat may not be converted or destroyed through development, it may be fragmented such that it becomes useless as a habitat for particular species. Even if the habitat remains intact, light and noise pollution can negatively impact the health and reproductive rates of species that are sensitive to these types of pollution. (Slabbekoorn 2008; Longcore 2004.) Pollution in the form of pesticides and rodenticides are also a threat, in addition to run-off pollution from roads that impacts water quality and aquatic life and the species that depend on it. (Perez 2007; Miller 2006; Relyea 2005.) Roads create habitat fragmentation since they act as dangerous physical barriers that many species won't cross, or are killed or injured if they do. (Poessel 2014; Ware 2015; Brock 2004; Swihart 1984.) Additionally, roads facilitate the spread of non-native and invasive species, particularly plants and their seeds, which threaten the survival of species native to these areas. (Gelbard 2003.) Fences create another type of habitat fragmentation by reducing mobility and prevent species from accessing all areas that they depend on for survival, or worse, they ensnare the animals that do try to cross them, resulting in injury or death. (Baines 2003; Paige 2008.) For many species, climate change will mean the need for adaptation in the form of migration to new habitats that support their needs. Fragmentation or obstruction of this mobility will result in greater mortality. (Scheffers 2016.)

Urban infill projects reuse land that has already been disturbed and that is located near urban centers, thus removing the need for conversion of open space for housing, businesses, shopping, roads and other infrastructure. (Wheeler 2002.) These projects are also good candidates for citing distributed solar, further reducing impacts to species and habitat. (Powers 2009.) Wildlife corridors, bridges and underpasses can be constructed in places where roads bisect and disconnect habitat and mobility. (Servheen 2007.) Fences should be used with an understanding of the impacts they have on species mobility, and should be constructed in such a way as to specifically exclude the target species, not all species. Consideration should be given to the type of fencing and the ways in which species could become entangles, injured or killed.

(Paige 2008.) Connective corridors between fragmented habitats will enable species to utilize the habitat and retain needed mobility for survival. (South Coast Wildlands 2008.) Alternatives to toxic and poisonous pesticides and herbicides should be used whenever possible to reduce harm to species and their habitats. (Litmans 2004.)

B. The DEIR does not contain an adequate baseline for biological resources.

CEQA requires that the lead agency analyze and disclose the existing conditions in the Project area. Unfortunately, the DEIR fails to do this by relying upon outdated surveys. In particular, the DEIR relies on surveys primarily from 1997 to 2004 and 2005 and 2006. (DEIR at 5.2-2.) Surveys that are over ten years old cannot provide information on "current conditions" on the site and are therefore not sufficient under CEQA.

Similarly, the DEIR relies upon inadequate surveys for special status species. The DEIR states that the Project site contains "potentially suitable habitat" for five species of federally endangered or threatened shrimp, but that no shrimp was observed during "2014-2015 focused surveys." The 2014-2015 rain season for Los Angeles County was barely half of average, such that shrimp's vernal pool habitat was significantly diminished. The DEIR should include surveys from years (such as 2016-2017) that contain rainfall at average or above average.

In addition, the DEIR claims that protocol level surveys were conducted in 2014-2015 for each species of fairy shrimp. (DEIR at 5.2-25.) However, the survey report does not appear to be included in the appendixes to the DEIR – only a survey report for a 2005-2006 survey is included.

The DEIR only references surveys for the California red-legged frog from 2001. These surveys are too old to provide any meaningful information on the current site conditions. Even if these surveys were not outdated, it is not clear that the surveys were conducted using established protocols. For instance, the surveys were only conducted between 11:30 a.m. and 6:30 p.m. (DEIR, Appx. D, Att. C) even though the adult red-legged frogs are nocturnal.[4] Because critical habitat for the California red-legged frog lies south east of the Project site, the County should require protocol level surveys of the California red-legged frog.

Despite the fact that the federally-threatened California gnatcatchers were located on site, including one onsite nest and a second one directly adjacent off-site, it does not appear that protocol-level surveys[5] were implemented for this species. Protocol-level surveys are necessary in order to evaluate the impacts from the project on the gnatcatcher. These documented locations for California gnatcatchers are some of the most northerly locations for this rare species,[6] and species on the edge of their range are particularly important, especially as the effects of a warming climate proceed.[7]

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[4] https://www.fws.gov/sacramento/es_species/Accounts/Amphibians-Reptiles/es_ca-red-legged-frog.htm.
[5] https://www.fws.gov/pacific/ecoservices/endangered/recovery/documents/CCalGnatcatcher.1997.protocol.pdf.
[6] CNDDB 2017.
[7] Channell, R. and M.V. Lomolino 2000. Dynamic biogeography and conservation of endangered species. Nature 403: 84-86. http://fire.biol.wwu.edu/cmoyer/zztemp_fire/biol432_W00/papers/biogeo_endspp00.pdf.

The DEIR should be recirculated after comprehensive surveys are conducted at the appropriate time of year to observe sensitive plant and animal species.

C. The DEIR fails to adequately analyze or mitigate impacts to special status wildlife.

The DEIR must analyze and mitigate all impacts on special status species, including California Department of Fish and Wildlife ("CDFW") species of special concern. The CDFW defines a species of special concern as a species that, among other things, "is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status."[8] CDFW aims to "achieve conservation and recovery of these animals before they meet California Endangered Species Act criteria for listing as threatened or endangered." (*Id*.) CDFW states that species of special concern "should be considered during the environmental review process." (*Id*.; CEQA Guidelines § 15380(b)(B).) An impact to wildlife is significant where it "substantially reduce[s] the number or restrict[s] the range of an endangered, rare or threatened species." (CEQA Guidelines, § 15065.) CDFW interprets this provision to apply to species of special concern. The County must mitigate significant effects whenever feasible. (Cal. Pub. Res. Code § 21080.5(d)(2)(A).)

- **Western Spadefoot Toad.** The DEIR states that the Project site hosts one of the few known populations of the western spadefoot in the region and that impacts would be significant. (DEIR at 5.2-36.) Yet, the DEIR states that MM 5.2-9 would render impacts less than significant. (DEIR at 5.2-52.) MM 5.2-9 is a "relocation program" that proposes to relocate the spadefoot toad population onto unspecified "suitable habitat." (*Id*.) If "suitable habitat" is not available, then MM 5.2-9 states that the habitat shall be "created." The DEIR fails to offer any evidence or analysis indicating that such a relocation program would be successful. In general, relocation programs are extremely risky and often result in the death of the relocated animals. Even if relocation programs were a reliable mitigation measure (which they are not necessarily), the DEIR provides very little detail as to how the relocation program will be conducted or where the toads will be relocated. The Project should not disrupt one of the last remaining populations of a special status species. Instead, the Project should be reconfigured or downsized in a manner that will not impact the toad populations.

- **Special status reptiles.** The DEIR states that various special status reptile species may occur on the Project site, including the silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ring-necked snack, Blaineville's horned lizard, and coast patch-nosed snake. (DEIR at 5.2-36.) The DEIR claims that "sweeps" prior to construction and "relocation…as necessary" would render impacts less than significant. (DEIR at 5.2-36.) MM 5.2-10 vaguely states, "If feasible, special status reptiles will be removed from the disturbance area and relocated to suitable habitat in adjacent areas." (DEIR at 5.2-52.) This mitigation measure does not address the habitat destruction that the Project will cause, nor does it ensure that direct mortality of special status species will not occur. And by qualifying the sentence with "if feasible," MM 5.2-10 gives the applicant a way

[8] *See* California Dep't of Fish & Wildlife, *Species of Special Concern* (available at https://www.wildlife.ca.gov/Conservation/SSC/).

to avoid conducting any mitigation if it states mitigation would not be "feasible." In any event, a "clearance sweep" immediately before construction activities begin will not result in the identification, capture, and successful relocation of over half a dozen species of small reptiles (many of which are active only at night and difficult to locate).

- **Southwestern willow flycatcher and least bell's vireo.** The DEIR states that these species have been observed on the Project area. (DEIR at 5.2-37.) In addition, the DEIR states that the Project will impact riparian habitat used by these species. (*Id.*) Given that these species are listed as endangered, the Project should avoid any development in areas used by these species. The DEIR incorrectly states that "biological monitoring" would reduce impacts to less than significant (*Id.*); monitoring will not protect these species from losing vital riparian habitat. While the DEIR promises that "suitable habitat" will be replaced at a 2:1 ratio, the proposed mitigation measures do not set forth specific plans and policies to ensure that actual habitat used by these species will be protected. And for impacts to federally listed endangered species, mitigation ratios generally should be much higher (e.g., at least 5:1).

- **California gnatcatcher.** The DEIR states that the California gnatcatcher has been observed on the Project site and that the Project would impact approximately 634.70 acres of habitat. (DEIR at 5.2-37.) While the DEIR vaguely states that impacts would be mitigated at a 2:1 ratio, the DEIR again does not specify whether it requires the preservation of 1269.40 acres of California gnatcatcher habitat, or where such habitat is located.

- **Other special status bird species.** Numerous other special status bird species inhabit the Project site. (DEIR at 5.2-37 & 38.) The DEIR states that hundreds of acres of habitat for these species would be lost, but that the loss would not be "substantial on a regional basis." (DEIR at 5.2-38.) Given the widespread habitat loss to special status bird species in Southern California caused by sprawl development, the DEIR's conclusion that such impacts are not "substantial" is not supportable.

D. The DEIR fails to set forth adequate or enforceable mitigation measures to protect special status wildlife.

The DEIR's mitigation measures are not adequate to protect special status wildlife. While MM 5.2-2 proposes acquisition of lands as described in certain Area Plan Policies, the DEIR does not provide any details regarding the types of land to be acquired, the amount of acreage, the location of the land, or which species the land acquisition will mitigate impacts. (DEIR at 5.2-42.) Such vague, deferred, and unenforceable mitigation proposals are not appropriate under CEQA. MM 5.2-3 similarly provides various potential mitigation measures (e.g., "creation" of habitat onsite or offsite) but the measures are vague and do not require the applicant to commit to any particular mitigation. CEQA requires more than a mere promise that the applicant will "consult" with applicable agencies; CEQA requires that all feasible mitigation measures be adopted ***prior*** to project approval.

MM 5.2-7 states that mitigation at a 2:1 ratio shall occur for California grassland/wildflowers fields. However, the measure also states that the ratio shall be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted. (DEIR at 5.2-47.) It is unclear how this measure will actually protect burrowing owls given that the measure does not appear to require that the protected lands actual contain existing burrowing owl populations. MM 5.2-8 contains similar language regarding the burrowing owl, but does not indicate whether any lands proposed for protection actual have existing burrowing owl populations.

An overarching problem with all of the proposed offsite mitigation is that the DEIR does not appear to require that the lands be connected to other open space. Without such a requirement, the Project could "mitigate" its impacts by protecting land that is isolated from other open space and thus has very little value because wildlife cannot migrant between the mitigation land and other open space. In contrast, the lands to be developed for the Project are adjacent to thousands of acres of open space in the Angeles National Forest.

The DEIR references a Habitat Mitigation and Monitoring Plan that will be developed and reviewed by the County's Department of Regional Planning. This plan is key to minimizing and mitigating impacts to environmental resources and should be included in the revised and recirculated EIR, so that the public and decision-makers can understand what is being proposed to minimize and mitigate the impact to on-site and off-site resources that will be affected by the project.

E. The DEIR fails to adequately analyze impacts on wildlife from noise.

Impacts on wildlife from noise are not adequately addressed within the DEIR. The DEIR merely acknowledges that noise may disrupt some species, but claims such impacts would not be significant because most of the species on the Project area are not federally listed species. (DEIR at 5.2-40.) As such, there is no analysis or determination within the DEIR as to whether noise impacts will disrupt the nesting, foraging, or other behavioral patterns of wildlife in the on-site conserved lands and adjacent open space. A full analysis of project related noise on wildlife should be provided in the revised and recirculated EIR. In addition, the DEIR must include mitigation measures for ongoing project operation to limit noise impacts to wildlife, especially given its location next to a national forest.

F. The DEIR does not address harmful interactions between humans and wildlife.

Another issue that is not addressed in the DEIR is the strong likelihood of problematic interactions between humans and wildlife. The DEIR notes that the Project site is "adjacent to open space in the Angeles National Forest (ANF) and Castaic Lake State Recreation Area (SRA), both of which provide high-quality wildlife habitat." (DEIR at 5.2-14.)

By placing over thousands of people in close proximity to open space areas, there is a strong probability that coyotes and other animals will forage in trash cans, prey on domestic pets, and otherwise disturb and frighten residents. In response, project residents may try to handle such interactions themselves, causing greater damage – for instance, putting out poison which could then kill an endangered or special status species. That interactions between humans and wildlife will occur is a problematic issue that needs to be identified and analyzed in the DEIR.

Another aspect of human and wildlife interaction that is commonly not considered is the likelihood of increasing the dependency of certain wildlife species on human-supplied food sources and human-created habitats which benefit invasive species over native species. (Hansen et al. 2005.) For example, people often place in bird feeders outside their homes which usually causes an increase in certain bird-species as well as bird predators in that area, creating competition among birds, increased predation, and the spread of parasites between species. (Shochat et al. 2010.) With the exurban type of development that this Project proposes, research has documented that native species have reduced survival and reproduction near homes, and native species richness often drops with increased exurban densities. In addition, exotic species, some human-adapted native species, and species from early successional stages often increase with exurban development. (Hansen et al. 2005.) As with this proposed project, the location of development is often nonrandom relative to biodiversity because both are influenced by biophysical factors resulting in the effects on biodiversity being disproportionately large relative to the area of exurban development. (*Id*.) In other words, not all natural areas are created equal and some of the most biodiverse areas and areas that are key to conserve for their biodiversity are often the same areas that are most attractive for exurban development.

VIII. The Project Is Not Consistent With The General Plan.

Land use decisions must be consistent with all applicable land use policies, including the General Plan and all of its elements. (*See Pfeiffer v. City of Sunnyvale City Council* (2011) 200 Cal. App. 4th 1552, 1562-1563.) Unfortunately, the Project is clearly inconsistent with multiple General Plan policies, as set forth below.

A. General Issues with General Plan Consistency

Although the DEIR defers conducting an analysis of the elements of the Santa Clarita Valley Area Plan 2012 ("SCVAP 2012"), the Project seems to conflict with the SCVAP 2012 goals, such as reducing vehicle trips and preserving water quality. (DEIR at 5.9-9.)

The DEIR states that Los Angeles County Board of Supervisors have only "indicated intent" to approve the general plan update; it is unclear if this update is binding on the Project. (DEIR at 5.9-7). The DEIR also lists several policies from the Los Angeles 1980 General Plan such as encouraging infill development and discouraging sprawling development, but then states that these goals no longer apply without further explanation as to why. (DEIR at 5.9-8.)

The DEIR provides conflicting statements regarding access to schools. The DEIR mentions building a school as part of Phase 2 of the Project and concludes this is consistent with the County's education policies (DEIR at 5.9-16) but construction of a public or private school (also it is likely inconsistent with the County's educational goals to *potentially* provide a location for a *private* school) is not guaranteed and would require travel off-site, which conflicts with travel and emission goals.

Again, the DEIR references "commuter computer program" as a legitimate means of reducing vehicle trips and ensuring consistency with emissions reduction goals. (DEIR at 5.9-21.)

The DEIR impermissibly concludes that the Project is consistent with water goals because it will comply with a NPDES permit. (DEIR 5.9-24.)

B. The DEIR impermissibly relies on 1992 Specific Plan.

The DEIR begins its land use analysis (and much of its analysis throughout the entire DEIR) with the assumption that the 1992 Northlake Specific Plan has been "adopted" and continues to carry legitimacy in providing consistency with various County plans. (DEIR at 5.9-3). The DEIR goes on to conclude, without any evidence, that the incorporation of the 1992 Plan indicates consistency with all applicable plans. (DEIR at 5.9-12.) Specifically, the DEIR states that the 1992 Plan has been incorporated into the SCVAP 2012. (DEIR at 5.9-8.) The DEIR also states that the Los Angeles County General Plan assumes future development from the 1992 Plan (DEIR at 5.9-14.) The DEIR impermissibly concludes that the 1992 Plan supersedes and replaces the Los Angeles County General Plan and SCVAP 2012. (DEIR at 5.9-10.) The DEIR does not provide any evidence for this and ignores the fact that the 1992 Plan is not applicable to the current Project.

Finally, the DEIR dedicates an entire section within the land use analysis to a discussion of the 1992 Specific Plan as though consistency with this outdated and irrelevant document provides any binding or necessary information on the current Project. (DEIR at 5.9-54.)

C. The DEIR does not adequately explain the Project's consistency with other general plan policies.

In Table 5.1-1, 2, and 3, the DEIR attempts to claim consistency with all applicable general plan policies. Unfortunately, these tables do not explain in any detail how the Project is consistent with these various policies, and instead generally refers to mitigation measures. (*See* DEIR at 5.9-13 (the DEIR should provide more explanation of applicable traffic mitigation fees); *see also* DEIR at 5.9-15 (stating that Project is consistent with the General Plan's goal of excellence in environmental resource management because impacts would be mitigated).]

The DEIR additionally could provide more specifics about how the Project will comply with Title 31 Green Building Code Standards. (DEIR at 5.9-11.)

IX. The DEIR Fails to Adequately Address its GHG Emissions.

Action to address climate change becomes ever more urgent with each passing day. The National Oceanic and Atmospheric Administration ("NOAA") and National Aeronautics and Space Administration ("NASA") confirmed that 2014 was the hottest year ever recorded. (NASA 2015.) Climate change will affect California's climate, resulting in such impacts as increased temperatures and wildfires, and a reduction in snowpack and precipitation levels and water availability.

Although some sources of GHG emissions may seem insignificant, climate change is a problem with cumulative impacts and effects. (*Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, (9th Cir. 2008) 538 F.3d 1172, 1217 ("the impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis" that agencies must conduct).) One source or one small project may not appear to have a significant effect on climate change, but the combined impacts of many sources can drastically damage California's climate as a whole. Therefore, it is the "policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures which will avoid or substantially lessen the significant environmental effects of such projects." (Pub. Res. Code § 21002.) While we are heartened to see the EIR does include measures to reduce the Project's GHG emissions, we urge the EIR be revised to include all possible steps to limit and mitigate the Project's GHG emissions.

For example, rather than committing only 50% of homes to 3-kilowatt solar panel systems, we urge the EIR to require all buildings within the development to have 3 kilowatt solar panel systems or the equivalent. (DEIR at 5.7-22.) Rooftop solar power is the most energy efficient, least-environmentally damaging form of renewable energy available for the Project and is ideal for the Project's location.

CAPCOA has also identified existing and potential mitigation measures that could be applied to projects during the CEQA process to reduce a project's GHG emissions. (CAPCOA 2008). The California Office of the Attorney General also has developed a list of reduction mechanisms to be incorporated through the CEQA process. (CAPCOA 2008 at Table 16.) These resources provide a rich and varied array of measures to be incorporated into the Project. Potential measures include ease of access to public transit, alternative construction materials, and onsite energy generation. Specific measures for the GHG emissions generated by the Project's energy consumption include, but are not limited to:

- Requiring that the Applicant seek ***and obtain*** the U.S. Green Building Council's LEED or comparable standards for energy- and resource efficient building during pre-design, design, construction, operations and management;
- Designing buildings for passive heating and cooling, and natural light, including building orientation, proper orientation and placement of windows, overhangs, skylights, etc.;
- Designing buildings for maximum energy efficiency including the maximum possible insulation, use of compact florescent or other low-energy lighting, use of energy efficient appliances, etc.;
- Reducing the use of pavement and impermeable surfaces;
- Requiring water re-use systems;
- Installing light emitting diodes (LEDs) for traffic, street and other outdoor lighting
- Limiting the hours of operation of outdoor lighting;
- Maximizing water conservation measures in buildings and landscaping, using drought tolerant plants in lieu of turf, planting shade trees;
- Ensure that the Project is fully served by full recycling and composting services;
- Ensure that the Project's wastewater and solid waste will be treated in facilities where GHG emissions are minimized and captured;
- Installing the maximum possible photovoltaic array on the building roofs and/or on the project site to generate all of the electricity required by the Project, and utilizing wind energy to the extent necessary and feasible;
- Installing solar water heating systems to generate all of the Project's hot water requirements;
- Installing solar or wind powered electric vehicle and plug-in hybrid vehicle charging stations to reduce emissions from vehicle trips;

The Project should further utilize the following measures related to construction:

- Utilize recycled, low-carbon, and otherwise climate-friendly building materials such as salvaged and recycled-content materials for building, hard surfaces, and non-plant landscaping materials;
- Minimize, reuse, and recycle construction-related waste;
- Minimize grading, earth-moving, and other energy-intensive construction practices;
- Landscape to preserve natural vegetation and maintain watershed integrity;

- Utilize alternative fuels in construction equipment and require construction equipment to utilize the best available technology to reduce emissions.

New construction, like this Project, has a unique opportunity to fully embrace and incorporate the use of renewable energy in its design, construction and operation. We urge the County to take full advantage of those opportunities, if it chooses to move forward with the Project.

X. Conclusion

Given the possibility that the Center will be required to pursue appropriate legal remedies in order to ensure enforcement of CEQA, we would like to remind the County of its duty to maintain and preserve all documents and communications that may constitute part of the "administrative record." As you may know, the administrative record encompasses any and all documents and communications which relate to any and all actions taken by the County with respect to the Project, and includes "pretty much everything that ever came near a proposed [project] or [] the agency's compliance with CEQA . . . ." (*County of Orange v. Superior Court* (2003) 113 Cal.App.4th 1, 8.) The administrative record further contains all correspondence, emails, and text messages sent to or received by the County's representatives or employees, which relate to the Project, including any correspondence, emails, and text messages sent between the County's representatives or employees and the Applicant's representatives or employees. Maintenance and preservation of the administrative record requires that, *inter alia*, the County (1) suspend all data destruction policies; and (2) preserve all relevant hardware unless an exact replica of each file is made.

Thank you for the opportunity to submit comments on the Project. We look forward to working to assure that the Project and environmental review conforms to the requirements of state law and to assure that all significant impacts to the environment are fully analyzed, mitigated or avoided. In light of many significant, unavoidable environmental impacts that will result from the Project, we strongly urge the Project not be approved in its current form. Please do not hesitate to contact the Center with any questions at the number listed below. We look forward to reviewing the County's responses to these comments in the Final EIR for this Project once it has been completed.

Sincerely,



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ATTACHMENT B





Friends of the
Santa Clara
River

April 16, 2018

Via Electronic Mail and FedEx (w/attachments)

Mr. Jodie Sackett
County of Los Angeles
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Re: NorthLake Specific Plan, Final Supplemental Environmental Impact Report

Dear Mr. Sackett:

These comments are submitted on behalf of the Center for Biological Diversity ("Center") and Friends of the Santa Clara River ("Conservation Groups") on the Final Supplemental Environmental Impact Report ("FEIR") for the proposed NorthLake Specific Plan Project ("Project").

The Conservation Groups respectfully request that the Project not be approved in its current form. As the California Department of Fish and Wildlife ("CDFW") and the Santa Monica Mountains Conservancy ("SMMC") and have already recommended in their respective comment letters, **the Project should be significantly downsized in order to avoid impacts to Grasshopper Creek, the western spadefoot toad, and other resources.**

On a broader level, it is unfortunate the County is even considering approval of such an outdated and environmentally harmful sprawl project. **The solution to the region's housing shortage is not to pave over blue-line streams, evict rare native wildlife, and destroy other irreplaceable natural resources**. Instead, the County should focus on encouraging development and affordable housing in existing communities. Approving the Project as proposed would also undermine the County's commitment to sustainability and fighting climate change. In addition, approval of the Project would endanger thousands of people, as the project area lies in a very high fire hazard severity zone.

The FEIR does not cure the deficiencies in the Draft Supplemental Environmental Impact Report ("DEIR") to adequately analyze a range of environmental impacts, mitigation measures, and alternatives; and to adequately describe the Project and its impacts. At the same time, the FEIR contains significant new information and the County has erred in failing to issue an amended DEIR, thereby depriving the public its rights to notice and opportunity to comment.

I. Background on the Conservation Groups

The Center for Biological Diversity is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over one million members and online activists throughout California and the United Sates. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County.

The mission of Friends of the Santa Clara River is to protect and preserve the cultural and biological resources of the Santa Clara River Watershed.

II. The County Should Not Approve Large-Scale Development in a Very High Fire Hazard Severity Zone.

The Project site is located in a "very high" fire hazard severity zone. (DEIR at 5.5-1.) California just experienced its worst wildfire season on record, which resulted in the loss of human life, the destruction of thousands of buildings, and extremely large expenses for the state.[1] A recent study revealed a disturbing trend in which new development is occurring fastest in high fire hazard severity zones.[2]

Unfortunately, the Project appears to continue that trend. The EIR[3] states:

> Implementation of the Project would increase the demand for fire services including personnel, equipment, and facilities as a result of the increased potential for structural fires and human-induced fires. Additionally, the Project site lies outside the service area of the Consolidated Fire District; this will thereby affect response times to the Project site. (DEIR at 5.5-1.)

The EIR later concedes that large fires occur in the SCVAP planning area approximately ***every ten* years**. (DEIR at 5.5-4.) Adding hundreds of acres of development and siting thousands of people in a very high fire hazard severity zone is irresponsible planning and will endanger future residents. Largescale development in such zones also is an irresponsible use of County and state funds and resources, as significant firefighting efforts will eventually be needed if (or when) fires occur.

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[1] *Washington Post*, "Costs to Fight 2017 California Wildfires Shatter Records" (Jan. 18, 2018); *Daily News*, "California keeps going over budget as costs of fighting wildfires continue to increase" Dec. 7, 2017).
[2] *KPCC*, "New housing grows fastest in SoCal's most fire-prone areas" (Mar. 12, 2018); Radeloff 2018.
[3] The DEIR and the FEIR together will sometimes be referred to as the "EIR" in this letter given that both documents collectively make up the EIR. However, citations will still reference the "FEIR" or "DEIR."

III. The FEIR Fails to Demonstrate That a Less Environmentally Damaging Project is Not Feasible.

The Center's comments on the DEIR outlined the County's substantive mandate under CEQA to study alternatives to the proposed project and select an alternative that minimizes impacts to the environment. The Center specifically questioned why the "Creek Avoidance Alternative" was not selected. As discussed below, the FEIR still fails to adequately answer this question.

A. The FEIR does not contain evidence that the Creek Avoidance Alternative is not feasible.

In attempting to justify why the Creek Avoidance Alternative was not selected, the FEIR claims that the Creek Avoidance Alternative would not "provide a mix of uses to reduce offsite vehicle trips and VMT…" (FEIR at 2-26.) Yet, elsewhere the FEIR takes the position that it would be "speculative" to assume that any of the jobs onsite would be filled by future residents of the Project. (FEIR at 2-81.) The FEIR does not explain how it can rely upon these onsite uses to reduce VMT while also implying that onsite jobs will ***not*** result in a reduction in VMT. In short, this justification appears to be little more than a posthoc rationalization by the developer to support its preferred project.

In rejecting the Creek Avoidance Alternative, the FEIR also claims that utility pipelines would need to cross over the creek, which would risk accidental spills, presumably which could contaminate the creek. (FEIR at 2-85.) The FEIR's purported concern for Grasshopper Creek is bewildering since the proposed project would destroy most of it. Obviously the ***risk*** of a spill is a far lesser "impact" than the ***certainty*** that a large portion of the stream will be destroyed. The FEIR fails to explain this logical inconsistency in its analysis. Similarly, the FEIR is devoid of any analysis showing why a utility pipeline would somehow make the project infeasible.

The FEIR's general complaints about how utilities will be needed regardless of project size also do not show how the Creek Avoidance Alternative is infeasible. Developments of all sizes—including those that are merely a few acres—are able to absorb the cost of attaching utilities.

In rejecting the Creek Avoidance Alternative, the FEIR claims that a reduction in project size would "not fully meet the Project objectives to enhance local economic well-being…" (FEIR at 2-85.) The FEIR contains no data backing up this claim, nor does it contain any comparison on the economic benefits of the preferred project versus the Creek Avoidance Alternative. The FEIR also ignores the reality that healthy and intact streams and ecosystems have economic benefits deriving from increased tourism. This omission is particularly notable given the Project's location next to Castaic Lake State Recreation Area, which is a local resource for recreation and tourism.

The FEIR claims that a smaller project is not feasible because the development "would also require development of amenities including schools, and parks." (FEIR at 2-79.) It is striking that the FEIR is justifying the destruction of *more* open space because of a perceived cost of "developing" parks. As noted above, the Project area is already surrounded by parks and open space, such as the Castaic Lake State Recreation Area. Surely something is wrong with the

planning process if the destruction of pristine open space is being justified due to a perceived cost of developing artificial parks. Justifying the destruction of wildlands in order to fund the creation of artificial parks also seems antithetical to the Project purpose of creating a community focused on "outdoor recreation" that "celebrate[s] the uniqueness of the place." (FEIR at 4-2.)

Likewise, the purported concern about developing schools is not consistent with various other statements in the FEIR—the FEIR refers to an "optional school site" (FEIR at 2-43) and contains analysis describing the Project's impacts if no school is developed (FEIR at 2-82.) If the Creek Avoidance Alternative is being rejected because a school would not be feasible with a smaller project, then why does the FEIR also state that a school may not be required? These types of inconsistencies render the FEIR inadequate as a decision-making document.

As discussed further below, the FEIR also contains the unsupportable claim that the Project will *not* have a significant effect on stream and riparian habitats. Because the FEIR fails to acknowledge that the Project will in fact have a significant effect on a stream and riparian habitat, it improperly concludes that no alternative that reduces biological impacts is necessary, which undermines the entire alternatives analysis. (FEIR at 2-94.)

The FEIR also failed to analyze whether a higher density project (and correspondingly smaller footprint) would be appropriate given the sensitive biological resources onsite. Such an alternative should have been included in the alternatives analysis.

The Center's comments on the DEIR also noted that there was no analysis of comparative environmental costs or economic benefits (including costs/profits) among the various project alternatives. The FEIR fails to even acknowledge—let alone respond—to this serious deficiency in the FEIR. (FEIR at 2-86.)

Finally, the FEIR fails to offer any evidence that a "low carbon alternative" is not feasible. It instead confusingly states that a "low carbon alternative" is not feasible because there is "no development on site and lower emissions isn't attainable." (FEIR at 2-91.) As discussed in the Climate Change section of this letter, a zero net energy development ***is*** feasible and a large development in the same area has agreed to seek and obtain zero net energy. Nowhere does the FEIR provide evidence demonstrating that a low carbon or zero carbon alternative is not feasible.

B. The EIR's alternatives analyses fail to account for the aesthetic degradation to Castaic Lake State Recreation Area and resulting economic losses.

Despite the FEIR's purported objective of promoting "economic growth," the FEIR fails to consider how marring the aesthetic and environmental values (and risking degraded water quality) of the Castaic Lake State Recreation Area (the "SRA") could impede economic growth. As documented on the Friends of Castaic Lake website, (http://www.castaiclake.com), the SRA is the County's largest regional park and is a local resource that supports recreation, tourism, hiking, fishing, boating, and tournaments.[4]

[4] The County's official website for Castaic Lake SRA similarly states, "Castaic Lake State Recreation Area is one of the largest and most spectacular state water reservoirs in California! It not only provides fresh water to local communities, but this 12,658-acre facility is also a great local recreational escape for the entire family!" http://parks.lacounty.gov/wps/portal/dpr/Parks/Castaic_Lake_State_Recreation_Area

The SRA's aesthetic and scenic values generate filming fees for the County as well as jobs and economic growth through film production. As the Friends of Castaic Lake website notes, "For leading film industry professionals, Castaic Lake continues to be a lucrative and expansive resource for diverse production necessities. Whether your production is large or small, the lake provides a unique environment for finding the terrain, setting and space needed to get that perfect shot. Many popular television shows such as 'C.S.I.' and 'Fear Factor' have used Castaic Lake to facilitate their production goals."[5] These aesthetic values will be significantly degraded if thousands of houses are built next to the SRA.

Despite the known aesthetic values of the SRA (which also are a driver of economic growth), the EIR contains a scant 1.5 pages of conclusory analysis on the aesthetic impacts of the Project. The EIR acknowledges that the project will be visible from the Castaic Lake SRA trail but incorrectly claims this impact is not significant due to "design guidelines." (DEIR at 7-1.) No analysis is provided supporting this untenable claim. The EIR also contains no visualizations of the extent of impacts to viewsheds, particularly in the SRA, making it impossible for decisionmakers to determine whether impacts to viewsheds would be significant.

C. The current version of the Project does not meet the project objectives.

The FEIR's fixation on the preferred alternative is unjustified because even the preferred alternative does not meet the project objectives outlined in the EIR. The EIR includes a project objective to "[i]nclude a mix of residential, commercial, industrial, recreational, and institutional uses ***that will reduce offsite vehicle trips and vehicle miles travelled***." (DEIR at 4-3, emphasis added.) However, the FEIR elsewhere states: "Regarding to employment, the Project does include employment opportunities associated with the on-site light industrial, commercial, recreational and institutional uses. While it is possible that some of these jobs may be filled by future residents of the Project, ***it is too speculative to conclude that***. It is noted that the Project Objectives (refer to page 4-3 of the Draft SEIR) identify that jobs would be created and do not identify that these jobs would necessarily be filled by future residents of the Project…it is assumed that most future residents would ***not*** work on-site." (FEIR at 2-81, emphasis added.) The FEIR thus is clear that it is likely that the Project will ***not*** "reduce offsite vehicle trips and vehicle miles travelled" by including e or commercial or industrial uses onsite. As such, the preferred alternative fails to meet the project objectives.

Even if the EIR was not internally consistent as described above, there is an even more serious error in the EIR – On April 5, 2018, the County published a 307-page "Supplemental Memo," which reveals that ***all*** of the industrial uses and virtually all of the commercial uses have now been eliminated from the Project and replaced with more dwelling units. (Memo at PDF 12.) The Memo explains that the "[r]evisions would eliminate industrial uses" and "areas that were previously proposed for industrial and commercial would now be developed with residential uses…" (Memo at PDF 14.) This revision to the Project renders it inconsistent with the Project objectives. More importantly, the County rejected (and refused to even consider) the Creek Avoidance Alternative purportedly because of a concern for reduced VMT arising from these same commercial and industrial uses. As such, the County's rejection of the Creek Avoidance Alternative on the basis that it would not provide an adequate "mix of uses" appears to be a pretext, given that the current preferred project also lacks this mix of uses.

[5] http://www.castaiclake.com/filming.html

Indeed, in the Alternatives Analysis, the EIR considers a "No Industrial Development Alternative" and concludes that it "would not meet the Project objective related to the provision of industrial uses to accommodate the projected labor force…" (DEIR at 6-21.) This conclusion remains in the FEIR.

D. The FEIR continues to misleadingly claim that large-scale development is inevitable on the site.

The FEIR continues to misleadingly suggest that development will occur even in the absence of the Project or certification of the FEIR. (FEIR at 2-87.) The FEIR goes so far as to say that "[t]he Project approved under the Specific Plan could be constructed today." (FEIR at 2-118.) This is factually inaccurate. There are numerous other regulatory requirements aside from CEQA review that are required for the prior version of the project to move forward. For instance, a streambed alteration permit would be needed from CDFW. CDFW has voiced serious concerns with the current version of the Project and those concerns likely apply to the prior version as well. In addition, it has been over 25 years since the entitlement of the original project and no development has occurred—conditions have changed, climate change has intensified, the extinction crisis has broadened. Applicable laws, plans, and regulations have changed significantly. None of these factors would have been adequately analyzed in a 26 year-old document. At a bare minimum, construction of the old version of the project would require certification of a supplemental or subsequent EIR. And CEQA requires analysis based upon existing physical conditions, not theoretical conditions. In short, the FEIR's fixation on the old version of the Project and the perceived "inevitability" of development frustrates public participation and informed decision-making.

IV. The FEIR Fails to Disclose or Mitigate Impacts to Grasshopper Creek and Other Streams.

The FEIR fails to accurately disclose the impacts of the Project on Grasshopper Creek, Castaic Creek, and the Santa Clara River. The FEIR employs a shockingly simplistic approach to determining whether these streams are impacted by considering the size of the entire watersheds instead of the areas actually impacted. For instance, the FEIR claims that the Project will impact "only 26 percent of the Grasshopper Canyon watershed" because the Project is destroying only 697 acres of the 2,685-acre watershed. (FEIR at 2-7.) This approach ignores the fact that 3.5 miles of ***the creek*** itself is part of those 697 impacted acres. The FEIR therefore equates lands at the edges of the watershed with the actual stream in order to downplay impacts to the actual stream. Taken to its logical extreme, the FEIR's approach would likewise conclude that filling the Merced River in Yosemite Valley with cement would not amount to a significant effect on the Merced River because only a few acres of the river's watershed were actually impacted with the cement.

The FEIR similarly persists in claiming that the Project only affects "approximately 1 percent" of the 129,680 acre Castaic Creek watershed and "approximately 0.4 percent" of the upper Santa Clara River watershed. (FEIR at 2-100.) This simplistic comparison is misleading for the same reasons discussed in the above.

The FEIR also fails to consider how other projects within the Castaic Creek and Santa Clara River watersheds have the potential to cumulatively impact these watersheds when

combined with the Project. In short, the FEIR's approach ignores the "death by a thousand cuts" that has slowly degraded water quality and streamflows in these streams. Instead, the FEIR claims BMPs—which are already required by law—will protect these resources that belong to all Californians. If BMPs and compliance with existing regulations were all that is necessary to ensure clean and healthy streams in Southern California, then why do many streams in Southern California fail to meet state and federal water quality standards? The FEIR never answers this crucial question.

Moreover, the FEIR reasserts the untenable claim that filling 3.5 miles of a blue-line stream is not a "significant impact" even without mitigation. The FEIR's claim is inconsistent with the comments submitted by CDFW, SMMC, and the California Department of Parks and Recreation.

The FEIR's claim also conflicts with the CEQA Guidelines. Appendix G considers an impact significant if it will (1) "have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service…." Filling 3.5 miles of a blue-line stream is categorically a "substantial adverse effect" on riparian habitat. Even accepting the FEIR's creative accounting—which misleadingly claims that only 26 percent of the Grasshopper Creek watershed will be impacted—a 26 percent reduction is still a significant impact. Moreover, CDFW already identified this "riparian habitat or other sensitive natural community"; more specifically, CDFW's comments noted that the DEIR did not include an alternative that minimized significant effects to sensitive resources, including the majority of Grasshopper Creek, vernal pools, and a perennial steep.

Appendix G also considers an impact significant if it will (1) "substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site"; or (2) "substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site…" The FEIR contains insufficient evidence to show that destroying a 3.5 miles of a stream will not alter drainage.

Because the FEIR fails to acknowledge the severity of the impacts on the watershed, it proposes insufficient mitigation. In response to the Center's comments that the DEIR failed to incorporate any BMPs as actual mitigation measures, the FEIR doubles down this approach, claiming that "[c]ompliance with regulatory requirements is not considered mitigation since it applies to the Project regardless of impacts; nor is mitigation required in order to ensure regulatory compliance…" (FEIR at 2-93.) The FEIR cites no authority for this claim. In fact, courts have held the opposite—specifically that "a condition requiring compliance with regulations is a common and reasonable mitigation measure, and may be proper where it is reasonable to expect compliance." (*Oakland Heritage Alliance v. City of Oakland* (2011) 195 Cal.App.4th 884, 906.) And while regulatory compliance ***may*** be one of many reasonable mitigation measures, courts are similarly clear that mere regulatory compliance is often insufficient to support a finding of no significant impact. (*Californians for Alternatives to Toxics v. Dept. of Food & Agric.* (2005) 136 Cal.App.4th 1, 17.)

The FEIR now includes "PDFs" or "project design features" which purport to incorporate some BMPs from the water quality technical report. Again, these are not enforceable CEQA mitigation measures. They are also deferred and vague, and are not clearly detailed in the FEIR, thereby frustrating public participation and informed decision-making.

V. The FEIR Fails to Adequately Analyze and/or Mitigate Impacts to Important Habitats and Special Status Wildlife.

The FEIR's claim that the Project would not drive special status species to below self-sustaining levels is unsubstantiated (FEIR, Response to Comments 16.55, Page 2-113). The proposed mitigation measures do not guarantee no net loss of habitat quantity or quality, nor do they ensure that displaced special-status species will thrive (whether sites are acquired or restored/established). These species and habitats are garnered special attention and protection with the intent of improving their chances of survival by avoiding take and further degradation due to impacts from actions such as those described in this project (*See* Center's DEIR Comment letter at p. 13.) The FEIR's finding that significant impacts to biological resources will be mitigated to less than significant is not supported by the facts and fails to meet CEQA's requirements.

The FEIR's assertion that a mitigation ratio of 2:1 for impacted habitats will reduce impacts to biological resources to less than significant (FEIR, Response to Comments 16.22, Page 2-94) and that established/created mitigation sites will exhibit equivalent ecological function within five years (DEIR MM 5.2-6,-7,-8,-11; FEIR, Appendix C, Draft Western Spadefoot Toad Relocation Program, Page 10) is unfounded. The FEIR needs to take into account that, due to their project, habitat loss and species displacement are immediate, while any gains from their mitigation is uncertain. Therefore, higher mitigation ratios coupled with extended years of effective monitoring and adaptive management strategies are needed to improve chances of achieving no net loss of habitats like wetlands and sage scrub (Moilanen et al.; Sudol and Ambrose; Ambrose et al.). If higher mitigation ratios are not feasible, the FEIR must provide evidence and analysis supporting that conclusion. With one third of America's plant and animal species vulnerable to impacts from human activity and one fifth at risk of extinction (Stein et al 2018), it is crucial that strategies to prevent further degradation and loss of biodiversity are explicit and scientifically sound.

<u>Western Spadefoot Toad and Non-riparian Wetland Habitat</u>

Amphibian populations in the U.S. are declining at an alarming rate of almost 4% per year (Grant et al.); therefore, impacts at the local population level must be thoughtfully and scientifically addressed, especially for species known to be in decline, such as the Western Spadefoot Toad, a California species of concern. The Draft Western Spadefoot Relocation Program provides more details regarding the translocation of western spadefoot toads that will be impacted by the project (FEIR, Appendix C). However, amphibian relocation has limited success, particularly if habitat needs to be created (Germano and Bishop). There is no scientific basis for the FEIR's claim that a Relocation Program would "result in substantial avoidance of direct impacts" to the toads, and stating that the species will persist in the region because of this mitigation is misleading and has a high likelihood of being false (DEIR, page 5.2-36).

The Draft Relocation Program fails to demonstrate that the planned relocation and created wetlands will be able to facilitate the long-term survival of the relocated toad populations (FEIR, Appendix C, Draft Western Spadefoot Relocation Program). In describing the potential sites for created pools, the Draft Relocation Program does not describe the upland habitat that would be vital to the toads' continued survival. The Draft Relocation Program states that there is "ample" upland habitat at the potential relocation site, but it does not provide further details (FEIR, Appendix C, Draft Western Spadefoot Toad Relocation Program, Page 2). Based on the map of vegetation types at the project site (DEIR, Exhibit 5.2-1), the proposed relocation sites (FEIR Appendix C, Draft Western Toad Relocation Program, Exhibit 1) are in areas dominated with California sagebrush-California buckwheat scrub with minimal areas (less than 150m at the widest point) of mixed sagebrush/scrub/California annual grasses. These toads prefer areas of open vegetation and short grasses, where soil is sandy and friable (United States Fish and Wildlife; Jansen et al.), and it is unclear if the proposed relocation sites fall in or near the mixed sagebrush/scrub/California annual grasses. In addition, according to Semlitsch and Bodie (2003), the average maximum upland habitat utilization from suitable breeding wetlands for frogs and toads is about 400m, making the California grasses habitat in/near the proposed relocation sites insufficient. If no burrowing habitat is available, toads will disperse further away from breeding ponds in search of their preferred substrate, which could lead to increased mortality and potentially no breeding functionality of the created pools (Germano and Bishop; Jansen et al.). The Draft Relocation Program lacks appropriate considerations of upland terrestrial habitat (including soil type) for the proposed created wetland habitat, making it less likely to facilitate successful toad establishment and more likely to cause toad mortality.

Should relocation be required during a drought year, the FEIR states in the Draft Relocation Program that they will transfer water to existing seasonal ponds to sustain breeding at least to the point of oviposition (FEIR, Appendix C, Draft Western Spadefoot Toad Relocation Program, Page 9). However, it is unclear whether this strategy will actually evoke the toads to emerge from their burrows to breed. These toads stay in burrows up to 0.9m deep (Ruibal et al.), and although the factors that stimulate emergence are not well understood, it is possible that sound or vibration from rain striking the ground may be the primary cue for the toads to emerge (United States Fish and Wildlife). Simply filling the pools may not be enough to motivate the toads to emerge from their burrows, which could leave the entire population to remain in their burrows and lost to construction. The failure of the FEIR to fully disclose and analyze this outcome violates CEQA.

Another factor that the toads' continued survival relies on is that the created wetlands must exhibit the appropriate hydrological and biological conditions. The proposed evaluation of wetland establishment and success based on photo-documentation (FEIR, Appendix C, Draft Western Spadefoot Toad Relocation Program, Pages 10-11) is wildly insufficient. Restoring complex ecosystems like ephemeral wetlands often results in reduced ecological function. In studies conducted in California on wetland mitigation sites permitted between 1979 and 2002, less than 20% of mitigated wetlands were performing optimally (Ambrose et al.; Sudol and Ambrose). Thus, the success of mitigation sites relies on the appropriate assessment of measurable performance standards based on habitat functions and adaptive management strategies (Bronner et al.; Matthews and Endress; Ambrose et al.; Sudol and Ambrose).

To accurately assess the ecological function of a created wetland, there are a suite of functions that must be measured, including buffer and landscape context, hydrology, physical structure (soils and topography), and biotic structure (native vs invasive plant and animal species) (Bronner et al.; Ambrose et al.; Sudol and Ambrose). The FEIR's current evaluation protocol would not provide the necessary information on any of these essential ecological functions. In addition, while the relocation program allows for adaptive management of these wetlands and toad populations, it states that monitoring will continue for only five years, whether or not the mitigation is successful (FEIR, Appendix C, Draft Western Spadefoot Toad Relocation Program, Pages 10). Five years is likely not enough time to determine the long-term trajectory for functional equivalency of created wetlands or the future survival of the Western Spadefoot Toad populations (Germano and Bishop; Zedler and Callaway; Mitsch and Wilson). The relocation program lacks consideration of the time it takes for created wetlands to have their intended functionality, the need for appropriate upland terrestrial habitat for species survival, and the importance of measuring performance criteria indicative of habitat functionality, which makes it unlikely to mitigate significant project impacts on the Western Spadefoot Toad and associated wetlands.

Southwestern Willow Flycatcher, Least Bell's Vireo, and Riparian Wetland Habitat

The FEIR claims that project impacts to riparian habitat and associated special status species are less than significant with mitigation, yet it provides little explanation as to how the mitigation plans will minimize such impacts (FEIR, Response to Comments 16.22, Page 2-94). The project would impact 13.26 acres of riparian/open water habitat, which includes filling in a portion of Grasshopper Creek and its tributaries (FEIR, Appendix C, Conceptual Habitat Mitigation Plan, Table 2). These areas are potential habitat for the federally endangered Southwestern Willow Flycatcher and Least Bell's Vireo, which have been observed in and near the project site (DEIR, Table 5.2-4, Page 5.2-24). The loss of potential habitat for these endangered birds and the fact that California has already lost ~95% of historic levels of riparian areas makes it extremely important that the mitigation of lost riparian wetland habitat clearly targets no net loss through strategic adaptive management and planning.

According to the Conceptual Habitat Mitigation Plan and MM 5.2-11, any mitigation for riparian habitat, whether onsite or offsite, would be completed at a mitigation ratio of 2:1 ratio (DEIR, MM 5.2-11, Page 5.2-54-55; FEIR, Appendix C, Conceptual Habitat Mitigation Plan, Table 2). This is insufficient, particularly since the FEIR needs to replace potential habitat for multiple endangered species. CDFW suggests a mitigation ratio of 5:1 for endangered species wetland habitat in the south coast region (California Department of Fish and Wildlife 2001). The Conceptual Habitat Mitigation Plan also states that riparian habitat will likely require habitat establishment, but no details regarding where this might be are provided, except that it will "require more intensive scouting and analysis" to find potential mitigation sites (FEIR, Appendix C, Conceptual Habitat Mitigation Plan, Page 8). The restoration/establishment of unidentified wetlands is not adequate mitigation under CEQA. In addition to siting mitigation banks approved by the USACE and CDFW (FEIR, Appendix C, Conceptual Habitat Mitigation Plan, Page 7), the Conceptual Habitat Mitigation Plan should also provide potential mitigation sites for riparian habitat restoration/establishment prior to habitat destruction.

Riparian/stream habitats are difficult to replace or create because of their complex hydrological, physical, and biotic structure, and it can take many years before an established riparian mitigation site might (or might not) become as ecologically functional as the lost habitat (Bronner et al.; Ambrose et al.; Sudol and Ambrose). The FEIR proposes a five-year monitoring program of the riparian mitigation sites in MM 5.2-11, which does not guarantee the equivalent ecological function of healthy riparian habitats (DEIR, MM 5.2-11, Page 5.2-54-55). The FEIR also does not provide measures to ensure that adaptive management strategies will be implemented to facilitate ecological function (DEIR MM 5.2-11, Page 5.2-55). Adaptive management, collecting measurable performance standards based on habitat functions to determine mitigation success, and improved documentation strategies are necessary to increase the success rate of riparian mitigation sites (Bronner et al.; Matthews and Endress; Ambrose et al.; Sudol and Ambrose).

Many of the mitigation measures in the FEIR also amount to the deferred development of mitigation. CEQA generally bars such deferred development of mitigation. In the limited circumstances in which deferred mitigation is appropriate, the agency must meet all of the following elements: (1) practical considerations prevented the formulation of mitigation measures during the planning process; (2) the agency committed itself to developing mitigation measures in the future; (3) the agency adopted specific performance criteria prior to project approval; and (4) the EIR lists the mitigation measures to be considered, analyzed, and possibly incorporated into the mitigation plan. (See *POET, LLC v. State Air Resources Bd.* (2013) 218 Cal.App.4th 681, 736-37 [review denied].) Here, the FEIR fails to establish that mitigation measures to protect biological resources could not have been developed *prior* to project approval. Nor does the FEIR establish compliance with any of the other elements set forth above for each mitigation measure.

Coastal California Gnatcatcher and Sage Scrub Habitat

As discussed in the Center's DEIR comment letter, impacts to special status species is per se significant where it substantially reduces the number or restricts the range of the species. During focused surveys conducted in 2014 and 2015, breeding and non-breeding individuals of the federally threatened Coastal California Gnatcatcher were observed throughout and directly adjacent to the project area (DEIR, Table 5.2-4, Page 5.2-24 and Exhibit 5.2-2). The project area is located in the northern region of the California gnatcatcher's current range (USFWS 2018), which is important as climate change continues to cause species to shift their distributions both in latitude and elevation (Chen et al.; Gillings et al.). According to Langham et al. (2015), over 50% of assessed North American birds are predicted to lose more than half of their current geographic range, making high quality habitat in the northern portion of the California gnatcatcher potentially critical for the future survival of the species. Preserving existing habitat known to be utilized by the species should be prioritized while considering species sensitivities and local-scale effects of climate change (Rapacciuolo et al.; Lenoir and Svenning).

The California gnatcatcher is dependent on coastal sage scrub habitat. It is estimated that over 90% of the coastal sage scrub habitat in California has been lost (Bowler, "Coastal Sage Scrub Restoration - I: The Challenge of Mitigation"), and much of the remaining habitat is highly fragmented (Bowler, "Ecological Restoration of Coastal Sage Scrub and Its Potential Role

in Habitat Conservation Plans."). Thus, the loss of 634.70 acres of remaining, intact, high quality sage scrub communities must be avoided, and if all impacts cannot be avoided, mitigated to ensure no net loss of habitat quantity or quality. Both acquisition and restoration/establishment of high quality habitat should be implemented to more effectively mitigate the loss and degradation of existing sage scrub habitat (Bowler, "Coastal Sage Scrub Restoration - I: The Challenge of Mitigation"; Bowler, "Ecological Restoration of Coastal Sage Scrub and Its Potential Role in Habitat Conservation Plans."). Although mitigation measures will prioritize existing California gnatcatcher critical habitat at a 2:1 ratio, as described in the draft Conceptual Habitat Mitigation Plan and MM 5.2-6 (FEIR, Appendix C, Conceptual Habitat Mitigation Plan, Page 7), these mitigation measures do not specify degraded areas that will be restored or replaced. In addition, for state and/or federally threatened or endangered species and their habitat, the ratio for mitigation is typically higher, ranging from 3:1 to 10:1.

In MM 5.2-6 the Applicant discusses sage scrub restoration or enhancement; however, the Applicant does not plan to measure enough indicators to determine the ecological function of the mitigation sites (DEIR, MM 5.2-6, Page 5.2-45). It is insufficient to only document the native and invasive plant cover; other indicators must be measured to assess the whole community and overall ecological functionality of the sites, including the presence/absence of native and non-native flora and fauna in the understory (Bowler et al 2000). In addition, should initial attempts of restoration/establishment fail or need improvement, mitigation measures should include adaptive management strategies that allow for protocol updates based on the most current scientific research in order to increase the chances of success. The FEIR should provide a comprehensive revegetation plan with measurable success criteria indicative of habitat functionality, and it should specify that adaptive mitigation strategies will be implemented if/when needed to improve or stabilize the intended ecological function of the mitigation sites, as overseen by the USFWS.

Sage scrub habitat is dependent on fire cycles that span many decades (Bowler, "Coastal Sage Scrub Restoration - I: The Challenge of Mitigation"; Bowler, "Ecological Restoration of Coastal Sage Scrub and Its Potential Role in Habitat Conservation Plans."). Thus, mitigation measures that provide for the maintenance and monitoring of mitigation sites for only five years are insufficient (DEIR, MM 5.2-6, Page 5.2-46-47), and long-term preservation planning should consider post-fire community changes and include burning and understory supplementation if/when necessary.

It is important to note that increased human presence coupled with the effects of climate change will likely lead to an increase in fire frequency and intensity, which would disrupt vegetation communities in and adjacent to the project that are dependent on low frequency and low intensity fire regimes, such as sage scrub (Westerling and Bryant; Syphard et al.; Fried et al.). While the FEIR provides some details regarding a Fire Management Plan, which includes a fuel modification plan, landscape plan, and irrigation plan, all to be developed in concert with LA County Fire Department approval and to be maintained by a Landscape Maintenance District or HOA (DEIR, Section 5.5), the lack of an established plan makes it difficult to ascertain whether the project footprint and consequent mitigation requirements reflect the total amount of disturbed/impacted habitat. In addition, it should be made clear that the most current fire safety recommendations from the LA County Fire Department and insurance companies, like the

California FAIR Plan Property Insurance (https://www.cfpnet.com/index.php/consumers/brushwildfirerating/), will be implemented during project development and lifetime maintenance of the site.

Burrowing Owl and Grassland Habitat

The Burrowing Owl is a species of special concern whose populations have been dramatically declining in California since the 1980s. The destruction of wintering habitat is a significant impact, as stated in the FEIR. Yet mitigation measures to offset these impacts are insufficient. In MM 5.2-13, the FEIR states that if a wintering burrowing owl is observed during the non-nesting season, the burrow(s) will be closed and the owl(s) will be excluded (DEIR, MM 5.2-13, Page 5.2-56), but they do not mention a Burrowing Owl Exclusion Plan to be developed and approved by the local CDFW office prior to exclusion, as recommended by CDFW (2012). In addition, before habitat destruction and burrowing owl exclusions take place, the FEIR should legally secure mitigation lands and develop burrowing owl monitoring and management plans (California Department of Fish and Wildlife). These mitigation measures are not included in the FEIR. This amounts to the deferred development of mitigation measures, in violation of CEQA and *POET*.

In MM 5.2-14 the FEIR states that if suitable burrows are removed or impacted, then artificial burrows will be created onsite or offsite, depending on available suitable habitat (DEIR, MM 5.2-13, Page 5.2-56). However, the FEIR does not specify where artificial burrows will be created in relation to the impacted natural burrows. According to CDFW (2012), if active burrows are closed, artificial burrows should be created in suitable habitat within 210m of the natural burrow(s) to increase the chances of successful reestablishment. These mitigation measures are not currently incorporated in the FEIR or Conceptual Habitat Mitigation Plan. Once again, this amounts to the deferred development of mitigation measures, in violation of CEQA and *POET*.

The main causes of burrowing owl declines are habitat loss, degradation, and fragmentation, yet mitigation for foothill needlegrass grassland in MM 5.2-8 only provides for a minimum mitigation ratio of 2:1 (DEIR, MM 5.2-8, Page 5.2-50). Because the burrowing owl is a species of special concern, the mitigation ratio should be at least 3:1 to prevent further loss of the species. In addition, mitigation should include both habitat preservation and establishment.

The minimum of 6.5 acres of habitat for every burrowing owl impacted, as mentioned in MM 5.2-8 (DEIR, MM 5.2-8, Pages 5.2-50), is not based on the best available science. This minimum acreage is from an outdated source (The California Burrowing Owl Consortium 1993), and new scientific data regarding burrowing owl mitigation have arisen since then. The amount of habitat required per owl depends on the quality of the habitat, and home ranges have been observed to be from 280 to 600 acres per individual (California Department of Fish and Wildlife). To facilitate the establishment of burrowing owls in mitigated habitat, Trulio (2015) recommends 30 to 140 acres per owl pair, along with open and structurally heterogeneous grassland habitat, high burrow densities, healthy ground squirrel or other fossorial mammal populations, and adjacent owl-occupied nesting habitat. No details are provided in the FEIR or

Conceptual Habitat Mitigation Plan to ensure that appropriate mitigation sites will be acquired and established to facilitate the long-term survival of burrowing owls.

Free-roaming Domestic Animals

Another controllable threat that the FEIR fails to appropriately address is the banning of free-roaming domestic animals. The FEIR states that development "edge effects" such as domestic cats and dogs will be adverse but not significant because wildlife populations in the region would not be impacted to below self-sustaining levels. However, scientific studies have shown that the impacts of free-roaming dogs and cats on wildlife are often underestimated, and in fact, they can pose significant impacts to wildlife (Loss et al.; Young et al.). This controllable impact should be addressed in order to reduce impacts to the adjacent wildlife.

Worker and Future Resident Awareness

There is no mention in the FEIR of developing or implementing a worker training program to increase awareness of potential special status species and habitats that may be encountered/impacted onsite. Providing worker training is a simple way to educate workers about why certain precautions are necessary. It is a way to help workers be able to recognize signs of these species and be more invested in their protection.

Because the project is located near natural open space and nature reserves, the FEIR should include a mitigation measure to increase education and awareness to future residents regarding environmental resources and how to minimize impacts to the environment. They should include that Home Owners Associations or similar entities provide the most up-to-date information regarding fire safety, special status species in and near the area, and the impacts of pesticides/rodenticides on local wildlife.

Pesticide and Rodenticide Impacts

The FEIR fails to appropriately address eliminating the use of rodenticides and pesticides in the proposed project area, which will likely be used for foraging by raptors (including burrowing owls), native predators, and scavengers. Secondary poisoning of wildlife from these products is increasingly decimating populations of predators, particularly in the urban wildlife interface (Mcmillin), and pesticides in urban runoff have been shown to have adverse effects on amphibian populations (Hayes et al.; Relyea.) Nonetheless, the FEIR does not appear to contain any analysis about the dangers of pesticide use in close proximity to special status amphibians such as the western spadefoot toad.

The FEIR instead completely disclaims any responsibility for mitigating pesticide impacts on special status species, stating that the "Project does not have the legal ability to ban the use of specific pesticides by the residents; the Project must achieve regulatory compliance." (FEIR at 2-96.) This is inaccurate and subverts the purpose of CEQA. The purpose of CEQA is not to ensure compliance with other environmental regulations. Instead, CEQA requires the agency to independently assess the potential direct and indirect impacts of the Project—based upon the species present and the surrounding habitats and environmental resources. Given the Project's unique location which encompasses sensitive riparian habitat for special status species,

the County cannot just point to regulations of general applicability and claim impacts are mitigated. Site specific analysis of pesticide impacts and targeted mitigation measures are required.

The FEIR states that MM 5.8-1 and the Integrated Pest Management Plan is sufficient to mitigate against pesticides and rodenticides and that it is illegal to ban the use of pesticides by residents (FEIR Response to Comments 16.23, Page 2-96). The FEIR's reliance upon "Integrated Pest Management" or "IPM" remains vague, deferred, and ineffective. In response to this concerned raised by the Center, the FEIR includes a number of links describing various IPM programs. This does not take the place of site-specific analysis assessing the effectiveness of IPM techniques. Notably, the diversity of the links listed in the FEIR demonstrates that there is no agreed-upon "IPM" set of measures with specific performance criteria. CEQA requires far more than the agency merely agree to abide by a set of ideas that are differently laid out by other parties. CEQA requires that specific, binding and enforceable mitigation measures be disclosed and discussed in the FEIR, and then adopted as conditions of project approval. The FEIR is deficient in this regard. The FEIR should also require that the Home Owners Association or similar entity provide up-to-date information regarding the impacts of rodenticides and pesticides on nearby wildlife.

Indirect Effects on Wilderness and Open Space

Large-scale development near existing conservation areas carries special risks and requires extra measures to ensure that conservation areas are not impacted by development. For instance, residents of the Project may develop unofficial walking, hiking, biking, or off-road vehicle trails in conservation areas, resulting to impacts to wildlife and ecosystem functions. Such impacts are well documented at other conservation areas in Southern California adjacent to development.[6] Unfortunately, the FEIR fails to adequately analyze, disclose, or mitigate this foreseeable effect of siting thousands of people next to the Angeles National Forest and in close proximity to the Los Padres National Forest.

VI. The EIR Does Not Adequately Analyze or Mitigate the Air Quality Impacts of the Project.

A. Air pollution is a public health crisis that requires the County to focus development in existing cities.

Air quality is a significant environmental and public health concern as unhealthy, polluted air contributes to, and exacerbates many diseases and mortality rates. In the U.S., government estimates indicate that between 10-12 percent of total health costs can be attributed to air pollution. (VCAQR 2003) Many plants and trees, including agricultural crops, are injured by air pollutants. This damage ranges from decreases in productivity, a weakened ability to survive drought and pests, to direct mortality. (VCAQR) Wildlife is also impacted by air pollution as the plants and trees that comprise their habitats are weakened or killed (yet the FEIR contains no analysis of the impacts of air pollution on wildlife). Aquatic species and habitats are

[6] David Garrick, "Trials Proposed for Del Mar Mesa Area," *San Diego Union Tribune* (July 20, 2015); Dryw Keltz, "Fish and Wildlife Squeeze Bikers from Carlsbad's Lake Calavera," *San Diego Reader* (June 5, 2017); Steven Bartholow, "Recreationists React to Crack Down on Authorized Trials Near Santee," *Santee Patch* (Nov. 16, 2013).

impacted by air pollution through the formation of acid rain that raises the pH level in oceans, rivers and lakes. (EPA 2016) Greenhouse gases, such as the air pollutant carbon dioxide which is released by fossil fuel combustion, contribute directly to human-induced climate change. (EPA 2016) In this feedback loop, poor air quality that contributed to climate change will in turn worsen the impacts of climate change and attendant air pollution problems. (BAAQMD 2016)

Some of the nation's most polluted counties are in Southern California with LA County continually topping the list. (ALA 2016) Air pollution and its impacts are felt most heavily by young children, the elderly, pregnant women and people with existing heart and lung disease. People living in poverty are also more susceptible to air pollution as they are less able to relocate to less polluted areas, and their homes and places of work are more likely to be located near sources of pollution, such as freeways or ports, as there areas are more affordable. (BAAQMD 2016; ALA 2016) Pollution sources include transportation, industry and manufacturing, construction, the importation and movement of goods, and energy development. Transportation presents one of the most significant sources of pollution in urban areas, where large segments of the population are constantly exposed to roads and traffic. (BAAQMD 2016; Newman)

Although there are many different types of air pollution, Ozone, Fine Particulate Matter and Toxic Air Contaminants are of greatest concern in urban areas, particularly in Southern California. These three air pollutants have been linked to an increased incidence and risk of cancer, birth defects, low birth weights and premature death, in addition to a variety of cardiac and lung diseases such as asthma, COPD, stroke and heart attack. (Laurent 2016; ALA 2016) Ozone, also commonly referred to as smog, is created by the atmospheric mixing of gases resulting fossil fuel combustion and other volatile organic compounds and sunlight. Although it is invisible, ozone poses one of the greatest health risks, prompting the EPA to strengthen its National Ambient Air Quality Standard for Ozone in 2015. (ALA 2016) Fine Particulate Matter is generally found in urban areas as a result of vehicle exhaust emissions, and these microscopic particles are what contribute to visible air pollution. These tiny participles are dangerous because they are small enough to escape our body's natural defenses and enter the blood stream. Fugitive dust is a term used for fine particulate matter that results from disturbance by human activity such as construction and road-building operations. (VCAQR 2003) Fine Particulate Matter can also result from ash caused by forest fires, which will continue to impact those living in the urban-wildland interface and increasingly beyond as climate change exacerbates the risk of forest fires. (BAAQMD 2016) Toxic Air Contaminants are released from vehicle fuels, especially diesel, which accounts for over 50% of the cancer risk from TACs. (BAAQMB 2016) This is especially relevant for Southern California with its abundance of diesel shipping traffic. (Bailey; Betancourt 2012)

Urban infill is an effective plan for reducing the air pollution and greenhouse gas emission resulting from heavy reliance on vehicles. Centrally locating housing, shopping and places of employment reduces vehicle miles travelled and new road construction. With fewer roads and less traffic, it will be less likely that housing will be located near busy, polluting roads, which is a large source of exposure. (BAAQMD 2016) Infill planning also allows for realistic promotion of alternative transportation such as walking or biking.

B. The County must conduct a health risk assessment prior to project approval.

The EIR must adequately analyze the potential health risks—including cumulative impacts—arising from air pollution generated directly or indirectly by the Project. The Guidelines require EIRs to discuss health problems caused by proposed projects. (Guidelines § 15126.2.) The EIR must assure that this is a robust health assessment for all criteria pollutants, Mobile Source Air Toxics, such as acrolein, benzene, 1,3-butadiene, diesel particulate matter, formaldehyde, naphthalene, and polycyclic organic matter, and Toxic Air Contaminants. Simply providing emissions levels or general descriptions of health impacts provides an inadequate context to decisionmakers and the public of the Project's actual effects on public health. In *City of Long Beach v. City of Los Angeles* (2018) 19 Cal.App.5th 465, the court held the agency failed to proceed in a manner required by law because the EIR did not include information on the air pollution impacts of the project on specific areas near the project vicinity, including how frequently and for what length of time the level of particulate air pollution in the surrounding area would exceed standards of significance. (*Id*. at 487-88.) Here, the FEIR does not provide adequate information on how specific pollutants would disperse and impact neighboring jurisdictions or specific areas in the project vicinity.

Instead, the EIR disclaims responsibility for analyzing these types of effects of the Project *now*, claiming such analysis is "speculative" because the exact uses have not yet been finalized. (FEIR at 2-67.) The FEIR also confusingly refers to the Northlake Specific Plan as a "program level specific plan." (*Id*.) While CEQA provides for "program level" EIRs, the Conservation Groups are unaware of any regulatory approval known as a "program level specific plan." In any event, CEQA does not allow an agency to avoid analyzing the effects of the project *prior* to approval by labelling it a "program-level" project.

Moreover, to the extent the exact nature of development is uncertain at this time, the agency must use its best efforts to find out all that it reasonably can, and then disclose any remaining uncertainties after conducting such an investigation and inquiry. (See S*an Diego Citizenry Group v. County of San Diego* (2013) 219 Cal.App.4th 1, 21-24.) For example, the County should have analyzed the health risks and conducted a health assessment based upon the most intensive uses permitted by the Project in order to inform the public and decision-makers of the "worst case" impacts of the Project on people living in the vicinity of the Project. Or it could have analyzed development types it views as "reasonably foreseeable" based upon the proposed zoning designations. In short, the County must use "best efforts to find out and disclose all that it reasonably can…" (Guidelines § 15144; Pub. Res. Code § 21003.1(a).)

All that the EIR proposes in MM 5.1-14 is the preparation of a health risk assessment prior to issuance of building permits for industrial buildings in the Project area. However, this would be a ministerial process that would occur outside of public view. (FEIR at 2-67.) The public and decision-makers would be unable to review the assessment or offer comments on its adequacy (and this applies equally to other types of development that might occur onsite). While CEQA allows for the deferral of developing mitigation measures in very limited contexts, it does not allow for the deferral of analysis regarding potential effects.

C. The County should require much stronger air quality mitigation measures.

CEQA requires that—*prior* to the approval of a project—the lead agency adopt all feasible mitigation measures which will avoid or substantially lessen the significant environmental effects of the project. (Pub. Res. Code § 21002.) In addition, "Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified." (CEQA Guidelines § 15126.4(a)(1)(B).)

The EIR states that construction and operational air pollution impacts would remain significant and unavoidable for a number of different types of air pollution. However, the EIR does not demonstrate that the County considered all potentially feasible mitigation measures for each type of air pollution, or adopted all feasible measures. Indeed, there are a wealth of mitigation measures already proposed by other agencies in technical reports that were not incorporated in the EIR.

Many mitigation measures that should be considered and adopted are described in detail in the documents attached: (1) San Joaquin Valley Air Pollution Control District: Mitigation Measures, (2) Bay Area Air Quality Management District, *California Environmental Quality Act: Air Quality Guidelines* (2011), (3) Sacramento Metropolitan Air Quality Management District, Recommended Guidance for Land Use Emission Reductions Version 3.3 (for Operational Emissions) (2016), (4) San Luis Obispo County Air Pollution Control District, CEQA Air Quality Handbook: A Guide for Assessing the Air Quality Impacts For Projects Subject to CEQA Review (2012), (5) California Air Pollution Control Officers Association (CAPCOA), *CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act* (2008), and (6) California Attorney General's Office, *Addressing Climate Change at the Project Level* (2010). The documents identify existing and potential mitigation measures that could be applied to projects during the CEQA process to reduce a project's air pollution and GHG emissions. These mitigation measures also provide the co-benefit of reducing many criteria emissions that contribute to the significant impacts to air quality from the Project and should be evaluated for their feasibility in reducing both GHGs and criteria pollutants.

Because CEQA requires the adoption of all feasible mitigation measures to reduce significant impacts, the Project must adopt all feasible mitigation measures to reduce air quality and GHG impacts or provide "substantial evidence" as to why the mitigation measures are infeasible. (Guidelines § 15091(b).) Again, even if the Project's impacts are *unavoidable* that does not absolve the County of its obligation to *mitigate* significant impacts to the extent feasible. Conservation Groups therefore suggest the EIR adopt all feasible mitigation measures set forth in the attached. Their feasibility is proven, in many cases, by their actual implementation by cities and counties across California.

D. The EIR needs to disclose the health risks of siting people next to a freeway.

The EIR proposes siting people within close proximity to the I-5 freeway, which is one of the busiest freeways in the region. The EIR claims that no health risk assessment is necessary because a 2005 Land Use Handbook requires such assessments only when there are sensitive uses within 500 feet of a freeway. (DEIR at 5.1-40.) Here, the EIR proposes multifamily homes within 900 feet of the freeway and single family homes within 1,200 feet.

The problem here is that there are in fact serious health risks associated with siting people 900-1200 feet from a freeway. Numerous studies have documented the air pollution and health impacts associated with siting expressways and freeways in close proximity to residential development, particularly upon sensitive receptors such as children and the elderly. (Lin 2000.) A review of 700 studies concluded that pollution causes asthma attacks in children, the onset of childhood asthma, impaired lung function, premature death and death from cardiovascular diseases, and cardiovascular morbidity. (Health Effects Institute 2010[7].)

Quite critically for this project, the Health Effects Institute study concluded that the "exposure zone" was 300 to 500 meters from the highways (984 feet to 1640 feet). (*Id.*) Other studies have reached similar conclusions. (*See* Anderson 2011; Suglia 2008.) Living near expressways also increases the likelihood that residents will suffer from dementia. (Chen 2017.) The University of Southern California's Environmental Health Centers have also collected data and studies showing risks and health impacts to pregnant women, babies, children, teenagers, adults, and seniors of living by a freeway.[8] While the studies are summarized in the footnoted website, most of them have also been enclosed with this letter. In short, the EIR fails to address the overwhelming body of peer-reviewed scientific evidence demonstrating that siting development next to a freeway or expressway will lead to significant health effects on the residents.

If the County does decide to move forward with siting people in such close proximity to a freeway despite the strong evidence that it may make people sick, it should require the developer to notify potential residents of the health risks of living by an expressway or freeway.[9] And it should disclose all the types of health impacts of such development in the EIR.

Instead, the County discounts the findings of its own Department of Public Health, claiming that "these freeway siting recommendations are based on studies from the early 2000s, and since then, diesel particulate emissions from heavy trucks have substantially declined; therefore, the siting guidelines are even more conservative." (DEIR at 5.1-40.) This ignores the scientific research conducted since the early 2000s (some of which is included as references) showing that living near a freeway is actually *more* dangerous than scientists initially concluded. Moreover, the focus solely on diesel particulate matter ("DPM") is a red herring—there are many other types of air pollution emanating from freeways (not to mention the EIR contains no information on whether the *volume* of DPM-generating vehicles has increased over the past 20 years, which it likely has as population and economic activity has increased in California). The EIR also insinuates that the "topographical location" will reduce risks, but does not provide any evidence supporting this. Air pollution can move horizontally or vertically and likely can travel up a small hillside, especially in windy conditions.

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[7] https://www.healtheffects.org/publication/traffic-related-air-pollution-critical-review-literature-emissions-exposure-and-health

[8] *See* http://envhealthcenters.usc.edu/infographics/infographic-living-near-busy-roads-or-traffic-pollution/references-living-near-busy-roads-or-traffic-pollution (collecting studies); *see also* http://www.latimes.com/projects/la-me-freeway-pollution/.

[9] *See Los Angeles Times,* "L.A. warns homebuilders, but not residents, of traffic pollution health risks," (Aug. 20, 2017) http://beta.latimes.com/local/lanow/la-me-ln-freeway-pollution-warnings-20170804-story.html.

Finally, as discussed later, the Supplemental Memo reveals that the Project now proposes siting people even *closer* to the I-5 than initially proposed, which is likely to lead to more serious health risks and impacts.

VII. The FEIR Fails to Analyze or Mitigate the Project's GHG Impacts.

A. Climate Change is a Catastrophic and Pressing Threat to California

A strong, international scientific consensus has established that human-caused climate change is causing widespread harms to human society and natural systems, and that climate change threats are becoming increasingly dangerous. The Intergovernmental Panel on Climate Change (IPCC), the leading international scientific body for the assessment of climate change, concluded in its 2014 Fifth Assessment Report that: "[w]arming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, and sea level has risen," and further that "[r]ecent climate changes have had widespread impacts on human and natural systems."[10] These findings were echoed in the United States' own 2014 Third National Climate Assessment and 2017 Climate Science Special Report, prepared by scientific experts and reviewed by the National Academy of Sciences and multiple federal agencies. The Third National Climate Assessment concluded that "[m]ultiple lines of independent evidence confirm that human activities are the primary cause of the global warming of the past 50 years"[11] and "[i]mpacts related to climate change are already evident in many regions and are expected to become increasingly disruptive across the nation throughout this century and beyond."[12] The 2017 Climate Science Special Report similarly concluded:

> [B]ased on extensive evidence,…it is extremely likely that human activities, especially emissions of greenhouse gases, are the dominant cause of the observed warming since the mid-20th century. For the warming over the last century, there is no convincing alternative explanation supported by the extent of the observational evidence.
>
> In addition to warming, many other aspects of global climate are changing, primarily in response to human activities. Thousands of studies conducted by researchers around the world have documented changes in surface, atmospheric, and oceanic temperatures; melting glaciers; diminishing snow cover; shrinking sea ice; rising sea levels; ocean acidification; and increasing atmospheric water

[10] IPCC [Intergovernmental Panel on Climate Change], Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, [Core Writing Team, R.K. Pachauri & L.A. Meyer (eds.)], IPCC, Geneva, Switzerland (2014), http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf at 2.

[11] Melillo, Jerry M, Terese (T.C.) Richmond & Gary W. Yohe (eds.), Climate Change Impacts in the United States: The Third National Climate Assessment, U.S. Global Change Research Program (2014), http://nca2014.globalchange.gov/downloads at 7.

[12] Melillo, Jerry M, Terese (T.C.) Richmond & Gary W. Yohe (eds.), Climate Change Impacts in the United States: The Third National Climate Assessment, U.S. Global Change Research Program (2014), http://nca2014.globalchange.gov/downloads at 10.

vapor.[13]

The U.S. National Research Council concluded that "[c]limate change is occurring, is caused largely by human activities, and poses significant risks for—and in many cases is already affecting—a broad range of human and natural systems."[14] Based on observed and expected harms from climate change, in 2009 the U.S. Environmental Protection Agency found that greenhouse gas pollution endangers the health and welfare of current and future generations.[15]

These authoritative climate assessments decisively recognize the dominant role of greenhouse gases in driving climate change. As stated by the Third National Climate Assessment: "observations unequivocally show that climate is changing and that the warming of the past 50 years is primarily due to human-induced emissions of heat-trapping gases."[16] The Assessment makes clear that "reduc[ing] the risks of some of the worst impacts of climate change" will require "aggressive and sustained greenhouse gas emission reductions" over the course of this century.[17]

The impacts of climate change will be felt by humans and wildlife. Climate change is increasing stress on species and ecosystems—causing changes in distribution, phenology, physiology, vital rates, genetics, ecosystem structure and processes—in addition to increasing species extinction risk.[18] Climate-change-related local extinctions are already widespread and have occurred in hundreds of species.[19] Catastrophic levels of species extinctions are projected during this century if climate change continues unabated.[20] In California, climate change will transform our climate, resulting in such impacts as increased temperatures and wildfires, and a reduction in snowpack and precipitation levels and water availability, as we detail below.

Therefore, immediate and aggressive greenhouse gas emissions reductions are necessary to keep warming well below 2°C above pre-industrial levels. The IPCC Fifth Assessment Report and other expert assessments have established global carbon budgets, or the total amount of

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[13] USGCRP [U.S. Global Change Research Program], Climate Science Special Report: Fourth National Climate Assessment, Volume I [Wuebbles, D.J. et al. (eds.)], U.S. Global Change Research Program, Washington, DC (2017), https://science2017.globalchange.gov/ at 10.

[14] NRC [National Research Council], Advancing the Science of Climate Change, National Research Council (2010), www.nap.edu at 2.

[15] U.S. EPA [U.S. Environmental Protection Agency], Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act; Final Rule, 74 Federal Register 66496 (2009).

[16] Melillo, Jerry M, Terese (T.C.) Richmond & Gary W. Yohe (eds.), Climate Change Impacts in the United States: The Third National Climate Assessment, U.S. Global Change Research Program (2014) at 2. *See also* Report Finding 1 at 15: "The global warming of the past 50 years is primarily due to human activities, predominantly the burning of fossil fuels."

[17] Melillo, Jerry M, Terese (T.C.) Richmond & Gary W. Yohe (eds.), Climate Change Impacts in the United States: The Third National Climate Assessment, U.S. Global Change Research Program (2014) at 13, 14, and 649. *See also* Report Finding 3 at 15: "Human-induced climate change is projected to continue, and it will accelerate significantly if global emissions of heat-trapping gases continue to increase."

[18] Warren, Rachel et al., Increasing impacts of climate change upon ecosystems with increasing global mean temperature rise, 106 Climatic Change 141 (2011).

[19] Wiens, John J., Climate-related local extinctions are already widespread among plant and animal species, 14 PLoS Biology e2001104 (2016).

[20] Thomas, Chris. D. et al., Extinction risk from climate change, 427 Nature 145 (2004); Maclean, Ilya M. D. & Robert J. Wilson, Recent ecological responses to climate change support predictions of high extinction risk, 108 PNAS 12337 (2011); Urban, Mark C., Accelerating extinction risk from climate change, 348 Science 571 (2015).

carbon that can be burned while maintaining some probability of staying below a given temperature target. According to the IPCC, total cumulative anthropogenic emissions of CO_2 must remain below about 1,000 $GtCO_2$ from 2011 onward for a 66 percent probability of limiting warming to 2°C above pre-industrial levels, and to 400 $GtCO_2$ from 2011 onward for a 66 percent probability of limiting warming to 1.5°C.[21] These carbon budgets have been reduced to 850 $GtCO_2$ and 240 $GtCO_2$, respectively, from 2015 onward.[22] Given that global CO_2 emissions in 2016 alone totaled 36 $GtCO_2$,[23] humanity is rapidly consuming the remaining carbon budget needed to avoid the worst impacts of climate change. As of early 2018, climate policies by the world's countries would lead to an estimated 3.4°C of warming, and possibly up to 4.7°C of warming, well above the level needed to avoid the worst dangers of climate change.[24]

The United States has contributed more to climate change than any other country. The U.S. is the world's biggest cumulative emitter of greenhouse gas pollution, responsible for 27 percent of cumulative global CO_2 emissions since 1850, and the U.S. is currently the world's second highest emitter on an annual and per capita basis.[25] Nonetheless, U.S. climate policy is wholly inadequate to meet the international climate target to hold global average temperature rise to well below 2°C above pre-industrial levels to avoid the worst dangers of climate change. Current U.S. climate policy has been ranked as "critically insufficient" by an international team of climate policy experts and climate scientists which concluded: "These steps represent a severe backwards move and an abrogation of the United States' responsibility as the world's second largest emitter at a time when more, not less, commitment is needed from all governments to avert the worst impacts of climate change."[26]

In response to inadequate action on the national level, California has taken steps through legislation and regulation to fight climate change and reduce statewide GHG emissions. Enforcement and compliance with these steps is essential to help stabilize the climate and avoid catastrophic impacts to our environment. California has a mandate under AB 32 to reach 1990 levels of GHG emissions by the year 2020, equivalent to approximately a 15 percent reduction from a business-as-usual projection. (Health & Saf. Code § 38550.) Based on the warning of the Intergovernmental panel on Climate Change and leading climate scientists, Governor Brown issued an executive order in April 2015 requiring GHG emission reduction 40 percent below 1990 levels by 2030. (Executive Order B-30-15 (2015).) The Executive Order is line with a

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[21] IPCC [Intergovernmental Panel on Climate Change], 2013: Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F. et al. (eds.)], Cambridge University Press (2013) at 25; IPCC [Intergovernmental Panel on Climate Change], Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)], IPCC, Geneva, Switzerland (2014) at 63-64 & Table 2.2.

[22] Rogelj, Joeri et al., Differences between carbon budget estimates unraveled, 6 Nature Climate Change 245 (2016) at Table 2.

[23] Le Quéré, Corrine, et al., Global Carbon Budget 2017, Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2017-123 (2017), http://www.globalcarbonproject.org/carbonbudget/17/data.htm.

[24] Climate Action Tracker, Improvement in warming outlook at India and China move ahead, but Paris Agreement gap still looms large (November 2017), http://climateactiontracker.org/publications/briefing/288/Improvement-in-warming-outlook-as-India-and-China-move-ahead-but-Paris-Agreement-gap-still-looms-large.html.

[25] World Resources Institute, 6 Graphs Explain the World's Top 10 Emitters (November 25, 2014).

[26] Climate Action Tracker, USA (last updated 6 November 2017), http://climateactiontracker.org/countries/usa.

previous Executive Order mandating the state reduce emission levels to 80 percent below 1990 levels by 2050 in order to minimize significant climate change impacts. (Executive Order S-3-05 (2005).) In enacting SB 375, the state has also recognized the critical role that land use planning plays in achieving greenhouse gas emission reductions in California.[27]

The state Legislature has found that failure to achieve greenhouse gas reduction would be "detrimental" to the state's economy. (Health & Saf. Code § 38501(b).) In his 2015 Inaugural Address, Governor Brown reiterated his commitment to reduce greenhouse gas emissions with three new goals for the next fifteen years:

- Increase electricity derived from renewable sources to 50 percent;
- Reduce today's petroleum use in cars and trucks by 50 percent;
- Double the efficiency of existing buildings and make heating fuels cleaner. (Brown 2015 Address.)

Although some sources of GHG emissions may seem insignificant, climate change is a problem with cumulative impacts and effects. (*Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, (9th Cir. 2008) 538 F.3d 1172, 1217 ("the impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis" that agencies must conduct).) One source or one small project may not appear to have a significant effect on climate change, but the combined impacts of many sources can drastically damage California's climate as a whole. Therefore, project-specific GHG emission disclosure, analysis and mitigation is vital to California meeting its climate goals and maintaining our climate.

B. The FEIR fails to establish consistency with AB 32 and its implementing policies, plans, and executive orders.

The EIR claims that because the Project is purportedly consistent with the Los Angeles County Climate Community Action Plan ("CCAP") and the 2012 Santa Clarita Valley Area Plan ("SCVAP"), the Project will not have a significant effect on climate change. (DEIR at 5.7-44.) As a preliminary matter, the FEIR fails to explain how the CCAP or SCVAP is consistent with CARB's 2017 Climate Change Scoping Plan Update,[28] which identifies a goal of reducing emissions to 1990 levels by 2020. Instead, the FEIR only claims that the CCAP sets a goal of reducing emissions to 11 percent below ***2010*** levels by 2020. (DEIR at 5.7-17.) The CCAP explains that the 11 percent target was based upon a 2013 GHG inventory update that purportedly showed that only a "smaller percent reduction (i.e., a 10% to 11% reduction) from 2005 to 2008 levels is needed to achieve the 2020 target (than anticipated in the AB 32 Scoping Plan)." (CCAP at 3-1.)[29]

However, the CCAP does not account for more ambitious GHG targets of the state that have been implemented since the initial scoping plan was released in 2011. For instance, Governor Brown signed Executive Order B-30-15 on April 29, 2015, which sets a target of reducing GHG emissions to 40 percent below 1990 levels by 2040. Although the EIR states that the CCAP was adopted on October 6, 2015, the CCAP contains no mention of Executive Order B-30-15. The goals in EO B-30-15 are incorporated into the 2017 Scoping Plan, and the Scoping

[27] See http://www.arb.ca.gov/cc/sb375/sb375.htm.
[28] https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf
[29] http://planning.lacounty.gov/assets/upl/project/ccap_final-august2015.pdf

Plan specifically recommends that local governments have a "community-wide goal to achieve emissions of no more than six metric tons CO2e per capita by 2030 and no more than two metric tons CO2e per capita by 2050." (Scoping Plan at 133.) The goals in EO B-30-15 are also incorporated into SB 32, and are therefore state law. (DEIR at 5.7-14.)

Nonetheless, neither the EIR nor the CCAP establish consistency with B-30-15 or the 2017 Scoping Plan. This omission is particularly serious given that the EIR concedes that this executive order—which the EIR characterizes as a statewide interim GHG target—applies to the Project. (DEIR at 5.7-22 & 12.)

The EIR also fails to analyze whether the Project is consistent EO B-16-2012, which (1) directs state agencies to facilitate the rapid commercialization of zero-emission vehicles and (2) establishes a goal of an "80 percent reduction of greenhouse gas emissions from the transportation sector in California by 2050 as compared to 1990 levels." (*Bay Area Citizens v. Association of Bay Area Governments* (2016) 248 Cal. App. 4th 966, 980.) Such large reductions in GHG emissions from the transportation sector requires that local land use authorities (such as the County) decline to approve projects that will lead to outsized transportations and GHG impacts.

To the extent that the County believes that these orders and policies are not specifically applicable to the Project, the Conservation Groups disagree. *Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal. 5th 497, 515 ("*SANDAG*") stated that it is not dispositive whether an earlier GHG executive order (EO S-3-05) is an "adopted GHG reduction plan" or accepted threshold of significance. Instead, *SANDAG* observed that EO S-3-05's "goal of reducing California's greenhouse gas emissions to 80 percent below 1990 levels expresses the pace and magnitude of reduction efforts that the scientific community believes necessary to stabilize the climate. ***This scientific information has important value to policymakers and citizens in considering the emission impacts of a project*** like SANDAG's regional transportation plan." (*Ibid*.) *SANDAG* also approvingly cited a letter from the California Attorney General noting that infrastructure and land use decisions "***may lock in transportation inefficiencies and preclude any realistic possibility of meeting the Executive Order's goal of an 80% reduction in GHG emissions***." (*Id*. at 509, emphasis added.)

The 2017 Scoping Plan further states that "Implementation of this change will rely, in part, on local land use decisions to reduce GHG emissions associated with the transportation sector, both at the project level, and in long-term plans (including general plans, climate action plans, specific plans, and transportation plans) and supporting sustainable community strategies developed under SB 375." (Scoping Plan at 101.) This indicates that mere reliance upon an existing long-term plan is not necessarily sufficient to reduce a project's GHG emissions, particularly when additional policies or standards have been implemented since adoption of the long-term plan.

The Conservation Groups are concerned that this Project—which is located fairly far from existing city centers and services—is exactly the type of project that will lock in transportation inefficiencies and preclude the state's ability to meet its GHG reduction goals. In fact, a recent report confirms this concern. Next10 issued their 2017 California Green

Innovation Index Report, ("CGII Report")[30] which shows that transportation emissions—which are the largest source of GHG emissions in the state—have been increasing. The CGI Report reveals that commute times in California have increased and average freeway speeds have decreased, which results in traffic congestion and additional GHG emissions. The CGI Report further demonstrates that GHG emissions reductions have recently has reached a plateau and are not decreasing at a significant pace anymore. (CGII Report at Figure 5.) The Report indicates that this is due to transportation emissions, which have begun to rise. (CGI Report at Figures 9 and 10.) As perhaps the largest land use authority in California, the County should exercise its authority to reduce transportation emissions instead of approving more large-scale sprawl projects.

Center for Biological Diversity v. Department of Fish & Wildlife (2015) 62 Cal.4th 204, 230 stated that "[l]ocal governments [] bear the primary burden of evaluating a land use project's impact on greenhouse gas emissions. ***Some of this burden*** can be relieved by using geographically specific greenhouse gas emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis." (Emphasis added.) Here, even assuming that the CCAP and SCVAP are valid documents that adequately implemented plans in existence at the time they were adopted, that does not relieve the County of its burden to ensure that future projects are consistent with all ***new*** policies, plans, and the best available data and science about the current emissions levels. Here, it is not clear that the County considered relevant and current data regarding climate change or the impacts of the transportation sector.

C. The FEIR's measures to reduce GHG emissions are vague and unenforceable.

The FEIR identifies some measures designed to reduce the Project's GHG emissions, including a "commitment" to install a certain amount of solar panels and EV chargers. (DEIR at 5.7-22; FEIR at 2-83.) While such measures are steps in the right direction, they do not qualify as enforceable mitigation measures under CEQA, such that there is no assurance that they will be implemented. If the Applicant is truly "committed" to these measures, then these measures should be incorporated as CEQA mitigation measures and/or binding conditions of project approval. Notably, the FEIR relies on these measures in claiming that the Project will reduce its GHG emissions from 66,083 MTCO2e to 56,722 MTCO2e. Accordingly, if the FEIR is going to rely on these measures to reduce GHG emissions, then there must be conditions of approval.

On a related matter, the FEIR lacks detail on the types of EV chargers that will be required. EV chargers in commercial parking lots should have "Level 3" DC fast charging instead of slower Level 2 charging.

Moreover, the FEIR refers to a "transportation demand management" or "TDM" measures, but lacks sufficient detail for the public to ascertain whether these measures will reduce GHG emissions. (FEIR at 5.7-22.) For example, the FEIR does not specify which "major employment center" will receive shuttle service, or how the local transit network will be expanded. (*Id*.) While the Supplemental Memo provides slightly more detail on this topic, it is insufficient to determine whether such measures will actually lead to real reductions in

[30] http://next10.org/sites/default/files/2017-CA-Green-Innovation-Index-2.pdf

automobile trips or GHGs. Given that the Project site is quite far from existing employment centers, the FEIR should provide specific details on how this program will in fact reduce transportation demand. In Appx. G of the DEIR (prepared by the Applicant's consultant), Table 2-13 purports to estimate the reductions in VMT resulting from the TDM measures. However, the CAPCOA Fact Sheet on which the table relies contains differing numerical reductions or "n/a" for the measures identified in the table.[31] Accordingly, it is not clear from the record whether even the small reductions in GHGs claimed are based upon reliable data. The FEIR also should describe how the TDM will be funded (and to what amount) and what entity will administer it.

D. The FEIR should require "zero net energy" as a condition of the Project.

Other projects in the County that have recently been approved include a goal of zero net GHG emissions. Such projects intend to achieve that goal through reducing onsite GHG emissions to the greatest extent practicable, but also by offsetting any other emissions through local emissions reductions projects.[32] Here, the FEIR fails to provide substantial evidence that such additional reductions needed to achieve zero net energy are infeasible—for instance, the FEIR could include more robust EV charging requirements, more onsite renewable energy, and a program to offset the remaining GHG emissions locally.

Any offset program must ensure "Additionality." California law establishes specific standards for greenhouse gas offset credits used in the AB 32 cap-and-trade system. Health and Safety Code section 38562(d) requires, in relevant part, that:

> (1) The greenhouse gas emission reductions achieved are real, permanent, quantifiable, verifiable, and enforceable by the state board.
>
> (2) For regulations pursuant to Part 5 (commencing with Section 38570) [i.e., regulations implementing the market-based cap-and-trade system], the reduction is in addition to any greenhouse gas emission reduction otherwise required by law or regulation, and any other greenhouse gas emission reduction that otherwise would occur.
>
> (3) If applicable, the greenhouse gas emission reduction occurs over the same time period and is equivalent in amount to any direct emission reduction required pursuant to this division.

In particular, the two-part definition of "additional" under subdivision (d)(2) requires not only that credited reductions are not otherwise legally required, but also that credited reductions would not otherwise occur in the absence of the offset project.

This definition of "additional" also applies in the CEQA context, as the regulatory history of the relevant CEQA Guidelines makes clear. The CEQA Guidelines specify that only GHG reductions that are "not otherwise required" may be used to offset project emissions. (CEQA

[31] http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf at Table 6-2.
[32] *See* California Department of Fish and Wildlife, *Newhall Ranch Resource and Development Management and Development Plan, Final Additional Environmental Analysis*, Appendix 2.1, available at http://planning.lacounty.gov/assets/upl/case/tr_53108_appendix-2-0-cdfw-final-aea-excerpts.pdf.

Guidelines, § 15126.4, subd. (c)(3).) However, as the California Resources Agency's Final Statement of Reasons for adopting this Guideline explains, the "not otherwise required" language was intended to make clear that only "additional" emissions reductions—that is, reductions not otherwise required by law or likely to occur anyway—may be used to generate offsets for CEQA mitigation.[33] The Final Statement of Reasons explicitly interprets CEQA's mitigation requirements, including requirements governing use of offsets, as "consistent with the Legislature's directive in AB32 that reductions relied on as part of a market-based compliance mechanism must be 'in addition to any greenhouse gas emission reduction otherwise required by law or regulation, and any other greenhouse gas emission reduction that otherwise would occur.'" (*Ibid*.)

Again, the FEIR has not established how zero net energy is infeasible. (See *Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 600 (whether a project is economically unfeasible "is not measured by increased cost or lost profit, but upon whether the effect of the proposed mitigation is such that the project is rendered impractical.").)

VIII. Many of the Studies Incorporated into the EIR Do Not Reflect the County's Independent Judgment.

Many of the studies that the FEIR cites to (*e.g.*, the Biological Resources Downstream Impacts Assessment [Appx. B], Special Status Plant Species Restoration Plan [Appx. C], Wildlife Crossing Assessment Memo [Appx. D]) indicate on their cover pages that they were prepared for the Applicant by a third party consultant. The FEIR indicates that the County accepted all of the conclusions and analyses prepared by these developer-funded consultants instead of independently preparing its own analyses. This is unlawful under CEQA. (*See California Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173, 194 (a public agency cannot charge a developer with the responsibility to study the impact of a proposed project and the EIR must reflect the independent judgment of the lead agency).)

It is true that the lead agency may receive information "which shall be considered by the public agency, and may be included, in whole or in part, in any report or declaration." (Pub. Res. Code § 21082.1.) To the extent the County can rely upon studies prepared and funded by the developer, this is the only section that would permit the County to do so. However, neither this section nor any of the CEQA Guidelines give the lead agency the discretion to uncritically rely upon the analyses and conclusions in the various developer-funded studies; the County must exercise its own independent judgment and support that judgment with evidence and analyses within the EIR. (*See Eureka Citizens for Responsible Government v. City of Eureka* (2007) 147 Cal. App. 4th 357, 371.) This is especially true when neutral expert authorities—such as CDFW and SMMC—strenuously disagreed with much of the developer-funded analyses and conclusions. Nonetheless, the responses in the FEIR to comments by these agencies (and other agencies) generally fail to do anything more to restate the conclusions of the developer-funded studies. Such reliance on developer-funded studies (especially in the face of disagreement by expert agencies) does not allow for informed and reasoned decision-making, nor is such reliance entitled to deference under the "substantial evidence" standard.

[33] California Natural Resources Agency, Final Statement of Reasons for Regulatory Action: Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97 at 48, 87-90 (December 2009).

In addition, many of these studies were published in the last few weeks, given the public very little time to review and provide comments. This frustrates CEQA's goals of public participation and informed decision-making.

IX. The EIR Needs To Be Recirculated Because The Project Was Significantly Revised on April 5, 2018.

As noted above, the County published a "Supplemental Memo" on April 5, 2018 that disclosed that revisions to the Project were made which removed virtually all of the commercial and industrial uses in favor of more dwelling units. Such revisions effect the traffic analysis, and by extension the air quality analysis and GHG analysis, as well as the studies supporting these analyses.

The EIR should be recirculated with adequate analysis assessing these revisions. Resources Code section 21092.1 provides that "[w]hen significant new information is added to an environmental impact report after notice has been given pursuant to Section 21092 and consultation has occurred pursuant to Sections 21104 and 21153, but prior to certification, the public agency shall give notice again pursuant to Section 21092, and consult again pursuant to Sections 21104 and 21153 before certifying the environmental impact report." CEQA Guideline 15088.5 further clarifies that "As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information."

Significant new information includes "a disclosure that (1) a new significant environmental impact would result from the project or a new mitigation measure; (2) a substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted; (3) a feasible alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the project's significant impacts but the project's proponents decline to adopt it; or (4) the draft EIR 'was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded." (*North Coast Rivers Alliance v. Marin Municipal Water Dist. Bd. of Directors* (2013) 216 Cal.App.4th 614, 654-655.)

At a minimum, either element (1) or (2) could be applicable here. While it is not apparent from the brief analyses in the Supplemental Memo exactly in what location the additional residential uses will be sited, the Memo indicates that "areas that were previously proposed for industrial and commercial would now be developed with residential uses…" (Memo at PDF 14.) However, the industrial and commercial uses were sited closest to I-5, presumably because of the public health risks of siting residential uses immediately adjacent to a highway. Yet, neither the Memo nor the EIR adequately analyze or consider the risks of siting people in such close proximity to a freeway. This is problematic because the scientific literature cited above indicates that the closer people live to a freeway, the more severe and pervasive the potential impacts are upon those persons.

X. The Statement of Overriding Considerations is Conclusory and Factually Incorrect.

The Statement of Overriding Considerations ("SOC") is deficient because it repeats the same factually and legally unsupportable conclusions and analyses set forth in the EIR (which

are outlined in this letter, the Center's previous comments, and in various other comment letters by expert agencies such as CDFW and SMMC). The SOC therefore fails to provide substantial evidence supporting its claims as to the impacts and proposed alternatives and mitigation measures. For example, as discussed above, the EIR does not show that the Creek Avoidance Alternative is not feasible. And the final version of the Project does not even meet all of the project objectives.

The SOC also is factually incorrect in repeatedly claiming that the Project will provide for industrial uses. (Supplemental Memo at PDF 204.) Likewise, the SOC is incorrect in claiming that the Project will be generating more employment opportunities based upon these (now non-existent) industrial uses. (*Id*.) Because of this, the SOC is incorrect in claiming that the "Project will accomplish and be fully consistent with Project Objectives… described in Table 6-1 of the SEIR." (*Id*.) As noted above, the EIR reaches the opposite conclusion when analyzing the No Industrial Development Alternative. (DEIR at 6-21.) At best, the SOC is extremely misleading because it claims economic benefits that are no longer part of the Project. These discrepancies and errors frustrate public participation and informed decision-making.

Moreover, the SOC is replete with bare statements that impacts are outweighed by benefits without adequate supporting analysis. The SOC does not adequately consider the impacts of the Project on other community resources such as the SRA (as discussed above). The SOC contains similarly conclusory claims that all feasible mitigation measures have been adopted. CEQA requires substantial evidence supporting these claims with respect to each area of significant impacts.

Finally, the SOC refers to the EIR as a "Program EIR" even though a program EIR is not appropriate here; the Project is a "specific plan," which is a particular development project, not a program for a regulatory action (e.g., a general plan).

XI. Conclusion.

The Center notes that the County failed to provide any response in the FEIR to the Center's request that—in connection with the administrative record—the County (1) suspend all data destruction policies; and (2) preserve all relevant hardware unless an exact replica of each file is made. The Center again asks that the County confirm that it has complied with these requests.

In light of the many significant, unavoidable environmental impacts that will result from the Project, we strongly urge the Project not be approved in its current form. If the County is intent on moving forward with this unwise project, at a minimum it should be redesigned and downsized to avoid sensitive resources such as Grasshopper Creek and habitat for the western spadefoot toad and burrowing owl.

Sincerely,



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ATTACHMENT C



April 1, 2019

Via Electronic Mail and FedEx (w/attachments)

Los Angeles County Board of Supervisors
c/o Ms. Celia Zavala
Executive Officer
500 West Temple Street
Los Angeles, CA 90012
executiveoffice@bos.lacounty.gov

Re: Northlake Specific Plan

Dear Los Angeles County Board of Supervisors:

These comments are submitted on behalf of the Center for Biological Diversity ("Center") on the proposed Northlake Specific Plan ("Project").

The County just released nearly 400 pages of documents relating to the Project on the evening of March 28, 2019, including a 216-page Findings of Fact and Statement of Overriding Considerations (the "Findings") regarding the Final Supplemental Environmental Impact Report ("FSEIR") for the Project. **The public is unable to review these documents in any meaningful manner over the less than two business days provided before the scheduled April 2 hearing on the Project. The Center strongly objects to the County conducting a hearing on this item on April 2 because there has not been sufficient time for the public to review and comment on these documents.**

The final Findings and final Mitigation, Monitoring and Reporting Program are key components of the CEQA process. For the Board to have a hearing and take an action on these items with virtually no public review or comment contravenes CEQA's mandate of public participation and informed decision-making in environmental matters.

I. Background on the Center

The Center for Biological Diversity is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science,

policy, and environmental law. The Center has over one million members and online activists throughout California and the United Sates. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County.

II. The EIR Must Be Revised and Recirculated In Light of the "New Normal" of Destructive Wildfires in Southern California.

On February 11, 2019, the Center sent a letter to the Board (the "February 11 Letter") requesting it to reconsider its tentative approval of the Centennial Specific Plan in light of the Board's December 2018 resolution acknowledging the "new normal" of more frequent wildfires in Southern California which are fueled by human ignitions from development in wildfire hazard areas. A copy of the February 11 Letter is attached hereto as Exhibit A, and is hereby incorporated by reference. The issues raised in the February 11 Letter are equally applicable to the Northlake Specific Plan and the FSEIR; in short (1) the County's Wildfire Analysis Motion recognizes the "new normal" of destructive wildfires in Southern California; (2) the Board cannot make an informed decision on Northlake until after the completion of the report called for by the Wildfire Analysis Motion; and (3) the County must revise and recirculate the EIR after the completion of the report called for in the Wildfire Analysis Motion.

On November 13, 2018, the Center sent a letter to the San Diego County Board of Supervisors discussing the wildfire impacts of poorly planned development in San Diego County (the "November 13 Letter"). A copy of the November 13 Letter is attached hereto as Exhibit B, and is hereby incorporated by reference. The issues raised in the November 13 Letter are equally applicable to the Northlake Specific Plan and the FSEIR—(1) developments in fire-prone natural areas that have historically burned have the highest chances of burning; (2) development in fire-prone areas will lead to more frequent fire in Southern California scrublands; (3) public safety in developments like Northlake cannot be guaranteed; (4) developments like Northlake contain insufficient fire safety measures and fire protection plans; (5) increased human ignitions will increase unnatural levels of smoke; (6) the direct economic impacts of wildfires are worsening; (7) the devastating environmental, health, social, and economic costs of poorly-planned, leapfrog developments in areas that will burn are too great, such that there is no justification for approving this development. The FSEIR and Findings do not contain sufficient analysis of these issues.

III. The EIR Must Be Revised and Recirculated In Light of Potential Project Impacts to Wildlife Connectivity and Struggling Local Mountain Lion Populations

On March 11, 2019, the Center sent a letter to the Ventura County Board of Supervisors discussing the importance of wildlife corridors and habitat connectivity (the "March 11 Letter"). A copy of the March 11 Letter is attached hereto as Exhibit C, and is hereby incorporated by reference. The issues raised in the March 11 Letter are equally applicable to the Northlake Specific Plan and the FSEIR—(1) habitat connectivity is essential for wildlife movement and biodiversity conservation; (2) corridors and corridor redundancy should be incorporated to retain functional connectivity and resilience to climate change; (3) developing over 3.5 miles of blueline stream will significantly negatively impact wildlife that use streams as corridors and foraging habitat, such as mountain lions; (4) large developments like Northlake and associated

noise and lighting can interfere with the behavior of local wildlife and impact survival of individuals and populations; (5) creating and enhancing wildlife crossing for existing roads is critical to maintaining wildlife movement and health ecosystems; and (6) projects like Northlake should use the best available science to identify important areas for wildlife movement and habitat connectivity. The FSEIR does not contain sufficient analyses and mitigation of these issues.

In addition, in light of recent studies regarding imperiled mountain lion populations in Southern California, the FSEIR fails to sufficiently analyze potential project impacts to local mountain lion populations. Northlake would be situated in an important linkage area for wildlife movement between the Los Padres National Forest, the Santa Susana Mountains, and the Angeles National Forest. The nearby Central Coast South mountain lion population, which includes individuals in the Santa Monica Mountains, Santa Susana Mountains, and Simi Hills, were found to have dangerously low genetic diversity and effective population size, and they are likely to become extinct within 50 years (Benson et al. 2016; Gustafson et al. 2018; Benson et al. 2019). In addition, Gustafson et al. (2018) found that the nearby mountain lion population in the San Gabriel/San Bernardino Mountains also has low genetic diversity and effective population size, which indicates that they too have a high risk of extinction. Other southern California mountain lion populations, such as those in the Santa Ana Mountains, were also found to have high risk of extinction within the next 50 years (Ernest et al. 2014; Benson et al. 2019). Genetic connectivity with other populations is essential for the survival of these Southern California mountain populations (Gustafson et al. 2017; Benson et al. 2019), and the removal of 3.5 miles of streams and riparian corridors could have a significant adverse impact on these populations by impeding movement. The FSEIR fails to sufficiently analyze these issues and must be recirculated with such analysis.

IV. The EIR Must Be Revised and Recirculated In Light of the Additional Units Added to the Project.

The Findings just released on the evening of March 28 disclose that the Project will include 2,295 dwelling units instead of 1,974 units. Adding 324 dwelling units will likely have more potentially significant impacts in terms of traffic and associated air pollution and greenhouse gas emissions. The FSEIR needs to be recirculated with disclosure, analysis, and mitigation of such impacts.

V. Conclusion

In light of the many significant, unavoidable environmental impacts that will result from the Project, we strongly urge the Project not be approved in its current form.

Sincerely,



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EXHIBIT A





February 11, 2019

Sent via email and FedEx

Los Angeles County Board of Supervisors
c/o Ms. Celia Zavala
Executive Officer
500 West Temple Street
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executiveoffice@bos.lacounty.gov

Re: Changed Circumstances Regarding The Centennial Specific Plan

Dear Los Angeles County Board of Supervisors:

These comments are submitted on behalf of the California Native Plant Society ("CNPS") and the Center for Biological Diversity ("Center") on the Centennial Specific Plan ("Centennial"). This letter highlights new information on wildfire risk that is relevant to informed decision-making and public participation regarding Centennial and its Environmental Impact Report ("EIR"). As a result of this new information, we believe that the final approval of Centennial should be delayed and the EIR should be revised and recirculated for additional public comment. As discussed in more detail in section III below, the California Environmental Quality Act ("CEQA") requires that an EIR be recirculated for public comment when new data or information relevant to the decision-making process arises.

The California Native Plant Society ("CNPS") is a non-profit environmental organization with 10,000 members in 35 Chapters across California and Baja California, Mexico. CNPS's mission is to protect California's native plant heritage and preserve it for future generations through the application of science, research, education, and conservation. CNPS works closely with decision-makers, scientists, and local planners to advocate for well-informed policies, regulations, and land management practices.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over one million members and online activists throughout California and the United Sates. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County.

I. The County's Wildfire Analysis Motion Recognizes The "New Normal" Of Destructive Wildfires In Southern California.

The Woolsey Fire started on November 8, 2018, and grew to become the most destructive fire in Los Angeles County history. By the time this blaze was extinguished, more than 2,000 structures were either damaged or destroyed and three people lost their lives. The fire—fanned by winds upwards of 70 mph and fueled by consecutive years of drought—scorched 96,000 acres, including 88% of the Santa Monica Mountains. This tragedy was stacked upon similar recent disasters including the Tubbs and Thomas Fires in 2017, and the Carr and Camp fires of 2018. All told, 16 out of 20 of the most destructive fires in California's history, in terms of structures destroyed and lives lost, have occurred within the past two decades.[1]

The role that land use planning decisions play in placing homes in the path of wildfires has become increasingly clear. In December 2018, now-retired CalFire Chief Ken Pimlott urged local land use authorities to consider prohibiting development in fire hazard areas so that homeowners, firefighters, and communities "don't have to keep going through what we're going through."[2]

On the heels of the Woolsey Fire, on December 18, 2018, the Los Angeles County Board of Supervisors unanimously adopted a Motion called "Analysis of the Woolsey Fire," which is enclosed herein as Attachment 1 (hereinafter referred to as the "Wildfire Analysis Motion"). In adopting the Wildfire Analysis Motion, the Board recognized the role that it and the County must play in ensuring the safety of communities under its jurisdiction. The Wildfire Analysis Motion specifically acknowledges the role that climate change has in creating hotter and drier conditions more conducive to wildfire and that residential development in the urban wildland interface increases the likelihood of wildfire ignitions and the property damage they cause:

> Our success in protecting human life should not disguise the fact that the County has entered a new era of threat from wildfires. Prolonged drought, coupled with other effects of climate change, has created an environment of explosive brush fire development, making firefighting more difficult than ever. **We increasingly see residential housing growth at the urban wild land interface which poses greater danger to firefighters and to the residents who live in these extremely high fire severity zones**.

(Wildfire Analysis Motion at p. 2, emphasis added.) The Wildfire Analysis Motion therefore calls for recognition of a "new normal" given these "new realities and the attendant dangers." (*Id*.)

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[1] Top 20 Most Destructive Fires in California History

[2] Interview with Ken Pimlott; Capitol Public Radio, 11-December-2018

The County therefore must "review existing prevention regulations and emergency notification systems, and look to lessons learned and what we can do better moving forward." (Wildfire Analysis Motion at p. 2.) The Wildfire Analysis Motion calls for a collaborative effort between all stakeholders, including fire departments, local land use jurisdictions, and community organizations.

The goal of the Wildfire Analysis Motion is to "determine[] whether changes are needed in order for the County to be best prepared to respond to another catastrophic event such as a wildfire of Woolsey's magnitude." (*Id*. at p. 4.) The motion further requires the County's Chief Executive Officer to report back to the Board in 90 days and every 90 days thereafter until the report is completed. (*Id*. at p. 3.)

II. The Board Cannot Make An Informed Decision On Centennial Until After Completion Of The Report Called For By The Wildfire Analysis Motion.

While we support the Board's efforts to mitigate the threat of future wildfires in the urban wildland interface and to learn from recent disasters, the Board's stated intention of December 11, 2018 to imminently approve the Centennial development is fundamentally contradictory to the intention announced on December 18, 2018 in the Wildfire Analysis Motion. Indeed, the EIR for Centennial does not acknowledge this "new normal" of more frequent wildfires in Southern California which are fueled by human ignitions from development in wildfire hazard areas, increased drought, and hotter and drier conditions due to climate change.

Located in the far northwest corner of the County, Centennial would place more than 19,000 homes in an area designated by CalFire as either a high or very high fire hazard severity zone. Conditions on this site, including frequent high wind events, vegetation and topography mean that wildfires that are ignited on or adjacent to the site could pose a severe risk to future residents and their property. Centennial is exactly the type of "residential housing growth at the urban wild land interface" that the Wildfire Analysis Motion concludes is a direct cause of the destructive wildfires that are repeatedly occurring.

In announcing its intent to approve Centennial on December 11, 2018, the Board included a condition that "the fire mitigation strategies associated with the Centennial Specific Plan be peer reviewed by, or in coordination with the California Department of Forestry and Fire Protection." While that is a step in the right direction, the public and applicable agencies have a right under CEQA to review these mitigation strategies *prior* to project approval. (See CEQA Guidelines § 15126.4(a).) Deferring development of such measures until after project approval violates CEQA and undermines informed decision-making and public participation. (See *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 92.) The public is also entitled to review and comment upon such measures because they in themselves might have environmental impacts. (CEQA Guidelines § 15126.4(a)(1)(D).)

In addition, the Board (as the decision-makers) needs to base its decision upon an EIR that accurately describes the clear, present, and future threat of wildfire surrounding the Centennial site, including the risks to residents, the environmental and economic costs to the County, and the potential that development in high fire-prone areas will result in more frequent wildfires caused by humans, which will degrade the surrounding environment. The science is clear that development in wildfire areas causes them to burn more frequently than they would naturally, which can prevent native vegetation from re-growing, thereby leading to erosion, loss of biodiversity, and more wildfires.[3]

Delaying a vote on Centennial is also necessary because the Draft Development Agreement negotiated by Tejon Ranch Company and County staff will "lock in" regulations in existence *at the time of execution*. This means that even if the County develops more robust regulations or plans to combat wildfire in the near future, those regulations or plans will not necessarily apply to Centennial, which is likely the largest development proposed in County history. The Draft Development Agreement also improperly constrains the County's discretionary authority to require further supplemental environmental analysis if circumstances warrant it, such as additional regulations or studies on wildfire risk.

In particular, section 3.2 only allows new or modified laws to apply to Tejon or future entitlement holders if such laws do "not delay, modify, prevent, or impede development or operation of the Project on the Property or conflict with any of the vested rights granted to Property Owner under this Agreement." (Development Agreement at page 17.)

Section 3.2 further suggests that even future state or federal laws or regulations will not apply to Centennial unless the County undergoes a burdensome "meet and confer" process with Tejon. Even then, section 3.2 states that Tejon still gets to decide whether to comply with such rules: "A Property Owner may, in its sole and absolute discretion, consent to the application to the Project of any Future Rules." (Development Agreement at page 17.)

Section 3.12 also contains an "override" provision that states that if there are inconsistencies between "Applicable Rules" and the Development Agreement, then the Development Agreement shall control. (Development Agreement at page 22.)[4] Likewise, the County's ability to conduct further environmental review or require further mitigation will be constrained or be subject to claims of "breach of contract" from Tejon.

[3] Wildfire, Drought, and Climate Change; Los Angeles Times, 12-Jan-2019

[4] This is also explained in the Center and CNPS's comment letter of December 6, 2018 (the "December 6 Letter") on pages 23 & 38-41.

III. The County Must Revise And Recirculate The EIR After Completion Of The Report Called For By The Wildfire Analysis Motion.

Based upon the above, the Board should decline to make a final decision on Centennial until after the report required by the Wildfire Analysis Motion is completed. After this report is completed, County Planning can decide whether to recirculate an EIR that fully apprises the public and the Board of the environmental costs of approving Centennial. Such a revised EIR would be informed by the lessons learned by the collaborative process and report called for by the Wildfire Analysis Motion.

Indeed, state law requires nothing less. An EIR must be recirculated for public comment when new data or information relevant to the decision-making process comes to light. CEQA provides:

> When significant new information is added to an environmental impact report after notice has been given pursuant to Section 21092 and consultation has occurred pursuant to Sections 21104 and 21153, but prior to certification, the public agency shall give notice again pursuant to Section 21092, and consult again pursuant to Sections 21104 and 21153 before certifying the environmental impact report.

(Cal. Pub. Res. Code § 21092.1.) The EIR for Centennial needs to include "a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences." (CEQA Guidelines, § 15151; see also *Berkeley Keep Jets Over the Bay Com. v. Board of Port Cmrs*. (2001) 91 Cal.App.4th 1344, 1356 [the EIR must set forth sufficient information to "foster informed public participation and to enable the decision makers to consider the environmental factors necessary to make a reasoned decision."].)

The Wildfire Analysis Motion acknowledges that the conditions relevant to the approval of Centennial have significantly changed—the Board has now formally recognized the link between residential development in the urban wildland interface, climate change, and the increased frequency of human-ignited wildfires County residents are enduring.

With the backdrop of this "new normal," the Board cannot hold a final vote on Centennial until it takes a hard look at whether the construction of a city in remote wildlands is still in the best interest of the County and whether the environmental review for the project adequately complies with CEQA.

Thank you once again for the opportunity to comment on the Centennial Specific Plan. Please feel free to contact us with any questions.

Sincerely,

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Attachment 1

AGN. NO._____

MOTION BY SUPERVISOR SHEILA KUEHL December 18, 2018

Analysis of the Woolsey Fire

The Woolsey Fire began on November 8, 2018 and burned for thirteen days before it was contained. It was an unprecedented, fast-moving brush fire that was 14 miles wide, with a footprint of 150 square miles, and driven by gusts of up to 70 mph — ultimately moving from the 101 freeway corridor to the ocean in just five hours. 70,000 homes, businesses and other structures lay in the fire's path. A quarter of a million people were evacuated, approximately 2,000 residential and commercial buildings, and other structures were damaged or destroyed. This was the most destructive fire Los Angeles County ("County") has ever seen.

Habitat and open space were also affected. Approximately 88% of the land in the Santa Monica National Recreation Area, owned by the National Park Service, burned, blackening more acres within that National Recreation Area than any other fire in recorded history.

As first responders fought the blaze, their first priority was to protect life through evacuations. County Departments worked together to constantly assess the trajectory of

MOTION

Solis	_____
Ridley-Thomas	_____
Kuehl	_____
Barger	_____
Hahn	_____

the fire, weather conditions, and topography in order to identify threatened areas in order to effectively fight the fire, ensure the safety of residents, and provide for structure defense where possible. As a result of their strategic deployment of resources, there was minimal loss of life and thousands of homes were saved. Nonetheless, the public has many questions about the procedures used for evacuations, firefighting processes and the decisions made regarding repopulation.

Our success in protecting human life should not disguise the fact that the County has entered a new era of threat from wildfires. Prolonged drought, coupled with other effects of climate change, has created an environment of explosive brush fire development, making firefighting more difficult than ever. We increasingly see residential housing growth at the urban wild land interface which poses greater danger to firefighters and to the residents who live in these extremely high fire severity zones.

Given these new realities and the attendant dangers, the County must prepare for a “new normal." The County needs to review existing prevention regulations and emergency notification systems, and look to lessons learned and what we can do better moving forward. All entities must be involved in this planning process including local law enforcement agencies, fire departments, emergency management agencies, city, state and federal agencies involved in emergency response efforts, residents, city officials and community organizations.

I, THEREFORE, MOVE that the Board of Supervisors direct the Chief Executive Officer to convene a Working Group to review the response to and recovery from the Woolsey fire and to identify best practices for evacuation and repopulation procedures, including the need for a uniform mass notification system for use throughout the Santa

Monica Mountains and the County of Los Angeles. The task force shall be comprised of all County Departments and other agencies involved in the Woolsey fire and its aftermath, including but not limited to County representatives from emergency response agencies, such as the Los Angeles County Sheriff's Department, the Los Angeles County Fire Department, Animal Care and Control, Public Health, Public Works, as well as the Los Angeles Police Department, the California Highway Patrol, Ventura County Fire, the Ventura County Sheriff's Department, Cal-OES, Cal-Fire, the National Parks, as well as representatives from the unincorporated Santa Monica Mountains, the City of Los Angeles, the cities of Calabasas, Agoura Hills, Hidden Hills, Malibu, and Westlake Village and the County of Ventura. The Working Group shall provide a progress report back to the Board in 90 days and every 90 days thereafter until such time as a final report is prepared and presented to the Board of Supervisors.

I FURTHER MOVE that the Board of Supervisors direct the Chief Executive Officer to engage the Working Group referenced above, and to retain a consultant with subject matter expertise, to review the County, City, State and other involved agencies efforts in responding to the Woolsey fire, and prepare and present a progress report back to the Board in 90 days, and every 90 days thereafter until completed, with an emphasis on the following:

1. The cause and origin of the Woolsey fire;
2. The deployment of firefighting resources as the fire progressed;
3. The distribution and adequacy of firefighting resources, including the availability of mutual aid resources;

4. Evacuation notification and procedures, including the implementation of public alert procedures and the use of mass notification systems;
5. Strategic communications during the fire and its aftermath between first responders, law enforcement, and municipal governments and the communities impacted by the fire; and
6. Community repopulation notification and procedures, including any conflicts in information between and among fire and law enforcement agencies.

The consultant's report shall detail lessons learned and the strengths of the response and recovery efforts and shall also identify areas of improvement to assist the Board in determining whether changes are needed in order for the County to be best prepared to respond to another catastrophic event such as a wildfire of Woolsey's magnitude.

S: LM/Analysis of the Woolsey Fire

18. Analysis of the Woolsey Fire

Recommendation as submitted by Supervisor Kuehl: Direct the Chief Executive Officer to convene a working group to review the response to and recovery from the Woolsey fire and identify best practices for evacuation and repopulation procedures, including the need for a uniform mass notification system for use throughout the Santa Monica Mountains and the County, comprised of all County Departments and other agencies involved in the Woolsey fire and its aftermath, including, but not limited to, County representatives from emergency response agencies such as the Sheriff's Department, the Fire Department, Departments of Animal Care and Control, Public Health, Public Works, as well as the Los Angeles Police Department, the California Highway Patrol, Ventura County Fire, the Ventura County Sheriff's Department, California Office of Emergency Services, California Fire Department, the National Parks, as well as representatives from the unincorporated Santa Monica Mountains, the Cities of Los Angeles, Calabasas, Agoura Hills, Hidden Hills, Malibu and Westlake Village and the County of Ventura, and provide a progress report back to the Board in 90 days, and every 90 days thereafter, until such time as a final report is prepared and presented to the Board; direct the Chief Executive Officer to engage the working group and retain a consultant, with subject matter expertise to review the County, City, State and other involved agencies efforts in responding to the Woolsey fire and prepare and present a progress report back to the Board in 90 days and every 90 days thereafter until completed, detailing lessons learned and the strengths of the response and recovery efforts and shall also identify areas of improvement to assist the Board in determining whether changes are needed in order for the County to be best prepared to respond to another catastrophic event such as a wildfire of Woolsey's magnitude, with an emphasis on the following:

The cause and origin of the Woolsey fire;

The deployment of firefighting resources as the fire progressed;

The distribution and adequacy of firefighting resources, including the availability of mutual aid resources;

Evacuation notification and procedures, including the implementation of public alert procedures and the use of mass notification systems;

Strategic communications during the fire and its aftermath between first responders, law enforcement and municipal governments and the communities impacted by the fire; and

Community repopulation notification and procedures, including any conflicts

in information between and among fire and law enforcement agencies. (18-7650)

Victor Trujillo addressed the Board.

On motion of Supervisor Ridley-Thomas, seconded by Supervisor Barger, this item was approved.

Ayes: 5 - Supervisor Solis, Supervisor Ridley-Thomas, Supervisor Kuehl, Supervisor Barger and Supervisor Hahn

Attachments: Motion by Supervisor Kuehl
Report
Video

19. Employee Relations Commission Hearing Officer Services Master Agreement

Executive Officer of the Board's recommendation: Authorize the Executive Officer of the Board to execute a new non-exclusive Master Agreement (MA) for Employee Relations Commission (ERCOM) Hearing Officer Services with 22 qualified contractors effective February 1, 2019 for a three-year term with two one-year and six month-to-month extension options; execute agreements for ERCOM Hearing Officer Services with additional contractors throughout the MA term upon the recommendation of the Executive Director of ERCOM, provided these contractors meet the minimum requirements and qualifications as outlined in the initial Request for Statement of Qualifications dated August 10, 2018 and Addendum dated September 11, 2018; and execute amendments to the MA for ERCOM Hearing Officer Services, as long as the amendments do not exceed the maximum contract term or the rates approved by the Board. (18-7845)

On motion of Supervisor Kuehl, seconded by Supervisor Ridley-Thomas, this item was approved.

Ayes: 5 - Supervisor Solis, Supervisor Ridley-Thomas, Supervisor Kuehl, Supervisor Barger and Supervisor Hahn

Attachments: Board Letter

EXHIBIT B

November 13, 2018

Via Electronic Mail and Hand Delivery (with references)

San Diego County Board of Supervisors
Attn: David Hall
Clerk of the Board of Supervisors
1600 Pacific Highway, Room 335
San Diego, CA 92101
David.hall@sdcounty.ca.gov

Re: Wildfire Impacts of Poorly-planned Development in San Diego County

Dear Supervisors:

These comments are submitted on behalf of the Center for Biological Diversity (Center) regarding the approval or pending approval of the following Projects:

1. Warner Ranch
2. Lilac Hills
3. Newland Sierra
4. Valiano
5. Harmony Grove Village South
6. Otay Ranch Village 14, 16, 19
7. Otay Ranch Village 13
8. Otay 250 Sunroad
9. Project Specific Requests (PSRs)

While the Center has many concerns regarding the environmental impacts and inadequate analyses provided in the Environmental Impact Reports of the proposed Projects, the purpose of this letter is to voice our concern regarding the public safety impacts of these poorly-planned, sprawl developments in fire-prone chaparral ecosystems in San Diego County. The Center reviewed the Environmental Impact Report of each Project to determine the cumulative impacts of these developments on wildfire risk and analyze the adequacy of proposed mitigation measures. Project footprints were compared to the fire history and fire threat of the region, as identified by state agencies (the Department of Forestry and Fire Protection [Cal Fire] and the California Public Utilities Commission [CPUC]), and the total number of housing units and potential residents for all the developments were calculated.

The proposed developments would be placed in natural landscapes dominated by fire-prone native chaparral and coastal sage scrub habitats that rely on wildfires to persist. Exurban developments like those proposed – with low to intermediate housing densities extending into chaparral and scrublands – have been shown to lead to frequent human-caused ignitions and fire

frequencies that exceed historical, natural levels in Southern California (Syphard et al. 2018). When fires occur too frequently, chaparral and sage scrub ecosystems are replaced by highly flammable non-native grasses, ultimately eliminating native habitats and increasing fire risks to communities.

By approving these sprawl Projects, the County will allow for the construction of almost 15,000 homes in natural areas dominated by chaparral and sage scrub habitat that regularly experience fire. The U.S. Census Bureau estimates that there are 2.87 persons per household in San Diego County, so together the developments would put more than 40,000 potential residents at risk. Placing more than 40,000 potential residents in fire-prone natural areas that are anticipated to burn without thoroughly considering the severe environmental, health, social, and economic consequences or requiring appropriate, science-based analyses regarding wildfire risk is reckless and a dereliction of your duty to the public. The developments will increase wildfire risks that could cause residents to lose their homes and the lives of loved ones and first responders. The increased fire risk could also worsen public health, destroy native ecosystems, and reduce biodiversity. These poorly-planned developments are not a solution to current housing needs; they will only lead to increased risk of harm and expenses for the County's residents.

Wildland fires are inevitable, natural processes in Southern California that are necessary and beneficial for chaparral and scrub ecosystems. The Center urges the County to protect human lives, property, and native biodiversity, by reforming growth strategies to focus on avoiding the placement of developments in high fire threat areas. Existing homes in fire-risk areas should be incentivized to complete retrofits with fire-resistant construction, appropriate defensible space, and homeowner fire safety education. Urban planning and design should focus on infill development in urban core areas, where wildfire threat is lower and people have access to jobs, public transit, and community. We can no longer dismiss California's natural fire regime and the direct relationship between urban sprawl and deadly wildfires. The County needs to stop approving development in high wildfire threat areas to keep its residents healthy and safe and to protect native biodiversity.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 1 million members and online activists throughout California and the United Sates. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life in Southern California, including San Diego County.

I. Developments in Fire-prone Natural Areas That Have Historically Burned Have the Highest Chances of Burning

Approving these Projects will allow for the construction of almost 15,000 homes in areas that Cal Fire has identified as having extreme fire threat to people and the CPUC has determined to have elevated and/or extreme fire threat. Almost all the proposed Projects are located in or adjacent to natural areas that have evolved with fire historically and have burned multiple times in the last 140 years. In fact, 20 fires have burned in areas of the Otay Ranch Villages since

1910, with the most recent and largest fire in the area occurring in 2007 (the Harris 2 Fire, ~91,000 acres burned).

Between the years 2000 and 2011, nearly 1,000 homes per year were destroyed by wildfires in Southern California (Syphard et al. 2012), and those numbers appear to be rising, considering last year's fires burned over 10,000 structures and this year's Camp Fire in Butte County and Woolsey Fire in Ventura County have destroyed almost 7,000 homes. Multiple studies indicate that developments with low/intermediate-density clusters surrounded by fire-dependent vegetation (*i.e.,* chaparral) in areas with a history of fires – like those proposed by the County – have the highest chances of burning (Syphard et al. 2012; Syphard et al. 2013). By approving these Projects, the San Diego Board of Supervisors will be directly endangering the lives of more than 40,000 people by placing homes in the exact arrangement and placement for maximum fire susceptibility in areas where fires will inevitably burn.

II. Development in Fire-prone Areas Will Lead to More Human Ignitions and Too Frequent Fire in Southern California Shrublands

In Southern California, sprawl developments with low/intermediate densities extending into chaparral and sage scrub habitats that are prone to fire have led to more frequent wildfires caused by human ignitions, like arson, improperly disposed cigarette butts, debris burning, fireworks, campfires, or sparks from cars or equipment (Keeley et al. 1999; Keeley and Fotheringham 2003; Syphard et al. 2007; Syphard et al. 2012; Bistinas et al. 2013; Balch et al. 2017; Radeloff et al. 2018). Human-caused fires account for 95% of all fires in Southern California (Syphard et al. 2013), and homes filled with petroleum-based products, such as wood interiors, paint, and furniture, provide additional fuel for the fires to burn longer and spread farther (Keeley et al. 2007). The most numerous and largest fires in San Diego County have been caused by equipment and powerlines in the wildland-urban interface, where housing density is low to intermediate (Syphard and Keeley 2015), and leapfrog developments have been found to have the highest predicted fire risk in the County (Syphard et al. 2013). With the increased ignition risk that comes with these poorly planned developments in high fire-prone areas, the County will only be fueling more frequent, larger, and more destructive wildfires.

The proposed developments would lead to a dangerous feedback loop of deadly fires and habitat destruction. Most would be placed in areas dominated by chaparral and sage scrub, native California habitats that rely on wildfires to persist. These habitats are adapted to infrequent (every 30 to 150 years), large, high-intensity crown fire regimes (Pyne et al. 1996; Keeley and Fotheringham 2001), and if these regimes are disrupted, the habitats become degraded (Keeley 2005, 2006a,b; Syphard et al. 2018). When fires occur too frequently, type conversion occurs and the native shrublands are replaced by non-native grasses and forbs that burn more frequently and more easily, ultimately eliminating native habitats and biodiversity while increasing fire threat over time (Keeley 2005, 2006a,b; Syphard et al. 2009; Safford and Van de Water 2014; Syphard et al. 2018). Thus, placing developments in these high fire-prone areas will lead to more frequent fires that will threaten the lives of more than 40,000 people who will live in or near these areas while degrading the health and biodiversity of Southern California's special ecosystems.

III. Public Safety in These New Development Areas Cannot be Guaranteed

Public safety issues are exacerbated by unreliable infrastructure to accommodate the consequences of more fires. Evacuating from wildfires can be life-threatening and having safety plans in place beforehand is not always enough. For example, while having warning systems and evacuation routes in place are important for fire preparedness and fire safety (e.g., County of San Diego, 2018, Lilac Hills Ranch App J Fire Protection Plan) their functionality when a fire occurs is not guaranteed. Wildfires may ignite with little or no notice, and warning systems can be slow and ineffective at reaching all residents in harm's way. This was the case in last year's Tubbs Fire in Sonoma County and Thomas Fire in Santa Barbara and Ventura Counties, which led to more than 40 deaths and almost $12 billion in property damage (St. John 2017; Lundstrom et al. 2017).

Instead of placing people and homes in places where residents will have to rely on potentially faulty warning systems and evacuation routes to escape from fires, the County should build homes in areas where fire is least likely to occur, such as in infill development in urban core areas. By avoiding placing developments in fire prone natural areas, the County could reduce the risk of fire and more effectively protect lives, property, and the natural environment.

IV. The Developments Contain Insufficient Fire Safety Measures and Fire Protection Plans

Despite the glaring wildfire issues of placing developments in fire-prone ecosystems, the County remains complacent with the developers' fire protection plans that rely on fuel modification zones that are counterproductive and guidelines that are inadequate (*e.g.*, County of San Diego, 2018, Harmony Grove Village South FEIR Appendix L Fire Protection Plan). Reliance on general guidelines and firesafe building/planning codes without sufficiently analyzing site-specific conditions or strategically implementing precautionary fire safety measures can lead to a false sense of safety and preparedness. Wildfire risk cannot be addressed with a one-size-fits-all solution.

Large fires in Southern California landscapes dominated by chaparral and shrublands are often associated with foehn winds (strong, warm, dry, and often downslope winds), such as the Santa Ana winds (Keeley 2006b). The region's largest fires have historically occurred in known wind corridors (Moritz et al. 2010). And in severe weather conditions, wind-driven fires can spread quickly – they can cover 10,000 hectares in one to two days (that's an area the size of Escondido, CA), as embers are blown ahead of the fires and towards adjacent fuels (*e.g.*, flammable vegetation, structures) (Syphard et al. 2011).

The primary approach to mitigating fire risk is through home safety measures to make structures less flammable and vegetation reduction in the defensible space immediately surrounding homes. However, a common misconception regarding defensible space in chaparral and scrub habitats immediately surrounding structures is that the wider the fuel modification zone the more protected the structures are from wildfires. For example, the Newland Sierra Project states that they plan to implement a 250-foot fuel modification zone to reduce fire risk, which is more than double the 100-foot fuel modification zone required by state law (County of

San Diego, 2018 Newland Sierra FEIR, Appendix N Fire Protection Plan). In the September 26, 2018 public hearing, the Board of Supervisors was satisfied that the project was doing as much as they could to mitigate the threat of fire. In addition, some local ordinances require homeowners to clear 300 feet or more of defensible space, and there have been reports of some people being unable to obtain fire insurance without that 300-foot zone (Syphard et al. 2014). However, these actions and guidelines neglect science and may not be appropriate for all regions or habitat types, and they could be dangerously misleading.

In a study conducted in San Diego County, the most effective vegetation treatment distances ranged between 16 to 58 feet from the home (Syphard et al. 2014). Fuel reduction treatments more than 100 feet from structures did not provide additional protection, even for structures situated on steep slopes (Syphard et al. 2014). And because continued disturbance can lead to type conversion from native shrublands to nonnative grasslands that can burn more quickly and easily, extended fuel modification zones could lead to further habitat degradation and increased fire threat (Merriam 2006; Keeley 2006a,b). Thus, asserting that a fuel modification zone beyond the 100-foot requirement provides additional mitigation and improved fire safety in a high fire-prone area gives a false sense of security. The best way to improve fire safety is to proactively reduce exposure to wildfire risk by avoiding the placement of homes in fire-dependent ecosystems (Syphard et al. 2014).

Another critical component of protecting lives and property from wildfires is fire hazard and fire safety education for homeowners in or near fire hazard areas. Structures with fire-resistant features, such as ember-resistant vents, fire-resistant roofs, and surrounding defensible space, have been shown to reduce the risk of destruction due to wildfires (Quarles et al. 2010; Syphard et al. 2014). However, simply stating that the structures are built to fire code does not guarantee that fire threat will be reduced. Proper maintenance and upkeep of the structures themselves as well as the immediate surroundings (*e.g.*, removing leaf litter from gutters and roofing; removing flammable materials like wood fences, overhanging tree branches, or trash cans away from the home) are required to reduce the chances of the structures burning. In addition, external sprinklers with an independent water source would reduce flammability of structures, yet none of the proposed developments include this feature on their structures. And while these fire-resistant structural features are important for fire safety and homeowners should be properly informed, the focus should be on retrofitting existing homes and structures in or near high fire-prone areas with these features, not putting these features on new homes that should not be placed in high fire-prone areas in the first place.

As noted above, the number of homes being destroyed by fires in Southern California are starting to become thousands per year. The arrangement and location of developments have been found to be the main drivers of fire susceptibility, with the highest chances of burning in developments like those proposed by the County – low/intermediate-density clusters surrounded by wildland vegetation in areas with a history of fires (Syphard et al. 2012; Syphard et al. 2013). Thus, the best way to make new construction as fire safe as possible is to avoid placing them in high fire-prone areas (Pincetl et al. 2008; Syphard et al. 2012; Syphard et al. 2013; Moritz et al. 2014). Land-use planning must be reformed to more appropriately consider wildfire risk management.

V. Increased Human Ignitions Will Increase Unnatural Levels of Smoke.

Smoke is a product of the natural and necessary wildfire regime in chaparral and sage scrub ecosystems. However, new leapfrog developments situated in fire-prone chaparral and sage scrub habitats, like those at issue here, will lead to increased human ignitions that will produce increased levels of smoke beyond what is natural. This can lead to harmful public health impacts due to increased air pollution not only from burned vegetation, but also from burned homes, commercial buildings, cars, etc. Buildings and structures often contain plastic materials, metals, and various stored chemicals that release toxic chemicals when burned, such as pesticides, solvents, paints, and cleaning solutions (Weinhold 2011). Thus, human-caused wildfires at the urban wildland interface that burn through developments, as is becoming more common with housing extending into fire-prone chaparral and shrublands, increase the frequency and toxicity of smoke exposure to communities in and downwind of the fires.

Increased fire frequency due to human activity and ill-placed developments will lead to increased occurrences of poor air quality from smoke, which can have public health effects. Hospital visits for respiratory symptoms (*e.g.*, asthma, acute bronchitis, pneumonia, or chronic obstructive pulmonary disease) have been shown to increase during and/or after fire events (Kunzli et al. 2006; Viswanathan et al. 2006; Delfino et al. 2009; Rappold et al. 2012; Liu et al. 2015; Reid et al. 2016). In particular, a study assessing the health impacts of the 2003 Cedar Fire in San Diego County, which burned an area of about 280,000 acres that consisted of chaparral and scrub-dominated landscapes and almost 3,000 structures, there were increases in hospital emergency room visits for asthma, respiratory problems, eye irritation, and smoke inhalation (Viswanathan et al. 2006). The proposed Projects do not thoroughly consider the health impacts that communities will have to suffer if developments are placed in fire-prone shrublands where they will disrupt the natural fire regime and increase fire frequency and smoke exposure. The County needs to consider these public health impacts and refrain from placing poorly-planned, leapfrog developments in landscapes dominated by fire-prone chaparral and shrublands.

VI. The Direct Economic Impacts of Wildfires Are Worsening

The direct economic impacts of human-caused wildfires are staggering. The cost of fire suppression and property damage from wildfires in California is over $18 billion since 2010, which, after adjusting for inflation, is double the cost from the previous three decades combined (Figure 1). Placing more housing in fire-prone natural areas has led to more costly fires, and these patterns will continue should the proposed Projects be approved.

Who shoulders these costs? California and federal residents end up paying in the form of fire insurance premiums and taxes that support Cal Fire and federal government subsidies and grants for homes in high risk areas. And these costs do not include other indirect/hidden costs associated with wildfires, such as the costs of doctors' appointments, medication, sick days taken from places of work, funerals, etc. As the costs of housing in California continues to increase, these costs will also continue to rise, further exacerbating the affordable housing crisis.

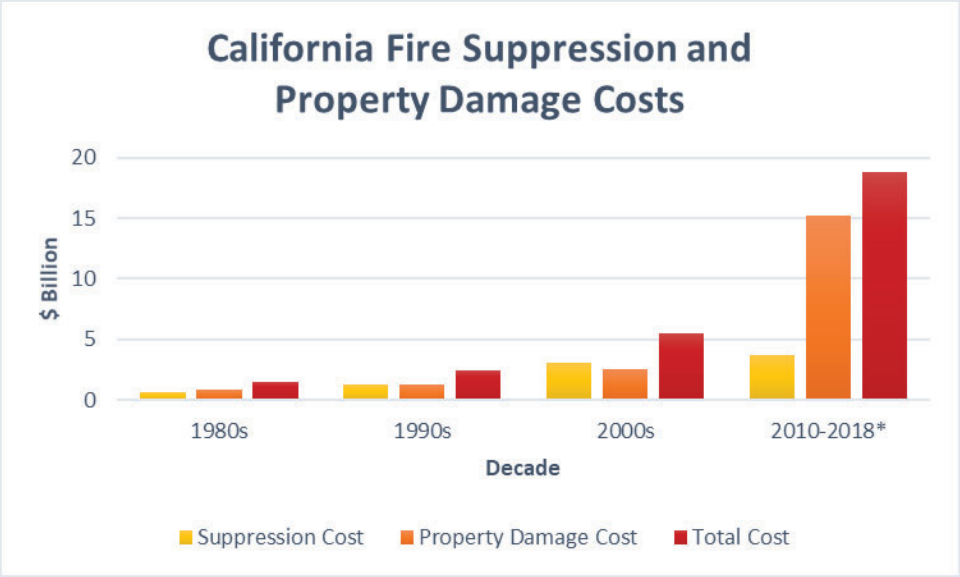

Figure 1. Costs of Fire Suppression and Property Damage by Decade. *Property damage cost data include 2017 insurance claim estimates and no 2018 costs. Data Source: Cal Fire and the Bureau of Labor Statistics.

VII. Conclusion

San Diego County can no longer afford to recklessly neglect the science of wildfires and wildfire risk in Southern California. The devastating environmental, health, social, and economic costs of poorly-planned, leapfrog developments in areas that *will* burn are too great. The Center urges the County to avoid placing developments like Newland Sierra and the Otay Ranch Villages in high fire-prone natural areas. Instead, the County should focus on creating communities in areas with lower wildfire risk, such as in infill development in urban core areas, where people will have access to jobs, public transit, and amenities. In addition, the County should prioritize retrofitting older homes and structures in the wildland-urban interface with fire resistant features, like ember-resistant vents, fire-resistant roofs, external sprinklers, and appropriate defensible space/fuel modification zones. Land-use planning must be reformed to more appropriately consider wildfire risk management and protect human lives, property, and the native biodiversity of Southern California's unique landscape.

Any focus on forest management to address California's fires is profoundly misguided. It makes no sense to complain about, and spend millions of dollars on, logging forests that are far away from communities when the actual fire threat facing thousands of families results primarily from poor planning in the interface adjacent to homes and businesses. Moreover, most of 2018's most extensive fires in California were not even in forests, and instead primarily burned grasslands and chaparral. We must also be honest about the conditions that are actually driving the fires – human ignitions, high winds, drought, and climate-change leading to hotter, drier conditions. Forest management is simply a scapegoat to ignore the difficult problems that need to be addressed, like poor land-use planning and climate change. California needs to stop allowing the building of flammable homes in flammable terrain, and fight climate change, instead of blaming the condition of California's forests for these fires.

Thank you for the opportunity to submit comments on these proposed Projects. We look forward to working to assure that the County forges responsible, fire safe planning to safeguard the health and safety of its residents and the natural environment. Please do not hesitate to contact the Center with any questions at the email listed below.

Sincerely,



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(Attached on CD)

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EXHIBIT C

March 11, 2019

Sent via email and FedEx

Ventura County Board of Supervisors
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Re: Proposed Habitat Connectivity and Wildlife Corridor Ordinance and Planning Commission Recommendations

Dear Ventura County Board of Supervisors:

These comments are submitted on behalf of the Center for Biological Diversity (the "Center") regarding the proposed Habitat Connectivity and Wildlife Corridor Ordinance ("Ordinance") and the Planning Commission Recommendations. The Center appreciates the work of the Board of Supervisors, Planning Commission, and Planning Division Staff in developing the Ordinance. The Ordinance as originally proposed would be a major step forward in maintaining and enhancing wildlife connectivity within Ventura County and the region; however, some of the proposed revisions and recommendations based on discussions from the January 31, 2019 Planning Commission meeting substantially weaken the Ordinance.

The Center strongly supports the objectives of the Ordinance and the County's efforts to preserve functional connectivity by establishing designated habitat connectivity and wildlife corridors (HCWC) and critical wildlife passage areas (CPWA). Limiting development and associated noise and lighting in these important corridor areas, enhancing wildlife crossing infrastructure where barriers already exist (*i.e.*, roads), and incorporating corridor redundancy will help to preserve habitat connectivity and foster the County's expansive biodiversity through current and future climate regimes. However, the Center is concerned about exemptions that would allow for excessive lighting, wildlife impermeable fencing, and surface mining and oil and gas exploration activities in these areas. Furthermore, recommendations from the Planning Commission do not take into account the best available science and instead aim to reduce the designated corridor areas to appease unknown agricultural concerns. The Center urges the Board to strengthen the Ordinance by applying the best available science to identify critical areas for wildlife movement and habitat connectivity, minimizing exemptions that undermine the Ordinance's goals, and requiring larger development buffers from surface water features (*i.e.*,

intermittent and perennial streams and wetlands) to effectively preserve functional connectivity for wildlife and vegetation throughout the County.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 1.4 million members and online activists throughout California and the United States. The Center and its members have worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Ventura County.

I. Habitat Connectivity Is Essential for Wildlife Movement and Biodiversity Conservation.

Habitat connectivity is vital for wildlife movement and biodiversity conservation. Limiting movement and dispersal with barriers (*e.g*., development, roads, or fenced-off croplands) can affect animals' behavior, movement patterns, reproductive success, and physiological state, which can lead to significant impacts on individual wildlife, populations, communities, and landscapes (Trombulak and Frissell 2000; Tewksbury et al. 2002Cushman 2006; van der Ree et al. 2011; Haddad et al. 2015; Ceia-Hasse et al. 2018). Individuals can die off, populations can become isolated, sensitive species can become locally extinct, and important ecological processes like plant pollination and nutrient cycling can be lost. In addition, connectivity between high quality habitat areas in heterogeneous landscapes is important to allow for range shifts and species migrations as climate changes (Heller and Zavaleta 2009, Cushman et al. 2013). Lack of wildlife connectivity results in decreased biodiversity and degraded ecosystems. Thus, preserving and maintaining natural and created corridors is critical for species and habitat conservation in fragmented landscapes (Gilbert-Norton et al., 2010).

Wildlife connectivity and migration corridors are important at the local, regional, and continental scale. Local connectivity that links aquatic and terrestrial habitats would allow various sensitive species to persist, including state- and federally-protected California red-legged frogs (*Rana draytonii*), arroyo toads (*Anaxyrus californicus*), and other species. At a regional scale, medium- and large-sized mammals that occur in Ventura County, such as mountain lions (*Puma concolor*), bobcats (*Lynx rufus*), gray foxes (*Urocyon cinereoargenteus*), ring-tailed cats (*Bassariscus astutus*), and mule deer (*Odocoileus hemionus*), require large patches of heterogeneous habitat to forage, seek shelter/refuge, and find mates. In addition, anadromous fish, such as steelhead trout (*Oncorhynchus mykiss*), are born in some of Ventura's waterways, spend several years in the Pacific Ocean, and return to Ventura to spawn. Ventura is an important hub for local and global biodiversity; wildlife movement and habitat connectivity must be maintained throughout the Ventura County.

II. Climate Change Is Likely to Significantly Alter Wildlife Behavior and Movement.

A strong, international scientific consensus has established that human-caused climate change is causing widespread harms to human society and natural systems, and climate change threats are becoming increasingly dangerous. In a 2018 *Special Report on Global Warming of*

1.5°C from the Intergovernmental Panel on Climate Change (IPCC), the leading international scientific body for the assessment of climate change describes the devastating harms that would occur at 2°C warming, highlighting the necessity of limiting warming to 1.5°C to avoid catastrophic impacts to people and life on Earth (IPCC 2018). In addition to warming, many other aspects of global climate are changing. Thousands of studies conducted by researchers around the world have documented changes in surface, atmospheric, and oceanic temperatures; melting glaciers; diminishing snow cover; shrinking sea ice; rising sea levels; ocean acidification; and increasing atmospheric water vapor (USGCRP, 2017).

Climate change is increasing stress on species and ecosystems, causing changes in distribution, phenology, physiology, vital rates, genetics, ecosystem structure and processes, and increasing species extinction risk (Warren et al., 2011). A 2016 analysis found that climate-related local extinctions are already widespread and have occurred in hundreds of species, including almost half of the 976 species surveyed (Wiens 2016). A separate study estimated that nearly half of terrestrial non-flying threatened mammals and nearly one-quarter of threatened birds may have already been negatively impacted by climate change in at least part of their distribution (Pacifici et al. 2017). A 2016 meta-analysis reported that climate change is already impacting 82 percent of key ecological processes that form the foundation of healthy ecosystems and on which humans depend for basic needs (Scheffers et al. 2016). Genes are changing, species' physiology and physical features such as body size are changing, species are moving to try to keep pace with suitable climate space, species are shifting their timing of breeding and migration, and entire ecosystems are under stress (Cahill et al., 2012; Chen et al., 2011; Maclean & Wilson, 2011; Parmesan, 2006; Parmesan & Yohe, 2003; Root et al., 2003; Warren et al., 2011). As such, it is imperative that current and future land use planning consider the impacts of climate change on wildlife movement. In order to further this goal, any development within the overlay zones should be reviewed to ensure functional connectivity in light of potential climate change impacts.

III. Corridor Redundancy Helps Retain Functional Connectivity and Resilience.

Corridor redundancy (*i.e*. the availability of alternative pathways for movement) is important in regional connectivity plans because it allows for improved functional connectivity and resilience. Compared to a single pathway, multiple connections between habitat patches increase the probability of movement across landscapes by a wider variety of species, and they provide more habitat for low-mobility species while still allowing for their dispersal (Mcrae et al., 2012; Olson & Burnett, 2008; Pinto & Keitt, 2008). In addition, corridor redundancy provides resilience to uncertainty, impacts of climate change, and extreme events, like flooding or wildfires, by providing alternate escape routes or refugia for animals seeking safety (Cushman et al., 2013; Mcrae et al., 2008; Mcrae et al., 2012; Olson & Burnett, 2008; Pinto & Keitt, 2008). Thus, the Center supports efforts that account for corridor redundancy and functional connectivity to facilitate wildlife movement throughout the County.

IV. Human Development and Associated Noise and Lighting Can Interfere with the Behavior of Local Wildlife Such as Mountain Lions.

Human development and associated noise can degrade adjacent wildlife habitat and behavior. (*See, e.g.,* Slabbekoorn 2008.) For instance, field observations and controlled laboratory experiments have shown that traffic noise can significantly degrade habitat value for migrating songbirds. (Ware et al. 2015.) This finding followed lab results indicating that subjects exposed to 55 and 61 dBA simulated traffic noise exhibited decreased feeding behavior and duration, as well as increased vigilance behavior. (*Id*.) Such behavioral shifts increase the risk of starvation, thus decreasing survival rates. A recent study also highlighted the detrimental impacts of siting development near areas protected for wildlife. The study noted that "Anthropogenic noise 3 and 10 dB above natural sound levels . . . has documented effects on wildlife species richness, abundance, reproductive success, behavior, and physiology." (Buxton, et al.) The study further noted that "there is evidence of impacts across a wide range of species [] regardless of hearing sensitivity, including direct effects on invertebrates that lack ears and indirect effects on plants and entire ecological communities (e.g., reduced seedling recruitment due to altered behavior of seed distributors)." (*Ibid*.) Moreover, human transportation networks and development resulted in high noise exceedances in protected areas. (*Ibid*.)

There also is strong evidence documenting the effects of human activity specifically on mountain lions. One study found that mountain lions are so fearful of humans and noise generated by humans that they will abandon the carcass of a deer and forgo the feeding opportunity just to avoid humans. (Smith 2017.)[1] The study concluded that even "non-consumptive forms of human disturbance may alter the ecological role of large carnivores by affecting the link between these top predators and their prey." (Smith 2017.) In addition, the study found that mountain lions respond fearfully upon hearing human vocalizations. Another study demonstrates that mountain lions exposed to other evidence of human presence (lighting, vehicles, dogs) will impact mountain lion behavior. (Wilmers 2013.) Other studies documented diet shifts in mountain lions near human development, and recommended minimizing any development in mountain lion habitat. (Smith 2016; *see also* Smith 2015.)

Additional studies similarly documented that mountain lions avoid "urban, agricultural areas, and roads and prefer[] riparian areas and more rugged terrain." (Zeller 2017; *see also* Vickers 2015.) One study found that over half (55 percent) of radio collared mountain lions in urban areas did not survive, and the majority were killed by humans either by vehicle strikes or using depredation permits. (Vickers 2015.) Given that human activities can interfere with natural behavior and movement of local wildlife, the Center supports the County's efforts to limit development and associated noise and lighting in corridor areas.

[1] *See also* Sean Greene, "How a fear of humans affects the lives of California's mountain lions," *Los Angeles Times* (June 27, 2017), available at http://beta.latimes.com/science/sciencenow/la-sci-sn-pumas-human-noise-20170627-story.html.

V. Creating and Enhancing Wildlife Crossings for Existing Roads Is Critical to Maintaining Healthy Ecosystems.

The Center supports the objective of the Ordinance to enhance wildlife connectivity on existing roads through the use of increased setbacks. Enhanced connectivity helps sustain functional ecosystems and ensure public safety. Although natural, existing corridors in fragmented landscapes have been shown to have more wildlife movement compared to created corridors (Gilbert-Norton et al., 2010), crossing structures combined with setbacks at the entrances and exits are useful as retroactive restoration in areas where existing roads have high incidence of wildlife vehicle conflict or where species movement has been severely impacted. When appropriately implemented, wildlife crossing infrastructure has been shown to improve wildlife permeability and reduce wildlife vehicle collisions (Bissonette & Rosa, 2012; Dodd Jr. et al., 2004; Dodd et al., 2012; Kintsch et al., 2018; Sawaya et al., 2014; Sawyer et al., 2012). Thus, by maintaining and restoring habitat connectivity that facilitates movement required for current and future species ranges and behaviors, the County would improve driver safety while promoting local biodiversity.

Outside of California many other states and jurisdictions have been proactively addressing wildlife connectivity issues. For example, Arizona, Colorado, and Wyoming have seen 80-96% reductions in wildlife vehicle collisions while gradually increasing the level of wildlife permeability over time (it appears that some species take more time than others to adapt to crossings) on sections of highways where they have implemented wildlife crossing infrastructure, such as underpasses, culverts, overpasses, wildlife fencing, and escape ramps (Dodd et al., 2012; Kintsch et al., 2017; Kintsch et al., 2018; Sawyer et al., 2012). Utah just completed the state's largest wildlife overpass at Parleys Canyon for moose, elk, and deer. Washington State is about to complete its largest wildlife overpass on I-90, which is anticipated to provide habitat connectivity for a wide variety of species between the North and South Cascade Mountains. The overpass cost $6.2 million as part of a larger $900 million expansion project that will include multiple wildlife crossings along a 15-mile stretch of highway. Savings from less hospital bills, damage costs, and road closures from fewer wildlife vehicle collisions will make up those costs in a few years (Valdes 2018). State transportation departments are actively pursuing these types of projects because of the benefits for wildlife connectivity, public safety, and the economy. The Center supports Ventura County's efforts to actively invest in preserving habitat connectivity where there are no roads or development while also enhancing or restoring connectivity where roads or other transportation infrastructure already exist.

VI. The Ordinance Should Require Stronger Development Buffers for Streams and Wetlands.

Based on recommendations from the Planning Commission, the Ordinance's surface water feature setbacks were reduced from 200 feet to 100 feet. The revision was based on concerns regarding potential impediments on agricultural operations. However, in a letter to the Board of Supervisors, Planning Division staff stated that it was not clear "what specific agricultural operations were of concern" given that there are already various exemptions for commercial agricultural activity (March 12, 2019 Planning Division Letter at 11). This change does not support one of the main objectives of the Ordinance to "[p]reserve the functional

connectivity and habitat quality of surface water features" (Section 8104-7.7(b)). Streams are important corridors for wildlife movement and habitat connectivity; the Ordinance should consider the best available science and require a minimum 200-foot setback from all perennial and intermittent streams, with special attention given to streams that are located within designated critical habitat or support or have the potential to support special-status, sensitive, or rare species.

Streams and wetlands throughout the County support numerous special-status flora and fauna, including steelhead trout (*Oncorhyncus mykiss*), least Bell's vireo (*Vireo bellii pusillus*), and California red-legged frogs (*Rana draytonii*). Many species that rely on these aquatic habitats also rely on the adjacent upland habitats (*e.g.*, riparian areas along streams, and grassland habitat adjacent to wetlands). In fact, 60% of amphibian species, 16% of reptiles, 34% of birds and 12% of mammals in the Pacific Coast ecoregion (which includes Ventura County) depend on riparian-stream systems for survival (Kelsey and West 1998). Many other species, including mountain lions and bobcats, often use riparian areas and natural ridgelines as migration corridors or foraging habitat (Dickson et al, 2005; Hilty & Merenlender, 2004; Jennings & Lewison, 2013; Jennings & Zeller, 2017). Additionally, fish rely on healthy upland areas to influence suitable spawning habitat (Lohse et al. 2008), and encroachment on these habitats and over-aggressive removal of riparian areas have been identified as major drivers of declines in freshwater and anadromous fish (*e.g.*, Stillwater Sciences 2002; Lohse et al. 2008; Moyle et al. 2011).

A literature review found that recommended buffers for wildlife often far exceeded 100 meters (~325 feet), well beyond the largest buffers implemented in practice (Robins 2002). For example, Kilgo et al. (1998) recommend more than 1,600 feet of riparian buffer to sustain bird diversity. In addition, amphibians, which are considered environmental health indicators, have been found to migrate over 1,000 feet between aquatic and terrestrial habitats through multiple life stages (Semlitsch and Bodie 2003; Trenham and Shaffer 2005; Cushman 2006; Fellers and Kleeman 2007). Specifically, the California red-legged frog, a threatened species that occurs and has designated critical habitat within Ventura County, was found to migrate about 600 feet between breeding ponds and non-breeding upland habitat and streams, with some individuals roaming over 4,500 feet from the water (Fellers and Kleeman 2007). Other sensitive species known to occur in Ventura County, such as western pond turtles (*Actinemys marmorata*, a candidate species under the Endangered Species Act) and California newts (*Taricha torosa*), have been found to migrate over 1,300 feet and 10,000 feet respectively from breeding ponds and streams (Trenham 1998; Semlitsch and Bodie 2003). Accommodating the more long-range dispersers is vital for continued survival of species populations and/or recolonization following a local extinction (Semlitsch and Bodie 2003; Cushman 2006). In addition, more extensive buffers provide resilience in the face of climate change-driven alterations to these habitats, which will cause shifts in species ranges and distributions (Cushman et al., 2013; Heller & Zavaleta, 2009; Warren et al., 2011). This emphasizes the need for sizeable riparian and upland buffers around streams and wetlands in Ventura County, as well as connectivity corridors between heterogeneous habitats. The Ordinance should not be weakened to 100-foot stream setbacks.

In addition, maintaining a minimum 200-foot development buffer from streams would facilitate essential ecosystem services that humans rely on. Larger buffer zones than those

proposed in the weakened Ordinance along streams would provide more stream bank stabilization, water quality protection, groundwater recharge, and flood control both locally and throughout the watershed (Nieswand et al. 1990; Norris 1993; Whipple Jr. 1993; Sabater et al. 2000; Lovell and Sullivan 2006). They would also protect communities from impacts due to climate change by buffering them from storms, minimizing impacts of floods, and providing water storage during drought (Environmental Law Institute 2008). Thus, the County should require a minimum 200-foot buffer around streams.

VII. Some of the Proposed Exemptions to the Critical Wildlife Passage Areas Overlay Zone Undermine the Objectives of the Ordinance.

The Center wholeheartedly supports the objectives of the Ordinance, which are outlined in the staff report to include (1) regulating the siting of structures, uses and activities within individual lots so as to avoid key habitat areas used by wildlife; (2) consolidating development to provide open areas as a means to facilitate wildlife passage within and between individual lots; and (3) providing access to, and movement between, surrounding protected habitat areas on a regional geographic scale.

In furtherance of those objectives, the Center again recommends that certain exemptions be removed from the Ordinance. In particular, section 8109-4.9 establishes the Critical Wildlife Passage Areas Overlay Zone ("CWPA"), which provides requirements and procedures for development in this zone. (Exh. 14 at 21.) However, the next section provides that these requirements and procedures do not apply to some types of development, including "[a]ny development on a lot zoned Commercial (CO, C1, CPD)....aboveground pipelines or transmission lines...construction and maintenance of driveways and roads internal to a lot." (*Id*. at 21.) Commercial development, pipelines, and internal roads can all impede wildlife connectivity and disturb animal behavior. As such, it is unclear why these uses are exempt from the CWPA requirements and procedures. Instead, these exemptions undermine the objectives of the Ordinance.

In addition, it appears that some uses are partially exempt from the CWPA requirements and procedures, including golf courses, wildlife impermeable fencing used to enclose commercially grown agricultural crops or products (Section 8109-4.929(c)), and drilling for geologic testing. Golf courses can fragment and degrade wildlife habitat while causing groundwater and surface water pollution arising from pesticides and fertilizers. And as stated in Section 8104-7.7, wildlife impermeable fencing "can create barriers to food and water, shelter, and breeding access to unrelated members of the same species needed to maintain genetic diversity." Exempting wildlife impermeable fencing that encloses vast areas of land undermines the goals of the Ordinance to "preserve functional connectivity for wildlife and vegetation" and"[m]inimize wildlife impermeable fencing" (*Id*). These types of development/land use should not be exempt from the CWPA requirements and procedures.

VIII. The Lighting Exemptions for Surface Mining and Oil and Gas Exploration Undermine the Objectives of the Ordinance.

Light pollution can confuse migratory birds and otherwise disturb and disrupt wildlife foraging and breeding. Light pollution can seriously threaten the continual survival of numerous species: "[t]he cumulative effects of behavioral changes induced by artificial night lighting on competition and predation have the potential to disrupt key ecosystem functions." (Rich and Longcore 2013). Species known to be impacted include mammals, birds (both migrating and non-migrating), reptiles, amphibians, invertebrates, fishes and plants. The impacts are wide ranging. Impacts include utilization of artificial lights, such as streetlights to forage underneath for food, which increases predation risk. (Rich and Longcore 2013). Bird species can also become "entrapped" within lighted areas, refusing to move for the night, and thus increasing their risk of predation. (*Id*.) Furthermore, light pollution need not be highly extensive to have a major impact on nearby plants and wildlife. For instance, one study found that desert rodents reduced foraging activity when exposed to the light of a single camp lantern. (Rich and Longcore 2013).

As such, any exemptions for outdoor lighting standards set forth in section 8109-4.8.2.1 should be narrowly drawn. (See Exh 14 at 8). While some of these exemptions described in section 8109-4.8.2.2 appear warranted, it is unclear why this section exempts "temporary or intermittent outdoor night lighting used for surface mining operations or oil and gas exploration and production." (*Id*.) Notably, the term "intermittent" is defined as a period of between "31 and 90 calendar days within any 12-month period." This exemption would allow surface mining or oil and gas exploration operations to use outdoor night lighting—often in remote or rural areas—for up to three months out of any given year. This exemption is likely to undermine the objective of the Ordinance to provide for movement between protected habitat areas on a regional geographic scale.

Further exemptions are provided in a post-Planning Commission revision in Section 8109-4.8.2.4(b)(11), which states that "lighting utilized for oil and gas exploration and production and surface mining operations may deviate the above-stated standards and requirements and shall be specified in a lighting plan approved by the County during the discretionary permitting process for the subject facility or operation." This weakens the Ordinance by allowing for increased light pollution that would further degrade wildlife corridors and deter animals from using them for movement and migration. Additional exemptions for lighting standards and requirements should not be afforded to surface mining and oil and gas exploration.

IX. The Ordinance Should Use the Best Available Science to Identify Important Areas for Wildlife Movement and Habitat Connectivity.

The Planning Commission Recommendations include the removal of Lockwood Valley from the Habitat Connectivity and Wildlife Corridor ("HCWC") overlay zone. As detailed in the March 12, 2019 Planning Division Letter to the Board of Supervisors, the wildlife connectivity mapping is a result of a collaborative research effort spanning several years and involving "scientists, regulatory agencies, academics, land managers, private property owners, businesses,

and non-profits throughout California." This mapping is the best available science that delineates habitat linkages with "the best potential movement routes" to support animal and plant species that were collectively selected to "represent a diversity of habitat needs and movement patterns" (*Id*.). As such, important habitat linkages identified through this process, including Lockwood Valley, should remain in the HCWC overlay zone.

The Planning Commission Recommendations also include the removal of Tierra Rejada Valley from the Critical Wildlife Passage Areas ("CWPA") overlay zone. This is one of three areas that were identified as "critically important wildlife passage areas" because they have the "highest risk of functional connectivity loss" (*Id*.) Again, this area was designated as a priority corridor area based on the best available science and should not be dismissed. The idea is to encourage clustering of development to minimize impacts of human activities (*e.g*., habitat degradation and removal; increased frequency of wildfire ignitions; edge effects caused by irrigation, artificial night-lighting, introduction of invasive species). To facilitate the general purpose of the Ordinance stated in Section 8104-7.7 "to preserve functional connectivity for wildlife and vegetation throughout the overlay zone by minimizing direct and indirect barriers, minimizing loss of vegetation and habitat fragmentation and minimizing impacts to those areas that are narrow, impacted or otherwise tenuous with respect to wildlife movement," the Tierra Rejada Valley should remain designated in the CWPA overlay zone.

The Center is encouraged by and supports the Planning Commission's recommendation to include the entire lot of the Santa Susana Field Lab in the HCWC and CWPA overlay zones, as the Save Open Space, Santa Monica Mountains ("SOS") identified this area as important habitat for mountain lions and other wildlife. (See Exh. 23 at PDF 189.) In addition, the SOS requested that the Lake Sherwood/Hidden Valley area be considered for inclusion in the HCWC and CWPA overlay zones because multiple mountain lions have been known to use the undeveloped areas of Lake Sherwood (*Id*.). The Center joins SOS in requesting that this area be considered for inclusion in the overlay zone. Ventura County should implement the best available scientific information regarding wildlife movement and habitat connectivity in the Ordinance. Furthermore, the Center urges the County to monitor existing corridors and identify other priority wildlife movement and habitat connectivity areas in collaboration with local experts, agencies, and organizations.

XI. Conclusion

Thank you for the opportunity to submit comments on the Ordinance and Planning Commission Recommendations. The Center strongly supports the objectives of the Ordinance and appreciates Ventura County's effort to use its local land use authority to develop an ordinance that promotes regional wildlife movement and habitat connectivity. Please do not hesitate to contact the Center with any questions at the number or email listed below.

Sincerely,





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ATTACHMENT D





December 22, 2020

Sent via email

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Re: Supplemental EIR for the Northlake Specific Plan

Dear Supervisors Mitchell, Kuehl, Solis, Hahn, and Barger:

We are writing to urge you to direct staff at the Los Angeles County Department of Regional Planning to prepare a supplemental environmental impact report ("EIR") for the Northlake Specific Plan ("Northlake Development"). The Northlake Development is a 1,300-acre housing development proposed on fire-prone wildlands adjacent to Castaic Lake State Recreation Area approved by the Board in April 2019. Even though the Northlake Development sits within a wildlife connectivity linkage known as the Sierra Madre-Castaic Connection, County staff did not require enforceable or adequate measures to address wildlife connectivity because the project proponent claimed mountain lions do not use the crossings in the area. **We are submitting evidence showing these claims are incorrect: the Mountains Recreation and Conservation Authority recently captured photographic evidence of a mountain lion using the crossing immediately adjacent to the development site.**

Background on the Conservation Groups

The Center for Biological Diversity ("Center") is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 1.7 million members and online activists throughout California and the United States. The Center and its members have

worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles.

Endangered Habitats League (EHL) is a non-profit, public interest conservation group for Southern California. It is dedicated to ecosystem protection and sustainable land use for all the region's inhabitants. EHL is and has been a stakeholder in several County of Los Angeles planning and environmental initiatives.

Photographic Evidence from the Mountains Recreation and Conservation Authority Confirms that Mountain Lions Use the Crossing Adjacent to the Northlake Development Site

We are submitting photos to you which were taken by staff at the Mountains Recreation and Conservation Authority ("MRCA") which demonstrate that mountain lions use the culverts under the I-5 freeway immediately next to the Project site. In particular, the attached photos (which we received from MRCA and are authenticated by the attached declaration from Chad Christensen) depict a mountain lion crossing from the east side of the southbound direction of the separated I-5 freeway from Grasshopper Canyon and westerly into the Marple Canyon on November 5, 2020 approximately between 2:49 a.m. and 2:59 a.m. (the "Mountain Lion Photos"). The single-lane box culvert for the Marple Canyon access road that crosses under this southbound section of I-5 is identified as "Tunnel 2" and "Underpass 2" in Santa Monica Mountains Conservancy's April 17, 2018 letter on the Northlake Development. Underpass 2 is one of two freeway crossing structures along a ten-mile section of I-5 between Templin Highway and Castaic Creek. The MRCA owns 245 acres of Marple Canyon west of Underpass 2 between the separated north-/southbound sections of I-5 and six acres east of Underpass 2 that connect with Grasshopper Canyon. The Mountain Lion Photos were taken by a camera placed on MRCA conservation lands by Mr. Christensen for the MRCA's Marple Canyon I-5 Wildlife Crossing Enhancement Project.

While the EIR for the Northlake Project does generally acknowledge that mountain lions may use the Project area (Final EIR at 2-136), County counsel joined the project proponents (which include Northlake Associates, LLC, which is controlled by NLDP Associates, LLC, Castaic Development Partners, LLC, and Michael Rosenfeld of Woodridge Capital Partners, LLC) in representing in court proceedings that "mountain lions will not be impacted by the Project" and "mountain lions are not using Project site crossings as confirmed by expert studies, including a wildlife camera study . . . ." (Respondents' and Real Parties in Interest's Joint Opposition Trial Brief at pp. 8 & 16-17.) **The Mountain Lion Photos demonstrate that these claims (which were based on a developer-commissioned study) are incorrect.**[1]

We further note that the County's own staff biologist, Joseph Decruyenaere, urged the developer's EIR drafters not to minimize the connectivity value of the existing culverts under the

[1] On December 17, 2020, the Conservation Groups requested judicial notice of these photos in Los Angeles County Superior Court case *Center for Biological Diversity et al. v. County of Los Angeles et al*., Case No. 19STCP01610, and the County and developer submitted a brief opposing the request for judicial notice.

I-5, which are far from perfect but are the only available means for mountain lions to cross the I-5 in the area. Mr. Decruyenaere wrote that the EIR language prepared by the developer's consultant:

> unduly minimizes the value of compromised movement opportunities. Nowhere else in biological conservation would you want to argue that because a resource is rare it's less than valuable. The fact that the use of a highly constrained opportunity for movement between natural areas might be made more difficult should always be considered a potentially significant impact unless there simply aren't any wildlife around to use the crossing. If a movement opportunity lacks a vegetated approach or some other feature that would seem to make it work better, that doesn't mean it doesn't pose an opportunity for movement. It just suggests that an animal might be less inclined to use it in the imaginary scenario that they have a better alternative. **However, in the real world, and in the highly fragmented, difficult to navigate landscapes that wildlife are consigned to, compromised movement opportunities may be the only opportunities available.** Revise the discussion to acknowledge the value of the crossings and instead of devaluing them, talk about how the project might change the potential for their use.[2]

Mr. Decruyenaere also wrote that the developer's consultant relies "chiefly on the idea that existing crossing features are not ideal but [they] neglect[] to provide conclusions as to how overall wildlife movement on the site and through the crossing features may actually change with buildout of the project."[3]

The Mountain Lion Photos confirm that mountain lions are using the culverts adjacent to the Project site even if they could be enhanced to be more friendly for wildlife. If built as proposed, the Northlake Development would permanently block these crossings and further constrain the already-limited movement opportunities for mountain lions.

We are submitting this evidence to the Board so the County can prepare an EIR for the Project that accurately discloses the impacts of this Project on the Central Coast South mountain lions. With an accurate EIR the Board can determine whether to reconsider the Project or require mitigation measures or project modifications to ensure the Northlake Development does not harm these mountain lions.

The County Must Prepare A Supplemental EIR for the Northlake Development

Relevant authorities require preparation of a subsequent or supplemental EIR in these circumstances. The California Environmental Quality Act ("CEQA") states that a subsequent or supplemental EIR may be required when either (1) substantial changes occur with respect to the

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[2] Mr. Decruyenaere's comments were attached to an email sent by County Planner Jodie Sackett on February 18, 2018 and are accessible in the administrative record ("AR") of the Los Angeles County Superior Court case *Center for Biological Diversity et al. v. County of Los Angeles et al*., Case No. 19STCP01610 at AR025874 (and Mr. Sackett's email is located at AR025825-26).
[3] Mr. Decruyenaere's comments are included in an email sent on February 12, 2018, and is available at AR025822-23.

circumstances under which the project is being undertaken which will require major revisions in the environmental impact report or (2) new information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available. (Pub. Res. Code § 21166.)

The Mountain Lion Photos qualify as either (or both) of these two categories. Mountain lions in the Project area are part of the Central Coast South population, which were granted "candidacy status" under the California Endangered Species Act ("CESA") in April 2020, such that they are afforded the same protections as other CESA-listed species. CEQA requires a "mandatory finding of significance" when a project has the potential to impact a CESA-listed species. (CEQA Guidelines § 15065(a)(1); *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 792 fn. 12.) And such a finding triggers a duty to consider and adopt all feasible alternatives or mitigation measures to reduce such impacts. (Pub. Res. Code § 21002.)

We Urge The Board Not To Drive Struggling Mountain Lions Closer to Local Extinction

Prior to the Board's approval of the Northlake Development last year, we submitted a letter to the Board on April 1, 2019 which included multiple peer-reviewed studies showing that Southern California's mountain lions are facing an extinction vortex due primarily to a loss of habitat connectivity. The Central Coast South population is particularly at risk with studies noting that a subset of the Central Coast South population in the Santa Monica mountains has "extremely low genetic diversity" while diversity of broader Central Coast South population is only "slightly higher."[4]

As currently proposed, the Northlake Development would permanently block connectivity over a significant portion of the Sierra Madre-Castaic Connection, which is a linkage critical to the survival of the Central Coast South mountain lions. Numerous expert agencies including the Santa Monica Mountains Conservancy ("SMMC") and California Department of Fish and Wildlife have raised serious concerns about the Northlake Development's permanent impacts on wildlife connectivity, with SMMC even filing an administrative appeal asking the Board to reconsider the Planning Commission's approval of the Project.

[4] Gustafson KD, Gagne RB, Vickers TW, Riley SPD, Wilmers CC, Bleich VC, Pierce BM, Kenyon M, Drazenovich TL, Sikich JA, Boyce WM, Ernest HB (2018) Genetic source–sink dynamics among naturally structured and anthropogenically fragmented puma populations. Conserv Genet 1–13 . doi: 10.1007/s10592-018-1125-0

Ensuring regional wildlife connectivity and protecting local mountain lions will require cooperation from conservation groups and state and local officials. We ask the Board to be part of the solution – and not part of the problem – by re-assessing the impacts of this development proposal.

Sincerely,

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Declaration of Chad Christensen

I, Chad Christensen, hereby declare as follows:

1. The facts set forth in this declaration are based on my personal knowledge. If called as a witness, I could and would testify competently to these facts. As to those matters which reflect an opinion, they reflect my personal opinion and judgment on the matter.

2. I am the Deputy Chief of Natural Resources and Planning for the Mountains Recreation and Conservation Authority (MRCA) and have been in this position since April 2020. Previously I was a Project Analyst hired in February 2017.

3. Attached are true and correct copies of photos taken on November 5, 2020 approximately between 2:49 a.m. and 2:59 a.m. of a mountain lion crossing from the east side of the southbound direction of the separated I-5 freeway from Grasshopper Canyon and westerly into the Marple Canyon. The single-lane box culvert for the Marple Canyon access road that crosses under this southbound section of I-5 is identified as "Tunnel 2" and "Underpass 2" in Santa Monica Mountains Conservancy's April 17, 2018 letter on the Northlake Project (AR010051-59). Underpass 2 is one of two freeway crossing structures along a ten-mile section of I-5 between Templin Highway and Castaic Creek. The MRCA owns 245 acres of Marple Canyon west of Underpass 2 between the separated north-/southbound sections of I-5 and six acres east of Underpass 2 that connect with Grasshopper Canyon.

4. These photos were taken by a wildlife camera that I placed on MRCA conservation lands on June 9, 2020 in my official capacity as Deputy Chief of Natural Resources and Planning and as Project Manager for the MRCA's Marple Canyon I-5 Wildlife Crossing Enhancement Project (Project).

5. The Project was awarded Wildlife Conservation Board (WCB) funding in 2020 to enhance 2.75 acres of habitat on the west and east approaches to Underpass 2 in order to promote wildlife movement between Marple and Grasshopper Canyons. On March 27, 2020, I received a Caltrans Encroachment Permit No. 07-20-N-SV-0894 to install the wildlife cameras within the freeway right-of-way as an MRCA in-kind contribution towards the Project. The

Project Area and Underpass 2 are part of the South Coast Wildland's *Castaic – Sierra Madre Connection.*

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 15th of December 2020,



Chad Christensen

Ventura, California


28.32 inHg - 68°F 11/05/2020 02:49AM MARPLE1


28.32 inHg - 68°F 11/05/2020 02:49AM MARPLE1


28.32 inHg - 68°F 11/05/2020 02:49AM MARPLE1


28.38 inHg - 73°F 11/05/2020 02:59AM MARPLE2


28.38 inHg - 73°F 11/05/2020 02:59AM MARPLE2


28.38 inHg - 73°F 11/05/2020 02:59AM MARPLE2

ATTACHMENT E

Electronically FILED by Superior Court of California, County of Los Angeles on 12/17/2020 12:28 PM Sherri R. Carter, Executive Officer/Clerk of Court, by M. Mariano, Deputy Clerk

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Attorneys for Center for Biological Diversity and Endangered Habitats League

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

CENTER FOR BIOLOGICAL DIVERSITY and ENDANGERED HABITATS LEAGUE,

Petitioners,

v.

COUNTY OF LOS ANGELES; BOARD OF SUPERVISORS OF THE COUNTY OF LOS ANGELES; PLANNING COMMISSION OF THE COUNTY OF LOS ANGELES; and LOS ANGELES COUNTY DEPARTMENT OF REGIONAL PLANNING,

Respondents.

NORTHLAKE ASSOCIATES, LLC; NLDP ASSOCIATES, LLC; CASTAIC DEVELOPMENT PARTNERS, LLC; WOODRIDGE CAPITAL PARTNERS, LLC; and MICHAEL ROSENFELD, an individual,

Real Parties in Interest.

Case No. 19STCP01610

PETITIONERS' THIRD SUPPLEMENTAL REQUEST FOR JUDICIAL NOTICE

Action Filed: May 1, 2019

Assigned for all purposes to the Honorable Richard L. Fruin

Department: 15

TO THE COURT AND ALL PARTIES:

PLEASE TAKE NOTICE that Petitioners Center for Biological Diversity and Endangered Habitats League ("Petitioners") hereby request that, in accordance with California Evidence Code sections 452(c) and 453, the Court take judicial notice of the photos of a mountain lion crossing one of the culverts adjacent to the Northlake development site (the "Mountain Lion Photos"), true and correct copies of which are attached to the attached Declaration of Chad Christensen ("Christensen Dec."):

I. Background on the Mountain Lion Photos

The Mountain Lion Photos depict a mountain lion crossing from the east side of the southbound direction of the separated I-5 freeway from Grasshopper Canyon and westerly into the Marple Canyon on November 5, 2020 approximately between 2:49 a.m. and 2:59 a.m. (Christensen Dec. ¶ 3.) The single-lane box culvert for the Marple Canyon access road that crosses under this southbound section of I-5 is identified as "Tunnel 2" and "Underpass 2" in Santa Monica Mountains Conservancy's April 17, 2018 letter on the Northlake Project (AR010051-59). (Christensen Dec. ¶ 3.) Underpass 2 is one of two freeway crossing structures along a ten-mile section of I-5 between Templin Highway and Castaic Creek. (AR010053; Christensen Dec. ¶ 3.) The Mountains Recreation and Conservation Authority ("MRCA")[1] owns 245 acres of Marple Canyon west of Underpass 2 between the separated north-/southbound sections of I-5 and six acres east of Underpass 2 that connect with Grasshopper Canyon. (Christensen Dec. ¶ 3.)

II. Judicial Notice of the Mountain Photos Is Proper

Petitioners acknowledge that extra-record evidence may not be submitted to contradict evidence in the administrative record. (See *Western States Petroleum Assn. v. Superior Court* (1995) 9 Cal.4th 559, 579 ["extra-record evidence can never be admitted merely to contradict the evidence the administrative agency relied on in making a quasi-legislative decision . . . ."].) However, here Petitioners request judicial notice of the Mountain Lion Photos to confirm what the EIR had already acknowledged in other sections—namely that "mountain lions may occur on the Project site" (AR007642; 7635) and

[1] MRCA is a local government public entity established pursuant to Joint Powers Act and is a partnership between the Santa Monica Mountains Conservancy, a state agency established by the legislature and two local park agencies. See https://mrca.ca.gov/about/.

"are expected to move between the Angeles National Forest through the study area to Castaic Lake in search of water in the summer . . ." (AR 3641.) (See Petitioners' Reply Brief at p. 8.)

More specifically, Petitioners are seeking judicial notice of the Mountain Lion Photos because Respondents argued in their Opposition Brief (and during the hearing on September 24, 2020) that the existing crossings adjacent to Project site are not currently used by mountain lions and are of no value to mountain lions. In particular, Respondents allege "mountain lions are not using Project site crossings as confirmed by expert studies, including a wildlife camera study" and "there is no evidence that mountain lions are using the off-site undercrossings adjacent to or crossing the Project Site." (Joint Opposition Brief at p. 8 & 17.) Petitioners are seeing judicial notice of the Mountain Lion Photos to show that the ***absence of evidence*** claimed by Respondents does not demonstrate an ***absence*** of mountain lions from the area. (See Petitioners' Reply Brief at p. 8.) Indeed, the Mountain Lion Photos confirm recent use of the area and the crossing adjacent to the Project site by a mountain lion.

Judicial notice of the Mountain Lion Photos also is proper because they qualify as an official act of a department of a public agency. (Cal. Evid. Code § 452(c); see also *Cooke v. Superior Court* (1989) 213 Cal.App.3d 401, 416 [overruled on other grounds in *County of San Diego v. State of California* (1997) 15 Cal.4th 68] [Evidence Code section 452(c) applies to legal subdivisions of the state].) In particular, the Mountain Lion Photos were taken by a wildlife camera that Mr. Christensen placed on MRCA conservation lands on June 9, 2020 in his official capacity as Deputy Chief of Natural Resources and Planning and as Project Manager for the MRCA's Marple Canyon I-5 Wildlife Crossing Enhancement Project (the "Wildlife Crossing Enhancement Project"). (Christensen Dec. ¶ 4.)

Courts may also allow judicial notice of post-approval documents in CEQA cases when they are helpful to an understanding of the issues. In Tu*olumne County Citizens for Responsible Growth, Inc. v. City of Sonora* (2007) 155 Cal.App.4th 1214 ["*Tuolumne County*"], the Court of Appeal granted Real Parties' request for judicial notice of a county transportation council resolution, even though the resolution "did not exist at the time [the] City approved" the project. (*Id.* at 1221.) The Court of Appeal granted the request "so that we have a better picture of the issues that will confront the superior court on remand," and noted that the trial court had also taken judicial notice of the resolution. (*Id.* & fn. 3.)

Other authorities support judicial notice of post-approval documents in some circumstances. Petitioners brought this action under Code of Civil Procedure section 1094.5 (see Verified Petition at ¶ 20), and CEQA specifically provides that challenges should be brought via this section. (See Pub. Res. Code § 21168 [any action or proceeding to set aside a decision of a public agency on the grounds of non-compliance with CEQA "shall be in accordance with the provisions of Section 1094.5 of the Code of Civil Procedure."].) In turn, section 1094.5 provides that extra-record evidence may be admissible "if the evidence was unavailable at the time of the hearing 'in the exercise of reasonable diligence'. . . ." (*Eureka Citizens for Responsible Government v. City of Eureka* (2007) 147 Cal.App.4th 357, 367, citing Code Civ. Proc. § 1094.5, subd. (e).) Here, Petitioners could not have requested judicial notice of the Mountain Lions Photos prior to the hearing on the Project because the Mountain Lion Photos did not yet exist.

III. Judicial Notice of the Mountain Lion Photos is Timely

Judicial notice of the Mountain Lion Photos is timely because Respondents have sufficient notice of this request and ample time to respond, given that the Court has taken the case under consideration and not yet issued any final rulings.

IV. Conclusion

Petitioners respectfully request that this Court take judicial notice of the Mountain Lion Photos.

DATED: December 17, 2020

CENTER FOR BIOLOGICAL DIVERSITY

By: _____

John Rose
Ross Middlemiss
Aruna Prabhala
John Buse

Attorneys for Petitioners CENTER FOR BIOLOGICAL DIVERSITY and ENDANGERED HABITATS LEAGUE

Attachment

Declaration of Chad Christensen

I, Chad Christensen, hereby declare as follows:

1. The facts set forth in this declaration are based on my personal knowledge. If called as a witness, I could and would testify competently to these facts. As to those matters which reflect an opinion, they reflect my personal opinion and judgment on the matter.

2. I am the Deputy Chief of Natural Resources and Planning for the Mountains Recreation and Conservation Authority (MRCA) and have been in this position since April 2020. Previously I was a Project Analyst hired in February 2017.

3. Attached are true and correct copies of photos taken on November 5, 2020 approximately between 2:49 a.m. and 2:59 a.m. of a mountain lion crossing from the east side of the southbound direction of the separated I-5 freeway from Grasshopper Canyon and westerly into the Marple Canyon. The single-lane box culvert for the Marple Canyon access road that crosses under this southbound section of I-5 is identified as "Tunnel 2" and "Underpass 2" in Santa Monica Mountains Conservancy's April 17, 2018 letter on the Northlake Project (AR010051-59). Underpass 2 is one of two freeway crossing structures along a ten-mile section of I-5 between Templin Highway and Castaic Creek. The MRCA owns 245 acres of Marple Canyon west of Underpass 2 between the separated north-/southbound sections of I-5 and six acres east of Underpass 2 that connect with Grasshopper Canyon.

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Project Area and Underpass 2 are part of the South Coast Wildland's *Castaic – Sierra Madre Connection.*

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 15th of December 2020,



Chad Christensen

Ventura, California

Response to Comment Letter B.4

Francis Tinney and Tiffany Yap
Center for Biological Diversity
May 29, 2025

Response B.4-1

Commenter provides an introduction to its comment letter. Regarding comments on sections of the RPDSEIR, specific comments are addressed below. With respect to the portions of the SEIR that were not recirculated, the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of those issues. See *Ione Valley Land, Air, and Water Defense Alliance, LLC v. County of Amador* (2019) 33 Cal.App.5th 165, 171 ("Res judicata bars all of LAWDA's objections to the partially recirculated EIR certification and project approval, except for those issues arising from the partially recirculated EIR concerning traffic impacts, because the remaining issues were litigated and resolved, or could have been litigated and resolved, in connection with the first petition, and the writ of mandate did not require the County to revisit issues other than traffic impacts."); *Sierra Club v. County of Fresno* (2020) 57 Cal.App.5th 979, 990 ("[A]n order of partial decertification is not necessary to protect Developer from relitigating the CEQA compliance of parts of the EIR not affected by the errors relating to air quality impacts. Instead, Developer is protected by res judicata, collateral estoppel and the requirement for the exhaustion of administrative remedies."); *Citizens for Open Government v. City of Lodi* (2015) 205 Cal.App.4th 296, 325-327 (res judicata barred claim that EIR failed to disclose cumulative water supply impacts as that claim was based on the same conditions and facts in existence when the original action was filed.); *San Franciscans for Reasonable Growth v. City and County of San Francisco* (1989) 209 Cal.App.3d 1502, 1517–1518 (rejected a challenge to an EIR's impacts analysis after the issuance of a peremptory writ of mandate as beyond the scope of the additional environmental review ordered in the writ); *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 481 ("Because those challenges asserted in the new petition could have been asserted before the entry of judgment in the prior proceeding and the material facts have not changed, BEEP's challenges to the project description and to the finding on land use consistency asserted in its latest petition for writ of mandate are barred by res judicata."); *Town of Atherton v. California High-Speed Rail Authority* (2014) 228 Cal.App.4th 314, 354 ("Collateral estoppel precludes relitigation of issues argued and decided in prior proceedings."). The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Response B.4-2

This is an introductory comment that is acknowledged. The comment does not address the content or adequacy of the RPDSEIR under CEQA or the State CEQA Guidelines; no additional response is required. The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Response B.4-3

The commenter is incorrect that the County cannot limit public comment to only those issues required for recirculation. The Los Angeles Superior Court's ruling in *Center for Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al*, Case No. 19STCP01610, dated January 11, 2021(Court Ruling; RPDSEIR Appendix A) granted in part and denied in part the petitioner's Petition for Writ of Mandate. Specifically, the Court Ruling held that the SEIR for the Northlake Project failed to comply with CEQA because it contained: (1) inadequate alternatives analysis (for failing to fully analyze a creek avoidance alternative); (2) inadequate Western Spadefoot Toad (WST) baseline assessment and, therefore, inadequate mitigation (to recreate baseline conditions; mitigation inadequate in detail and commitment); and

(3) improper deferred mitigation as to rare plants (measure lacked sufficient detail). The Court denied the Petition for Writ of Mandate regarding (1) impacts to mountain lions/wildlife crossings, (2) aesthetics, (3) air quality/public health, (4) wildfire impacts, and (5) recirculation.

CEQA Guidelines Section 15088.5(c) provides:

> If the revision is limited to a few chapters or portions of the EIR, the lead agency need only recirculate the chapters or portions that have been modified.

The RPDSEIR does not revise the 2019 SEIR in any respect other than as directed by the Court. As the RPDSEIR is limited to a few portions of the 2019 SEIR, pursuant to CEQA Guidelines Section 15088.5(c), the County elected not to recirculate the 2019 Draft SEIR or the 2019 FSEIR for public review and comment.

CEQA Guidelines Section 15088.5(f)(2) provides:

> When the EIR is revised only in part and the lead agency is recirculating only the revised chapters or portions of the EIR, the lead agency may request that reviewers limit their comments to the revised chapters or portions of the recirculated EIR. ***The lead agency need only respond*** to (i) comments received during the initial circulation period that relate to chapters or portions of the document that were not revised and recirculated, and (ii) ***comments received during the recirculation period that relate to the chapters or portions of the earlier EIR that were revised and recirculated***. The lead agency's request that reviewers limit the scope of their comments shall be included either within the text of the revised EIR or by an attachment to the revised EIR. (Emphasis added.)

Consistent with CEQA Guidelines Section 15088.5(f)(2), page 1-1 of the RPDSEIR states:

> This document has been made available for public review and comment in accordance with the procedures contained in the Notice of Availability. Written comments may be submitted to Mr. Jodie Sackett, Los Angeles County Department of Regional Planning, 320 West Temple Street, Los Angeles, California 90012. ***As CEQA Guidelines Section 15088.5, subdivision (f)(2) permits, the County requests reviewers to limit the scope of their comments to that material which is addressed within the text of the revised portions and the appendices included in this RPDSEIR. The County also requests that reviewers not make new comments on matters not included in this RPDSEIR.*** (Emphasis added.)

Therefore, pursuant to CEQA Guidelines Section 15088.5(f)(2), the County will not respond to comments related to the chapters or portions of the SEIR that were not modified and were not revised and recirculated in the RPSDEIR. Moreover, as set forth in Response B.4-1, the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of issues there were or could have been raised in the prior proceeding.

Commenter is correct that the County will need to recertify the SEIR (which will be comprised of the 2019 SEIR (Draft and Final), the RPDSEIR and the RPFSEIR); however, that recertification does not open up chapters and sections of the 2019 SEIR that were not recirculated for public comment or litigation challenge as the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of those issues. None of the cases cited by the commenter reach a different conclusion. In *Woodward Park Homeowners Assn., Inc. v. City of Fresno* (2007) 150 Cal.App.4th 683, the Court of Appeal ordered the trial court to issue a writ of mandate to the city to reverse its certification of the EIR; this case did not involve recirculation of only portions of the EIR and thus is inapplicable. The same is true regarding *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814 – it did not involve a challenge to recirculated sections of an

EIR. And while *Ukiah Citizens for Safety First v. City of Ukiah* required recirculation, it was limited to only one section of the EIR; it did not require recirculation of the entire EIR nor allow for public comment on the sections not recirculated: "Because the EIR certified in this case was inadequate in its analysis of energy impacts of the project, recirculation and consideration of public comments concerning the energy analysis will be necessary before the EIR may be certified and the project approved." *Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 Cal.App.4th 256, 266–267. In fact, in response to the Court of Appeal's decision in *Ukiah Citizens for Safety First v. City of Ukiah*, the City of Ukiah prepared and recirculated a "Recirculated Partial Draft Environmental Impact Report" for the project (SCH No. 2011112025),[1] which only revised the energy section and did not revise and recirculate any other portion of the final EIR that the court ordered the city to set aside. The City of Ukiah's project (a Costco Wholesale warehouse) was subsequently approved and the Costco in Ukiah opened its doors in July 2018.[2] The County here took the exact same corrective action that the City of Ukiah did – it revised and recirculated the portions of the 2019 SEIR that the Court ruled did not comply with CEQA. Contrary to the commenter's incorrect legal opinion, recertification of an EIR based on limited recirculation does not open up non-recirculated sections to public comment or legal challenge. The comment is noted for the record and will be forwarded to the decision-makers for review and consideration.

Response B.4-4

The RPDSEIR complies with the Court Ruling as to those issues that had to be recirculated. As set forth in Response B.4-1, above, the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of issues there were raised or could have been raised in the prior proceeding. As set forth in Response B.4-3, CEQA Guidelines Section 15088.5(f)(2) expressly permits the County to limit comments to the material included in the RPDSEIR and only provide responses to those comments. Commenter's prior comments letters were responded to as part of the prior administrative proceeding. No additional response is required.

Response B.4-5

The RPDSEIR complies with CEQA Guidelines Section 15088.5 (c) as the RPDSEIR recirculated those sections of the 2019 SEIR that were required to be revised by the Court Ruling. New information has not been added to sections or chapters of the SEIR that were not recirculated. Moreover, Section 15088.5 does not trump the principles of res judicata and collateral estoppel. (See Response B.4-1.) To the extent that the commenter tries to revive its claim that additional sections of the 2019 SEIR need to be recirculated, that claim is barred by collateral estoppel as that claim was litigated as Cause of Action Two in *Center for Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al*, Case No. 19STCP01610 and the Court denied that claim. (RPDSEIR Appendix A (Court Decision) at pages 8 through 11.) No additional response is required.

Response B.4-6

As set forth in Response B.4-5, above, the RPDSEIR complies with CEQA Guidelines Section 15088.5 (c) as the RPDSEIR recirculated those sections of the SEIR that were required to be revised by the Court Ruling. New information has not been added to sections or chapters of the 2019 SEIR that were not recirculated including climate change impacts and water supply.

[1] The City of Ukiah's Recirculated Partial Draft EIR is available at https://cityofukiah.com/wp-content/uploads/2021/12/RevisedEnergyAnalysisCostco020917.pdf. The City of Ukiah's final Recirculated Partial Environmental Impact Report for the project is available at https://cityofukiah.com/wp-content/uploads/2021/12/FEIR_COSTCO_04272017.pdf.

[2] See https://cityofukiah.com/costco-in-ukiah/.

Moreover, Section 15088.5 does not trump the principles of res judicata and collateral estoppel. Wildfire impacts were included in RPDSEIR. No additional response is required.

Response B.4-7

See Responses B.4-1, B.4-3, B.4-5 and B.4-6. In addition, commenter raised claims of inadequate GHG/climate change impacts in its Petition for Writ of Mandate, but chose not to present those claims to the Superior Court. Res judicata bars that claim now. No additional response is required.

Response B.4-8

See Responses B.4-1, B.4-3, B.4-5, B.4-6 and B.4-7.

Response B.4-9

See Responses B.4-1, B.4-3, B.4-5, B.4-6 and B.4-7.

Response B.4-10

See Responses B.4-1, B.4-3, B.4-5, and B.4-6. In addition, the commenter raised claims of inadequate water supply in its Petition for Writ of Mandate, but chose not to present that claim to the Superior Court. Res judicata bars that claim now. No additional response is required.

Response B.4-11

Collateral estoppel bars relitigation of the mountain/wildlife movement and connectivity issues. See Responses B.4-1, B.4-3, B.4-5, and B.4-6. The Court Ruling denied all of the commenter's claims regarding mountain lions and wildlife crossings finding that "The use of the undercrossings by large animals was thoroughly discussed in the SEIR … The County had the best available information on the topic when it approved the Project in April 2019. The County's implied determination that the Project will not interfere with mountain lion crossings of the I-5 is supported by substantial evidence." (RPDSEIR Appendix A (Court Ruling), pages 19 through 21.) No additional response is required.

Response B.4-12

See Responses B.4-1, B.4-3, B.4-5, and B.4-6. In addition, CBD raised claims of inadequate analysis of impacts to the burrowing owl in its Petition for Writ of Mandate, but chose not to present that claim to the Superior Court. Res judicata bars that claim now. The commenter is correct regarding the changed status for the burrowing owl as of October 10, 2024; however, the change in status to State Candidate does not affect the adequacy of the previous SEIR's determination of significance. The burrowing owl was a California Species of Concern at the time of the significance determination and there is no need to change this determination or to update the mitigation measures. All the burrowing owl detections were of "wintering" owls and no breeding owls were detected. (See 2019 Draft SEIR Table 5.2-4 (Special Status Wildlife Species Known To Occur In The Project Region), page 5.2-23.) Thus, it may be possible for project construction in burrowing owl habitat to take place outside the winter season such that an Incidental Take Permit (ITP) would not be required as no owls would be impacted or otherwise harmed. As stated in the 2019 Draft SEIR:

> The burrowing owl winters on the Project site. This is an unusual wintering location for this species, since it is located in the foothills rather than on the valley floor. The focused surveys determined that the Project site is only used by the burrowing owls for wintering and not breeding. Breeding or wintering populations of burrowing owl have been almost

completely extirpated from the coastal slope of southern California; therefore, impacts to this wintering population would be considered potentially significant. Implementation of MM 5.2-12, MM 5.2-13, and MM 5.2-14[3] would reduce impacts to less than significant. These mitigation measures require pre-construction wintering owl surveys, and if active wintering burrows are detected within the Project impact boundary, artificial burrows outside the impact boundary within suitable habitat would be constructed at a 1:1 ratio, ensuring a substantial reduction in potential impacts during and after Project implementation." (2019 Draft SEIR, page 5.2-39.)

Nevertheless, the Applicant will consult with CDFW and should CDFW determine that an ITP would be warranted, an ITP will be obtained. In any event, the proposed 2:1 Mitigation for all areas of suitable habitat fully mitigates the impact in accordance with CEQA.

Response B.4-13

See Responses B.4-1, B.4-3, B.4-5, B.4-6 and B.4-11.

Response B.4-14

See Responses B.4-1, B.4-3, B.4-5, B.4-6 and B.4-11.

Response B.4-15

See Responses B.4-1, B.4-3, B.4-5, B.4-6 and B.4-11.

Response B.4-16

The RPDSEIR, including Appendices D-1 (Wildland Fire Risk Report), D-2 (Northlake Specific Plan Wildland Fire Evacuation Scenarios – Evacuation Time Estimates Memorandum) and K (Wildland Fire Risk Report Northlake Project Addendum #1), complied with all of the mandates of CEQA (Appendix G, Section XX, subsection a, b and c requirements) and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act"* regarding wildfire impact analysis. Commenter provides no credible evidence of a significant wildfire impact.

Response B.4-17

Commenter claims the RPDSEIR does not include substantial evidence supporting the determination that "[n]either construction nor operation of the Project would exacerbate wildfire risks, thereby exposing occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire." The substantial evidence is contained in RPDSEIR Appendices D-1 (Wildland Fire Risk Report), D-2 (Northlake Specific Plan Wildland Fire Evacuation Scenarios – Evacuation Time Estimates Memorandum), and K (Wildland Fire Risk Report Northlake Project Addendum #1). These are expert technical reports, cited in and attached to the RPDSEIR, that provide the substantial evidence for all of the wildfire impact determinations. Commenter is incorrect that the RPDSEIR did not adequately disclose or assess the area's baseline conditions. The Wildland Fire Risk Report (RPDSEIR Appendix D-1) provides an extensive discussion of the baseline environmental conditions, including climate history, vegetation and wind history.

[3] **MM 5.2-14** Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable wintering burrowing owl habitat, the area shall be assessed. If the habitat assessment concludes that the area lacks potentially suitable burrowing owl burrows, no additional action is required. However, if potentially suitable burrows are located in the assessment area, any burrows that may be impacted by the project will be replaced with artificial burrows within on-site or off-site (if applicable) preserved areas with potentially suitable burrowing owl habitat.

(RPDSEIR Appendix D-1, pages 13 through 25; see also Response B.4-18, below.) RPDSEIR Appendix K (Wildland Fire Risk Report Northlake Project Addendum #1) specifically addresses risk from new human presence in high fire-prone areas and the wildlife-urban interface (WUI) and concludes that "the increased wildfire risk from human-ignited wildfire is less than significant." (Appendix K at page 7.) The RPDSEIR, including Appendices D-1, D-2, and K, complied with all of the mandates of CEQA (Appendix G, Section XX, subsection a, b, and c requirements) and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act"* regarding wildfire impact analysis. Commenter provides no credible evidence of a significant wildfire impact.

Response B.4-18

Commenter claims the Wildland Fire Risk Report fails to mention the Hughes Fire in January 2025 and did not account for climate change. Regarding the Hughes Fire, the Wildland Fire Risk Report was prepared in December 2024, a month before the Hughes Fire. As such, it was not included in the fire history section of the report as it had not occurred at the time the report was prepared. The Hughes Fire was predicted by Scenario 6 - LakeSpotsat40, with the origin within the County Recreation Area (RPDSEIR Appendix D-1, page 65, 68), and the Evacuation Report determined that there would be sufficient time to evacuate the previously approved Project with no impediment to all three evacuation points (RPDSEIR Appendix D-1, Table 6; see also RPDSEIR Appendix D-1, page 68). The fact that the Hughes Fire happened, which was predicted, does not change the analysis, conclusions or determinations that the wildfire impacts are less than significant. Regarding climate change, the Wildland Fire Risk Report contains an extensive discussion of weather, temperature, humidity and wind history based on years of reported meteorological data for the Project Site that were added into the extensive modeling of the 10 wildfire scenarios. (RPDSEIR Appendix D-1, pages 25 through 50.) The sources cited by commenter are not Project Site specific. For modeling purposes, local (i.e., Project Site) historical data trends provide the only credible data to predict future change. Thus, the comment that the Wildland Fire Risk Report failed to account for climate change is incorrect. Commenter provides no credible evidence of a significant wildfire impact.

Response B.4-19

Commenter claims the RPDSEIR fails to adequately mitigate the wildfire risk, yet submits no credible evidence of a wildfire significant impact. The RPDSEIR, and the supporting technical appendices (RPDSEIR Appendix D-1, D-2 and K), provide substantial evidence that the wildfire risk is less than significant. The RPDSEIR, including Appendices D-1, D-2 and K, complies with all of the mandates of CEQA (Appendix G, Section XX, subsection a, b and c requirements) and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act"* regarding wildfire impact analysis. The County is not required to impose mitigation measures where there is a less-than-significant impact. Applicable case law prohibits the imposition of mitigation measures unless they have a nexus to and are proportional to a project's significant impacts. (*Nollan v. California Coastal Comm.* (1987) 483 U.S. 825; *Dolan v. City of Tigard* (1994) 512 U.S. 374.) Commenter's claim that project design features cannot be used to avoid impact analysis citing *Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645 is inapplicable. The Wildland Fire Risk Report sets forth wildland fire protection measures (including regulatory compliance measures) that were previously required or integrated into the previously approved Project and additional fire protection measures or project design features all of which contribute to avoiding or reducing wildfire impacts and were considered in the wildfire impact analysis. (RPDSEIR Appendix D-1, pages 77 – 78.) The RPDSEIR, including Appendices D-1, D-2, and K, contains detailed analysis that is substantial evidence supporting the determination of a less than significant wildfire impact. There is no missing analysis (and the commenter does not identify any missing analysis); thus,

Lotus is inapplicable in this case. In *Lotus*, the issue was adoption of mitigation absent impact analysis or a significance threshold for determining a significant impact that required mitigation. Commenter provides no credible evidence of a significant wildfire impact.

Response B.4-20

Commenter claims the RPDSEIR and its wildfire technical reports fail to mention or discuss the Project area's "historical fire regimes and the role Indigenous communities likely played in shaping the fire ecology of habitats in and adjacent to the Project area," yet identifies no requirement to include such in the technical impact analyses. There is no such requirement. The RPDSEIR, including Appendices D-1, D-2, and K, complies with all of the mandates of CEQA (Appendix G, Section XX, subsection a, b, and c requirements) and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act"* regarding wildfire impact analysis. The Wildland Fire Risk Report (Appendix D-1) provides an extensive discussion of the baseline environmental conditions and reported fire history. Commenter provided no credible evidence of a significant wildfire impact.

Response B.4-21

Commenter states that the proposed project could increase unintentional human-driven wildfires that disrupt natural fire regimes and further degrade ecosystems, yet provides no evidence in support. The RPDSEIR, including Appendices D-1, D-2, and K, complies with all of the mandates of CEQA (Appendix G, Section XX, subsection a, b and c requirements) and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act"* regarding wildfire impact analysis. Appendix K (Wildland Fire Risk Report Northlake Project Addendum #1) specifically addresses risk from new human presence in high fire-prone areas and the wildlife-urban interface (WUI) and concluded that "the increased wildfire risk from human-ignited wildfire is less than significant." (Appendix K at page 7.) Commenter provided no credible evidence of a significant wildfire impact.

Response B.4-22

Commenter raises concerns regarding unintentional wildfires and associated air quality. Addendum #1 to the Wildland Fire Risk Report specifically addresses risk from new human presence in high fire-prone areas and concluded that "the increased wildfire risk from human-ignited wildfire is less than significant." (RPDSEIR Appendix K at page 7.) Moreover, the RPDSEIR concludes that "Neither construction nor operation of the Project would exacerbate wildfire risks, thereby exposing occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire." Commenter speculates that an unintentional wildfire in the Project Area would result in poor air quality; none of the commenter's citations are Project Site specific. CEQA does not require the analysis of speculative impacts. (CEQA Guidelines Section 15145.) Commenter provided no credible evidence of a significant wildfire impact.

Response B.4-23

Commenter states that development in fire-prone areas increases firefighting costs due to unintentional ignitions. RPDSEIR Appendix K provides an assessment of exacerbation of wildfire risk (CEQA Guidelines section 15126.2(a)) from increased human habitation in a wildlife-urban interface and concluded that the increased wildfire risk from human-ignited wildfire associated with the previously approved Project is less than significant. Any increased costs on governmental agencies related to the provision of public services is not considered a project impact. In *City of Hayward v. Board of Trustee of California State University* (2015) 242 Cal. App. 4th 833, the court found that Section 35 of Article XIII of the California Constitution requires local agencies to provide

public safety services, including fire protection and emergency medical services, and that it is reasonable to conclude that the city (here the County) will comply with that provision to ensure that public safety services are provided. The *Hayward* ruling also concluded that "assuming the city continues to perform its obligations, there is no basis to conclude that the project will cause a substantial adverse effect on human beings" and the "need for additional fire protection services is not an environmental impact that CEQA requires a project proponent to mitigate." Commenter provided no credible evidence of a significant wildfire impact.

Response B.4-24

Commenter claims the RPDSEIR (though it cites the SEIR) fails to adequately assess and mitigate the Project's impacts to wildfire risk, yet fails to identify an error or omission in the extensive analysis. Stating that "wildfire impacts disproportionately affect low-income and minority communities," while may be true, is not a critique of the RPDSEIR wildfire impact analysis and in no way undermines the RPDSEIR's analysis. Moreover, commenter fails to cite any guideline or requirement for the wildfire impact analysis to address "the aftermath of a wildfire." The RPDSEIR wildfire analysis and the Wildfire Report comport with the requirements of CEQA and the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act*" guidelines. Commenter submitted no credible evidence of a potential significant wildfire impact. See also Response B.4-22.

Response B.4-25

While the commenter claims the WST impact analysis failed to take into account certain factors, the commenter fails to identify anything that was omitted from the WST analysis and does not provide any credible evidence of a potential significant impact that was not already addressed in the WST analysis. GLA prepared a detailed Western Spadefoot Toad (Spea hammondii) Impact Analysis and Habitat Mitigation and Monitoring Plan (HMMP) in coordination with the California Department of Fish and Wildlife (CDFW), which included review by CDFW, with comments provided by CDFW in the WST Plan dated between August 31 and September 30, 2022, with additional comments dated April 28 and May 1, 2023. Upon their final review, following requested revisions on April 28 and May 1, 2023, CDFW provided an email confirming that all requested modifications to the WST Plan had been completed and that CDFW had no additional comments, thus confirming the adequacy of the WST Plan. (See RPDSEIR Appendix B-1 (Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan).) Importantly, CDFW submitted a comment letter on the RPDSEIR (Letter A.1, above) and stated "CDFW has reviewed and approved the Habitat Mitigation and Monitoring Plan for special-status plants (July 2022 [Revised October and December 2022 and February 2023) and western spadefoot toad (July 2022 [Revised March and June 2023])." Commenter provided no credible evidence of a significant WST impact.

Response B.4-26

As referenced by the commenter, WST was not detected in VP6 in 2004/2005 when the species was at the same time observed in two other pools at the site (SP1 and VP1). However, the RPDSEIR determined that VP6 is potentially suitable during above-average rainfall years, meaning that the pool would need to inundate for an adequate duration to allow WST larvae to complete its lifecycle to the metamorph stage. VP6 is a very shallow pond that in some years contains sufficient water for at least the deposition of eggs and the presence of larvae. As referenced from the RPDSEIR by the commenter, western toad larvae were observed in the pool in 2004/2005. However, the pool was not observed in 2004/2005 to pond for sufficient duration to allow larvae to reach sufficient size to emerge as metamorphs. The commenter further questions why the presence of "tadpoles" in VP6 in 2004/2005 is not considered as a detection of WST, or

why the RPDSEIR concluded that VP6 is "potentially suitable" for WST and not "occupied". But the commenter themselves noted that it was western spadefoot larvae (and not WST) that was detected in VP6. As such, VP6 was not occupied by WST in 2004/2005, and therefore, the RPDSEIR did not recognize it as occupied. Therefore, the commenter's statement that the characterization of VP6 as being unoccupied by WST as "unfounded" is incorrect, as the WST was clearly not present in VP6 in 2004/2005 and the determination of presence/absence of any species is based on the year in which surveys are conducted. That WST was detected in other pools at the same time is not a basis for concluding that VP6 was occupied, as WST was clearly not present in VP6 during that season, and that is an important distinction. However, that the pool could support WST in the future, based in part on the detection of the larvae of another toad species (western toad) in the pool, was the basis for the RPDSEIR to conclude that VP6 represents suitable habitat for WST and to conservatively propose mitigation for the pool. This is an accurate depiction of VP6 and does not "downplay the importance of the existing pools to the spadefoot population present on the Project site" as was stated by the commenter. Nevertheless, the commenter is correct that VP6 was included in the ponds for which impacts are considered significant. Thus, impacts are fully mitigated as determined in coordination with CDFW, which reviewed and approved the WST HMMP. (See Response B.4-24.)

Response B.4-27

As noted in Response B.4-25, GLA prepared a detailed Western Spadefoot Toad (*Spea hammondii*) Impact Analysis and Habitat Mitigation and Monitoring Plan in coordination with CDFW. CDFW expressly acknowledged that it approved the WST HMMP. (RPDSEIR Comment Letter A.1, Response A.1-3.) Commenter provides no credible evidence of a potential significant impact not already addressed in the WST analysis or fully mitigated to CDFW's satisfaction.

Response B.4-28

See Response B.4-25 and B.4-27.

Response B.4-29

See Response B.4-25 and B.4-27.

Response B.4-30

See Response B.4-25 and B.4-27. Commenter's claims of inadequate mitigation are incorrect. CDFW approved the WST HMMP. (See RPDSEIR Comment Letter A.1, Response A.1-3.)

Response B.4-31

The mitigation identified in the CDFW-approved HMMP (onsite ponds) is alone sufficient to mitigate the project impacts to WST. The "contingency sites" are identified specifically for that purpose, as contingencies to be utilized as necessary if criteria could not be fulfilled with the onsite pools. However, the contingency sites are not presently needed to create additional artificial pools as part of the proposed mitigation. If the contingency sites are later needed to satisfy mitigation criteria, then activities performed, including additional artificial pool creation, would be undertaken as required under the HMMP which is enforceable mitigation (Mitigation Measure MM 5.2-9). It is speculation to assume that the onsite pools will not be successful and thus additional ponds at different locations will be needed. CEQA does not require the analysis of speculative impacts. (CEQA Guidelines Section 15145.) The HMMP provides detailed performance criteria for both success criteria for the onsite ponds and contingency site criteria should additional pools be required. (See Response B.4-25 and B.4-27.)

Response B.4-32

Commenter requests a higher percentage of affordable units. This is not a comment that addresses impact issues that were required to be recirculated in the RPDSEIR, nor is it a CEQA issue. Moreover, the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of this issue. (See Response B.4-1.) Comment will be forwarded to the decision-makers.

Response B.4-33

Commenter provides background information on VMT but does not provide any credible evidence of a potential VMT impact. The RPSDEIR contains adequate VMT analysis, approved by Public Works. (RPDSEIR pages 2-53 through 2-60, RPDSEIR Appendices C-1 and C-2.)

Response B.4-34

Commenter claims the use of the NLSP is an invalid baseline for the VMT analysis. Commenter is incorrect. The NLSP is the approved specific plan for the Project Site. The approvals are valid, and the plan could be constructed as approved; as it was approved and still valid, it is not hypothetical. As such, the NLSP is the correct baseline to compare the previously approved Project to. The County Department of Public Works expressly approved the VMT analytic approach, including using the NLSP as the baseline. The NLSP VMT per Service Population (27.03) is the baseline for comparison to the previously approved Project VMT per Service Population (25.70) per the methodology required by the County Department of Public Works. Per the County Department of Public Works, this threshold is appropriate because the NLSP approval occurred before SB 743 and modifications are being made after SB 743. Therefore, per the County, the previously approved Project does not need to be evaluated against the County baseline like a brand new project. Because the previously approved Project VMT per Service Population is less than the NLSP, VMT impacts were determined to be less than significant. Public Works approved the VMT Transportation Analysis. (See RPDSEIR Appendix C-2 (Department of Public Works December 2, 2024 Transportation Impact Analysis Approval Letter.)

Response B.4-35

Commenter claims mitigation needs to be adopted to reduce significant VMT impacts, yet the VMT analysis, approved by Public Works, demonstrates that there will be no VMT impact. As such, mitigation is not necessary or required. The County is not required to impose mitigation measures where there is a less-than-significant impact. Applicable case law prohibits the imposition of mitigation measures unless they have a nexus to and are proportional to a project's significant impacts. (*Nollan v. California Coastal Comm.* (1987) 483 U.S. 825; *Dolan v. City of Tigard* (1994) 512 U.S. 374.) Moreover, as set forth in the Northlake Specific Plan Transportation Impact Analysis for CEQA (RPDSEIR Appendix C-1), there are a number of project features of the previously approved Project that tend to reduce VMT, such as constructing a pedestrian network, integrating affordable housing, constructing bicycle trails and expanding the transit network which the previously approved Project is not taking quantitative credit for. Commenter provided no credible evidence of a VMT impact.

Response B.4-36

Commenter repeats its comment that the VMT analysis used the wrong baseline. As set forth in Response B.4-34, that is incorrect; the VMT analysis, approved by Public Works, used the correct baseline. Moreover, as noted in Response B.3-35, there are a number of project features of the previously approved Project that tend to reduce VMT such as constructing a pedestrian network, integrating affordable housing, constructing bicycle trails, and expanding the transit network which

the previously approved Project is not taking quantitative credit for, all of which demonstrates consistency with the General Plan policies to reduce VMT. Commenter provided no credible evidence of a VMT impact.

Response B.4-37

Commenter takes issue with the rejection of Alternative C and refers to financially viable luxury resort. Neither the 2019 SEIR nor the RPDSEIR contain an Alternative C, and a luxury resort is not a proposed project use. The 2019 SEIR identified Alternative 4 (Phase 1 Development) as the environmentally superior alternative. The RPDSEIR identified the Partial Creek Avoidance Alternative (PCAA) (RPDSEIR Alternative 2) as the environmentally superior alternative. The Court Ruling only required recirculation of the Creek Avoidance Alternative (CAA) as a fully analyzed alternative. The RPDSEIR alternatives analysis of the CAA and the PCAA complies with the Court Ruling and CEQA's requirements.

Response B.4-38

Commenter claims that the rejection of the CAA needed to include cost information as to why it is infeasible. Not so. Rejection of an alternative can be based on economic, legal, social, or other considerations. (CEQA Guidelines Section 15091 (a) (3).) And only a single basis for rejection, supported by substantial evidence, is required. (See *Save Panoche Valley v. San Benito Cnty.* (2013) 217 Cal.App.4th 503, 523 [upholding rejection of alternative as one finding of infeasibility was supported by substantial evidence; court did not review the other infeasibility findings as only one supported finding was needed].) Here, the RPDSEIR determined that the CAA was infeasible due to its "engineering geologic, geotechnical and hydrologic issues." (RPDSEIR, page 2-80.) That determination was supported by the Geotechnical/Hydrologic Review of the Creek Avoidance Alternative (RPDSEIR Appendix F-2) which provided expert substantial evidence:

> Our review found that the CAA configuration results in significant increased geotechnical, engineering hydrogeologic, and safety / critical access risks to the development. The CAA was also found to seriously impact Grasshopper Creek as well. It is our opinion that the CAA approach, in an attempt to "save" the creek, would likely result in the ultimate degradation and destruction of the creek and canyon habitat. We also conclude that the engineering geologic /geotechnical adversities that would develop as a result of implementing the CAA approach would result in unacceptable increases in risk and, as a result, would not be feasible.

Commenter also claims that the RPDSEIR states that the CAA is not feasible "without elaboration." The RPDSEIR and the Geotechnical/Hydrologic Review of the Creek Avoidance Alternative (RPDSEIR Appendix F-2) provide extensive analysis demonstrating that the CAA is infeasible. Commenter provided no credible evidence to the contrary.

Regarding the PCAA, as set forth in the RPDSEIR,

> The PCAA provides the same number of residential units as the previously approved Project, but on a smaller Phase 2 development area. As such, the PCAA contributes the same as the previously approved Project regarding the County's RHNA allocation as the previously approved Project. As with the previously approved Project, the affordable unit count would be maintained at 315 units. However, the PCAA provides significantly less active recreational and open space area (37 fewer acres). Accordingly, the PCAA does not meet the following objective to the same degree as the previously approved Project:
>
> - Specific Plan 4, Open Space/Recreational Area, Goal i: To improve opportunities for a variety of outdoor recreational experiences

Rejection of an alternative for failing to meet project objectives as compared to the proposed project is legally permissible. (See *Sierra Club v. County of Napa* (2004) 121 Cal.App.4th 1490, 1503; *Save San Francisco Bay Ass'n v. San Francisco Bay Conserv. & Dev. Comm'n* (1992) 10 Cal.App.4th 908, 929.) Commenter provided no credible evidence to the contrary. Both determinations that the CAA and the PCAA are infeasible are supported by substantial evidence and consistent with the mandates of CEQA.

Response B.4-39

Commenter summarized its comments, threatens litigation, and requests notice and document retention. All of Commenter's comments were addressed above. Commenter is on the project notice list. No further response is required.

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May 29, 2025

Jodie Sackett
Los Angeles County Department of Regional Planning
320 West Temple Street
Los Angeles, California 90012

Via Electronic Mail

Comments on Partial Recirculated Draft Supplement EIR
NorthLake Specific Plan - SCH 2015031080

Dear Mr. Sackett:

B.5-1

The Santa Monica Mountains Conservancy offers the following comments on the Partial Recirculated Draft Supplemental Environmental Impact Report (PRDSEIR) for the proposed NorthLake project. All the EIR alternatives to date, after all proposed mitigations, would still result in significant biological impacts to habitat for the State listed mountain lion population, Western spadefoot toad habitat, and habitat connectivity to existing underpasses used by wildlife under the southbound lanes of Interstate 5. One such underpass has protected public land on both sides of the southbound lanes.

B.5-2

The cumulative impacts analysis for biological impacts remains inadequate and free of any facts as demonstrated by this concluding PRDSEIR paragraph:

> *The cumulative impact on biological resources would be considered greater than the Project alone. However, when considering all the proposed and existing projects in the Project area, the previously approved Project contributes a relatively small portion of the impacts in the area due to its relatively small impact acreage, and the location adjacent to existing development. The Project is not expected to contribute a significant impact to the Project area. Incremental impacts would not be cumulatively considerable, and no additional mitigation is required.*

A project with 33 million cubic yards of grading that extends development over three miles into core National Forest and State Park adjacent habitat is none of the above, it is cumulatively significant. It is an avoidable tragedy to wildlands and the viewsheds of many public viewing areas.

The Conservancy urges the County not to certify the PRDSEIR. If the County does certify the PRDSEIR, the Conservancy urges that only the Partial Creek Avoidance Alternative Recirculated Alternative 2 be considered for adoption as the environmentally superior alternative in the PRDSEIR. The County should also trim the northern development footprint boundary of this alternative to include just enough grading to allow just the shown northern access road to Ridge Route but no other northward development shown in the Phase Two project area. The County has the power to shape this and all other alternatives. They are not at all set in stone. The long-term ecological value of this referenced Alternative 2 and of the Phase One Only Alternative is wholly dependent on all open space both to the north and to the periphery of the development being permanently protected by conservation easements recorded as conditions of any map recordation and with substantial monitoring endowments. Expansion of the project would be permanently precluded.

B.5-3

The County has no obligation to approve more development than that immediately above-described footprint of a trimmed down PRDSEIR Alternative 2. The applicant failed to include specific measurable Project Objectives in both the DEIR and all subsequent EIR documents. The official EIR Project Objectives are subjective with no set minimum baseline numbers for **any** development components. In addition, the sum all EIR material to date leading up to the PRDSEIR does not conclude that any specific number of any type of housing is necessary for the County meet its RHNA numbers.

B.5-4

Because the sum of EIR materials and PRDSEIR to date conclude that the project will still result in many unavoidable significant adverse environmental impacts, the County does not have to adopt a Statement of Overriding Conditions if it chooses to negotiate a reduction of any adverse impacts. With this above laid out complete capacity to legally shape the project, the County should balance new housing in the Specific Plan area with the needs of the existing greater public such as--traffic reduction, open space, wildfire prevention, viewshed protection, air pollution avoidance, water supply, landfills, and access to quality nature.

B.5-5

The PRDSEIR environmentally superior alternative (Alternative 2) provides over 1500 mixed housing units. The best argument in the PRDSEIR against this PRDSEIR Alternative 2 is that there would 37 acres less of active recreational and open space area. What short sighted thinking. There instead actually would be hundreds of more acres of open space, and any lost recreational area could simply be integrated into the Alternative 2 footprint. The upper half of Grasshopper Canyon would not need to be filled in with 10 million cubic yards of fill.

Times have changed. Big fires have burned. Home insurance has permanently gone up and become scarce to obtain in Very High Fire Hazard Severity Zones which this project is and will remain in. Ecological resources have more protection. Citizens value viewsheds from freeways and parklands with more expectations of preservation. The physical and biological constraints of the subject property are immense. The proposed project makes a mockery of the County planning policies and objectives to protect open space and sensitive resources. It is

B.5-6

1990s idea in 2025 and must be substantially reduced to respect lessons learned in the January 2025 fires.

B.5-6 cont.

What is going to happen to the oil pipelines that traverse the length of the project on the east side of Grasshopper Canyon?

B.5-7

The PRDSEIR shows land in Marple Canyon owned by the Mountains Recreation and Conservation Authority (MRCA) as potential mitigation areas. The MRCA has not provided any approval or made any arrangement with the applicant.

The Conservancy works with the MRCA on many habitat restoration projects in the Santa Clara River watershed. Temperatures will continue to get hotter as the climate changes, and water will become progressively more expensive and evaporate more rapidly. Habitat restoration is hard and fraught with failure from drought, herbivory, and onslaughts of aggressive non-native weeds. To our staff knowledge, there are no known successful upland restoration projects in the Santa Clara River watershed. Hydroseeded manufactured slopes with v-ditches adjacent to residential subdivisions do not qualify.

B.5-8

The entire PRDSEIR mitigation program for the loss of sensitive plant species depends on upland habitat restoration of plants that are rare. They are rare because they have a tough time growing in very many places. No one knows how viable the seeds of these species are when collected and what percentage if any will germinate when finally sown years later in protected open spaces. With the total absence of proven success doing upland habitat restoration, or creation, the only way to ensure adequate mitigation is hold bonds for each separate required plant species restoration that would be held for 10 years or until proven success. If there is restoration failure after 10 years, the County would keep the bond funding and purchase open space as a second-best mitigation alternative. A sliding scale can be worked out in which for example every quarter-acre of failed restoration, the County would recoup $100,000 of funds. That type of ratio is vital to generate enough funding to purchase properties because of the cost of land now, the pre-acquisition costs to find willing sellers at appraised values, and the increased cost of land 10 years hence.

The Conservancy, the MRCA, and the Desert and Mountain Conservation Authority (DMCA) work extensively together to accept and record conservation easements for mitigation lands. The legal costs of negotiations, title review, title reports, monitoring, reporting, and potential legal defense again violators over decades (all in a hyper-inflation period) are significant given that conservation easements are in perpetuity instruments. A qualified conservation easement holder that accepts conservation easements without substantial funding is doing a disservice to itself and the citizens of California. The MRCA and the DMCA have both learned the hard way.

B.5-9

The bulk of the PRDSEIR biological mitigation measures depend on the recordation of multiple conservation easements potentially spread between watersheds miles apart with marginal access. The Final PRDSEIR should be modified to state that the applicant must be willing to pay all Grantee expenses for the acceptance of conservation easements and provide endowments that will fund adequate oversight in perpetuity with inflation adjustors. The PRDSEIR language must also be enhanced to definitively state that no other uses besides restoration would be allowed in any conservation easement, including any fire department required fuel modification. If necessary to avoid fuel modification requirements, the project must make the conservation easements larger.

B.5-9 cont.

The PRDSEIR requires an endowment for the Incidental Take Permit of Crotch's bubble bee (CBB). There is no CDFW approved mitigation bank for CBB. As a result, the endowment must cover the care and protection of over 1,000 acres of semi-disparate open space, in perpetuity, even if a percentage of the land is within the Specific Plan area. For such onsite habitat, the PRDSEIR fails to address what entity would hold fee title. Would it be a HOA with limited long-term interest in habitat protection? With all the costs of labor in 2025, endowments to cover care of over 1,000 acres of conservation easement protection potentially spread over multiple properties in different sub-watersheds must be well into the seven-figure range. The Final PRDSEIR must include detailed discussion about conservation easement costs because the easements are essential to the document's biological mitigation measures.

B.5-10

Sincerely,

PAUL EDELMAN
Deputy Director
Natural Resources and Planning

Response to Comment Letter B.5

Paul Edelman
Santa Monica Mountains Conservancy
May 29, 2025

Response B.5-1

Commenter claims that all of the EIR alternatives result in significant biological impacts to mountain lion habitat, Western spadefoot toad (WST) habitat, and habitat connectivity to the existing underpasses used by wildlife. Commenter is incorrect. First, the Court Ruling only required recirculation of the CAA, to be a fully analyzed alternative as opposed to a screened out alternative. Second, the Court denied the claims regarding impacts to mountain lions and wildlife crossings; as such, the doctrines of res judicata and collateral estoppel preclude litigation and/or relitigation of those issues. (See Response B.4-1, B.4-11, and B.4-13 through B.4-15.) Third, the RPDSEIR provides recirculated WST mitigation that demonstrates impacts to WST habitat is less than significant. Finally, the PCAA:

> would eliminate approximately 2,200 feet of development in the northern portion of the site when compared to the previously approved Project, which would enable wildlife movement along multiple paths between the northern I-5 under-crossing and Castaic Lake. Additionally, the PCAA would also enable wildlife movement along the more southerly of the two I-5 undercrossings, connecting wildlife movement to Castaic Lake. The PCAA would also enable wildlife movement along pathways through the southerly part of the Project's development area, consistent with the preliminary Wildlife Connectivity Plan adopted as a condition of approval of the Project. By eliminating development at the northern end of the Project Site, the PCAA would enable enhanced wildlife movement when compared with the previously approved Project, resulting in a less than significant impact related to wildlife movement.

(RPDSEIR pages 2-90 – 2-91.)

Response B.5-2

Commenter claims the previously approved Project's biological impacts are cumulatively significant, but does not provide any credible evidence of a significant cumulative biological impact; rather, the commenter concludes that there must be a cumulative impact because of the 33 million yards of grading. The RPDSEIR provides a fulsome cumulative impact determination that finds that, because the project-specific biological resource impacts are less than significant with mitigation, the "incremental impacts would not be cumulatively considerable." All of the RPDSEIR's impact analyses (as well as the 2019 SEIR impact analyses) took into account the amount of grading as necessary and applicable.

> This cumulative impact analysis considers potential impacts to sensitive biological resources that would result from combined, incremental impacts of the Project when added to other past, present, and reasonably foreseeable future projects having closely related impacts. The following cumulative impact analysis is based on a review of related projects in the vicinity of the Project Site, the Project's direct and indirect impacts with implementation of mitigation measures, existing conditions in the Project vicinity, and an analysis of aerial photographs.
>
> The Project would have potentially significant adverse impacts on biological resources. Several mitigation measures (MM 5.2-1 through MM 5.2-22, including as modified above) would be implemented to reduce these impacts to less than significant levels. Cumulative

> projects in the area are expected to have similar potential impacts to the Project on biological resources in the Project vicinity due to similar development activity and/or similar existing conditions. The cumulative impact on biological resources would be considered greater than the Project alone. However, when considering all the proposed and existing projects in the Project area, the previously approved Project contributes a relatively small portion of the impacts in the area due to its relatively small impact acreage, and the location adjacent to existing development. The Project is not expected to contribute a significant impact to the Project area. Incremental impacts would not be cumulatively considerable, and no additional mitigation is required.

(RPDSEIR Section 2.1.9 Cumulative Impacts, page 2.52.) The cumulative impact determination comports with the mandates of CEQA.

Response B.5-3

Commenter asks that the PCAA be adopted as the environmentally superior alternative. In compliance with Section 15126.6(e)(2) of the State CEQA Guidelines, the PCAA is identified as the environmentally superior alternative in the RPDSEIR:

> Based on the alternatives analysis in this RPDSEIR, in compliance with Section 15126.6(e)(2) of the State CEQA Guidelines, Recirculated Alternative 2, the Partial Creek Avoidance Alternative, would be the environmentally superior alternative among all six Project alternatives summarized in Table 2-12 above as it reduces the development footprint, thus reducing biology impacts and greenhouse gas emissions and would have less construction noise impacts (though construction noise would still be significant and unavoidable). However, the significant and unavoidable impacts to air quality would not be reduced to below a level of significance. All other impacts would be similar to the previously approved Project. On balance, Recirculated Alternative 2 would result in the greatest reduction in impacts compared to the previously approved Project while maintaining the same amount of housing. For these reasons, Recirculated Alternative 2 is the environmentally superior alternative. As compared to project objectives, the PCAA provides significantly less active recreational and open space area (37 fewer acres). Accordingly, the PCAA does not meet the following objective to the same degree as the previously approved Project:
>
> - Specific Plan 4, Open Space/Recreational Area, Goal i: To improve opportunities for a variety of outdoor recreational experiences.

Commenter's support for adoption of the PCAA as the proposed project, instead of the previously approved Project, will be forwarded to the decision-makers.

Regarding commenter's suggested revisions to the PCAA, CEQA does not require analysis of modified versions of the same alternative. (See Response A.1-11 and A.1-12.) Commenter's suggestions will be forwarded to the decision-makers.

Response B.5-4

Commenter claims there needed to be specific measurable Project Objectives, but fails to cite any CEQA requirement that project objectives be measurable. Rather, CEQA Guidelines Section 15124(b) states "[t]he statement of objectives should include the underlying purpose of the project and may discuss the project benefits." (See also *California Oak Found. v. Regents of Univ. Cal.* (2010) 188 Cal.App.4th 227, 276 (a lead agency has broad discretion to formulate project objectives).) In addition, including measurable objectives with minimum baseline numbers for development components would violate the principle that project objectives cannot be too project-

specific. (See *North Coast Rivers Alliance v. Kawamura* (2015) 243 Cal.App.4th 647, 668 (project objective "artificially narrow"); *We Advocate Through Envt'l Review v. County of Siskiyou* (2022) 78 Cal.App.5th 683, 692 (project objectives were so narrowly defined lead agency "dismissively rejected" any alternatives other than the proposed project).) Moreover, a challenge to the Project Objectives is barred by doctrines of res judicata and collateral estoppel. (See Response B.4-1 and B.4-3.)

Response B.5-5

Commenter claims that the County does not need to adopt a Statement of Overriding Considerations "if it chooses to negotiate a reduction of any adverse impacts." Commenter is incorrect. Reduction of significant and unavoidable impacts to less than significant is not a negotiation. In any event, all significant and unavoidable impacts would need to be reduced to less than significant such that a Statement of Overriding Considerations was not required. (See CEQA Guidelines Section 15093.) The County has the discretion to adopt a Statement of Overriding Considerations if it finds that the project benefits outweigh the environmental impacts. (*Id*.) If adopted, the Statement of Overriding Considerations will provide the balancing the commenter requests; the Statement of Overriding Considerations is not required to be included in the RPDSEIR or the RPFSEIR.

Response B.5-6

Commenter is advocating for the adoption of the PCAA. Commenter's support for adoption of the PCAA as the proposed project, instead of the previously approved Project, will be forwarded to the decision-makers.

Response B.5-7

Commenter asks about the oil pipelines located on the Project Site. As set forth in the RPDSEIR Project Description, "an existing crude oil pipeline easement containing two oil pipelines that traverse the entire north-south length of the Project Site would be relocated to an alignment along the eastern boundary of the proposed development area and within the identified grading footprint.) (RPDSEIR, page 1-2.)

Response B.5-8

Commenter is correct that Marple Canyon has been identified as a potential mitigation site for certain habitat. In coordination with Mountains Recreation and Conservancy Authority, the applicant's biologists have evaluated Marple Creek and mapped southwestern spiny rush for purposes of conservation and mitigation. While formal arrangements have not been made, discussions are anticipated to recommence if and when the Project receives its approvals.

Response B.5-9

Commenter provides comments as to potential additions to the Rare Plant mitigation measures (Mitigation Measures MM 5.2-5(a) – MM 5.2-5(c) and MM 5.2-4) in terms of bonds, conservation easement etc. It should be noted that the County and the project Applicant reviewed these mitigation measures with CDFW and incorporated all of their comments and revisions to CDFW's satisfaction and approval. (See Response A.1-3 (CDFW approval of Habitat Mitigation and Monitoring Plan for special-status plants (July 2022 [Revised October and December 2022 and February 2023]).) Commenter speculates that the mitigation measures may be ineffective, but fails to provide any credible evidence in support. The Rare Plant HMMPs, approved by CDFW, contain contingency plans to ensure the performance standards are achieved, which include the

potential for an additional 10-year program at alternative sites. Commenter's suggestions will be forwarded to the decision-makers.

Response B.5-10

Commenter raises questions with the potential need for an endowment for the Incidental Take Permit of Crotch's bubble bee. Both the County and the applicant recognize that this is a standard requirement for mitigation and associated conservation. To this end, the RPDSEIR provided the following:

> If mitigation is not purchased through a mitigation bank, and lands are conserved separately, a cost estimate will be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity. The funding source will be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount will be established following the completion of a project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The Property Analysis Record will consider all management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development.

As noted above, a "qualified natural lands management entity" will be selected to hold the conservation easement(s), and the endowment amount will be established following the completion of a project-specific Property Analysis Record to calculate the costs of in-perpetuity land management, if needed.

SECTION 3.0 CORRECTIONS, CLARIFICATIONS, AND ADDITIONS TO THE RPDSEIR

Any corrections, clarifications and additions to the RPDSEIR text, tables, and figures generated either from responses to comments or independently by the County, are stated in this section. Various corrections regarding figure/table numbers and names, grammatical, punctuation, spelling and typographical errors in the RPDSEIR are not called out separately in this document; however, any substantive changes are individually addressed.

These RPDSEIR corrections, clarifications and additions are provided to clarify and amplify the RPDSEIR. Changes may be corrections or clarifications to the text and tables of the RPDSEIR. Other changes to the RPDSEIR clarify that the analysis is based upon the information and concerns raised by comments during the public review period. None of the information contained in these RPDSEIR revisions constitutes significant new information or changes to the analysis or conclusions of the RPDSEIR.

The information included in these revisions that resulted from the public comment process does not constitute substantial new information that requires recirculation of the RPDSEIR. Section 15088.5 of the State CEQA Guidelines states in part:

(a) A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term "information" can include changes in the Project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the Project or a feasible way to mitigate or avoid such an effect (including a feasible Project alternative) that the Project's proponents have declined to implement. "Significant new information" requiring recirculation includes, for example, a disclosure showing that:

(1) A new significant environmental impact would result from the Project or from a new mitigation measure proposed to be implemented.

(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

(3) A feasible Project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the Project, but the Project's proponents decline to adopt it.

(4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

(b) Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR.

The changes to the RPDSEIR included in this section do not constitute "significant" new information. Therefore, recirculation of the RPDSEIR is not required because the new information added to the RPDSEIR through these revisions only clarify or amplify information already provided or make insignificant modifications to the already adequate RPDSEIR.

Specifically, three mitigation measures were modified and one additional mitigation measure has been added at the request of CDFW. The modifications simply included CDFW as an approving

agency, along with County of Los Angeles Department of Regional Planning, for plant habitat plans called for in mitigation measures MM 5.2-6 through MM 5.2-8. New mitigation measure MM 5.2-22 requires additional Crotch's bumble bee surveys at the mitigation sites called for in mitigation measures MM 5.2-6 through MM 5.2-8. However, impacts to Crotch's bumble bee were fully mitigated with mitigation measures MM 5.2-6 through MM 5.2-8, as required by Cal. Code Regs., tit. 14, § 783.2, subd. (a)(8). There are no changes to impact determinations.

The revisions contained in the following pages are in the same order as the information appears in RPDSEIR. Changes in text are signified by strikeouts (~~strikeouts~~) where text has been removed and by bold underlining (**underline**) where text has been added. The applicable page numbers from the RPDSEIR are also provided where necessary for ease of reference.

RPDSEIR Page 1-2 is revised as follows:

However, 323**1** units would be reallocated from the Phase 2 area of the Project to the Phase 1 area (for a total of 2,297 Phase 1 units).

RPDSEIR Page 2-43 is revised as follows:

MM 5.2-6 The loss of sage scrub habitat within the impact area is considered a significant impact. Sage scrub habitat shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but shall be no less than 2:1 for habitat restoration, enhancement or preservation, or combination thereof. A total of 634.70 acres of sage scrub would be impacted by Project implementation, which includes Purple sage scrub, California sagebrush–California buckwheat scrub, Black sage scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, California sagebrush–California buckwheat scrub/California annual grassland, and the burned sage scrub areas: burned Purple sage scrub, burned California sagebrush–California buckwheat scrub, burned Black sage scrub, and burned California sagebrush–California buckwheat scrub/California annual grassland. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, and preservation shall depend on the initial quality of the habitat area to be restored, enhanced or preserved and would be determined by the Project Applicant and the LACDRP. Sage scrub habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. Where restoration or enhancement is the proposed mitigation, the Project Applicant shall develop a Habitat Mitigation and Monitoring Program (HMMP) and shall submit it to the LACDRP **and the California Department of Fish and Wildlife (CDFW)** for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to the issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants of suitable sage scrub species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), Peirson's morning-glory will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP **and CDFW**

and according to its specified materials, methods, and performance criteria, which shall include the following items:

RPDSEIR page 2-46 is revised as follows:

MM 5.2-7 The loss of California annual grassland/wildflower fields within the impact area is considered to be a significant impact. California annual grassland/wildflower fields shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 24.23 acres of Foothill needlegrass grassland and burned Foothill needle grass grassland would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). California annual grassland/wildflower fields habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP **and the California Department of Fish and Wildlife (CDFW)** for review and approval. The HMMP shall be developed by a qualified restoration ecologist submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for burrowing owls. Habitat restoration/enhancement shall consist of seeding of suitable California annual grassland/wildflower fields plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP **and CDFW** and according to its specified materials, methods, and performance criteria, which shall include the following items:

RPDSEIR page 2-49 is revised as follows:

MM 5.2-8 The loss of foothill needlegrass grassland within the impact area is considered to be a significant impact. Foothill needlegrass grassland shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 342.85 acres of California annual grassland/Wildflower fields would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas

through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). Foothill needlegrass grassland habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP **and the California Department of Fish and Wildlife (CDFW)** for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for the burrowing owl. Habitat restoration/enhancement shall consist of seeding of suitable foothill needlegrass grassland plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP **and CDFW** and according to its specified materials, methods, and performance criteria, which shall include the following items:

RPDSEIR page 2-29 is revised as follows:

MM 5.2-9 A mitigation program for western spadefoot toad (WST) shall be implemented prior to construction, ground disturbance, or vegetation removal that would impact the WST breeding habitat, or areas within 1,000 feet of WST-occupied ponds within the Project Site. The mitigation program would include the components set forth below. A detailed methodology for this effort shall be reviewed by the CDFW and the LACDRP prior to implementation of the mitigation program. Results of the mitigation program shall be provided to the CDFW and the LACDRP.

- Prior to implementing the Spadefoot Relocation Plan, two focused surveys during average or above-average rainfall years will be conducted within the prior appropriate seasons. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e., 2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied pond as well as those identified in recent surveys.
- Suitable sites for seasonal pond creation, within the Project open space, specifically within other NorthLake-owned properties, have been identified and 1.07 acres of seasonal pond habitat will be created. The specific location of the 1.07-acre pool complex is depicted on Exhibit 5 of the *NorthLake Castaic, Los Angeles County, California, Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan July 2022 (Revised March and June 2023)* (HMMP). As described in the WST Mitigation Implementation Plan, three pools would be created based on

current grading plans. The combined size of the three pools (1.07 acres) exceeds the maximum combined size of potential WST habitat currently at the Project Site (0.95 acres, as shown in Table 2-4, above). The WST Mitigation Implementation Plan would address the following issues specific to the site or sites:

- Soil Characteristics and whether clay liners will be necessary
- Pool locations and site access routes for construction
- Types of habitat potentially affected by construction and measures to restore damaged **habitat** subject to temporary impacts
- Watershed size and characteristics
- Grading plan with cross section for each pool to be created
- Specifications for clay liner (i~~n~~**f** needed) including source of clay and installation methods
- Upland habitat characteristics, including soil suitability for burrowing and vegetative buffer, will also be addressed in the plan

RPDSEIR page 2-28 and RPDSEIR Appendix J page 5 are revised as follows:

> Based on areas of suitable habitat, the project would provide 337.55 acres of mitigation within the onsite conservation areas and 156.7 acres of conservation on adjacent NorthLake ownership for a total of ~~492.2~~ **494.25** acres of preservation

RPDSEIR page 2-96 is revised as follows:

> Ability to Avoid or Substantially Lessen the Significant Impacts of the Project Development of the Project Site with the PCAA would decrease the development disturbance area compared to the previously approved Project, although the uses remain the same. Although the degree of impacts for some topics may be less with this alternative, the overall impact conclusions would be consistent with the previously approved Project. Consistent with the previously approved Project, the PCAA would result in significant and unavoidable impacts related to air quality~~,~~ **and** noise~~, and traffic (VMT)~~. No additional significant or more significant impacts would occur with this alternative.

Mitigation Measure MM 5.2-22 will be added to the Mitigation Monitoring and Reporting Program. See Section 4.0, below.

MM 5.2-22 **The project applicant shall retain a qualified biologist with the appropriate handling permits to conduct focused surveys for Crotch's bumble bee within the proposed habitat restoration/enhancement sites prior to implementation of the HMMP as set forth in MM 5.2-6 through MM 5.2-8. Focused surveys shall follow California Department of Fish and Wildlife's (CDFW) Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023). Focused surveys shall also be conducted throughout the entire proposed mitigation areas and during the appropriate flying season to ensure no missed detection of Crotch's bumble bee occurs. Survey results, including negative findings, shall be submitted to CDFW and LACDRP prior to the start of a monitoring program.**

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SECTION 4.0 MITIGATION MONITORING AND REPORTING PLAN

4.1 INTRODUCTION

In accordance with the requirements of Section 21081.6 of the *California Public Resources Code,* and as part of its adoption of the RPFSEIR for the NorthLake Specific Plan Project, the County of Los Angeles adopts this Mitigation Monitoring and Reporting Program (MMRP). The County adopts this MMRP in its capacity as the lead agency for the SEIR and RPSEIR in accordance with the provisions of the California Environmental Quality Act (CEQA) (*California Public Resources Code* Section 21000 et seq.) and the State CEQA Guidelines (*California Code of Regulations,* Title 14, Section 15000 et seq.).

The principal purpose of this MMRP is to ensure that the mitigation measures for the approved Project are reported and monitored to ensure compliance with their requirements. In general, the Los Angeles County Department of Regional Planning is responsible for overseeing implementation and completion of the adopted measures. This includes the review of all monitoring reports, enforcement actions, and document disposition, unless otherwise noted in the attached MMRP table.

4.2 MITIGATION MONITORING AND REPORTING PROGRAM

The MMRP is provided in tabular format to facilitate effective tracking and documentation of the status of mitigation measures. The attached MMRP table provides the following monitoring information:

- **Mitigation Measures.** The text of all adopted mitigation measures (MMs) from the RPDSEIR and all applicable MMs from the 2019 SEIR has been provided in this MMRP.
- **Responsible for Implementation.** This MMRP identifies the party that is responsible for implementing each of the MMs that are specified in the RPDSEIR, RPFSEIR, and 2019 SEIR.
- **Timing.** This MMRP includes information related to when each MM in the RPDSEIR, RPFSEIR, and applicable MMs in the 2019 SEIR will be implemented.
- **Responsibility for Monitoring.** This MMRP identifies the County Department(s) or other public agency(ies) that are responsible for overseeing the implementation and completion of each MM.
- **Completion Date.** The completion date column of this MMRP is used to record the date that each mitigation measure is completed. This column of the MMRP table will be filled in by the County in the future as the Project is implemented and the MMs are completed. Upon completion, the MMRP and associated documentation will be kept on file at the Los Angeles County Department of Regional Planning.

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TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Air Quality (Section 5.1 of the 2019 Draft SEIR)					
MM 5.1-1	Prior to grading permit issuance, applicants shall develop a Construction Traffic Emission Management Plan to minimize emissions from vehicles including, but not limited to, scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes. (SCVAP MM 3.3-1)	Prior to grading permit issuance	Applicant	County of Los Angeles Department of Regional Planning	
MM 5.1-2	Prior to grading permit issuance, applicants shall develop a Construction Dust Emission Management Plan to minimize construction-related dust and particulate emissions. The Construction Emission Management Plan shall require the use of Best Available Control Measures, as specified in Table 1 of SCAQMD's Rule 403. If potentially significant impacts are identified after the implementation of the SCAQMD recommended Best Available Control Measures, the Construction Emission Management Plan shall include the following additional elements: (SCVAP MM 3.3-2 dust measures) • Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. When wind speeds exceed 15 miles per hour the operators shall increase watering frequency. • Active sites shall be watered at least three times daily during dry weather. • Increase watering frequency during construction or use non-toxic chemical stabilizers if it would provide higher control efficiencies. • Suspend grading and excavation activities during windy periods (i.e., surface winds in excess of 25 miles per hour). • Suspend the use of all construction equipment during first-stage smog alerts. • Application of non-toxic chemical soil stabilizers or apply water to form and maintain a crust on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). • Application of non-toxic binders to exposed areas after cut and fill operations and hydroseeded areas. • Cover or application of water or non-toxic chemical suppressants to form and maintain a crust on inactive storage piles. • Planting of vegetative ground cover in disturbed areas as soon as possible and where feasible. • Operate street sweepers that comply with SCAQMD Rules 1186 and 1186.1 on roads adjacent to the construction site so as to minimize dust emissions. Paved parking and staging areas shall be swept daily. • Reduce traffic speeds on all unpaved roads to 15 miles per hour or less. • Pave or apply gravel on roads used to access the construction sites when possible. • Designate personnel to monitor dust control measures to ensure effectiveness in minimizing fugitive dust emissions. • An information sign shall be posted at the entrance to each construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. Any reasonable complaints shall be rectified within 24 hours of their receipt.	Prior to grading permit issuance	Applicant and Future Developers	County of Los Angeles Department of Regional Planning; SCAQMD	
MM 5.1-3	Prior to grading permit issuance, applicants shall develop a Construction Equipment Exhaust Emission Management Plan to minimize construction-related exhaust emissions. The Construction Equipment Exhaust Emission Management Plan shall require the following elements: (SCVAP MM 3.3-2 exhaust emission measures) • Scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes.	Prior to grading permit issuance	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 10:00 AM and 3:00 PM, and between 7:00 PM and 6:00 AM provided that a noise disturbance is not generated across a residential or commercial property line). • Use of diesel-powered construction equipment shall use ultra-low sulfur diesel fuel. • Use electric welders to avoid emissions from gas or diesel welders when such equipment is commercially available. • Use electricity or alternate fuels for on-site mobile equipment instead of diesel equipment when such equipment is commercially available. • Use on-site electricity or alternative fuels rather than diesel-powered or gasoline powered generators when such equipment is commercially available. • Maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations. • Minimize idling time either by shutting equipment when not in use or reducing the time of idling to 5 minutes as a maximum. • Limit, to the extent feasible, the hours of operation of heavy duty equipment and/or the amount of equipment in use. • Retrofit large off-road construction equipment that will be operating for significant periods. Retrofit technologies such as particulate traps, selective catalytic reduction, oxidation catalysts, air enhancement technologies, etc., shall be evaluated. These technologies will be required if they are certified by CARB and/or the US EPA, and are commercially available and can feasibly be retrofitted onto construction equipment. • The project applicant shall require all on-site construction equipment to meet US EPA Tier 4 or higher emissions standards according to the following: o April 2010 through December 31, 2011: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 2 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. o January 1, 2012 through December 31, 2014: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. o Post-January 1, 2015: All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. A copy of each unit's certified tier specification, BACT documentations, and CARB, SCAQMD, or ICAPCD operating permit shall be provided at the time of mobilization of each applicable unit of equipment. • The contractor shall utilize low-VOC content coatings and solvents that are consistent with applicable SCAQMD and ICAPCD rules and regulations.				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	• Consideration shall be given to use of other transportation methods to deliver materials to the construction sites (for example, trains or conveyors) if it would result in a reduction of criteria pollutant emissions.				
MM 5.1-4	The Project Applicant or Construction Manager shall ensure that, during all grading activities, construction grading shall be discontinued on days forecasted for first-stage alerts.	During all grading activities	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-5	Prior to grading permit issuance, applicants shall be required to conduct an LST analysis (SCVAP MM 3.3-3).	Prior to grading permit issuance	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-6	The Project Applicant or Construction Manager shall ensure that, during mass grading activities, mass grading shall not occur within 1,600 feet of the Northlake Hills Elementary School when school is in session to the maximum extent feasible.	Prior to issuance of grading permits for areas within 1,600 feet of the Northlake Hills Elementary School	Construction Contractor, Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-7	Prior to final building inspection, the applicant shall provide preferential parking spaces for carpools and vanpools at major commercial and office locations. The spaces shall be clearly identified on plot plans and may not be pooled in one location (SCVAP MM 3.3-6).	Prior to final building inspection	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-8	New residential developments shall allow only natural gas-fired hearths and shall prohibit the installation of wood-burning hearths and wood-burning stoves (SCVAP MM 3.3-7).	Prior to issuance of each residential building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-9	A commuter computer program shall be developed for the NorthLake residents in an attempt to reduce commuter vehicle trips generated by the proposed projects. (1992 SP EIR MM 4.5-9).	Prior to issuance of the first residential occupancy permit	Applicant	County of Los Angeles Department of Regional Planning	
MM 5.1-10	Prior to the issuance of each non-residential building permit, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the building designs. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits. • For buildings that are greater than 100,000 square feet of building space or with more than ten tenant-occupants, changing/shower facilities shall be provided as specified in Section A5.106.4.3, Nonresidential Voluntary Measures, of the California Green Building Standards (CALGreen) Code. • Facilities shall be installed to support future electric vehicle charging at each non-residential building with 30 or more parking spaces. Installation shall be consistent with Section A5.106.5.3, Nonresidential Voluntary Measures (Tier 1), of the CALGreen Code. • The Project shall install 135 electric vehicle (EV) chargers[4] at non-residential parking spaces within the Project limits and/or the greater Castaic community.	Prior to the issuance of each non-residential building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-11	Prior to the issuance of each residential building permit, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the building designs or specifications. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits • Visitor parking shall include preferentially located parking spaces for alternative-fueled vehicles. • Bicycle parking shall be provided as specified in Section A4.106.9, Residential Voluntary Measures, of the CALGreen Code, or, provide required long-term and short-term bicycle parking for buildings as specified in Section 22.52.1225 of the County Zoning Ordinance, whichever is more stringent. • 100 percent of residences shall be pre-wired for an EV charging station and at least 10 percent of residences shall have an EV charging station.	Prior to the issuance of each residential building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

[4] Assumed to be Level 2 chargers that can provide enough electricity to provide a 25 mile driving range per hour spent charging.

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.1-12	Prior to issuance of each building permit for parking structures and parking lots with 20 or more parking spaces, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the parking facility. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits. • The parking facility shall include a minimum of five percent preferentially located parking spaces for alternative-fueled (electric, natural gas, or similar low-emitting technology) vehicles. • The parking facility shall include at least one electric vehicle charging station. Electrical lines shall be designed and sized to add additional charging stations for up to three percent of the total parking spaces when a demand is demonstrated. The design and installation shall be consistent with Section A4.106.8.2, Residential Voluntary Measures, of the CALGreen Code. • For residential parking facilities, bicycle parking shall be provided as specified in Section A4.106.9, Residential Voluntary Measures, of the CALGreen code.	Prior to issuance of each building permit for parking structures and parking lots with 20 or more parking spaces	Construction Contractor, Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-13	Once constructed, the Applicant shall ensure that the tenants/operators of non-residential uses include the following features and procedures. Proof of compliance shall be provided to the County within one month following the issuance of each occupancy permit. • Post signs requiring that trucks shall not be left idling for prolonged periods (i.e., in excess of 5 minutes, as required by State law). • Post both bus and Metrolink schedules in conspicuous areas. • Configure the employee work schedules around the local bus schedule and provide said schedules as evidence of compliance to Regional Planning upon request.	Within one month following the issuance of each occupancy permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-14	Prior to the issue of occupancy permits for each industrial building, the Permit Applicant/Developer shall demonstrate that ambient air quality concentrations of criteria pollutants at sensitive receptors resulting from the proposed use(s) shall not exceed the following: • Nitrogen dioxide (NO_2) – 0.10 parts per million (ppm), 1 hour average; 0.03 ppm, annual arithmetic mean • Inhalable particulate matter (PM10) – 2.5 micrograms per cubic meter ($\mu g/m^3$), 24-hour average; 1.0 $\mu g/m^3$-annual average • Fine particulate matter (PM2.5) – 2.5 $\mu g/m^3$, 24-hour average The Permit Applicant/Developer shall also demonstrate through preparation of a subsequent health risk assessment that the incremental health risks from toxic air pollutants at sensitive receptors resulting from the proposed use(s) shall not exceed the following: • Maximum incremental cancer risk – 10 in 1 million • Cancer burden – 0.5 excess cancer cases in areas where the cancer risk exceeds 1 in 1 million • Chronic hazard index – 1.0 • Acute hazard index – 1.0	Prior to the issuance of occupancy permits for each industrial building	Applicant and Future Developers	County of Los Angeles Department of Regional Planning and Department of Public Health	
MM 5.1-15	No playgrounds, ball fields, or other facilities that encourage active recreation shall be built west of the Southern California Edison (SCE) easement.	Prior to tract map approval	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-16	Prior to the commencement of brush clearing, grading, or other activity that would generate fugitive dust, the Property Owner/Developer shall employ a Dust-Control Supervisor who will be on the site within 30 minutes of the start of work taking place each morning; will have the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all South Coast Air Quality Management District (SCAQMD) Rule 403 requirements; and will have completed the SCAQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class.	Prior to brush clearing activities, issuance of grading permits, or other construction activities	Construction Contractor	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.1-17	To aid in the prevention of Valley Fever among construction crews on the Project site, the following measures shall be implemented by the Construction Contractor during all construction activities: • Hire crews from local populations where possible, since it is more likely that they have been previously exposed to the fungus and are therefore immune. • Require crews to use NIOSH-approved respiratory protection with particulate filters to restrict inhalation of particulates during Project clearing, grading, and excavation operations in accordance with California Division of Occupational Safety and Health regulations. • Where acceptable to the County of Los Angeles Fire Department, control weed growth by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering. • During rough grading and construction, the access way into the Project site from adjoining paved roadways shall be paved or treated with environmentally safe dust-control agents.	Prior to issuance of grading permits and through duration of construction activities	Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.1-18	Prior to sale, lease, or rental of any residential structure or portion thereof on the NorthLake Project site, the Property Owner/Developer shall provide to each prospective purchaser or tenant a notice and statement of acknowledgment that shall be executed (i.e., read and signed) by the prospective purchaser, lessee, or tenant that the property within NorthLake may present a temporary risk of exposure to Valley Fever spores during construction or other earth-moving activities. The form shall include strategies to reduce potential exposure to Valley Fever spores. The form and method of distribution of said notice and statement of acknowledgment shall be as approved by the County of Los Angeles Department of Regional Planning**.**	Prior to sale, lease, or rental of any residential structure or portion thereof on the NorthLake Project site	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.1-19	Prior to issuance of each grading and building permit, the applicant/developer shall require in contract specifications, that contractors set goals to limit unnecessary construction equipment idling to 3 minutes and include methods to encourage equipment operators to achieve the 3-minute goal.	Prior to each grading and building permit	Project Applicant and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.1-20	Prior to the issue of the first occupancy permit for commercial or industrial facilities, the master developer shall establish the NorthLake Community Transportation Program that would be established through the creation of Covenants, Codes and Restrictions (CC&Rs) for all commercial and industrial properties within the Specific Plan to establish and coordinate the following programs that would reduce single-vehicle commuting and the associated criteria pollutant and GHG emissions: • Ride share program – The program will establish a system for coordinating ride sharing among employees of on-site commercial and industrial businesses. The program will also work with employers to support vanpools. • Commuter bus program – The program will coordinate with Santa Clarita Valley Transit to (1) extend the existing bus routes into the NorthLake Project area and (2) determine employee demand for express commuter buses to the Project Site and establish commuter bus service in response to demand.	Prior to issuance of the first occupancy permit for commercial or industrial facilities	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
Biological Resources (Section 5.2 of the 2019 Draft EIR, RPDSEIR, RPFSEIR)					
MM 5.2-1	If special-status species may potentially be subject to direct loss through implementation of construction activities, mitigation measures proposed as part of biological site survey reports shall include a requirement for preconstruction special-status species surveys, followed by measures to ensure avoidance, relocation or safe escape of special-status species from construction activity, whichever action is the most appropriate. If special status species are found to be brooding, denning, nesting, etc. on site during the preconstruction survey, construction activity shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate off-site habitat areas. A qualified biologist shall be on site to conduct surveys, to perform or oversee implementation of protective measures, and to determine when construction activity may resume. **(SCVAP 2012 EIR MM 3.7-2)**	Prior to issuance of grading permits	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	
MM 5.2-2	Impacts on sensitive habitats resulting from implementation of the Area Plan shall be compensated for through the acquisition of lands described in Policies CO 10.1.3, CO 10.1.11 and CO 10.1.12. Said acquisition shall prioritize habitat types that are particularly at risk in the region. At risk habitats include but are not limited to waterways, wetlands and vernal pools; alluvial scrub; native grasslands; savannas, woodlands and forests; holly-leaf cherry and Great basin sagebrush associations; and rocklands. **(SCVAP 2012 EIR MM 3.7-2)**	Prior to issuance of grading permit(s) and during construction	Project Applicant, Future Developers, and Construction Contractor	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.2-3	Removal of riparian habitat will require coordination with the California Department of Fish and Wildlife and the U.S. Army Corps of Engineers. Mitigation for riparian habitat lost may include one or a combination of the following measures: 1) project alteration to avoid impacting the onsite riparian habitat; 2) the onsite creation of at least an equal amount of equal quality habitat; 3) enhancement of poor quality onsite habitat, usually greater than 1:1 ratio (habitat lost to habitat enhanced); and 4) creation of offsite habitat where none currently exists. Final mitigation requirements shall be determined through consultation with the appropriate agencies. **(1992 SP EIR MM 4.7-5)**	Prior to issuance of grading permit(s) and during construction	Project Applicant, Future Developers, and Construction Contractor	County of Los Angeles Department of Regional Planning and California Department of Fish and Wildlife and U.S. Army Corps of Engineers	
MM 5.2-4	Mitigation for the club-haired mariposa lily and the slender mariposa lily shall consist of transplantation of lilies to a mitigation site and establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*).[5] The *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from lilies that are located within the impact boundaries and bulbs will be subsequently excavated and stored for later transplantation to the translocation site depicted on Exhibit 5 of the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan.* The Mitigation Program in the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the club-haired mariposa lily and the slender mariposa lily: • A pre-grading survey shall be conducted for two seasons following emergence of leaves and during the peak flowering period (approximately March through June) by the Biological Monitor. The Biological Monitor shall clearly identify each lily location within the impact area with a pin flag for later collection. The pre-grading survey shall also document the approximate coverage of native and non-native plants at each lily population to be impacted. • Prior to seed collection, the existing lily locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities. • Individual lily bulbs shall be excavated and collected following the seed collection and once the bulbs have entered their winter dormancy period (approximately September 1). The bulbs shall be stored by a qualified nursery or institution with appropriate storage facilities and all non-target bulbiferous species shall be discarded. • A portion of the collected seeds will be used to grow 500 slender/club-haired mariposa lilies for contingency purposes and stored a native plant nursery until needed as determined by the project biologist. • Receptor site or sites identified in BonTerra's *Feasibility Analysis of NorthLake Biological Mitigation Requirements* and refined by GLA (as shown on Exhibit 5 of the *Special-Status Plants Impact Assessment and Habitat Mitigation and* Monitoring *Plan*) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. • Receptor sites on lands currently owned by NorthLake will be managed by SMMC or other approved entities. Prior to commencing the actions set forth in this plan, the applicant shall submit final agreements to CDFW and the County with the acceptable entities that will hold the Conservation Easement(s) (CE) and provide long-term management. • Funding for this measure shall be suitably established to the County's satisfaction.	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[5] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• Performance criteria have been developed in the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan,* dated February 2023, and pre-approved by the LACDRP and CDFW. The performance criteria shall address (1) native and non-native plant coverage requirements (mitigation site conditions should be consistent with lily populations in the impact area) and (2) percentage of lilies that exhibit emergent leaves that that bloom each year as follows (because the salvaged plantings will be phased over a three-year period as described above, the monitoring period would be ten years for each phase or a minimum of 13 years beginning from the start of phase 1. As set forth in Table 3 of the of the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan*, under the phased translocation, 40-percent of plants would be translocated in year 1, 40-percent in year 2 and 20-percent in year 3): **Year One** • Emergence of leaves of a minimum of 70-percent of the translocated bulbs • Flowering of a minimum of 50-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Two** • Emergence of leaves of a minimum of 60-percent of the translocated bulbs • Flowering of a minimum of 40-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Three** • Emergence of leaves of a minimum of 50-percent of the translocated bulbs • Flowering of a minimum of 30-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Four** • Emergence of leaves of a minimum of 50-percent of the translocated bulbs • Flowering of a minimum of 30-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Five** • Emergence of leaves of a minimum of 60-percent of the translocated bulbs • Flowering of a minimum of 40-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• No evidence of herbivory **Year Six** • Emergence of leaves of a minimum of 70-percent of the translocated bulbs • Flowering of a minimum of 50-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Seven** • Emergence of leaves of a minimum of 70-percent of the translocated bulbs • Flowering of a minimum of 50-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Eight** • Emergence of leaves of a minimum of 80-percent of the translocated bulbs • Flowering of a minimum of 60-percent of the translocated bulbs **Year Nine** • Emergence of leaves of a minimum of 90-percent of the translocated bulbs • Flowering of a minimum of 70-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory **Year Ten** • Emergence of leaves of a minimum of 100-percent of the translocated bulbs • Flowering of a minimum of 70-percent of the translocated bulbs • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and • No evidence of herbivory • Potential seed sources from additional donor sites shall also be identified in case it becomes necessary to collect additional seed for use on the site following performance of remedial measures. The monitoring shall be conducted for ten years (for each phase) from installation of the translocated bulbs or from installation of container plants. As noted, this could result in two separate and unrelated ten-year monitoring efforts, including one that originates with bulb installation and a subsequent effort that begins with container stock installation. If the performance standards are not being met during the first year, additional measures may be suggested as determined appropriate by the Project Biologist as set forth in the Contingency				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Plan set forth in the Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan as set follows: • If any of the translocation/receptor sites are observed to be failing significantly to achieve the performance standard during the ten-year monitoring period, the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be stored at a nursery for the first year of the program. • If the receptor sites appear on track to meet the performance standards no sooner than year seven of the monitoring and maintenance period, the remaining plant material may be planted at the receptor sites (if space allows) or additional acceptable receptor sites will be identified. • Seeds and/or bulbs will continue to be harvested from lilies maintained in the nursery and installed in the receptor sites on an as-needed basis to ensure receptor sites are progressing toward final performance. • If the receptor sites fail to achieve the performance standards by the tenth year of the program, the monitoring period may be extended if the Project Biologist in consultation with LACDRP and CDFW, determines that the site is continuing to progress and can ultimately achieve the performance standards. Alternatively, if it is determined that a particular receptor site is not able to meet performance standards, then additional receptor sites will be identified to make up the difference. Thus, for example, if a receptor site received 500 bulbs, at the 80-percent success criteria it must have 400 emergent plants or 300 flowering plants to be successful. If the site only exhibits 40-percent emergent plants and 30-percent of flowering Mariposa lilies, then the site would be credited with the partial success achieved and an additional site where the shortfall could be made up would be identified. • Potential seed sources from additional donor sites shall also be identified in case it becomes necessary to collect additional seed for use on the site following performance of remedial measures.				
MM 5.2-5a Mitigation for the round-leaved filaree shall consist of transplantation of round-leaved filaree to a mitigation site and establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*).[6] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from round-leaved filaree that are located within the impact boundaries and stored for propagation of container plants to provide for introduction of propagated plants to the translocation site depicted on Exhibit 4A of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the round-leaved filaree: • A pre-grading survey shall be conducted for two seasons, prior to grading of the occupied area, during the peak flowering period (approximately March through May) by the Biological Monitor. The Biological Monitor shall clearly identify the extent of the round-leaved filaree location within the impact area with pin flags and record the extent of the population using sub-meter GPS for later collection. The pre-grading surveys shall also document the approximate coverage of native and non-native plants at the location of the population to be impacted. • Prior to seed collection, the existing round-leaved filaree locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities.	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[6] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• Collected seeds, up to one half, will be used to grow a minimum of 300 plants and the remaining half will be stored to allow for contingency purposes all of which would be planted at the receptor site once performance standards are achieved. • Receptor site or sites identified by GLA during site assessments in 2021 (see Exhibit 4A in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[7]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP and CDFW. In developing the performance standards for the round-leaved filaree, it is important to consider the primary goal of the plan referenced above, which is to establish a self-sustaining population of this plant consisting of the number of individuals/population size determined during pre-construction surveys. With replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors: • The number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe the translocated populations over a period of years to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track emergent plants along with flowering individuals which in combination provides the best and easiest indicators to track that the translocation is succeeding. • Various threats to the plants must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of recruited individuals, with seed set, leading to future germination/successful reproduction. • Habitat characteristics, including non-native grasses and herbaceous weeds, are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory. Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the variability in the number of flowering individuals from year-to-year, the performance standards will have been achieved during at least three years of the ten-year monitoring program. Thus, the standards provide specific criteria showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction. **Year One Through Year Ten** • Flowering of a minimum of 100-percent of the total number of flowering plants counted during pre-construction surveys originating from container stock or seed bank. As noted, the number of container stock individuals planted or plants originating from seed following the initial establishment will equal or exceed the number impacted as determined during pre-construction surveys during at least three years of the ten-year monitoring period; and • Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial planting (30-percent).				

[7] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

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MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Contingency Plan In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards: • If the receptor site is observed to be failing significantly to achieve the performance standards during the ten-year monitoring period (e.g., flowering of 100-percent is not achieved after three years with normal or above-normal rainfall), the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be propagated from the contingency seed supply held at the nursery for contingency purposes (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials. The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, the container stock would be propagated from the contingency seed and the plants would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance, would be initiated as set forth above.				
MM 5.2-5b Mitigation for the paniculate tarplant shall consist of transplantation of paniculate tarplant by means of seed broadcasting to a mitigation site with establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*).[8] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from paniculate tarplant that are located within the impact boundaries and stored for introduction to the receptor site depicted on Exhibit 4A of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the paniculate tarplant: • A pre-grading survey shall be conducted for two seasons during the peak flowering period (approximately June through August) by the Project Biologist. The Project Biologist shall clearly identify the extent of the paniculate tarplant location within the impact area with perimeter pin flags and sub-meter GPS for later use during seed collection. The pre-grading survey shall also document the approximate coverage of native and non-native plants at the location of the population to be impacted. • Prior to seed collection, the existing paniculate tarplant locations marked during pre-construction surveys shall be monitored every two weeks by the Project Biologist or a qualified Seed Collector under the direction of the Project Biologist to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities. • One third of the collected seeds will be used to broadcast on the receptor site during an initial year and one third would be retained for the second year at the receptor site. The remaining one-third of the seed would be held for contingency purposes until performance standards are achieved. Once they are achieved, the contingency seed would be distributed into the mitigation site. • The receptor site identified by GLA during 2021 (see Exhibit 4A in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[9]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[8] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

[9] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP (and CDFW). In developing the performance standards for the paniculate tarplant, it is important to consider the primary goal of the plan as set forth above, which is to establish a self-sustaining population of this plant consisting of the number of individuals/population size determined during the largest population number of the two years of pre-construction surveys. With replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors: • The number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe the translocated populations over a period of years to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track flowering individuals to confirm that the translocation is succeeding. • Various threats to the plants must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of recruited individuals, with seed set, leading to future germination/successful reproduction. • Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory. Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the variability in the number of flowering individuals from year-to-year, the performance standards will have been achieved during at least three years during the ten-year monitoring program. Thus, the annual standards provide specific criteria showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction. **Year One Through Year Ten** • Flowering of a minimum of 100-percent of the total number of flowering plants counted during the larger of the two years during which pre-construction monitoring was conducted. This would be achieved during at least three years of the ten-year monitoring period); and • Habitat subject to translocation must exhibit same or less cover by non-native grasses; and forbs than during the initial planting (30-percent). **Contingency Plan** In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards: • If the receptor site is observed to be failing significantly to achieve the performance standards during the ten-year monitoring period (e.g., flowering of 100-percent is not achieved after three years with normal or above-normal rainfall), the Biological Monitor will identify an alternate site(s) in which to install the contingency seed held at the nursery for contingencies purposes (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials. • The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, contingency seed would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance would be initiated as set forth above.				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.2-5c	Mitigation for the southwestern spiny rush includes two components to ensure long-term persistence of southwestern spiny rush in northern Los Angeles County. Mitigation includes 1) preservation of streambed habitat within Marple Canyon that contains 523 individuals of the spiny rush, and 2) planting of southwestern spiny rush at a mitigation site with establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan)*.[10] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seed will be collected from southwestern spiny rush plants located within the impact boundaries. The collected seed will be stored for propagation of container plants. Once propagated, the container plants would be introduced to the translocation site depicted on Exhibit 4B of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan.* The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the southwestern spiny rush: • A pre-grading survey shall be conducted during a single season during the peak flowering period (approximately March through May) by the Biological Monitor. The Biological Monitor shall identify the extent of the southwestern spiny rush location within the impact area using sub-meter GPS for later seed collection. • Prior to seed collection, the existing southwestern spiny rush locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities. • Collected seeds will be used to grow a minimum of 600 plants to allow for contingency purposes all of which would be planted at the receptor site. Half of the seed collected will be retained by the nursery for additional propagation as a contingency measure. • Receptor site or sites identified by GLA during site assessments in 2021 (see Exhibit 4B in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[11]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas. Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP and CDFW. In developing the performance standards for the southwestern spiny rush, it is important to consider the primary goal of the plan as set forth above, which is to provide for a combination of preservation and establishment of a self-sustaining population of this plant consisting of the 300 individuals, which in combination of the preservation in Marple Canyon would mitigate impacts to this species. In order to achieve survival of 200 plants within Grasshopper Creek, 300 individuals will be planted initially to allow for natural attrition. With the combined preservation and replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors: • Southwestern spiny rush is a perennial plant and the number of flowering individuals in any given year does not vary substantially. However, based on environmental conditions, it is not expected that populations change significantly over the period of years needed to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track the existing population within Marple Canyon along with established individuals in Grasshopper Creek to determine progress.	Prior to vegetation clearing and/or grading activities; monitoring shall be conducted for ten years or until the mitigation site reaches its performance standards	Project Applicant, Future Developers, Construction Contractor and Qualified Biologist	County of Los Angeles Department of Regional Planning	

[10] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

[11] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to the RPDSEIR).

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
• Various threats to the plants established within Grasshopper Creek must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of planted and recruited individuals, with seed set, leading to future germination/successful reproduction. • Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory. Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the expected stability in the number of flowering individuals from year-to-year, the performance standards will have been achieved at the end of the ten-year monitoring program. Thus, the annual standards provide a guide showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction. **Marple Canyon Year One Through Year Ten** • Persistence of Marple Canyon population totaling 523 individuals with no more than ten-percent reduction due to such factors such as drought. Thus, there would be a minimum of 471 individuals at the end of the ten-year monitoring period. **Grasshopper Creek Year One** • Survival of 80-percent of the 200 established individuals. • Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year. **Grasshopper Creek Year Two** • Survival of 90-percent of the 200 established individuals. • Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year. **Grasshopper Creek Year Three through Ten** • Survival of 100-percent of the 200 established individuals. • Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year. **Contingency Plan** In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards: • If the Grasshopper Creek receptor site is observed to be failing significantly to achieve the performance standard during the ten-year monitoring period (e.g., survival of 100-percent of 200 established individuals is not achieved by the end of ten years), the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be propagated from the contingency seed supply held at the nursery for the (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials. The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, the container stock would be propagated from the				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	contingency seed and the plants would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance, would be initiated as set forth above.				
MM 5.2-6	The loss of sage scrub habitat within the impact area is considered a significant impact. Sage scrub habitat shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but shall be no less than 2:1 for habitat restoration, enhancement or preservation, or combination thereof. A total of 634.70 acres of sage scrub would be impacted by Project implementation, which includes Purple sage scrub, California sagebrush–California buckwheat scrub, Black sage scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, California sagebrush–California buckwheat scrub/California annual grassland, and the burned sage scrub areas: burned Purple sage scrub, burned California sagebrush–California buckwheat scrub, burned Black sage scrub, and burned California sagebrush–California buckwheat scrub/California annual grassland. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, and preservation shall depend on the initial quality of the habitat area to be restored, enhanced or preserved and would be determined by the Project Applicant and the LACDRP. Sage scrub habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. Where restoration or enhancement is the proposed mitigation, the Project Applicant shall develop a Habitat Mitigation and Monitoring Program (HMMP) and shall submit it to the LACDRP and the California Department of Fish and Wildlife (CDFW) for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to the issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants of suitable sage scrub species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), Peirson's morning-glory will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria, which shall include the following items: **Responsibilities and Qualifications**. The responsibilities and qualifications of the Project Applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures and/or State or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency. b. **Performance Criteria**. Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The HMMP shall state that the use of the mitigation site by special status wildlife species (e.g., coastal California gnatcatcher), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off. c. **Site Selection.** The mitigation sites shall be determined in coordination with the Project Applicant and the LACDRP. The site(s) shall be located in dedicated open space areas (or areas available for dedication), and shall be contiguous with other natural open space areas. Mitigation sites include onsite, NorthLake-owned offsite property, and obtaining acres from a CDFW-approved mitigation bank or through purchase and long-term conservation of suitable habitat, including areas where restoration or enhancement is needed, or a combination of the two options to account for the remainder. The Project Applicant shall demonstrate acquisition of suitable lands for restoration, enhancement, or preservation prior to issuance of the Project grading permit.	Prior to issuance of grading permits, and HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	County of Los Angeles Department of Regional Planning/California Department of Fish and Wildlife	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
d. **Native Plant and Seed Materials Procurement**. For restoration or enhancement, at least three years prior to mitigation implementation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin: i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. All container plants shall be propagated from seed of local origin as defined above. No plant or seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the' following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. e. **Wildlife Surveys and Protection.** The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., coastal California gnatcatcher]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. The HMMP shall also describe potential restrictions on these management tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). f. **Site Preparation and Plant Materials Installation.** For restoration or enhancement, mitigation site preparation shall include, as necessary (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, decompacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photodegradable'] fiber roll); (f) application of salvaged native plant materials (i.e., duff) as available, and supervised by a biological monitor, (g) temporary irrigation installation; (h) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials including specification of approved herbicides); (i) planting of container species; and (j) seed mix application. g. **Schedule.** An implementation schedule shall be developed for restoration or enhancement, that includes planting and seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). h. **Maintenance Program**. The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal-including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) replacement of dead container plants (as needed); (g) application of remedial seed mixes (as needed); (h) herbivory control; and (i) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. The mitigation site shall be maintained for a period of five years to ensure the successful sage scrub habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria. i. **Monitoring Program**. The Monitoring Program for restoration or enhancement shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring (e.g., randomly placed point-intercept transects); (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the Project Applicant has been released from maintenance requirements by the LACDRP. j. **Long-term preservation**. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.				

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.2-7	The loss of California annual grassland/wildflower fields within the impact area is considered to be a significant impact. California annual grassland/wildflower fields shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 24.23 acres of Foothill needlegrass grassland and burned Foothill needle grass grassland would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). California annual grassland/wildflower fields habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP and the California Department of Fish and Wildlife (CDFW) for review and approval. The HMMP shall be developed by a qualified restoration ecologist submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for burrowing owls. Habitat restoration/enhancement shall consist of seeding of suitable California annual grassland/wildflower fields plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria, which shall include the following items: • The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration enhancement programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency. • Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program. • The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas or areas available for dedication as open space, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owls and other wildlife species; e.g., opportunities for escape and refuge from stochastic events such as fire, flood, etc.; (3) consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible. soil types and microhabitat conditions suitable for the special status plant species listed above. • At least two years prior to mitigation plant and seed installation associated with restoration of enhancement, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in	Prior to issuance of grading permits, HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	County of Los Angeles Department of Regional Planning/California Department of Fish and Wildlife	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. • The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owls, to determine the species' occupation of the mitigation site(s). The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). • For restoration or enhancement, mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) temporary irrigation installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)--including specification of approved herbicides; and (g) seed mix application. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. • An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). • The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal-including specification of approved herbicides; (d) maintenance of erosion control measures; (e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria for restoration or enhancement. • The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo documentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.					
MM 5.2-8	The loss of foothill needlegrass grassland within the impact area is considered to be a significant impact. Foothill needlegrass grassland shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 342.85 acres of California annual grassland/Wildflower fields would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the	Prior to issuance of grading permits, HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	County of Los Angeles Department of Regional Planning/California Department of Fish and Wildlife	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). Foothill needlegrass grassland habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP and the California Department of Fish and Wildlife (CDFW) for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for the burrowing owl. Habitat restoration/enhancement shall consist of seeding of suitable foothill needlegrass grassland plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and CDFW and according to its specified materials, methods, and performance criteria, which shall include the following items: a. **Responsibilities and Qualifications**. The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency. b. **Performance Criteria**. Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for the burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off. c. **Site Selection**. The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas or areas available for dedication, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owls and other wildlife species; e.g., opportunities for escape and refuge from stochastic events such as fire, flood, etc.; (3) consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible, soil types and microhabitat conditions suitable for the special status plant species listed above. d. **Seed Materials Procurement.** At least two years prior to mitigation plant and seed installation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area. in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. e. **Wildlife Surveys and Protection**. The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation,				

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installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owls, to determine the species' occupation of the mitigation site(s). The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). f. **Site Preparation and Plant Materials Installation**. For restoration or enhancement, mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, decompacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photodegradable'] fiber roll); (f) temporary irrigation installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)--including specification of approved herbicides; and (h) seed mix application. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. g. **Schedule**. An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). h. **Maintenance Program**. The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal- including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shalt reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria. i. **Monitoring Program.** The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP. j. **Long-term preservation**. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.				
MM 5.2-9 A mitigation program for western spadefoot toad (WST) shall be implemented prior to construction, ground disturbance, or vegetation removal that would impact the WST breeding habitat, or areas within 1,000 feet of WST-occupied ponds within the Project Site. The mitigation program would include the components set forth below. A detailed methodology for this effort shall be reviewed by the CDFW and the LACDRP prior to implementation of the mitigation program. Results of the mitigation program shall be provided to the CDFW and the LACDRP. • Prior to implementing the Spadefoot Relocation Plan, two focused surveys during average or above-average rainfall years will be conducted within the prior appropriate seasons. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e.,	Prior to construction activities in the spring during the breeding season	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	California Department of Fish and Wildlife and County of Los Angeles Department of Regional Planning	

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2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied pond as well as those identified in recent surveys. • Suitable sites for seasonal pond creation, within the Project open space, specifically within other NorthLake-owned properties, have been identified and 1.07 acres of seasonal pond habitat will be created. The specific location of the 1.07-acre pool complex is depicted on Exhibit 5 of the *NorthLake Castaic, Los Angeles County, California, Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan July 2022 (Revised March and June 2023)* (HMMP). As described in the WST Mitigation Implementation Plan, three pools would be created based on current grading plans. The combined size of the three pools (1.07 acres) exceeds the maximum combined size of potential WST habitat currently at the Project Site (0.95 acres, as shown in Table 2-4, above). The WST Mitigation Implementation Plan would address the following issues specific to the site or sites: o Soil Characteristics and whether clay liners will be necessary o Pool locations and site access routes for construction o Types of habitat potentially affected by construction and measures to restore damaged habitat subject to temporary impacts o Watershed size and characteristics o Grading plan with cross section for each pool to be created o Specifications for clay liner (if needed) including source of clay and installation methods o Upland habitat characteristics, including soil suitability for burrowing and vegetative buffer, will also be addressed in the plan • Following creation of the 1.07-acre pool complex or complexes and prior to grading of the impacted pools, each pool within each complex will be monitored during the rainy season to ensure that the created pools exhibit at least 60 days of ponding during an average or above-average rainfall year. • Following documentation of adequate ponding for each created pool during an average or above-average rainfall year, and prior to grading of the impacted pools, soil inoculum from the impacted pools will be translocated to the created pools to provide a food source for WST. • Following documentation of adequate ponding for each created pool during an average or above-average rainfall year, and prior to grading of the impacted pools, WST egg masses, larvae and metamorphs will be translocated to the created pools for at least two wet seasons where WST egg masses, larvae and metamorphs are present in the impact pools and suitable conditions to receive the WST egg masses, larvae and metamorphs are present in the created pools. In addition, data regarding successful breeding will be submitted to CDFW for concurrence that sufficient reproduction has occurred to allow impacts to the pools in the development area. • During grading of the pools to be impacted, the Project Biologist will be present to rescue any adult WST that would be relocated to the created pool complex. • Following the two seasons of translocation of WST egg masses, larvae and metamorphs, and successful breeding, the created pools will be monitored for ten years as set forth in HMMP Table 6 (Conceptual Schedule for Pond Creation Milestones) to document the progression of the WST toward the performance standards provided in the WST HMMP prepared for the project: o **Hydrological Monitoring Performance Standard.** Ponding duration of at least 60 days must be documented to occur during average or above average rainfall years prior to translocation of egg masses, larvae, metamorphs, or adults. Ponding duration of at least 60 days must also be documented during the 10-year monitoring period. At the end of the ten-year monitoring period, this performance standard will have been achieved if ponding duration equals or exceeds ponding duration of 60 days during average or above-average rainfall years. It is important to note that during below-average rainfall years, depending on the severity of drought conditions that the created ponds will not pond for sufficient duration to allow WST to reach maturity. Thus, during the ten-year monitoring period, it is to be expected that some years will not pond for 60 days. Nevertheless, the performance standard				

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for hydrology will be considered achieved as long a ponding for 60 days occurs during average rainfall years. Finally, hydrology may be augmented at the direction of the Project Biologist, especially once breeding is observed and is threatened by declining water levels in the pools due to lower-than average rainfall. In the event that the Project Biologist determines that additional water should be added to any pond occupied by egg masses or larvae, it will be necessary to ensure protection of the egg masses and larvae by discharging water to the pool(s) in a manner that does not disturb the egg masses or larvae and does not result in the erosion of soil into the pool(s). This could be accomplished through temporary placement of large gravel at the discharge site (at the edge of the pool(s)) underlain by plastic that would allow the water to enter the pool(s) slowly and with no sediment. o **Performance Standard Prior to Grading**. Prior to Project grading that removes the impacted doner pools, during an average or above-average rainfall year, at least two of the three created ponds within the pond complex exhibits emergence of metamorphs in each pond to ensure breeding in subsequent years. Successful breeding would be determined by the presence of egg masses that are not present due to translocation but which occur due to reproduction. Should this occur during a below-average rainfall year, the condition would be satisfied as it would show that the pools are performing as intended. In any case, data regarding successful breeding will be submitted to CDFW for concurrence that sufficient reproduction has occurred to allow impacts to the pools in the development area. o **Performance Standard Post-Grading**. Following Project grading that removes the impacted donor pools, during an average or above-average rainfall year, at least two of the three created ponds within the pond complex will exhibit breeding as indicated by the presence of WST egg masses, tadpoles/larvae/ or metamorphs, to confirm establishment of breeding WST for each pond complex created. Should this occur during a below-average rainfall year, the condition would be satisfied as it would show that the pools are performing as intended.				
MM 5.2-10 A Biological Monitor shall be on site during all vegetation clearing activities and thereafter on an as-needed basis. The Biological Monitor will conduct a clearance sweep prior to clearing activities to minimize potential for special status reptile mortality. If feasible, special status reptiles will be removed from the disturbance area and relocated to suitable habitat in adjacent areas.	Prior to and during all vegetation clearing activities	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	
MM 5.2-11 Riparian vegetation shall be preserved, restored, or enhanced on site or off site at a ratio identified in the USACE and CDFW permits/agreements for the project. The ratio shall be no less than 2:1 for habitat restoration or preservation. Habitat enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. The mitigation ratio for habitat enhancement shall depend on the initial quality of the habitat area to be enhanced, and would be determined by the Project Applicant, the USACE, the CDFW, and the LACDRP. Riparian habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The Project Applicant shall develop a HMMP and shall submit it to the USACE, the CDFW, and the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist and approved by the USACE, the CDFW, and the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants and cuttings of suitable riparian plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), spiny rush will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP and according to its specified materials, methods, and performance criteria, which shall include the following items: a. **Responsibilities and Qualifications.** The responsibilities and qualifications of the Project Applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under USACE and CDFW permit conditions. A successful program shall be defined as one that has been signed off on by the USACE and the CDFW.	Prior to issuance of grading permits, HMMP implementation shall begin no more than one year following project impacts to this habitat type	Project Applicant, Future Developers, Construction Contractor, and Qualified Restoration Ecologist	U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and County of Los Angeles Department of Regional Planning	

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b. **Performance Criteria.** Mitigation performance criteria to be specified in the HMMP shall conform to USACE and CDFW permit conditions. The HMMP shall state that the use of the mitigation site by special status wildlife species (e.g., least Bell's vireo), though not a requirement for site success, would be regarded by the USACE, the CDFW, and the LACDRP, as a significant factor in considering eligibility for program sign-off. c. **Site Selection.** The mitigation sites shall be determined in coordination with the Project Applicant, the USACE, the CDFW, and the LACDRP. The site(s) shall be located in dedicated open space areas, and shall be contiguous with other natural open space areas. d. **Seed Materials Procurement.** At least two years prior to mitigation implementation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. e. **Wildlife Surveys and Protection.** The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., least Bell's vireo]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). f. **Site Preparation and Plant Materials Installation.** Mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) application of salvaged native plant materials (i.e., coarse woody debris), as available and supervised by a biological monitor; (g) temporary irrigation installation; (h) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)—including specification of approved herbicides; (i) planting of container plant and cutting species; and (j) seed mix application. g. **Schedule.** An implementation schedule shall be developed that includes planting and seeding to occur in late fall and early winter (i.e., between November 1 and February 15) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). h. **Maintenance Program.** The Maintenance Program shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal—including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) replacement of dead container plant and cuttings (as needed); (g) application of remedial seed mixes (as needed); (h) herbivory control; and (i) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. The mitigation site shall be maintained for a period of five years to ensure the successful sage scrub habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the USACE, the CDFW, and the LACDRP prior to five years if the mitigation program has achieved all performance criteria. i. **Monitoring Program.** The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring (in conformance with the USACE 2015 Guidelines); and (c) annual monitoring reports, which shall be submitted to the USFWS, the CDFW, and the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and				

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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
	compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the Project Applicant has been released from maintenance requirements by the USACE, the CDFW, and the LACDRP. j. **Long-term preservation.** Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.				
MM 5.2-12	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of vegetation associated with project implementation, the limits of disturbance shall be clearly defined and marked in the field using lath and flagging or orange snow fencing. The Biological Monitor shall review the limits of disturbance prior to initiation of construction activities. The Biological Monitor shall be on site during the initial vegetation clearing and thereafter on an as-needed basis to assist the Project Applicant with mitigation measure compliance and to provide guidance in avoiding and/or minimizing impacts to biological resources.	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of vegetation associated with project implementation	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	
MM 5.2-13	The Project shall be conducted in compliance with the conditions set forth in the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code with methods approved by USFWS and CDFW to protect active bird//raptor nests. The nature of the Project requires that work would be initiated during the breeding season for nesting birds (March 15-September 15) and nesting raptors (February 1-June 30). LACFCO, in consultation with a qualified biologist, may employ bird exclusionary measures (e.g., mylar flagging) prior to the start of bird breeding season to minimize opportunities for birds to nest within established boundaries of the Project. In order to avoid direct impacts on active nests, a pre-construction survey shall be conducted by a qualified Biologist for nesting birds and/or raptors within 3 days prior to clearing of any vegetation or any work near existing structures (i.e., within 50 feet for nesting birds and within 500 feet for nesting raptors). If the Biologist does not find any active nests within or immediately adjacent to the impact area, the vegetation clearing/construction work shall be allowed to proceed. Results of the surveys will be provided to the CDFW and the LACDRP. CDFW will be consulted for their determination of the need for an Incidental Take Permit, in the event that any listed or candidate species are encountered during pre-construction surveys. If the Biologist finds an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted or breeding activities substantially disrupted, the Biologist shall delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the nature of the construction activity. Typical nest buffers may be approximately 200 feet for song birds and 500 feet for raptors. Any nest found during survey efforts shall be mapped on the construction plans. The active nest shall be protected until nesting activity has ended. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by a qualified Biologist: (1) clearing limits shall be established within a buffer around any occupied nest, unless otherwise determined by a qualified Biologist and (2) access and surveying shall be restricted within the buffer of any occupied nest, unless otherwise determined by a qualified Biologist. Encroachment into the buffer area around a known nest shall only be allowed if the Biologist determined that the proposed activity would not disturb the nest occupants. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest or the nest has failed.	Within 3 days prior to vegetation clearing activities or work near existing structures	Project Applicant, Future Developers, Construction Contractor, and Qualified Biologist	California Department of Fish and Wildlife and County of Los Angeles Department of Regional Planning	
MM 5.2-14	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable wintering burrowing owl habitat, the area shall be assessed during the appropriate time of year (October 15 to March 31). In the event that wintering owls or burrows are detected, CDFW will be consulted. If the habitat assessment concludes that the area lacks potentially suitable burrowing owl burrows, no additional action is required. However, if potentially suitable burrows are located in the assessment area, any burrows that may be impacted by the project will be replaced with artificial burrows within on-site or off-site (if applicable) preserved areas with potentially suitable burrowing owl habitat, following consultation with CDFW. If a wintering owl is observed during the non-nesting season, the burrow will be monitored by a qualified Biologist and, when the burrowing owl is away from the burrow, the burrow will be removed (or the burrow closed) so the burrowing owl cannot return to the burrow, following consultation with CDFW. The qualified Biologist will supervise the removal of the burrow.	Prior to grading and/or construction related activities involving the disturbance and/or removal of potentially suitable wintering burrowing owl habitat	Project Applicant, Construction Contractor, and Qualified Biologist	County of Los Angeles Department of Regional Planning	

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MM 5.2-15	Due to the close proximity of occupied habitat of a federally listed coastal California gnatcatcher, the Project shall not commence without consultation with the USFWS due to the potential for take per the FESA. The consultation will occur within the framework of Section 7 through the USACE regulatory permitting process. If required by the USFWS, a Biological Assessment will be provided to support the Service's Biological Opinion.	Prior to the initiation of any grading and/or construction-related activity	Project Applicant and Future Developers	U.S. Fish and Wildlife Service and County of Los Angeles Department of Regional Planning	
MM 5.2-16	To limit the amount of operational noise (i.e., from residents) to surrounding natural open space areas, a 100-foot buffer within the fuel-modification zone shall be planted along the boundary of developed land uses with plant species to be reviewed and approved by the Los Angeles County Fire Department and the LACDRP Biologist. The vegetation within the transition zone buffer will block sound waves and screen noise from the adjacent development so that the amount of indirect noise reaching the wildlife habitat would be reduced. Landscaping in areas adjacent to natural open space shall use species native to the project region that are considered fire-retardant (e.g., toyon [*Heteromeles arbutifolia*]). The Planting Plan shall be submitted to the Los Angeles County Fire Department and LACDRP Biologist for review and approval prior to issuance of a building permit.	Prior to the initiation of any grading and/or construction-related activity	Project Applicant, Future Developers, and Construction Contractor	Los Angeles County Fire Department and County of Los Angeles Department of Regional Planning	
MM 5.2-17	Prior to the issuance of building permits, a Lighting Plan for the subject tract shall be submitted to the LACDRP for review and approval to demonstrate that lighting from the proposed project shall be directed away from natural open space areas and any proposed biological resources mitigation sites. Land uses with high-intensity lighting shall be relocated within the development to areas away from natural open space.	Prior to the issuance of building permits	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.2-18	To limit the amount of human disturbance to surrounding natural open space areas, a Fencing Plan to deter project occupants from entering the natural areas shall be prepared by the project developer and implemented. The Fencing Plan shall include provisions for signs and wildlife-friendly split-rail fencing to direct residents to keep out of sensitive natural open space and revegetation and/or mitigation areas. In areas bordering natural open space and fuel-modification zones, the Landscape Plan shall reflect a transition zone designed to buffer natural habitats from developed areas and proposed fencing. This transition zone should reduce impacts associated with invasion by introduced species and should help buffer human activity adjacent to the wildlife habitat. Landscaping in areas adjacent to natural open space shall use species native to the project region (e.g., toyon) and be consistent with guidelines from the Los Angeles County Fire Department.	Prior to the initiation of any grading and/or construction-related activity and throughout Project operation	Project Applicant, Future Developers and Construction Contractor	Los Angeles County Fire Department and County of Los Angeles Department of Regional Planning	
MM 5.2-19	Landscaping designs shall be submitted to LACDRP for review and approval by a qualified Biologist. The review shall ensure that no invasive, exotic plant species are used in any proposed landscaping and that suitable substitutes are proposed. Excluded plant species shall be consistent with the California Invasive Plant Council current list at the time of installation. Only native species from the Santa Clarita Valley region shall be used in landscaping along the project boundaries adjacent to open space.	Prior to approval of landscape plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.2-20	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable bat roosting habitat, namely rocky outcrops or trees, a qualified Biologist shall conduct a pre-construction bat habitat assessment of the potential habitat marked for removal. Potential for roosting will be categorized by (1) potential for solitary roost sites and (2) potential for colonial roost sites (i.e., ten bats or more). If the potential for colonial roosting is determined, CDFW will be consulted and those rocky outcrops or trees shall not be removed during the bat maternity roost season (March 1 to July 31). Trees potentially supporting colonial roosts outside the maternity roost season and trees potentially supporting solitary roosts may be removed via a two-step removal process whereby, at the direction of the Biologist, some level of disturbance (such as trimming of lower branches of trees) is applied to the habitat on the day prior to removal to allow bats to escape during the darker hours. In the case of a tree, it shall be removed the following day (i.e., there shall be no less or more than one night between initial disturbance and the grading or tree removal). Rock outcrops potentially supporting colonial roosts outside the maternity roost season and rock outcrops potentially supporting solitary roosts may be fitted with a bat exclusionary device, at the entry location, whereby bats are allowed to leave the structure but unable to return. The structure can be demolished the following day. In addition, the habitat replacement requirements of other Mitigation Measures further reduce the impact to bats through the preservation, enhancement, restoration and/or creation of impacted vegetation, which shall be generally suitable for impacted bat species. Prior to disturbance of any roosting habitat, a Bat Relocation Monitoring Plan (BRMP) shall be submitted and approved by the CDFW and the LACDRP. The BRMP shall include, at a minimum, the following items: (1) species of bats present onsite, (2) habitat uses of the site (i.e., roosting, hibernating, etc.) (3) roosting habitat replacement feature guidelines, (4) construction	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable bat roosting habitat	Project Applicant, Future Developers and Qualified Biologist	California Department of Fish and Wildlife and County of Los Angeles Department of Regional Planning	

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	monitoring guidelines, (5) habitat replacement feature monitoring, and (6) reporting requirements. Reporting shall occur annually to LACDRP and CDFW. The BRMP will be submitted annually for five years.				
MM 5.2-21	Prior to the issuance of a grading permit, the project applicant will apply for coverage under the State Water Resources Control Board's General Permit for Storm Water Discharge Associated with Construction Activity (Construction Activities General NPDES Permit) and will comply with all the provisions of the permit, including the development of a Storm Water Pollution Prevention Plan, which includes provisions for the implementation of Best Management Practices and erosion control measures. Best Management Practices will include both structural and non-structural measures. The purpose of this mitigation measure is to ensure that site runoff does not adversely affect downstream biological resources including Castaic Lake, Castaic Creek, and the Santa Clara River.	Prior to the issuance of a grading permit	Project Applicant	State Water Resources Control Board	
MM 5.2-22	The project applicant shall retain a qualified biologist with the appropriate handling permits to conduct focused surveys for Crotch's bumble bee within the proposed habitat restoration/enhancement sites prior to implementation of the HMMP as set forth in MM 5.2-6 through MM 5.2-8. Focused surveys shall follow California Department of Fish and Wildlife's (CDFW) Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023). Focused surveys shall also be conducted throughout the entire proposed mitigation areas and during the appropriate flying season to ensure no missed detection of Crotch's bumble bee occurs. Survey results, including negative findings, shall be submitted to CDFW and LACDRP prior to the start of a monitoring program.	Prior to the implementation of the HMMP and during the appropriate flying season	Project Applicant	County of Los Angeles Department of Regional Planning	
Cultural Resources (Section 5.3 of the 2019 Draft SEIR)					
MM 5.3-1	If human remains are encountered during a public or private construction activity, other than at a cemetery, State Health and Safety Code 7050.5 states that no further disturbance shall occur until the Los Angeles County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The Los Angeles County Coroner must be notified within 24 hours. If the coroner determines that the burial is not historic, but prehistoric, the Native American Heritage Commission (NAHC) must be contacted to determine the most likely descendent (MLD) for this area. The MLD may become involved with the disposition of the burial following scientific analysis. (**SCVAP 2012 EIR MM 3.8.7)**	During grading and earth disturbance activities	Project Applicant and Construction Contractor	Los Angeles County Coroner and Native American Heritage Commission	
MM 5.3-2	In the unlikely event that artifacts are found during grading within the County's Planning Area or future roadway extensions, an archaeologist will be notified to stabilize, recover, and evaluate such finds. (**SCVAP 2012 EIR MM 3.8.3)**	During grading and earth disturbance activities	Project Applicant, Construction Contractor, and Qualified Archaeologist	County of Los Angeles Department of Regional Planning	
MM 5.3-3	For archeological sites accidentally discovered during future construction, there shall be an immediate evaluation of the find by a qualified archeologist. If the find is determined to be a historical or unique archeological resource, as defined under CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be provided. Construction work may continue on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i). (**SCVAP 2012 EIR MM 3.8.5)**	During grading and earth disturbance activities	Project Applicant, Construction Contractor, and Qualified Archaeologist	County of Los Angeles Department of Regional Planning	
MM 5.3-4	During grading activities. In the unlikely event that artifacts are found during grading within the Project site, a paleontologist will be notified to stabilize, recover, and evaluate such finds. (**SCVAP 2012 EIR MM 3.8.6, modified)**	During grading and earth disturbance activities	Project Applicant, Construction Contractor, and Qualified Paleontologist	County of Los Angeles Department of Regional Planning	
MM 5.3-5	Avoidance is the preferred treatment for cultural resources. Where feasible, project plans shall be developed to allow avoidance of cultural resources. Where avoidance of construction impacts is possible, covering of the cultural resource site with a layer of chemically stable soil and avoidance planting (e.g., planting of prickly pear cactus) shall be employed to ensure that indirect impacts from increased public availability to the site are avoided. Where avoidance is selected, cultural resource sites shall be deeded into permanent conservation easements or dedicated open space. **(SCVAP 2012 EIR MM 3.8.1)**	During grading and earth disturbance activities	Project Applicant	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

	Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.3-6	If avoidance and/or preservation of in place cultural resources is not possible, the following mitigation measures shall be initiated for each impacted site: a. A participant-observer, as determined by the Native American Heritage Commission (NAHC), shall be used during archaeological testing or excavation in the project site. Prior to the issuance of a grading permit for the project, the project proponent shall develop a test level research design detailing how the cultural resource investigation shall be executed and providing specific research questions that shall be addressed through the excavation program. In particular, the testing program shall characterize the site constituents, horizontal and vertical extent, and, if possible, period of use. The testing program shall also address the California Register and National Register eligibility of the cultural resource and make recommendations as to the suitability of the resource for listing on either Register. The research design shall be submitted to the County of Los Angeles Regional Park and Open-Space District for review and comment. For sites determined, through the Testing Program, to be ineligible for listing on either the California or National Register, execution of the Testing Program will suffice as mitigation of project impacts to this resource. (**SCVAP 2012 EIR MM 3.8.2)**	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant and Construction Contractors	County of Los Angeles Regional Park and Open Space District and Native American Heritage Commission	
MM 5.3-7	All Project-related ground-disturbing activities in archaeologically sensitive sediments shall be monitored by a qualified Archaeologist to reduce any archaeological resources impacts to a level considered less than significant. The construction monitoring program shall be preceded by a pre-grade meeting in the field in which the Project Archaeologist shall explain the procedures necessary to protect and safely remove potentially significant archaeological resources, and shall establish procedures for monitoring based on the sensitivity of the sediments being graded, schedule, and other information received from the applicant. If potential cultural sites are identified during construction-related ground disturbances, all work in that location shall cease or be immediately diverted until the qualified archaeologist has evaluated the nature and significance of the find. The Project Applicant shall then be notified if the materials are believed to be potentially significant, and the archaeologist may recommend further study and mitigation to the satisfaction of LACDRP.	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant, Construction Contractors, and Qualified Archaeologist	County of Los Angeles Department of Regional Planning	
MM 5.3-8	At such time when the Project Archaeologist is on-site for monitoring activities, a qualified Native American Tribal Monitor shall be notified and invited to observe ground-disturbing activities. The Native American Tribal Monitor shall coordinate with the Project Archaeologist and provide input regarding potential resources or cultural sites. Should any resources be discovered, the procedures set forth in MM 5.3-2 shall be followed.	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant, Construction Contractors	County of Los Angeles Department of Regional Planning and Native American Heritage Commission	
MM 5.3-9	All Project-related ground-disturbing activities in paleontologically sensitive sediments shall be monitored by a qualified Paleontologist to reduce any impacts to non-renewable fossil resources to a level considered less than significant. The construction monitoring program shall be preceded by a pre-grade meeting in the field in which the Project Paleontologist shall explain the procedures necessary to protect and safely remove potentially significant fossil materials for study and curation at the Natural History Museum of Los Angeles County, and shall establish procedures for monitoring based on the sensitivity of the sediments being graded, schedule, and other information received from the applicant. If potential paleontological sites are identified during construction-related ground disturbances, all work in that location shall cease or be immediately diverted until the qualified paleontologist has evaluated the nature and significance of the find. The Project Proponent will then be notified if the materials are believed to be potentially significant, and the paleontologist may recommend further study and mitigation to the satisfaction of LACDRP.	Prior to the issuance of a grading permit and during grading and earth disturbance activities	Project Applicant, Construction Contractors, and Qualified Paleontologist	County of Los Angeles Department of Regional Planning	
Energy (Section 5.4 of the 2019 Draft SEIR)					
MM 5.4-1	The County shall review all development plans to guarantee that energy conservation and efficiency standards of Title 24 are met and are incorporated into the design of the proposed project prior to approval. (**SCVAP 2012 EIR MM 3.17-7**)	Prior to approval of development plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.4-2	The County shall review all development proposals to guarantee that sufficient energy resources and facilities are available to supply adequate energy to the proposed project and associated uses prior to approval. (**SCVAP 2012 EIR MM 3.17-6)**	Prior to approval of development plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

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MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Greenhouse Gas Emissions (Section 5.7 of the 2019 Draft SEIR)					
MM 5.7-1	Prior to the issuance of building permits, the applicant shall provide evidence of green building practices and design elements that reduce GHG emissions, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-1**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-2	Prior to the issuance of building permits, the applicant shall provide evidence of energy- efficient designs, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards, such as those found in the Leadership in Energy and Environmental Design ("LEED") Green Building Ratings and/or comply with Title 24, Part 11, the California Green Building Standards Code. (**SCVAP MM 3.4-2**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-3	Prior to the issuance of building permits, the applicant shall provide evidence of energy efficient lighting, heating and cooling systems, appliances, equipment, and control systems, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-3**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-4	Prior to the issuance of building permits, the applicant shall provide evidence of light colored "cool" roofs and cool pavements, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-4**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-5	Prior to the issuance of building permits, the applicant shall provide evidence of efficient lighting (including LEDs) for traffic, street, and other outdoor lighting purposes, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-5**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-6	Prior to the issuance of building permits, the applicant shall provide evidence of efficient pumps and motors for pools and spas, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-6**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-7	Prior to the issuance of building permits, the applicant shall provide evidence of the ability to install solar, and solar hot water heaters, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-7**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-8	Prior to the issuance of building permits for, the applicant shall provide evidence of water-efficient landscapes, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-8**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-9	Prior to the issuance of building permits, the applicant shall provide evidence of water efficient irrigation systems and devices, such as soil-based irrigation controls and use water-efficient irrigation methods, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-9**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-10	Prior to the issuance of building permits, the applicant or their contractor shall submit a site construction management plan for the reuse and recycle construction and demolition (including soil, vegetation, concrete, lumber, metal, and cardboard) to the Department of Public Works for review and approval in accordance with the requirements of the ordinances developed pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-10**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-11	Prior to the issuance of building permits, the applicant shall provide evidence of reuse and recycling receptacles in residential, industrial, and commercial projects, in accordance with the requirements of the ordinances developed pursuant to the County's Green Building Program and other applicable State and County standards. (**SCVAP MM 3.4-11**)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-12	Prior to the issuance of building permits, the applicant shall provide evidence of consistency with "smart growth" principles to reduce GHG emissions (i.e., ensure mixed- use, infill and higher density projects provide alternatives to individual vehicle travel and promote efficient delivery of goods and services). (SCVAP MM 3.4-12)	Prior to the issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.7-13	Prior to implementing project approval, the applicant shall preserve existing trees, to the extent feasible and consistent with mitigation measures, encourage the planting of new trees consistent with the final landscape palettes, and create open space where feasible. (**SCVAP MM 3.4-13**)	Prior to implementing project approval	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-14	Prior to the issuance of each residential occupancy permit, the Applicant or successor developer shall submit for approval to the County the plan for the applicable future homeowners association(s) to provide educational information to each homeowner on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; (5) the use of solar heating, automatic covers, and efficient pumps and motors for pools and spas; and (6) recycling to all homeowners prior to individual purchase of property and again annually.	Prior to the issuance of each residential occupancy permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-15	Prior to the issuance of each nonresidential occupancy permit, the Applicant or successor developer shall submit for approval to the County the plan to provide educational information to each owner or tenant on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; and (5) recycling to all homeowners prior to individual purchase of property and again annually.	Prior to the issuance of each nonresidential occupancy permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-16	Prior to the issuance of each grading and building permit, the applicant/developer shall require in contract specifications, that contractors set goals to limit unnecessary construction equipment idling to 3 minutes and include methods to encourage equipment operators to achieve the 3-minute goal.	Prior to the issuance of each grading and building permit	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.7-17	Prior to the issue of the occupancy permit for the 1,000th residential unit, the master developer shall provide the County with plans for a weekly farmers' market to be sponsored by the homeowners' association or similar entity.	Prior to the issue of the occupancy permit for the 1,000th residential unit,	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
Hydrology and Water Quality (Section 5.8 of the 2019 Draft SEIR)					
MM 5.8-1	The Project will develop and implement an Integrated Pest Management Plan as a mitigation measure in accordance with the integrated pest management and pesticide and fertilizer application guidelines established by the University of California Division of Agriculture and Natural Resources Statewide Integrated Pest Management Program (http://www.ipm.ucdavis.edu/). The IPM Plan, which will serve to control nutrients and reduce pesticide use, will include the following components: 1. Roles and responsibilities. The IPM Plan will identify the key decision makers in the program, other key roles (such as the person responsible for recordkeeping), and the program funding mechanisms. 2. Pest identification. The IPM Plan will identify plant species and potential pests for these plant species. The Plan shall provide references to resources (e.g., existing field manuals) and identify tools (e.g., hand lens) that can be used to facilitate identification. 3. Practices to prevent pest incidence and reduce pest buildup. The IPM Plan will include a list of acceptable management strategies for each potential pest. For example, effective practices include modifying landscaping to be less conducive to pest survival, using pest-resistant plant varieties, using mulch to suppress weeds, encouraging naturally occurring biological controls, educating the public to be more tolerant of pests, removing pests mechanically or with barriers and traps, developing a list of pesticides that are less toxic to the environment, and developing formulations that will control the pest if other methods are not successful. 4. Monitoring to examine vegetation and surrounding areas for pests to evaluate trends and to identify when controls are needed. The IPM Plan will establish monitoring guidelines for the potential pests and beneficial insects. Monitoring procedures shall include regular visual inspections or checking with traps and methods to quantify observations. The monitoring program shall be used to evaluate when pests may become intolerable and to evaluate the level of effectiveness of controls. 5. Establishment of action thresholds that trigger control actions. The IPM Plan will establish injury levels and action thresholds for each potential pest that is listed in the plan. The injury level is the number of pests	Prior to issuance of occupancy permits and throughout Project operation	Construction Contractor, Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

TABLE 4-1
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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
associated with intolerable damage. Action thresholds are the set of conditions required to trigger a control action, usually pesticide application. 6. Pest control methods. The IPM Plan will describe cultural, mechanical, environmental, and biological pest control methods and shall list pesticides authorized for use and the Safety Data Sheets for each pesticide. The Plan will include specific criteria for selecting pest management methods, for example, those that are least disruptive to natural controls and least damaging to water quality, and procedures for evaluating the effectiveness of the control method. 7. Fertilizer management. The IPM Plan will describe soil assessment techniques, fertilizer types, application methods, and proper storage and handling of fertilizers. 8. Pesticide management. The IPM Plan will discuss pesticide safety (e.g., Material Safety Data Sheets, precautionary statements, and protective equipment); regulatory requirements; spill mitigation; groundwater and surface water protection measures associated with pesticide use; and pesticide applicator certifications, licenses, and training (i.e., all pesticide applicators must be certified by the California Department of Pesticide Regulation). The IPM Plan will include a pesticide application guidelines/checklist. For example, the application equipment must be calibrated correctly and written records must be kept of any pesticide application. 9. Irrigation management. The IPM Plan will describe the low volume water approaches to landscape irrigation, such as drip type and sprinkler systems with SMART controllers, and shall also describe the training to be provided to landscape crews that will focus on applying water only when needed to enhance plant root growth, managing irrigation to avoid conditions conducive to disease development, and minimizing runoff containing pollutants. 10. Record keeping. The IPM Plan will describe the records that will be maintained for program implementation, including pest identification and monitoring results, when and where various pest suppression techniques were implemented, pesticide application records, observed side effects of the treatment on non-target species, and public complaints and positive feedback received. 11. Training. The IPM Plan will describe continuing education of pest management personnel. 12. Effectiveness evaluation. The IPM Plan will describe the methods to be used to evaluate the overall effectiveness of the program and the schedule for reviewing the Plan to incorporate new IPM technology.					
Noise (Section 5.10 of the 2019 Draft SEIR)					
MM 5.10-A	With concurrence from the Castaic Union School District, the Applicant will construction a minimum 3-foot-high sound wall along the eastern edge of the outdoor fields, a 6-foot high wall along the eastern edge of the school parking lot, and a 3-foot high wall along the western edge of Ridge Route Road north of the school parking lot to block noise from project-related traffic to the school playground and school buildings. The location of the proposed sound wall is shown in Figure 1.	Prior to issuance of grading permits and building permits and during construction	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-B	During construction, the Applicant will place a flagman at the campus during school hours to ensure school and construction traffic flow safely in the school vicinity.	Prior to issuance of grading permits and building permits and during construction	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-C	The Applicant will ensure that access to the campus is always preserved during construction.	Prior to issuance of grading permits and building permits and during construction	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-1	Maintain adequate buffer distances from nearby residences to freeways, high traffic volume roads, railroads, airports, manufacturing facilities, industrial facilities, mining centers and other existing processing plants where the public may be affected by noise. **(SCVAP MM 3.18-2)**	Prior to issuance of grading permits and building permits	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-2	Sound barriers should be required of the owners of the proposed sensitive land uses adjacent to high noise sources, to protect the public from significant noise impacts. **(SCVAP MM 3.18-4)**	Prior to issuance of grading permits and building permits	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

TABLE 4-1
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Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.10-3	The placement of telecommunication towers and antennas power boxes should comply with noise ordinances. All related equipment should be rated not to exceed 45 dB(A) at any residential property line. **(SCVAP MM 3.18-6)**	Prior to approval of utility plans	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-4	Prior to the issuance of each permit for clearing, grading, or building within 500 feet of existing residences or the Northlake Elementary School, the Developer shall demonstrate that the construction plans or specifications include the following noise-abatement and control measures. This measure applies to all phases of construction. • All construction equipment, including internal combustion engines and stationary equipment (used for construction purposes) shall be equipped with noise-reducing features such as, but not limited to, improved mufflers, intake silencers, ducts, engine enclosures, and acoustical shields or shrouds. • Stationary sources located within 450 feet of the Northlake elementary School or off-site residences shall have noise abatement, such as engine enclosures or placed behind barriers, to limit the noise level at the sensitive receptor to 60 dBA L_{eq} or less. • Stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers. • On-site and off-site construction haul routes shall be designed to avoid noise-sensitive uses, as feasible. • Equipment and material staging areas and equipment maintenance areas shall be located at least 500 feet from sensitive noise receivers, if feasible.	Prior to the issuance of each permit for clearing, grading, or building within 500 feet of existing residences or the Northlake Elementary School	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-5	To the extent feasible, intensive noise activity (e.g., operation of earth moving equipment) within 750 feet of the Northlake Elementary School shall be scheduled to occur when classroom instruction is not scheduled. If grading or similar construction activity within 150 feet of the school is to occur for longer than one day while school is in session, the Developer shall install a temporary noise barrier between the construction area and the school. The barrier shall be 12 feet high and solid from the ground to the top. The barrier shall be constructed with plywood that is at least ½ inch thick or with another material that creates a noise transmission loss of at least 20 dBA. The barrier shall be located to break the line of sight between the school and the construction area. Where feasible, the barrier shall remain in place until the completion of construction near the school. This measure applies to all phases of construction.	Prior to initiation of any construction activity within 750 feet of Northlake Elementary School	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-6	If grading or similar construction activity within 150 feet of off-site residences is to occur for longer than one day, the Developer shall install a temporary noise barrier between the construction area and the residences. The barrier shall be 12 feet high and solid from the ground to the top. The barrier shall be constructed with plywood that is at least ½ inch thick or with another material that creates a noise transmission loss of at least 20 dBA. The barrier shall be located to break the line of sight between the residences and the construction area. Where feasible, the barrier shall remain in place until the completion of construction near the residences. This measure applies to all phases of construction.	Prior to issuance of a building permit for each industrial and commercial land use	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-7	Prior to issuing of a building permit for each industrial and commercial land use, the Developer shall submit a noise analysis to the County demonstrating that projected noise levels from stationary sources, vehicle activity, loading docks, and similar sources will not exceed the exterior noise standards of Section 12.08.390 of the County Code. For purposes of this MM, school use shall be considered as a residential use (Zone II) in the County Code. The noise analysis shall, to the extent feasible, be cumulative, considering not only the noise generated by the proposed development but also noise generated by adjacent and nearby stationary sources. Where the adjacent properties have not been developed, the analysis should show that the noise level from the proposed development would be far enough below the standard to allow a reasonable increment for future noise sources without exceeding the standard.	Prior to issuance of a building permit for each industrial and commercial land use	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-8	Prior to issuing of a building permit for each multi-family residential use, the Developer shall submit a noise analysis to the County demonstrating that projected air conditioning and refrigeration equipment noise levels would be exceed the standards of Section 12.08.530 of the County Code.	Prior to issuance of a building permit for each multi-family residential use	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

TABLE 4-1
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Mitigation Measures	Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.10-9 Prior to issuing of building permits for single family and duplex residences adjacent to Ridge Route Road, Northlake Boulevard, A Street, B Street, or E Street, and for multi-family residences adjacent to Ridge Route Road and Northlake Boulevard, the Developer shall submit a noise analysis to the County demonstrating that projected exterior noise levels at areas where residents would reasonably be expected to spend more than one hour, such as back yards, would not exceed 60 dBA CNEL for single family and duplex residences and 65 dBA CNEL for multi-family residences. This standard is based on the California Land Use Compatibility Guidelines. Noise abatement may be achieved by setbacks, berms, and walls. The noise analysis shall also demonstrate that interior noise levels in all habitable rooms would of duplexes and multi-family residences would not exceed 45 dBA CNEL, as required by the California Building Code.	Prior to issuance of building permits for single family and duplex residences adjacent to Ridge Route Road, Northlake Boulevard, A Street, B Street, or E Street, and for multi-family residences adjacent to Ridge Route Road and Northlake Boulevard	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-10 Prior to issuing of building permits for commercial land uses adjacent to Ridge Route Road, the Developer shall submit a noise analysis to the County demonstrating that projected exterior noise levels at areas where patrons would reasonably be expected to spend more than one hour, such as outdoor restaurant seating, would not exceed 70 dBA CNEL.	Prior to issuance of building permits for commercial land uses adjacent to Ridge Route Road	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-11 Prior to the issuance of each grading permit, the Developer shall submit plans and/or specifications to the County demonstrating that site preparation and grading within 265 feet of a residence or the NorthLake Elementary School shall be performed with equipment that will not cause a vibration exceeding 0.01 peak particle velocity (ppv) inch per second (in/sec).	Prior to the issuance of each grading permit	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.10-12 If blasting is required, the Applicant or its contractor shall hire a certified blasting expert to develop a blasting program to be approved by the County Department of Public Works. The program shall include but not be limited to the following elements: • Design the blast to limit noise and vibration at any residence or the NorthLake Elementary School to the limits recommended by the Office of Surface Mining Reclamation and Enforcement or similarly recognized authority. • Based on the blasting locations, define an impact area where noise and vibration impacts are anticipated to be distinctly perceptible. • Inform all homeowners and tenants in the impact area of the Project, the planned blasting program, and the anticipated noise and vibration impacts. In addition to printed literature, have a public meeting. Provide a contact for homeowners for pre- and post-blast questions. • Use blast signals to notify residents prior to each blast. • Monitor blasts to verify noise and vibration levels at the nearest receptor(s).	Prior to commencement of any blasting activities	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
Public Services (Section 5.11 of the 2019 Draft SEIR)				
SCVAP MM 3.15-2 Concurrent with the issuance of building permits, the project applicant shall participate in the Developer Fee Program to the satisfaction of the County of Los Angeles Fire Department.	Concurrent with the issuance of building permits	Applicant	County of Los Angeles Fire Department	
SCVAP MM 3.15-3 Adequate water availability shall be provided to service construction activities of any project to the satisfaction of the County of Los Angeles Fire Department.	Prior to approval of development plans	Applicant	County of Los Angeles Fire Department	
SCVAP MM 3.15-4 Development applicant(s) shall be required to pay the Los Angeles County Sheriff's established law enforcement facility fees for North Los Angeles County prior to issuance of a certificate of occupancy on any structure. The fees are for the acquisition and construction of public facilities to provide adequate service to the residents of the County's Planning Area.	Prior to approval of development application	Applicant	County of Los Angeles Fire Department	
SCVAP MM 3.15-1 Project developers shall pay the current library fee at the time of building permit issuance ($885.00 per residential unit for FY 2016-17) to the County of Los Angeles to offset the demand for library items and building square footage generated by the proposed project. The library mitigation payment shall be made on a building permit by building permit basis by the developer for residential projects.	Prior to issuance of building permits	Applicant and Future Developers	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
Traffic, Access, and Circulation (Section 5.11 of the 2019 Draft SEIR)					
MM 5.11-3	Prior to construction activities, the Project Applicant shall prepare and submit a detailed Construction Traffic Control Plan to the County of Los Angeles Department of Public Works for review and approval. The Construction Traffic Control Plan shall describe in detail safe detours and provide temporary traffic control during construction activities for the project. To reduce traffic congestion, the Plan shall include, as necessary, appropriate, and practicable, the following: temporary traffic controls (e.g., a flag person) during all phases of construction to maintain smooth traffic flow; dedicated turn lanes for movement of construction trucks and equipment on and off site; scheduling of construction activities that affect traffic flow on the arterial system to off-peak hours; consolidation of truck deliveries; rerouting of construction trucks away from congested streets or sensitive receptors; and/or signal synchronization to improve traffic flow.	Prior to the issuance of building permit	Project Applicant and Future Developers	County of Los Angeles Department of Public Works	
Utilities (Section 5.12 of the 2019 Draft SEIR)					
MM 5.12-1	The project applicant shall provide all onsite water system improvements and shall contribute to required new or upgraded existing offsite improvements to meet all water supply needs for the proposed development. (**1992 SP EIR MM 4.12.1)**	Prior to the issuance of building permits	Project Applicant and Future Developers	County of Los Angeles Department of Public Works and Newhall County Water District	
MM 5.12-2	All water system improvements shall be sized at the water improvement plan check stage of development. **(1992 SP EIR MM 4.12.2)**	Prior to approval of water improvement plan(s)	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Public Works	
MM 5.12-3	Project connection fees would be deposited into a capital improvement fund to help pay for new facilities and expansion required by the Districts; **(1992 SP EIR MM 4.9.3)**	Prior to connection to Los Angeles Sanitation Districts facilities	Project Applicant	County of Los Angeles Department of Regional Planning and Los Angeles Sanitation Districts	
MM 5.12-4	Payment of the connection fees is required for issuance of a permit to connect the project to surrounding Los Angeles County Sanitation District facilities, if necessary**. (1992 SP EIR MM 4.9.4)**	Prior to issuance of permit to connect the project to surrounding Los Angeles County Sanitation District facilities	Project Applicant	County of Los Angeles Department of Regional Planning and Los Angeles County Sanitation District	
MM 5.12-5	Routine testing of pre-discharge treated effluent should be conducted to monitor compliance with established water quality control limits. (**1992 SP EIR MM 4.9.7)**	During construction activities and Project operation	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-6	Prior to issuance of occupancy permits, the Project Applicant shall provide evidence to the County of payment of connection fees in compliance with the requirements of the Newhall County Water District.	Prior to issuance of occupancy permits	Project Applicant	County of Los Angeles Department of Regional Planning and Newhall County Water District	
MM 5.12-7	Prior to connection to the Los Angeles County Sanitation District's wastewater system, the Project Applicant shall provide evidence of payment of the Santa Clarita Valley Sanitation District's Connection Fee Program.	Prior to connection to the Los Angeles County Sanitation District's wastewater system	Project Applicant	Los Angeles County Sanitation District and Santa Clarita Valley Sanitation District	
MM 5.12-8	Prior to issuance of occupancy permits, the Project Applicant shall coordinate with the Los Angeles County Sanitation Districts to upsize the existing 12-inch VCP Castaic Trunk Sewer in Ridge Route Road (south of the intersection with Lake Hughes Road), as determined necessary by the LA County Sanitation Districts to accommodate future flow volumes.	Prior to the issuance of occupancy permits	Project Applicant	County of Los Angeles Department of Regional Planning and Los Angeles County Sanitation District	
MM 5.12-9	Monitor growth, and coordinate with water districts as needed to ensure that long-range needs for potable and reclaimed water will be met. (**SCVAP 2012 EIR MM 3.13.3)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-10	If water supplies are reduced from projected levels due to drought, emergency, or other unanticipated events, take appropriate steps to limit, reduce, or otherwise modify growth permitted by the Area Plan in consultation with water districts to ensure adequate long-term supply for existing businesses and residents. **(SCVAP 2012 EIR MM 3.13.4)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-11	Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval. (**SCVAP 2012 EIR MM 3.13.5)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.12-12	Require the use of drought tolerant landscaping, native California plant materials, and evapotranspiration (smart) irrigation systems. (**SCVAP 2012 EIR MM 3.13.6)**	Prior to approval of landscape plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-13	In making land use decisions, consider the complex, dynamic, and interrelated ways that natural and human systems interact, such as the interactions between energy demand, water demand, air and water quality, and waste management. (**SCVAP 2012 EIR MM 3.13.8)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-14	In coordination with applicable water suppliers, adopt and implement a water conservation strategy for public and private development. (**SCVAP 2012 EIR MM 3.13.9)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-15	Provide examples of water conservation in landscaping through use of low water use landscaping in public spaces such as parks, landscaped medians and parkways, plazas, and around public buildings. (**SCVAP 2012 EIR MM 3.13.10)**	Prior to approval of landscape plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-16	Require low water use landscaping in new residential subdivisions and other private development projects, including a reduction in the amount of turf-grass. (**SCVAP 2012 EIR MM 3.13.11)**	Prior to approval of landscape plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-17	Provide informational materials to applicants and contractors on the Castaic Lake Water Agency's Landscape Education Program, and/or other information on xeriscape, native California plants, and water conserving irrigation techniques as materials become available. (**SCVAP 2012 EIR MM 3.13.12)**	Prior to commencement of grading or construction activities	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-18	Promote the use of low-flow and/or waterless plumbing fixtures and appliances in all new non-residential development and residential development of five or more dwelling units. (**SCVAP 2012 EIR MM 3.13.13)**	Prior to issuance of occupancy permits	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-19	Support amendments to the County Building Code that would promote upgrades to water and energy efficiency when issuing permits for renovations or additions to existing buildings. (**SCVAP 2012 EIR MM 3.13.14)**	Prior to the issuance of permits for renovations or additions to existing buildings	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-20	Apply water conservation policies to all pending development projects, including approved tentative subdivision maps to the extent permitted by law. Where precluded from adding requirements by vested entitlements, encourage water conservation in construction and landscape design. (**SCVAP 2012 EIR MM 3.13.15)**	Prior to approval of development plans	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-21	Upon the availability of non-potable water services, discourage and consider restrictions on the use of potable water for washing outdoor surfaces. (**SCVAP 2012 EIR MM 3.13.16)**	At the time when non-potable water services are available	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-22	In cooperation with the Sanitation District and other affected agencies, expand opportunities for use of recycled water for the purposes of landscape maintenance, construction, water recharge, and other uses as appropriate. (**SCVAP 2012 EIR MM 3.13.17)**	Prior to construction and during Project operation	Project Applicant and County of Los Angeles Department of Regional Planning	County of Los Angeles Department of Regional Planning and Los Angeles County Sanitation District	
MM 5.12-23	Require new development to provide the infrastructure needed for delivery of recycled water to the property for use in irrigation, even if the recycled water main delivery lines have not yet reached the site. (**SCVAP 2012 EIR MM 3.13.18)**	Prior to approval of development plan	Project Applicant and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-24	Participate and cooperate with other agencies to complete, adopt, and implement an Integrated Regional Water Management Plan to build a diversified portfolio of water supply, water quality, and resource stewardship priorities for the Santa Clarita Valley. (**SCVAP 2012 EIR MM 3.13.20)**	Prior to and during Project operation	Project Applicant and County of Los Angeles Department of Regional Planning	County of Los Angeles Department of Regional Planning	
MM 5.12-25	Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval. (**SCVAP 2012 EIR MM 3.13.21)**	Prior to project approval	Project Applicant	County of Los Angeles Department of Regional Planning	
MM 5.12-26	Promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel or additions. (**SCVAP 2012 EIR MM 3.13.22)**	Prior to approval of applicable permits for remodel or additions	County of Los Angeles Department of Regional Planning	County of Los Angeles Department of Regional Planning	
MM 5.12-27	Landscaping shall emphasize drought-tolerant vegetation (xeriscaping) where not watered with reclaimed water. Plants of similar water use shall be grouped to reduce over-irrigation of low-water-using plants. Those areas not designed in xeriscape shall be gauged to receive irrigation using the minimal requirements. (**1992 SP EIR MM 4.12.6)**	Prior to approval of landscape plans	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	

TABLE 4-1
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures		Mitigation Timing	Responsible Agency/Party	Monitoring Agency/Party	Completion Date (Signature Required)
MM 5.12-28	Residential occupants shall be informed as to the benefits of low-water-using landscaping and sources of additional assistance in xeriscaping. (**1992 SP EIR MM 4.12.7)**	During operation	Project Applicant and Future Developers	County of Los Angeles Department of Regional Planning	
MM 5.12-29	The County of Los Angeles shall follow state regulations in implementing the goals, policies, and programs identified in the Los Angeles County Integrated Waste Management Plan in order to achieve and maintain a minimum of 50 percent reduction in solid waste disposal through source reduction, reuse, recycling, and composting. In response to California's 75 Percent Initiative, at least 75 percent of all solid waste will be recycled or reused by 2020. Additionally, the Project Applicant or Construction Manager shall ensure that a minimum of 65 percent of the non-hazardous construction and demolition debris will be recycled and/or salvaged or meet a local construction and demolition waste management ordinance. (**SCVAP 2012 EIR MM 3.17.1)**	During construction activities and Project operation	Project Applicant, Future Developers, and/or Construction Manager	County of Los Angeles Department of Regional Planning	
MM 5.12-30	The County shall require all future commercial, industrial and multifamily residential development to provide adequate areas for the collection and loading of recyclable materials (i.e., paper products, glass, and other recyclables) in compliance with the State Model Ordinance, implemented on September 1, 1994, in accordance with AB 1327, Chapter 18, California Solid Waste Reuse and Recycling Access Act of 1991. (**SCVAP 2012 EIR MM 3.17.2)**	During construction activities and Project operation	Project Applicant and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-31	The County shall require all development projects to coordinate with appropriate County agencies to ensure that there is adequate waste disposal capacity to meet the waste disposal requirements of the County's Planning Area, and the County shall recommend that all development projects incorporate measures to promote waste reduction, reuse, recycling, and composting. (**SCVAP 2012 EIR MM 3.17.3)**	Prior to development plan approval	Project Applicant	County of Los Angeles Department of Regional Planning and Sanitation Districts of Los Angeles County	
MM 5.12-32	All new development in the County's Planning Area will be required to implement existing and future waste reduction programs in conformance with the County's Planning Area SRRE program. (**SCVAP 2012 EIR MM 3.17.4)**	During construction activities and Project operation	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-33	Any hazardous waste that is generated on site, or is found on site during demolition, rehabilitation, or new construction activities shall be remediated, stored, handled, and transported in compliance per appropriate local, state, and federal laws, as well as with the County's SRRE. (**SCVAP 2012 EIR MM 3.17.5)**	During demolition, rehabilitation, or construction activities	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-34	Collection/storage facilities for recyclables shall be incorporated into all building designs and/or a conveniently located recycling area shall be developed on the project site for use by all occupants/users of the commercial/industrial uses. (**1992 SP EIR MM 4.13.1)**	During construction activities and Project operation	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-35	The owner and/or tenants of all onsite commercial and industrial uses shall comply with all applicable federal, state and local requirements for handling hazardous materials. Onsite businesses handling hazardous materials shall submit a Business Plan which will include information or inventories, employee training and emergency response plans and procedures. (**1992 SP EIR MM 4.13.2)**	During Project operation	Applicant, Future Developers, and Onsite commercial and industrial owners and/or tenants	County of Los Angeles Department of Regional Planning	
MM 5.12-36	Removal of hazardous materials, waste from the project site shall be conducted by registered waste hauler in accordance with all applicable rules and regulations. (**1992 SP EIR MM 4.13.3)**	During construction activities and Project operation	Project Applicant, Future Developers and Construction Contractor	County of Los Angeles Department of Regional Planning	
MM 5.12-37	All hazardous materials used in association with future onsite businesses shall be stored in specific locations and clearly marked as to contents. (**1992 SP EIR MM 4.13.4)**	During Project operation	Applicant, Future Developers, and Onsite commercial and industrial owners and/or tenants	County of Los Angeles Department of Regional Planning	

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LA COUNTY PLANNING

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Chief Deputy Director,
Regional Planning

NOTICE OF COMPLETION AND AVAILABILITY OF A RECIRCULATED PARTIAL DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR THE "NORTHLAKE SPECIFIC PLAN PROJECT" PROJECT NO. R2015-00408-(5) VESTING TENTATVE TRACT MAP NO. 073336 (RPPL2023004336) TENTATIVE PARCEL MAP NO. 073335 (RPPL2023004448) CONDITIONAL USE PERMIT NO. RPPL2023004316 ENVIRONMENTAL ASSESSMENT NO. RPPL2023004887 STATE CLEARINGHOUSE NO. 2015031080

Los Angeles County Department of Regional Planning, acting in the capacity of "Lead Agency" under Los Angeles County's ("County's") Environmental Guidelines, Chapter III, Section 304, has filed a "Notice of Completion and Availability" of a Recirculated Partial Draft Supplemental Environmental Impact Report ("RPDSEIR") for the NorthLake Specific Plan Project ("Project"). This document has been prepared in accordance with, and pursuant to, the California Environmental Quality Act ("CEQA"), as amended; Public Resources Code, Section 21000 et seq.; and the "Guidelines for Implementation of the California Environmental Quality Act" ("State CEQA Guidelines"), California Code of Regulation, Title 14, Chapter 15000 et seq., (including Section 15160).

PUBLIC REVIEW PERIOD

The formal public review period for the RPDSEIR will be from **April 14, 2025 to May 29, 2025** (45 days). As CEQA Guidelines Section 15088.5, subdivision (f)(2) permits, the County requests reviewers to limit the scope of their comments to that material which is addressed within the text of the revised portions and the appendices included in the RPDSEIR. The County also requests that reviewers not make new comments on matters not included in this RPDSEIR. All comments received by the closing of the public review period regarding the environmental analysis in the RPDSEIR will be considered in the Revised Portions of the Final Supplemental EIR ("Revised PFSEIR").

PROJECT LOCATION

The approximately 1,330-acre Project Site is located east of Interstate (I) 5, west of Castaic Lake, and north of the community of Castaic, California in unincorporated Los Angeles County. Regional access to the Project area is provided by I-5, and site access is provided via the Parker Road and Lake Hughes Road exits from I-5. Local access to the Project Site is provided by Ridge Route Road, which traverses northerly along the western edge of the Project Site.

PROJECT BACKGROUND

The NorthLake Specific Plan Draft SEIR ("DSEIR") was released on May 2, 2017, and circulated for a 45-day public review and comment period ending on June 15, 2017. Following the close of the public comment period on the DSEIR on June 15, 2017, detailed responses to all public agency comments and comments received from members of the general public received regarding the Project and the analyses of the DSEIR were prepared and are contained in the Final SEIR.

An Errata was released in February 2018, prior to the County Regional Planning Commission ("Regional Planning Commission") hearing to make minor technical corrections to the SEIR and to provide further information in response to public comments received prior to the Regional Planning Commission meeting. The Errata included only minor technical changes to the SEIR and additional information to support the SEIR's conclusions, and the Errata merely clarified or amplified or made

insignificant modifications in the adequate SEIR. At the February 21, 2018, public hearing, the Regional Planning Commission requested that the Applicant include an affordable housing component in the Project. Based on this request, the Applicant made minor revisions to the Project analyzed in the SEIR to include an affordable component. An Errata dated April 4, 2018 was prepared which concluded that the revisions involve only minor changes to the distribution of land uses and an overall reduction in density and intensity or use, and the Errata merely clarified or amplified or made insignificant modifications in the adequate SEIR. On April 18, 2018, the Regional Planning Commission adopted the required findings, certified the SEIR, and granted the requested Project approvals. On April 23, 2018, an appeal was filed by the Center for Biological Diversity, the Santa Monica Mountains Conservancy, and the Golden State Environmental Justice Alliance. A Second Errata dated August 2018 was prepared to make minor technical corrections in the SEIR and to provide further information in response to public comments at the Regional Planning Commission meeting.

On September 25, 2018, the County Board of Supervisors ("Board") held a public hearing on the Project and the appeals and voted to reject the appeals, uphold the Regional Planning Commission approvals, and certify the SEIR. On April 2, 2019, the Board adopted the Project entitlements, CEQA findings and Mitigation Monitoring and Reporting Program, and Project conditions.

A Petition for Writ of Mandate was filed in May 2019 challenging the Project and in 2021 a Writ of Mandate and Judgement was issued, obligating the County to set aside certification of the SEIR and the Project entitlements (which the County complied with). Upon consideration of the revisions to the SEIR required by the Court Ruling and set forth in the RPDSEIR, the County will reconsider the Project for approval.

PROJECT DESCRIPTION

The previously approved Project consists of development of Phase 1, Phase 2, and associated off-site map improvements for both Phase 1 and Phase 2. Phase 1, which includes the entitlements Vesting Tentative Tract Map ("VTTM") No. 073336, Vesting Tentative Parcel Map ("VTPM") No. 073335, and Conditional Use Permit ("CUP") No. RPPL2023004316, comprises development of a 720-acre portion of the Project Site with a total of 2,295 dwelling units, including 288 single-family units on approximately 41 acres, 1,341 multi-family units on approximately 107 acres, 345 senior multi-family units on approximately 49 acres, and 315 affordable units and six market-rate live/work units (included within 20 acres of commercial use). Phase 1 also includes commercial uses (22 acres), open space and parks uses (412 acres), roadways (86 acres), a school pad (21 acres), water tank pad (5.1 acres), and a fire station pad (1.4 acres).

The remainder of the Project Site, referred to as the Phase 2 area, would be developed with 855 single-family units; 386 acres of parks, trails, and open space; 23 acres of school uses; and 36 acres of associated roadway and infrastructure improvements. Phase 2 is not included in VTTM 073336 and will require a separate map number. VTPM 073335 requests 21 large lot parcels (40 acres or more) for future lease and finance purposes and covers both phases.

Associated off-site map improvements in both Phase 1 and Phase 2 total 65.13 acres, including remedial grading, drainage features, and road and utility alignments.

The Project improvements would consist of the construction of Ridge Route Road at the Project's main entrance to the south and a secondary access route to the northwest, construction of Northlake Parkway adjacent to and west of the Phase 2 portion of the Project Site, a 4.64-acre connection of Grasshopper Creek Park, a debris basin, 2.39 acres in trail connections, a 5.1-acre pad for a water tank, 29.79 acres of manufactured slopes, and 11.98 acres of natural open space. In addition,

extensions of the existing electrical distribution circuitry would occur along the existing Ridge Route Road to reach the Project, and substation upgrades would occur on Southern California Edison property.

In addition to the above improvements, an existing crude oil pipeline easement containing two oil pipelines that traverse the entire north-south length of the Project Site and both Phases 1 and 2 would be relocated to an alignment along the eastern boundary of the proposed development area and within the identified grading footprint.

At the February 21, 2018, public hearing, the Regional Planning Commission requested that the Applicant include an affordable housing component in the Project. Based on this request, the Applicant made minor revisions to the Project analyzed in the SEIR to include an affordable component (315 affordable units).

Project entitlements include: (1) NorthLake Specific Plan No. 87-172, (2) VTPM No. 073335, (3) VTTM No. 073336, and (4) CUP No. 2015-00019. The CUP is to authorize the Northlake Specific Plan site plan review, affordable set-aside housing, affordable senior set-aside housing, mixed-use and live-work development, on-site and off-site grading exceeding 100,000 cubic yards of cut/fill material, walls and fences exceeding six feet in height, and the construction of two water tanks with associated grading and infrastructure.

SUMMARY OF ENVIRONMENTAL IMPACTS
The SEIR concluded that impacts associated with the 2019 previously Approved Project would result in significant and unavoidable environmental impacts related to Operational, Construction, and Cumulative Air Quality; Construction, Operational, and Cumulative Noise; and Project and Cumulative Traffic. The RPDSEIR evaluates the potential for environmental impacts based on the Court Order as applied to the 2019 previously Approved Project; no modifications to the previously Approved Project uses have been made or are required. The RPDSEIR provides supplemental analysis related to:

1) Revised biological impact analysis only as to the Western Spadefoot Toad, special-status plants, and crotches' Bumble Bee;
2) Updated Traffic Analysis as to Vehicle Miles Travelled pursuant to Senate Bill 743 and CEQA Guidelines Section 15064.3;
3) Updated Wildfire Analysis pursuant to Appendix G of the CEQA Guidelines; and
4) Revised alternatives analysis only as to the addition of a Creek Avoidance Alternative and a Partial Creek Avoidance Alternative.

The RPDSEIR concludes that the Project as considered in the RPDSEIR would not result in any new significant and unavoidable impacts or substantially increase the severity of any of the significant and unavoidable impacts beyond those previously analyzed based on the updated analysis.

PUBLIC HEARING
A public hearing on the proposed Project and the RPDSEIR (as well as the SEIR) will be scheduled before the Regional Planning Commission at a time and date to be determined.

REVIEWING LOCATION
A hard copy of the RPDSEIR is available for public review at the following locations:

- County of Los Angeles Building and Safety Antelope Valley Field Office, 335 East Avenue K-6 #A, Lancaster, California 93535
- Castaic Library, 27971 Sloan Canyon Road, Castaic, California 91384

- San Fernando Library, 217 North Maclay Avenue, San Fernando, California 91340
- Stevenson Ranch Library, 25950 The Old Road, Stevenson Ranch, CA 91381

The public is also encouraged to visit the LA County Department of Regional Planning's website to review the digital copy of the RPDSEIR at:

https://lacdrp.legistar.com/LegislationDetail.aspx?ID=7297239&GUID=8CCA3A7D-4458-4A58-970D-251E36B9454F&Options=ID|Text|&Search=25-092

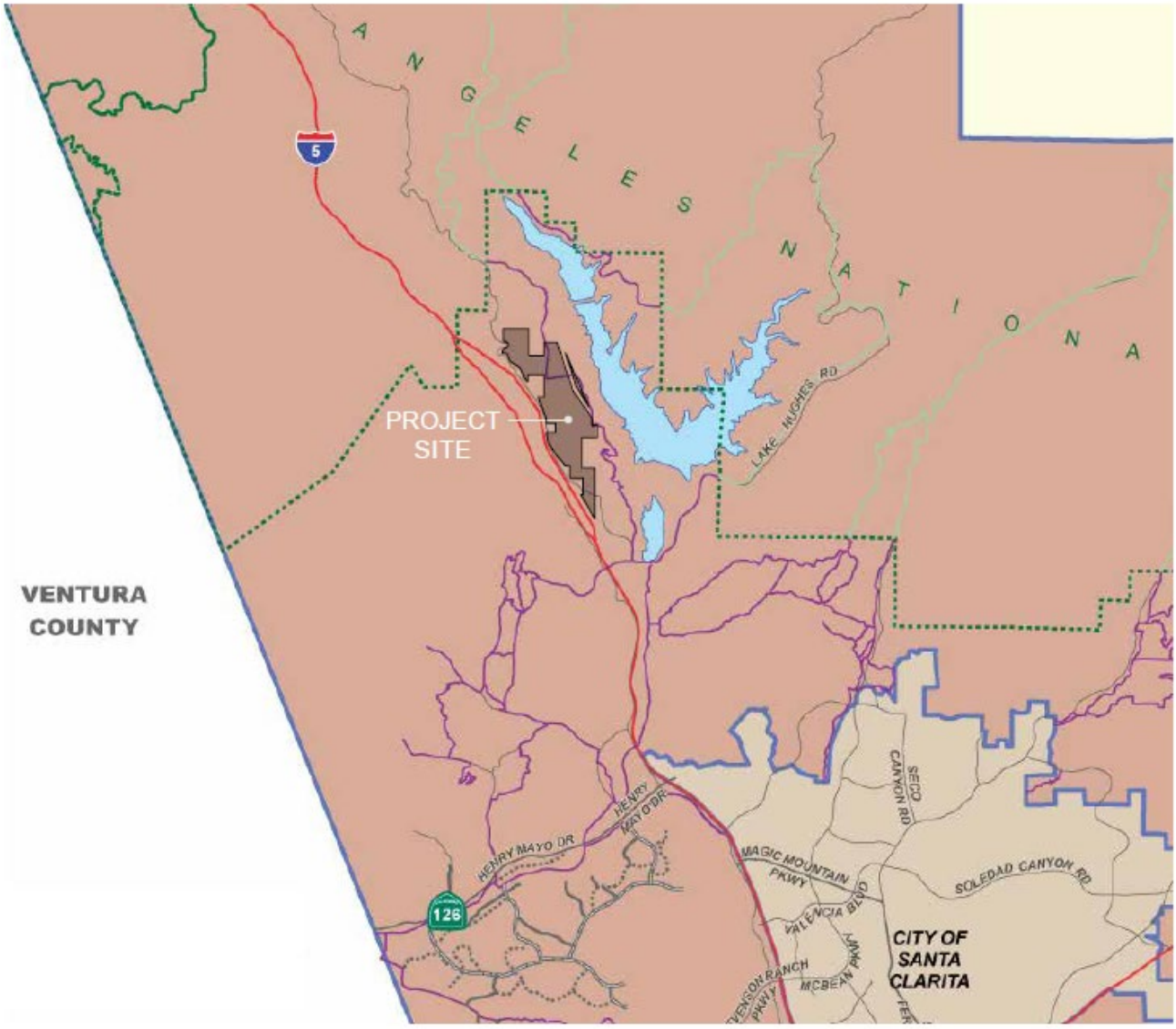
The previous Notice of Preparation, Initial Study, and SEIR prepared for the 2019 Project can be found archived at this webpage: https://planning.lacounty.gov/long-range-planning/northlake-specific-plan/

Please direct all written comments to the following address:

ATTN: Mr. Jodie Sackett, Subdivisions
Los Angeles County
Department of Regional Planning
320 W. Temple Street, Fl. 13
Los Angeles, CA 90012

Telephone: (**213) 893-7409**
E-mail: jsackett@planning.lacounty.gov

All written responses need to be received or postmarked on or before May 29, 2025 at 5:00 PM, and will be included in the Revised PFSEIR, which will be posted at the Department website location listed above.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VENTURA COUNTY
HENRY MAYO DR
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MAGIC MOUNTAIN PKWY
SOLEDAD CANYON RD
VALENCIA BLVD
MCBEAN PKWY
CITY OF SANTA CLARITA

Partial Recirculated Draft Supplemental Environmental Impact Report
NorthLake Specific Plan
Los Angeles County, California

SCH No. 2015031080

Prepared for

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April 2025

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J Crotch's Bumblebee Survey Results, Impacts and Mitigation for NorthLake Project, Los Angeles County by Glenn Lukos Associates, Inc, dated July 2024
K Wildland Fire Risk Report NorthLake Project Addendum #1, December 2024

ACRONYM LIST

ADT	Average daily traffic
AG	Attorney General
BMPs	Best Management Practices
BTAR	Biological Technical Assessment Report
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAA	Creek Avoidance Alternative
CAPCOA	California Air Pollution Control Officers Association
CBB	Crotch's Bumblebee
CBR	Considered but Rejected
CCR's	codes, covenants, and restrictions
CDFW	California Department of Fish and Wildlife
CE	Conservation Easement
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHP	California Highway Patrol
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNRL	California Natural Resources Agency
CO	carbon monoxide
County	County of Los Angeles
CRPR	California Rare Plant Rank
CWA	Clean Water Act
dBA	decibel
DCS	Disaster Communications Service
DSEIR	Draft Supplemental EIR
EIR	Environmental Impact Report
FESA	Federal Endangered Species Act
FSEIR	Final Supplemental EIR
ft	feet
GHG	greenhouse gas
HMMP	Habitat Mitigation and Monitoring Plan
HOA	homeowner's association
LACDRP	Los Angeles County Department of Regional Planning
LACoFD	Los Angeles Country Fire Department
LACPW	Los Angeles County Public Works
LASD	Los Angeles County Sheriff's Department
LID	Low Impact Development
LOS	Level of service
MBTA	Migratory Bird Treaty Act
mcy	million cubic yards
MMRP	Mitigation Monitoring and Reporting Program
MMs	Mitigation Measures
NCCP/HCP	Natural Community Conservation Plan/Habitat Conservation Plan
NEPA	National Environmental Policy Act
NOA	Notice of Availability
NOP	Notice of Preparation
NLSP	NorthLake Specific Plan
NPPA	Native Plant Protection Act
PCAA	Partial Creek Avoidance Alternative

PDF	Project Design Feature
PM10	respirable particulate matter with a diameter of 10 microns or less
PM2.5	fine particulate matter with a diameter of 2.5 microns or less
PNA	Parks Needs Assessment
PNA+	Parks Needs Assessment Plus
PRC	Public Resources Code
RHNA	Regional Housing Needs Assessment
RPDSEIR	Recirculated Portions of the Draft Supplemental EIR
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments
SEIR	Supplemental Environmental Impact Report
sf	Square feet
SP	Stock Pond
SWRCB	State Water Resources Control Board
TIA	Traffic Impact Analysis
USEPA	U.S. Environmental Protection Agency
USFW	U.S. Fish and Wildlife Service
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compounds
VPHPL	vehicles per hour per lane
WST	Western Spadefoot Toad

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SECTION 1.0 INTRODUCTION

1.1 PURPOSE

The County of Los Angeles (County), as lead agency, prepared this document, titled Recirculated Portions of the Draft Supplemental EIR (RPDSEIR), to analyze the potential environmental impacts of the *NorthLake Specific Plan* (NLSP or Project) under the California Environmental Quality Act (CEQA). The County prepared this RPDSEIR in accordance with the Los Angeles Superior Court ruling on the Center For Biological Diversity and Endangered Habitats League v. County Of Los Angeles, et al, and Real Parties in Interest, Northlake Associates, et al, Case No. 19STCPO1610 ruling (Court Ruling), dated January 11, 2021, which granted in part and denied in part the Center For Biological Diversity and Endangered Habitats League's Petition for Writ of Mandate. A copy of the Court Ruling is provided in Appendix A.

The Court Ruling held that the Supplemental Environmental Impact Report (SEIR) (SCH No. 2015031080) for the Project, certified by the County on September 25, 2018, and consisting of the Draft Supplemental EIR (DSEIR), the Final Supplemental EIR (FSEIR) and associated errata, failed to comply with CEQA because it contained: (1) inadequate alternatives analysis (for failing to fully analyze a creek avoidance alternative); (2) inadequate Western Spadefoot Toad (WST) baseline assessment and, therefore, inadequate mitigation (to recreate baseline conditions; mitigation inadequate in detail and commitment); and (3) improper deferred mitigation as to rare plants (measure lacked sufficient detail). The Court denied the Petition for Writ of Mandate regarding: (1) impacts to mountain lions/wildlife crossings, (2) aesthetics, (3) air quality/public health, (4) wildfire impacts, and (5) recirculation.

This document does not revise the SEIR in any respect other than as directed by the Court, as the Court Ruling upheld all other aspects of the SEIR. As the RPDSEIR is limited to a few portions of the SEIR, pursuant to CEQA Guidelines Section 15088.5, subdivision (c), the DSEIR and FSEIR are not being recirculated for public review and comment.

The discussions which follow adhere to the general document structure and sequence presented in the SEIR and are based on a simple format in which each individual portion of the SEIR deemed inadequate by the Court Ruling is presented, with appropriate responsive discussion and/or analysis. If this RPDSEIR is approved by the County, it will become the final volume of the SEIR. The analysis in this document relies on all relevant information in the SEIR, its appendices and errata, as well as the new or additional sources of information identified herein.

This document has been made available for public review and comment in accordance with the procedures contained in the Notice of Availability. Written comments may be submitted to Mr. Jodie Sackett, Los Angeles County Department of Regional Planning, 320 West Temple Street, Los Angeles, California 90012. As CEQA Guidelines Section 15088.5, subdivision (f)(2) permits, the County requests reviewers to limit the scope of their comments to that material which is addressed within the text of the revised portions and the appendices included in this RPDSEIR. The County also requests that reviewers not make new comments on matters not included in this RPDSEIR. Responses to all comments received during the review period regarding the environmental analysis in this RPDSEIR will be provided in a separate document – a Revised Portions of the Final Supplemental EIR (Revised PFSEIR). Pursuant to CEQA Guidelines Section 15088.5, subdivision (f)(2)(ii), written responses will be prepared only to comments received regarding this RPDSEIR. The Revised PFSEIR will provide the basis for County decision-makers to consider the environmental implications of the Project as well as possible ways to mitigate any significant environmental impacts. Prior to making a decision on the Project, the County must certify that the Revised PFSEIR has been completed in compliance with CEQA, was presented

to the County's decision-making body, that the decision-making body reviewed and considered the information contained in the Revised PFSEIR prior to approving the Project, and that the Revised PFSEIR reflects the lead agency's independent judgment and analysis.

1.2 PROJECT SUMMARY

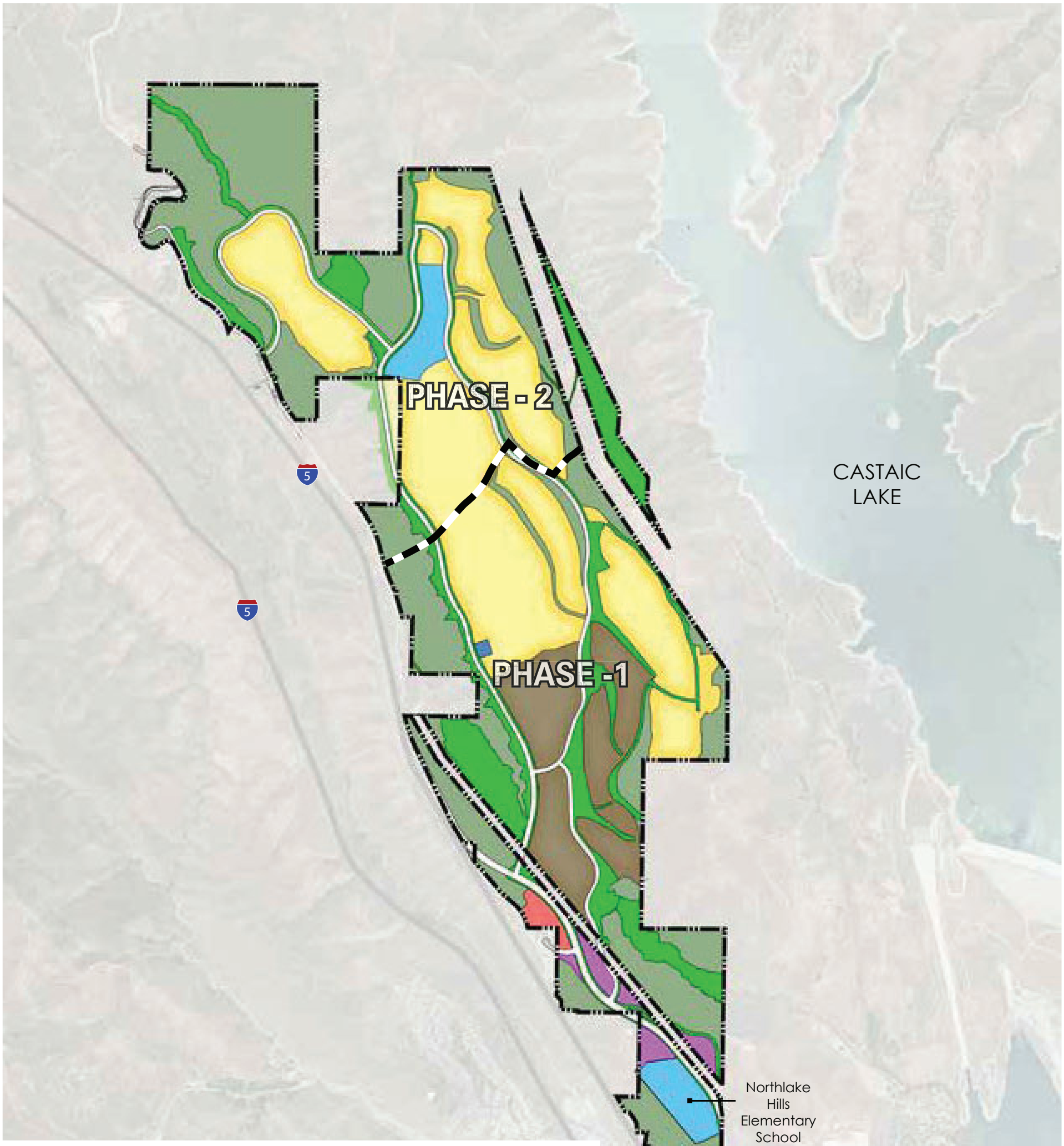
The previously approved Project consists of development of Phase 1, Phase 2, and associated off-site external map improvements in both Phase 1 and Phase 2 totaling 65.13 acres, including remedial grading, drainage features, and road and utility alignments. Phase 1 comprises (1) development of a 720-acre portion of the Project Site with a total of 2,295 dwelling units, including 288 single-family units on approximately 41.3 acres, 1,341 multi-family units on approximately 107 acres, 345 senior multi-family units on approximately 49 acres, 315 affordable units and 6 market-rate live/work units (included within 20 acres of commercial use). Phase 1 also includes, and lots are also provided for commercial development (22 acres), open space and parks (412 acres), roadways (86 acres), school pad (21 acres) and a fire station pad (1 acre), as shown on Figure 1, Previously Approved Land Use Plan.

The remainder of the Project Site, referred to as the Phase 2 area, would be developed with 855 single family homes, 386 acres of parks, trails, and open space, 23 acres of school uses, and 36 acres of associated roadway and infrastructure improvements. Phase 2 is included in Vesting Tentative Tract Map (VTTM) No. 073336 and the Conditional Use Permit (CUP) request is for 21 large lot parcels (40 acres or more) for future lease and finance purposes.

The Project improvements would consist of the construction of Ridge Route Road at the Project's main entrance to the south and a secondary access route to the northwest, construction of NorthLake Parkway adjacent to and west of the Phase 2 portion of the Project Site, a 4.64-acre connection of Grasshopper Creek Park, a debris basin, 2.39 acres in trail connections, a 5.1-acre pad for a water tank, 29.79 acres of manufactured slopes, and 11.98 acres of natural open space. In addition, extensions of the existing electrical distribution circuitry would occur along the existing Ridge Route Road to reach the Project, and substation upgrades would occur on Southern California Edison property. Grading for the proposed Project would involve approximately 33 million cubic yards of earthwork. Grading would occur over an approximate 1,330-acre rough grade footprint that accommodates the VTTM 073336 lots, plus the remaining 610 acres associated with future development of Phase 2.

In addition to the above improvements, an existing crude oil pipeline easement containing two oil pipelines that traverse the entire north-south length of the Project Site would be relocated to an alignment along the eastern boundary of the proposed development area and within the identified grading footprint.

At the February 21, 2018, public hearing, the Regional Planning Commission requested that the Applicant include an affordable housing component in the Project. Based on this request, the Applicant made minor revisions to the Project analyzed in the SEIR to include an affordable component. Specifically, the Applicant eliminated 108,283 square feet (sf) of industrial uses and 13,197 sf of commercial land uses and redesignated the industrial areas and remaining 31,200 sf of commercial land uses (excluding Highway Commercial) as Mixed-Use Neighborhood Commercial. The residential total at full buildout remains 3,150 units, same as the previously approved Project. However, 323 units would be reallocated from the Phase 2 area of the Project to the Phase 1 area (for a total of 2,295 Phase 1 units). This includes 6 market-rate live-work units, which would combine residential living space with commercial space. In addition, a total of 315 units would be deed restricted as affordable, as defined by the County, and developed in both phases. Of the 315 affordable units, 95 would be designated as senior-living affordable units. The senior-living affordable units would be available for occupants aged 55 and over and who meet



LAND USE SUMMARY

		Land Use Category	AC	DU	SQ.FT.
LAND USE		Single Family	267.4	2,065	
		Multi-family	74.5	1,085	
		Community Commercial	6.7		44,397
		Highway Commercial	2.5		32,175
		Industrial	13.7		108,283
		School [1]	43.5		
		Fire Station	1.4		
		Street R.O.W.	120.5		
OPEN SPACE		Recreation/Park [2]	167.0		
		Natural Open Space/Slope [3]	632.5		
	TOTAL		**1,329.7**	**3,150**	**184,855**

Source: PlaceWorks 2017

Previously Approved Land Use Plan

Exhibit 1

NorthLake Specific Plan, Recirculated Portions of the Supplemental Draft EIR

N W E S

Map not to scale

PSOMAS

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the minimum criteria to qualify for affordable housing. The remainder of the affordable housing units would not have any age restrictions. The market-rate live-work units and deed restricted affordable units are considered multi-family units under some impact methodologies below.

1.3 EIR CERTIFICATION AND PROJECT APPROVALS

In compliance with CEQA and the State CEQA Guidelines, the County conducted an Initial Study of the proposed Project and determined that an SEIR would be the appropriate environmental document to analyze the Project's potential impacts to the environment, as there have been additions and changes to the NLSP project, but they would not require major revisions to the 1992 NLSP EIR. The Initial Study identified a preliminary range of potential impact issues to be analyzed. A Notice of Preparation (NOP) and the Initial Study were distributed to responsible and interested agencies and key interest groups to solicit comments and to inform the public of the proposed Project. The NOP/Initial Study was distributed on March 24, 2015, for a 30-day review period, as required by CEQA. In addition, the County held a scoping meeting for the DSEIR on April 8, 2015. The purpose of the meeting was to solicit input from interested agencies, individuals, and organizations regarding the Project, alternatives, mitigation measures (MMs), and significant effects to be analyzed in the DSEIR.

Potentially significant environmental impacts addressed in the DSEIR included: Air Quality, Biological Resources, Cultural Resources, Energy, Hazards and Hazardous Materials, Geology and Soils, Greenhouse Gas Emissions, Hydrology and Water Quality, Land Use and Planning, Noise, Transportation/Traffic, and Utilities and Service Systems. The DSEIR analyzed both individual components and cumulative effects of the Project together with related projects on these topics and identified a variety of mitigation measures to reduce the potential adverse effects of the Project.

In accordance with CEQA requirements, the DSEIR also analyzed potential alternatives to the Project, including (1) No Project/No Development Alternative, (2) No Project/Development Pursuant to the Approved NorthLake Specific Plan, (3) No Industrial Development Alternative, and (4) Phase 1 Development Alternative. Potential environmental impacts of each of these alternatives were discussed as required by CEQA and each alternative was compared to the Project.

The DSEIR for the Project was released for public review on May 2, 2017, and circulated for public review and comment for a 45-day period ending on June 15, 2017. In compliance with Section 15087 of the State CEQA Guidelines, the County provided public Notice of Availability (NOA) of the DSEIR at the same time it sent a Notice of Completion to the Office of Planning and Research. In addition, the County held a public hearing regarding the Project before a Hearing Examiner on May 24, 2017.

Following the close of the public comment period on the DSEIR on June 15, 2017, detailed responses to all public agency comments and comments received from members of the general public received regarding the Project and the analyses of the DSEIR were prepared and are contained in the FSEIR.

An Errata was released in February 2018, prior to the Regional Planning Commission hearing to make minor technical corrections in the FSEIR and to provide further information in response to public comments received prior to the Regional Planning Commission meeting. The Errata included only minor technical changes to the SEIR and additional information to support the SEIR's conclusions, and the Errata merely clarified or amplified or made insignificant modifications in the adequate SEIR.

Project entitlements included: (1) NorthLake Specific Plan (Project No. 2015-00408-(5), (2) Vesting Tentative Parcel Map No. 073335-(5), (3) Vesting Tentative Tract Map No. 073336-(5), and (4) Conditional Use Permit No. 2015-00019-(5) (to authorize the Northlake Specific Plan site plan review, affordable set-aside housing, affordable senior set-aside housing, mixed-use and live-work development, on-site and off-site grading exceeding 100,000 cubic yards of cut/fill material, walls and fences exceeding six feet in height, and the construction of two water tanks with associated grading and infrastructure).

At the February 21, 2018 public hearing, the Regional Planning Commission requested that the Applicant include an affordable housing component in the Project. Based on this request, the Applicant made minor revisions to the Project analyzed in the SEIR to include an affordable component. An Errata dated April 4, 2018 was prepared to determine whether these minor changes would change any of the conclusions of the SEIR. The Errata concluded that the revisions involved only minor changes to the distribution of land uses and an overall reduction in density and intensity or use, and the Errata merely clarified or amplified or made insignificant modifications in the adequate SEIR.

On April 18, 2018, the Regional Planning Commission adopted the required findings, certified the SEIR, and granted the requested Project approvals.

A Second Errata dated August 2018 was prepared to make minor technical corrections in the FSEIR and to provide further information in response to public comments at the Regional Planning Commission meeting. The Second Errata included only minor technical changes to the SEIR and additional information to support the SEIR's conclusions, and the Errata merely clarified or amplified or made insignificant modifications in the adequate SEIR.

On September 25, 2018, the County Board of Supervisors (Board) held a public hearing on the Project and the appeals and voted to reject the appeals, uphold the Regional Planning Commission approvals, and certify the SEIR. On April 2, 2019, the Board adopted the Project entitlements, CEQA findings and Mitigation Monitoring and Reporting Program (MMRP), and Project conditions.

1.4 CEQA LITIGATION AND PREPARATION OF THE RPDSEIR

On May 1, 2019, Center for Biological Diversity and Endangered Habitats League filed a Petition for Writ of Mandate (Petition) in the Los Angeles Superior Court challenging the County's approval of the Project under CEQA (*Center For Biological Diversity and Endangered Habitats League v. County Of Los Angeles, et al, and Real Parties in Interest, Northlake Associates, et al,* Case No. 19STCPO1610). On January 11, 2021, the Court issued the Court Ruling, finding that the County did not comply with CEQA in certain respects in approving the Project, and granting in part and denying in part the Petition. The Court Ruling ordered the County to set aside all of their Project approvals and revise the SEIR as directed in the Court Ruling.

On February 1, 2021, the Court issued a Writ of Mandate and Judgment. The Writ of Mandate obligated the County to set aside its certification of the SEIR, its adoption of the Findings of Fact, Statement of Overriding Considerations, and MMRP, its approval of the Northlake Specific Plan Project (Project No. 2015-00408-(5)), the Vesting Tentative Parcel Map No. 073335-(5), Conditional Use Permit No. 2015-00019-(5), and Vesting Tentative Tract Map No. 073336-(5), and any other associated approvals (Project Approvals).

On May 18, 2021, the Board set aside all Project Approvals, including certification of the SEIR. Upon consideration of the revisions to the SEIR required by the Court Ruling and set forth in this RPDSEIR, the County may reconsider the Project for approval.

Pursuant to CEQA Guidelines Section 15088.5, subdivision (g), Section 2.0 of this RPDSEIR contains the following revised and updated portions and/or sections to be recirculated for public comment:

(1) Revised biological impact analysis only as to the Western Spadefoot Toad (WST) and special-status plants, as well as impact assessment for Crotch's Bumblebee (CBB) (presented in Section 2.1),

(2) Updated Traffic Analysis as to Vehicle Miles Travelled (VMT) pursuant to Senate Bill (SB) 743 and CEQA Guidelines Section 15064.3 (presented in Section 2.2),

(3) Updated Wildfire Analysis pursuant to Appendix G of the CEQA Guidelines (presented in Section 2.3), and

(4) Revised alternatives analysis only as to the addition of a Creek Avoidance Alternative and a Partial Creek Avoidance Alternative (presented in Section 2.4).

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SECTION 2.0 REVISIONS TO SEIR IN RESPONSE TO THE COURT RULING

2.1 REVISED BIOLOGICAL IMPACT ANALYSIS

2.1.1 INTRODUCTION

This section[1] has been revised in accordance with the Court Ruling, specifically to address (1) the WST baseline assessment and mitigation and (2) special-status plant mitigation. In addition, an assessment of impacts to the Crotch's Bumblebee is included. This section has not been revised to address any other impact to biology, including the mountain lions/wildlife crossing issues for which the Court Ruling upheld the County's SEIR analysis and impact determinations.

Specifically, the Court Ruling stated the following regarding WST:

> ***ISSUE THREE: THE BASELINE AND MITIGATION MEASURES PROVIDED IN THE SEIR TO PROTECT THE WESTERN SPADEFOOT TOADS ARE NOT SUFFICIENT UNDER CEQA:***
>
> *A project has a significant effect on the environment if it will eliminate a species of special concern from the Project site. Guidelines 15065. Section15065(a) provides:*
>
> > *A lead agency shall find that a project may have a significant effect on the environment ... where there is substantial evidence ... that any of the following conditions may occur (1) The project ... threaten[s] to eliminate a plant or animal community ....*
>
> *In that event, section 15065(b)(2) requires the project proponent to:*
>
> > *implement mitigation requirements relating to such species and habitat pursuant to an approved habitat conservation plan or natural community conservation plan.*
>
> *The Western spadefoot toad ("WST") is a California species of special concern. AR 3665 (CDFW letter); see AR 3644 defining "species of special concern." A self-sustaining WST population exists at the Project site in and adjacent to Grasshopper Canyon. AR 3689. The WST habitat in Grasshopper Creek and nearby seasonal wet areas will be eliminated by the Project. Grasshopper Canyon itself will be filled in and levelled for building sites. The DSEIR acknowledges the Project will destroy the WST habitat along Grasshopper Canyon.*
>
> > *Since this Grasshopper Canyon population is one of few known populations in the region and Project impacts would result in the loss of these populations (or a substantial portion thereof), impacts to this species would be considered significant ... AR 1943.*
>
> *The County has approved Mitigation Measure 5.2-9 to relocate the WST population to a new habitat that the applicant is to create (at an as-yet unspecified location) and monitored for five years.*
>
> *The parties dispute, first, the sufficiency of the baseline biological surveys for the site, and, thus, dispute not only the number of individuals in the WST community that are*

[1] The biological impact analysis is contained in Section 5.2 of the SDEIR and incorporated herein by reference except where expressly superseded.

to be relocated but also the number and characteristics of the breeding pools that will have to be created to sustain the population in a new habitat. The applicant's Biological Technical Report, Appendix D relies on a single biological survey for its count of WST: "The western spadefoot was observed incidentally during previous amphibian surveys, and in the focused surveys conducted for the species in 2014 (Bon Terra 2000b, 201 4c)." AR 1943. Petitioners argue the BonTerra's surveys underestimate the WST population on the site because the surveys were taken during draught years when the WST numbers were reduced.

The parties dispute, secondly, that the mitigation measures ensure that the relocation of the WST to a new habitat will be successful. The Biological Technical Report asserts that "[i]mplementation of Mitigation Measure 9 [MM 2.5-9) would reduce this impact [on the WST] to less than significant level. " Id. Petitioners argue the mitigation measures are inadequate to assure that result.

The mitigation measures approved by the County to mitigate the loss of WST habitat will require that the existing WST population on the Project Site be captured and relocated to new WST habitat. The DSEIR promises:

> *"Implementation of MM 5.2-9 which requires a western spadefoot relocation program, would reduce this impact to a less than significant level through translocation of individuals to suitable habitat. This measure would result in substantial avoidance of direct impacts to the western spadefoot and as a result the western spadefoot is expected to persist in the region following project implementation." AR 1943.*

The actual mitigation measure MM 2.5-9 reads in its entirety:

A relocation program for western spadefoot toad will be conducted prior to construction during the spring at the height of the breeding season for this species.... Results of the relocation program shall be provided to the CDFW and the LACDRP.

(a) Prior to implementing the Spadefoot Relocation Plan, a focused survey will be conducted within the prior appropriate season. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e., 2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied pond as well as others.

(b) The intent of the Relocation Plan is to capture and relocate as many western spadefoot toads as possible. Western spadefoot toads shall be relocated on or off site to an area of suitable habitat, as reviewed by the CDFW and the LACDRP. The relocation site shall be of similar (or better) quality as the habitat within the project impact area where the western spadefoot toads are captured. If no suitable habitat is available for relocation, suitable habitat shall be created.

Petitioners, to reiterate, argue that the WST relocation project violates CEQA because (l) the baseline definition of the WST population understates the extent of the habitat of the species on the Project site; and (2) the mitigation plan to relocate the existing WST population is unformulated and therefore does not assure the WST will be successfully introduced at another location.

These arguments, in the Court's view, are well taken.

The applicant has prepared a detailed relocation plan for the Western spadefoot toad. There is the Relocation Plan itself (AR 7831-7846) and a feasibility analysis (AR 8385-8417). The Relocation Plan specifies the steps that are to be taken to remove the WST population (including larvae, tadpoles and mature specimens) from their existing habitat and to replant them in or near pools that have been constructed to match the dimensions and depths of the pools from the original habitat and inoculized [sic] with soils from their original habitat. The pools would be situated in areas having similar vegetation to the original habitat. The feasibility study identifies six sites that could be constructed to recreate the original habitat (two at the site's north end and two on the adjacent state recreational area). The pools apparently are to be replenished by rainfall only.

The Relocation Plan, however, is designed to duplicate the conditions for the WST habitat that were identified in the 2014 BonTerra Psomos [sic] focused survey. That survey and earlier incidental surveys were allegedly taken in drought years, and, therefore, as petitioners argue, underestimate the extent of the WST habitat and the number of WST individuals. (In drought years the adult WST may stay underground in hibernation.) The parties have not, so far as the Court can ascertain, provided the rainfall data for the years in which the surveys were taken nor established whether those years had below average rainfall. The petitioners, however, assert that surveys taken in 2014 and general surveys taken in 2004 and 2005 were drought years. This issue was raised during the public comment periods, and the Court is unable to find evidence in the record to refute that the surveys were taken in drought years. The issue bears on whether the implementation of MM 2.5-9 will reduce the impact on the WST to less than significant. Petitioners argue that there are 8 to 10 seasonable pools in which the WST have been observed to breed and where larvae and tadpoles live, but the Relocation Plan intends to construct only three breeding pools. If petitioners are correct, Relocation Plan is inadequate to maintain the WST population.

The County's biologist, Joseph Decruyenaere, criticized the SEIR, telling the Planning Commission: "Mitigation for the spadefoot needs to address impacts to all 8 previously documented breeding pools, not just the two that have been observed since 2014. " AR 25823. The CDFW in its June 15, 2017 letter spotted the same problem, telling the Planning Commission: "the Department considers the 2014 surveys not adequate for determining the extent of the western spadefoot toad." AR 7395.

The Errata later [sic] attempted to address this issue by requiring additional surveys to determine the extent of the WST habitat. The Errata (AR 8330) provides:

> *Prior to implementing the Spadefoot Relocation Plan, a focused survey will be conducted within the two prior appropriate seasons prior to the issuance of a grading permit. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e. 2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied pond as well as others.*

The Relocation Plan as a mitigation measure is intended to reduce the impacts of the destruction of the WST habitat to less than significant. This requires that the habitat that is to be destroyed must be measured in a manner that obtains its maximum dimensions so that those potential dimensions may be realized in the new circumstances at the site where the WST is relocated. The applicant's focus on its 2014 (or 2015) survey is inadequate because it ignores information indicating that with average or greater than

average rainfall the extent of the WST habitat is larger with more breeding pools to support a larger WST population. The Errata, in other words, is inadequate because it establishes a restriction on the number of breeding ponds that will be duplicated at the new WST habitat, e.g. those identified in the 2014 survey plus any identified in "two prior appropriate season s" before a grading permit is issued. This restricts the extent of a recreated WST colony because it establishes fewer than the maximal number of breeding pools. What happens if the applicant establishes three breeding pools based on the 2014 survey and a year later there is deluge rainfall? The site unlike Grasshopper Canyon may not naturally expand the number of breeding pools. The WST has survived in Grasshopper Canyon through wet years and draught years. The evidence indicates Grasshopper Canyon has the potential to increase its number of breeding pools in wet years and thus to support a larger WTS population. This potential will be lost if the applicant mechanically duplicates the number of breeding pools that it finds from surveys taken before the grading of Grasshopper Canyon begins.

Concluding on the first issue, the applicant has not established a baseline for the WST habitat that must be re-created to preserve the WST population presently existing on the Project site. The mitigation measure for the WST is inadequate for that reason.

On the second issue, petitioners argue the relocation plan provided in MM 5.2-9 is inadequate. While the MM 5.2-9 requires the newly created habitat be monitored for five years the steps that will be taken to ensure success are unspecified. (The amphibian relocation plan is described in the SEIR, Appendix C (Biological Resources Plan) at AR 7839.) The CDFW also raised objections to the relocation plan. AR 7390-7405 (CDFW letter of June 15, 2017). The CDFW notes the applicant has not identified a specific site for relocation and does not promise that successful transplantation can be accomplished. AR 7396. The CDFW, as a trustee agency, does not have authority to approve or disapprove a project; however, it is required to be consulted and may comment as to projects that involve fish and wildlife, rare and endangered native plants, wildlife areas and ecological reserves.

The promise the applicant will create a habitat in which the transplanted WST population will flourish is deferred mitigation. The parties concede that the success of an alternate habitat is uncertain and will require on-going attention during and maybe beyond the monitoring period. The standard governing the acceptability of deferred mitigation measures is provided in Guidelines section 15126.4(a)(l)(B), reading:

> *Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures shall not be deferred until some future time. The specific details of a mitigation measure, however, may be developed after project approval when it is impractical or infeasible to include those details during the project's environmental review, provided the agency (1) commits itself to the mitigation; (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard that will be considered, analyzed, and potentially incorporated in the mitigation measure.*

The Court does not find a specific response to the contention that the applicant's deferred mitigation for the loss of the WST habitat does not provide sufficient detail, lacking particularly a specified location for a successful reconstruction of the Grasshopper Canyon WST community. The applicant relies on the September 13, 2018 letter from Glenn Lukos Associates (the Tony Bomkamp letter) to supply substantial evidence that the applicant

> *will succeed in transplanting the WST population. The Bomkamp letter does not make any commitment; it merely points to the process described in the SEIR (AR 7839) and says Bomkamp personally has been involved in establishing "seasonal pool for western spadefoot toads" in Orange County, without providing further detail. AR 16011.*

More is required by Guidelines section 15126 for mitigation measures that are deferred. The MM standards required for future projects are that the mitigation measure itself "inform [the lead agency] what it is to do and what it must accomplish, and they commit [the agency] to mitigating impacts before proceeding." See, Center for Biological Diversity v. Department of Fish & Wildlife (2015) 234 Cal. App.4th 214, 240, 245. The deferred mitigation to create a new habitat for the WST community is inadequate in detail and commitment. The mitigation measures to assure relocation of the WST population at the Project site does not comply with CEQA requirements.

The Court Ruling stated the following regarding special-status plants:

> ***ISSUE FOUR: THE MITIGATION MEASURES PROVIDED IN THE SEIR TO PROTECT THE RARE PLANTS ARE NOT SUFFICIENT UNDER CEQA:***

Five special status plant species have been identified during surveys to exist at various locations on the Project site. These are the round-leaved filaree, the club-haired mariposa lily and the slender mariposa lily (collectively lilies); the paniculate tarplant, and the southwestern spiny rush. AR 1926-29. As special status plant species, a destruction of their habitat must be mitigated to less than significance. Guidelines 15065(a)(l). The loss of these plants through the site development is to be mitigated by the transplantation of all existing individual plants as well as seeds or bulbs that are found. The FSEIR states:

> *A less than significant impact would be achieved through implementation of MM 5.2 -2, MM 5.2-3 and MM 5.2-11... which require a Riparian Restoration Program be developed and approved by USACE [US Army Corps of Engineers], CDFW, and LACDRP prior to issuance of grading permits, ... AR 8564*

MM 5.2-4 specifies procedures for the lilies. Seeds are to be collected and bulbs excavated for transplantation to a mitigation site and established as a self-sustaining population. A Biological Monitor is to prepare a Mitigation Plan for approval of LACDRP and is to oversee its implementation. AR 8568.

MM 5.2-5 specifies procedures for the round-leaved filaree, paniculate tarplant, and southwestern spiny rush. The Project applicant is to prepare procedures to collect and store the plants and seeds, create an alternate site to include soil preparation, irrigation, methods to control competing plants at the new site and prepare a list of "County-approved success criteria."

The CDFW challenges the adequacy of the mitigation measures, pointing out that the sites for transplantation are not selected, that the procedures to accomplish transplantation are not specified, and that success criteria are yet to be determined. CDFW believes that the rare plants cannot be transplanted on the site as the available patches after development will be fragmented. The CDFW is likewise dubious about transplantation off-site:

> *The Department has concerns when the DSEIR states it will transplant species off-site as this implies other areas will be subject to impact by this action. This additional impact would then need mitigation as this ecosystem is now being altered. AR 7398.*

CDFW was concerned that the mariposa lilies might not survive transplantation, saying it was unaware of any population created by seeding or translocation having been successful "at demonstrating long-term self-sustaining population."

CDFW expressed dissatisfaction with the generality of the mitigation measures, saying:

> *MM7 [now MM 5.2-4 and -5] does not allow the Department to comment on the appropriateness of the location, technique, success criteria, monitoring methods, density, length of time monitoring is required, or the method proposed for long-term protection and funding. AR 7399.*

The deficiencies identified in the CDFW letter demonstrate that the deferred mitigation measures for transplantation of the rare plants do not satisfy the CEQA standards set forth in Guidelines section 15126.4(a)(l)(B).

The applicant relies on the Glenn Lukos Associates (Bomkamp) letter to supply the evidence that deferred mitigation measures for the relocation of the six plant varieties are guidance enough. AR16015-18. Bomkamp's letter advises that there are various locations where the soil conditions are suitable to re-establish the individual plant varieties, but, beyond that, no information is provided to address the deficiencies identified by the CDFW. Further detail is required for the mitigation measures proposed for the rare plants in order to mitigate the destruction of their habitat to a less than significant threshold.

The mitigation measures for successful relocation of the rare plants found at the Project Site do not comply with CEQA requirements.

2.1.2 METHODOLOGY

The following section is based on (1) the Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan, July 2022 (Revised March, June 2023 and April 2024) by Glenn Lukos Associates, Inc. (GLA 2022a [Revised April 2024]; WST Report), (2) the Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan, July 2022 (Revised October and December 2022, February 2023 and April 2024) by Glenn Lukos Associates, Inc. (GLA 2022b [Revised April 2024]) (3) Effects of Potential Listing of Western Spadefoot Toad on NorthLake Project in Castaic, Los Angeles County, California (November 12, 2023) by Glenn Lukos Associates, Inc., (4) Summary of Western Spadefoot Toad Surveys in 2023 and 2024 at NorthLake Project Site, Los Angeles County, California (August 6, 2024) by Glenn Lukos Associates, and (5) Crotch's Bumblebee Survey Results, Impacts and Mitigation for NorthLake Project, Los Angeles County by Glenn Lukos Associates, Inc, dated July 2024 (CBB Survey Report). The full text of each report is included as Technical Appendices B-1, B-2, H through J, respectively, of this document.

2.1.3 BACKGROUND INFORMATION

Western Spadefoot Toad

The WST is a species of amphibian in the family Scaphiopodidae. It is found in western California (USA) and northwestern Baja California (Mexico). WST is a relatively smooth-skinned species of American spadefoot toad. Its eyes are pale gold with vertical pupils. It has a green or grey dorsum, often with skin tubercles tipped in orange, and has a whitish color on the abdomen. On each hind foot is a wedge-shaped black spade. Adult toads are between 3.8 cm and 7.5 cm (1.5 in and 3.0 in) long. Juveniles have a similar appearance to adults, but with more distinct spotting. It is

nocturnal, and activity is limited to the wet season, summer storms, or during evenings with elevated substrate moisture levels.

WST was observed on the Project Site during various general and focused amphibian surveys as well as during focused surveys for listed fairy shrimp species within seasonal pools. The surveys that observed WST were conducted during years with well above-average rainfall (2004/2005) and below-average rainfall (2014). While numerous ephemeral ponds and features have been observed on the Project Site over time during various surveys for different species, only three features have been observed to contain WST and only one additional feature was observed to contain potential WST habitat, despite no WST being observed in this latter feature. Subsequent surveys were conducted in 2023 and 2024. A more detailed discussion of the survey results, including a summary of relevant rainfall data, is provided below.

Special-Status Plants

Five special-status plant species were detected on the Project Site during various surveys over multiple years. The species accounts address the species detected in 1998 and 2001 as well as those detected by BonTerra in 2014. The *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* (GLA 2022b [Revised April 2024]) (Impact Assessment, Appendix B-2 to this RPDSEIR) includes important updates, specifically the California Rare Plant Rank (CRPR) for the round-leaved filaree and the addition of the California Natural Diversity Database (CNDDB) Rarity rankings for southwestern spiny rush, paniculate tarplant, slender mariposa lily, and club-haired mariposa lily to provide a more robust analysis relative to the significance of the impacts. (See also SDEIR, Section 5.2.2.)

Round-leaved filaree

Round-leaved filaree (*California macrophylla*) is an annual or biennial herbaceous species that occurs in clay soils in grasslands, openings in coastal sage scrub, and cismontane woodland (Allen and Roberts 2013). This species is less than six inches in height and generally blooms between mid-March and early May. In October 2017, when BonTerra prepared the Rare Plant Plan, round-leaved filaree was listed with a CRPR of 1B.2 (Rare or endangered in California and elsewhere, fairly endangered in California).

A total of 39 individuals of this species was observed in annual grassland in the central portion of the site in silty-clay soils in 2001 and was not observed during botanical surveys conducted in 2014 (BonTerra Psomas 2014). Associated plant species reported in 2001 included salt grass (*Distichlis spicata*), foxtail barley (*Hordeum murinum leporinum*), western plantain (*Plantago erecta*), fascicled tarweed (Deinandra fasciculata), and California goldfields (*Lasthenia californica*); however, neither the geographic extent or density of the population were reported and are thus unknown. On April 6 and 14, 2022, the location was visited by GLA biologist Tony Bomkamp to determine whether the occurrence of round-leaved filaree was extant, and the species was not detected. The site conditions appeared to have become degraded as the area has converted to dense non-native grasses and the species such as salt grass, western plantain, fascicled tarplant and California goldfields were no longer present. These are native forbs and their absence is an indicator that the site has been degraded, most likely by wildfire and/or grazing which has changed the character of the site and likely explains why the round-leaved filaree was not detected on either visit.

In November 2017, after completion of BonTerra's Special Status Plant Species Restoration Plan, the California Native Plant Society removed this species from the "Inventory of Rare and

Endangered Plants" changing the status from 1B.2 to "Considered but Rejected" (CBR)[2] with the note "Too common statewide" and the additional comment "counties that contain small, localized populations under severe threat should track *C. macrophylla* as a species of local concern". Thus, this species no longer has special status under the CRPR; or as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (CDFW) or U.S. Fish and Wildlife Service (USFW) as discussed below in the impact analysis. Nevertheless, round-leaved filaree is considered locally rare by the County of Los Angeles and was addressed in the Rare Plant Plan, should the occurrence be confirmed in preconstruction surveys.

Paniculate Tarplant

Paniculate tarplant (*Deinandra paniculata*) is an annual herbaceous species that is found in grassland, open chaparral and woodland, and disturbed areas, often in sandy or sandy-clay soil (Baldwin et al 2012). This is an upright species that grows up to 30 inches in height and typically blooms between May and November. Paniculate tarplant has a CRPR of 4.2 (Limited distribution in California, fairly endangered in California). Of note is the fact that paniculate tarplant has a CNDDB Rarity Ranking of S4 ("Apparently secure within California")[3] and CalFlora lists 710 records for this species as discussed below in the impact assessment. One population of paniculate tarplant comprised of several hundred individual plants was observed during 2014 botanical surveys in the northern-central portion of the Project Site, in an opening of sage scrub habitat located on a northwest-facing slope. This occurrence was confirmed during a site visit by GLA biologist Tony Bomkamp on April 14, 2022, at which time the geographic extent was mapped using GPS and the density was observed to be variable ranging from approximately one to five plants per square meter, resulting in population estimate of 600. Associated plant species at this location include California sagebrush (*Artemisia californica*), tocalote (*Centaurea melitensis*), red-stemmed filaree (*Erodium cicutarium*), and nodding needlegrass (*Stipa cernua*).

Southwestern spiny rush

Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*) is a perennial rhizomatous herb that occurs in alkaline seeps and moist saline soils. This species grows from 20 to 50 inches in height and typically blooms between June and August (Baldwin et al 2012); however, it is detectable throughout the year. Southwestern spiny rush has a CRPR of 4.2 (Limited distribution in California, fairly endangered in California). Like the paniculate tarplant, Southwestern spiny rush has a CNDDB Rarity Ranking of S4[4] ("Apparently secure in California") and CalFlora lists 406 records for this species. Southwestern spiny rush was observed throughout Grasshopper Canyon, and it was estimated by BonTerra that several hundred individual plants exist in the Project development boundary. BonTerra's mapping showed that the majority of Grasshopper Creek was occupied; however, densities were not reported. Approximately 2,000 individuals of this plant were observed throughout the main drainage in Grasshopper Canyon in 2021 by GLA biologists. GLA noted that density varies from occasional individuals to dense thickets of nearly 100-percent cover for some localized patches. In general, the spiny rush was limited to the low flow channel and adjacent terraces. The plants were growing in mule fat scrub and mule fat scrub/spiny rush marsh vegetation. The substrate in these areas is sandy riverwash with cobbles and boulders (BonTerra 2014). The plant species generally associated with southwestern spiny rush includes mule fat (*Baccharis salicifolia*) and sandbar willow (*Salix exigua*).

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2 The California Rare Plant Rank is derived directly from the California Native Plant Society *Inventory of Rare and Endangered Plants*.

3 http://www.rareplants.cnps.org/detail/1892.html.

4 http//rareplants.cnps.org/939.html.

Slender Mariposa Lily and Club-Haired Mariposa Lily

Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) and club-haired mariposa lily (*C. clavatus* var. *clavatus*) are perennial herbs in the lily family and *Calochortus* genus, which consists of 50 species and/or subspecies that are native to California. Slender mariposa lily has a CRPR of 1B.2 (Rare or endangered in California and elsewhere, fairly endangered in California) and a CNDDB Rarity Ranking of S2S3 ("Imperiled" and "Vulnerable"). Club-haired mariposa lily has a CRPR of 4.3 (Limited distribution in California, not very threatened in California) and a CNDDB Rarity Ranking of S3. CalFlora lists 95 and 117 occurrences, respectively. These plants represent varieties of the same species and are known to hybridize with each other. Due to this known hybridization, these two species are often treated as a single species for purposes of impact assessment and mitigation, when necessary. For portions of the population, BonTerra mapped occupied polygons; however, BonTerra did not provide specific counts for each polygon so it is not possible to establish densities; however the total number of plants was provided for the development area which is adequate for determining the impact and required mitigation as set forth below. GLA has observed this species on multiple sites in northern Los Angeles County and densities vary from very low (< one/square meter) to multiple/square meter. Density for the proposed establishment areas is addressed below.

Crotch's Bumblebee

Crotch's Bumblebee (*Bombus crotchii*) (CBB) was petitioned to the State of California in 2018 for listing of the CBB as endangered under the California Endangered Species Act (CESA). The Fish and Game Commission advanced the species to "Candidate" status (for listing as endangered) under the CESA in June 2019. The CBB has a historic range that covers the portions of southern and central California including the NorthLake project site. Subsequently, the candidacy of the CBB was challenged in court, and in November 2020 the Sacramento County Superior Court ruled that insects are not eligible for listing under CESA. The Superior Court's ruling was subject to a subsequent legal challenge regarding CESA's definition of a fish as "a wild fish, mollusk, crustacean, invertebrate, amphibian, or part, spawn, or ovum of any of those animals" and was eventually overruled by the California Court of Appeal on May 31, 2022, making the CBB subject to protection under CESA.[5]

The CBB is a State Candidate Endangered species[6] that inhabits open grassland and scrub habitats. This species occurs primarily in California, including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of southwestern California. This species was historically common in the Central Valley of California, but according to the listing package now appears to be absent from most of it, especially in the center of its historic range.

Bumblebees, including CBB, are generalist foragers and have been reported visiting a wide variety of flowering plants. CBB has a very short tongue, and thus is best suited to forage at open flowers with short corollas. The plant families commonly associated with CBB observations or collections from California include Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae. Plants in the genera *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia,* and *Salvia* are common food plants. These floral associations do not necessarily represent CBB's only preferred plants over other flowering plants, but rather may represent the prevalence of these flowers in the landscape where this species occurs.

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5 *Almond Alliance of California v. Fish and Game Commission* (2022) 79 Cal.App.5th 337.

6 The California Fish and Game Commission voted to designate CBB as Candidate Endangered species on June 12, 2019. That designation was placed on hold during the litigation. Following the Court of Appeal ruling, the candidacy was reinstated on September 30, 2022. The final determination is pending.

Bumblebees are social insects that live in colonies composed of a queen, workers, and reproductive individuals (males and new queens). Colonies are annual and only the new, mated queens overwinter. These queens emerge from hibernation in the early spring and immediately start foraging for pollen and nectar and begin to search for a nest site. Nests are often located underground in abandoned rodent nests, or above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees. Initially, the queen does the foraging and care for the colony until the first workers emerge and assist with these duties. Bumblebees collect both nectar and pollen of the plants that they pollinate. In general, bumblebees forage from a diversity of plants, although individual species can vary greatly in their plant preferences, largely due to differences in tongue length. Bumblebees are well-known to engage in "buzz pollination," a very effective foraging technique in which they sonicate the flowers to vibrate the pollen loose from the anthers.

2.1.4 EXISTING CONDITIONS

Western Spadefoot Toad

WST was observed at the Project Site during various general and focused amphibian surveys as well as during focused surveys for listed fairy shrimp within seasonal pools.

1. 2004/2005 Fairy Shrimp Surveys

A determination for the extent of suitable habitat for WST is possible from the data collected during wet-season fairy shrimp surveys in 2004/2005, which was one of the wettest rainfall years in the last 50 years[7]. From October 2004 to February 2005, the amount of accumulated rainfall at the Project Site far exceeded the average annual rainfall amount. During this time period, more than 35 inches of rain fell at the Project Site, where the average annual rainfall is 20 inches per year.

Appendix A of the January 17, 2006, BonTerra fairy shrimp report documents the results of the surveys and describes eight ponded features that were identified during the surveys.[8] Ponding was recorded along with water depths during the surveys and the presence of a suite of invertebrates, amphibians (including WST), and other species such as waterfowl. Four of the 8 ponded features identified in that report (ponds VP 1, VP 2, VP 6, and Stock Pond [SP] 1) exhibited sufficient ponding to support WST as noted in the comments in Appendix A of that report. It is important to note that fairy shrimp surveys during the 2004/2005 survey season began

[7] The January 17, 2006 BonTerra Fairy Shrimp Focused Survey reported: "The precipitation from the winter of 2004-05 was well above average. The average rainfall for northwestern Los Angeles County is 20 inches per year. The accumulated rainfall for the months of October 2004 to February 2005 was 44 inches at the Del Valle Weather Station, approximately six miles to the southwest of the Project Site (Table 1) [based on the monthly totals cited by BonTerra the total from October 2004 through February 2005 actually was 34.59 inches and with an additional 1.24 inches in March 2005 which BonTerra included in the 2006 BonTerra Fairy Shrimp Focused Survey, thus the total was 35.83 inches]. There was an initial, early rainfall during October 19 and 26, 2004. A total of 4.72 inches fell at the Del Valle Weather Station during October 2004. November 2004 rainfall totaled 0.17 inch at Del Valle. The majority of the rains came during the months of December 2004 through February 2005. The Del Valle Weather Station rainfall total was 6.82 inches in December 2004, 12.46 inches in January 2005, and 10.42 inches in February 2005 [and 1.24 inches in March 2005]. The above average rainfall enabled the wet season survey to comprehensively sample the ponds for representative invertebrates present. The ponds inundated on December 27 and 28, 2004, during a rainfall event that delivered 4.5 inches over two days and remained inundated above the 0.39-inch (3 cm) standing water criteria until the final site visit on April 9, 2005."

[8] BonTerra Consulting. January 17, 2006. *Results of Focused Presence/Absence Surveys for Fairy Shrimp at the NorthLake Specific Plan and Castaic High School Project Site, Near the Community of Castaic in Unincorporated Los Angeles County*.

on November 27, 2004, and extended to April 9, 2005, ensuring that the surveys fully captured a sufficient segment of the breeding season for the WST.[9]

Ponded features VP 1, VP 2 and SP 1 were observed and documented as supporting WST. WST was not observed and documented at feature VP 6 during the 2004/2005 surveys. However, feature VP 6 supported western toad larvae, which leads to the conclusion that the habitat is potentially suitable for WST, at least during above-average rainfall years.

Critically, the other four ponded features (ponds VP 3, VP 4, VP 5, and VP 7) BonTerra identified during the surveys in 2005 and documented in the 2006 Report were too shallow (i.e., no more than a few inches at maximum depth) and dried out throughout the course of the surveys. Accordingly, these four ponded features lacked sufficient water depth and duration to support WST. This is particularly important information, because if these features were too shallow and therefore failed to pond for sufficient duration during the 2004/2005 rainfall season, which was an exceptionally wet year, their lack of suitability for WST is unambiguously established. No amphibians or fairy shrimp were detected in these features during an extra-optimal year. For these features, there is no potential for WST to successfully breed.

Based on above-average rainfall during the 2004/2005 rainfall season, features listed as VP 1, VP 2, and SP 1 in the 2006 BonTerra report are the only features documented to support WST; one additional feature, VP-6, is the only other feature with potential to support WST (at least in above-average rainfall years). The other 4 ponded features (ponds VP 3, VP 4, VP 5, and VP 7) cannot support WST.

2. 2014 Shrimp Surveys and Western Spadefoot Toad Surveys

In 2014, a year that exhibited lower-than-average rainfall, BonTerra conducted surveys for fairy shrimp and amphibians, as well as focused surveys for WST. A total of 6 ponded features were observed and mapped at the Project Site during the 2014 surveys. Each of the six ponded features were also observed and recorded during the 2004/2005 surveys; no new ponded features were observed at the Project Site during 2014 surveys. Notably, the 2014 surveys labeled the ponded features at the Project Site differently than the 2004/2005 surveys.

WST was only observed at two of the six ponded features that were observed and recorded during the 2014 surveys. WST was previously observed at both of these ponded features during the prior 2004/2005 surveys. As noted above, WST was also observed at a third ponded feature during the 2004/2005 surveys. However, WST was not observed at this ponded feature during the 2014 surveys, most likely due to insufficient ponding in 2014. WST was not observed at the other three ponded features during the 2014 surveys.

As shown in the table below (Table 2-1), during the 2014 surveys, WST tadpoles were observed in the ponded features previously identified in the 2006 BonTerra fairy shrimp report as SP 1 (identified as Pond 7 in the 2014 surveys for fairy shrimp and amphibians, and Pond 1 in the 2014 focused surveys for WST) and VP 1 (identified as Pond 8 in the 2014 surveys for fairy shrimp and amphibians, and Pond 2 in the 2014 focused surveys for WST). WST was not observed in the ponded feature previously identified in the 2006 BonTerra fairy shrimp report as VP 2 (identified as Pond 9 in the 2014 surveys for fairy shrimp and amphibians, and not identified in the 2014 focused surveys for WST).

[9] WST breeding season is typically late winter to the end of March. See: S. Morey, 2000. California Wildlife Habitat Relationships System California Department of Fish and Wildlife California Interagency Wildlife Task Group.

The results of BonTerra's 2014 focused surveys for WST are summarized below:

> *Western spadefoot toad was detected at both Pond 1 and Pond 2 during the surveys (Exhibit 4). Western spadefoot toad tadpoles were detected in Pond 2 on March 31, 2014. Advertising adult males and foraging adults of both sexes were observed at Pond 1 on March 31, April 7 and 15, and May 7, 2014. Amplexing (mating) pairs were observed at Pond 1 on April 7 and 15, 2014. Metamorphs were observed at Pond 1 on May 21, 2014. Photographs of Pond 1 and Pond 2 are presented in Attachment A, and photographs of the western spadefoot toad tadpoles, metamorphs, and adults on the Project Site are presented in Attachment B.*
>
> *Tadpoles observed at Pond 2 were at Gosner stage 26-30[1] a little more than halfway to metamorphosis, and at least one hind limb bud was visible on each of the tadpoles examined. Given that western spadefoot toad larvae have been documented metamorphosing within three weeks of egg-hatching (Lannoo 2005), tadpoles could have potentially metamorphosed within 12 days of the first observation on March 31, 2014. The pool had diminished significantly by the April 7, 2014, survey and no tadpoles were observed. It is unlikely that the tadpoles observed during the March 31 survey had metamorphosed by the second survey on April 7.*
>
> *Up to 15 male spadefoot toads were observed vocalizing at Pond 1 on April 15, representing the peak of breeding activity observed during surveys. The observation of metamorphs on May 21 indicates successful breeding at Pond 1.*[10]

Subsequent WST surveys were conducted in 2023 and 2024 following above average rainfall years. These surveys confirmed the presence of WST in the 3 previously observed ponds – Pond 1, Pond 2 and the Cattle Pond (SP 1). Specifically, the WST population estimates for the Cattle Pond were difficult to quantify as this pond dried faster and earlier in the year than the two smaller ponds and the water was turbid. The detection of WST at the Cattle Pond was low; however, metamorphs were quickly detected during both years. Given the Cattle Pond dries faster than Ponds 1 and 2, WST development may be accelerated in the Cattle Pond. The Cattle Pond is larger than the other two ponds with more soil cracks available for WST refuge; therefore, the number of metamorphs hiding in the cracks is likely much higher than were detected. The detection of WST at Pond 1 yielded the highest consistent detection from 500s to low 1,000s and multiple cohorts were observed co-occurring. Pond 1 appears to remain inundated longer than Pond 2; therefore, it may support a larger population of WST larvae, allowing multiple cohorts to metamorphose. Pond 1 was observed to support multiple cohorts and Baja California treefrog during both years. During the 2024 Pond 2 survey, the WST tadpoles were primarily from one cohort and of similar size to Pond 1's oldest cohort. As mentioned above, Pond 2 appears to dry faster than Pond 1, as it exhibited half the surface area compared to Pond 1 in 2024 and completely dry during the 2023 visit. However, Pond 2 remained inundated long enough, in both years, to produce at least one cohort, given the numerous metamorphs detected in 2023 and the late-stage tadpoles observed in 2024. Although Pond 1 appears to have the ability to support more WST larvae, both ponds are sufficiently proximate to each other to function as a single population that is likely supporting hundreds to low 1,000s of WST metamorphs during above average rainfall years.

[10] BonTerra Psomas. October 2, 2014. Results of Focused Presence/Absence Surveys for the Arroyo Toad and Western Spadefoot Toad on the NorthLake Specific Plan Project Site, Los Angeles County, California.

TABLE 2-1
POND NOMENCLATURE CLARIFICATION AND WST SURVEY RESULTS

Ponded Features Observed 2004/2005 Fairy Shrimp Survey (AR 3828)[a]	Observed in 2004/2005 Fairy Shrimp Survey? (Y/N; Survey ID)	Ponded Features Observed 2014 Fairy Shrimp Survey[b] (AR 3848)	Observed in 2014 Fairy Shrimp Survey? (Y/N; Survey ID)	Ponded Features Observed in 2014 WST Survey[c] (AR 3904)	Observed in 2014 WST Survey (Y/N; Survey ID)?	Ponded Features Observed in 2022/2023 and 2023/2024 WST Surveys	Observed in 2022/2023 and 2023/2024 WST Surveys (Y/N; Survey ID)?	Draft Western Spadefoot Toad Relocation Program Identifier[e]
VP 1	**Y** (AR 3833)	Pond 8	**Y** (AR 3868-3871)	Pond 2	**Y** (AR 3897)	Pond 2	**Y** (Appendix I)	Pond 2
VP 2	**Y** (AR 3834)	Pond 9	N		N	Pond 1	**Y** (Appendix I)	Pond 1
VP 3	N	Pond 4	Not surveyed		Not surveyed		Not surveyed	
VP 4	N	Pond 5	Not surveyed		Not surveyed		Not surveyed	
VP 5	N	Pond 6	Not surveyed		Not surveyed		Not surveyed	
VP 6[d]	N		Not surveyed		Not surveyed		Not surveyed	Pond 3
VP 7	N		Not surveyed		Not surveyed		Not surveyed	
SP 1	**Y** (AR 3835)	Pond 7	**Y** (AR 3852 – 3855)	Pond 1	**Y** (AR 3897)	Cattle Pond	**Y** (Appendix I)	Cattle Pond

[a] Stock Pond = SP; Vernal Pool = VP; Administrative Record citation = AR, followed by the page number.
[b] Ponds 1-3 were different ponds located off site.
[c] Ponds 1 and 2 are the only ponds shown on Exhibit 4 (Ponds Occupied by WST) based on the 2014 survey.
[d] VP 6 appears to have exhibited sufficient ponding but did not support WST at the same time they were observed. VP 6 is designated Pond 3 in the WST Report.
[e] Adopted nomenclature for the WST Report and the RPDSEIR.

3. Number of Ponded Features at Project Site During Optimal Conditions

As reported above, in the 2006 *Fairy Shrimp Report*, BonTerra included a detailed table (Table 1 on page 6) with monthly rainfall data showing that the 2004/2005 rainfall year (approximately 36 inches) was more than the average rainfall for the region (approximately 20 inches). Accordingly, the 2004/2005 rainfall year reflects the most optimal conditions for WST habitat at the Project Site.

The 2004/2005 surveys were conducted during optimal conditions for WST habitat at the Project Site. During the 2004/2005 surveys, WST were observed at three ponded features on the Project Site. A fourth ponded feature at the Project Site exhibited potential for WST habitat, but no WST larvae was observed at this ponded feature during the 2004/2005 surveys. Accordingly, the 2004/2005 surveys demonstrate that the Project Site has a maximum of four ponded features that can support WST. The other four ponded features observed and documented at the Project Site cannot support WST, even during optimal conditions when there has been above-average rainfall.

BonTerra's *DRAFT Western Spadefoot Toad Relocation Program*[11] is based on the four ponded features at the Project Site that can support WST. These ponded features are identified as: Pond 1 (previously identified as VP 2 in the 2006 BonTerra fairy shrimp report, and Pond 9 in the 2014 surveys for fairy shrimp and amphibians); Pond 2 (previously identified as VP 1 in the 2006 BonTerra fairy shrimp report, and Pond 8 in the 2014 surveys for fairy shrimp and amphibians); Pond 3 (previously identified as VP 6 in the 2006 BonTerra fairy shrimp report); and Cattle Pond (previously identified as SP 1 in the 2006 BonTerra fairy shrimp report, and Pond 7 in the 2014 surveys for fairy shrimp and amphibians). While only WST larvae were observed in Pond 3 during the 2004/2005 or 2014 surveys, Pond 3 will be subject to mitigation and pre-construction surveys because it exhibited potential for supporting WST during above-average rainfall years. Pond 3 will also serve as a potential collection site based on the presence or absence of WST as determined by the pre-construction surveys. Table 2-1, above, summarizes the survey results and clarifies the ponded feature nomenclature, consistent with *Western Spadefoot Toad Relocation Program*.

Grading for the previously approved Project would result in the loss of Pond 1, Pond 2 and the Cattle Pond. Grading would also impact Pond 3.

4. Dimensions of Ponded Features at Project Site During Optimal Conditions

The maximum dimensions of the pools discussed above and those subject to mitigation was determined during the 2004/2005 rainfall season, which, as noted above, reflected the optimal conditions for WST habitat at the Project Site. The method for determining the maximum dimensions of the three ponds to be impacted is described on page 2 of BonTerra's *DRAFT Western Spadefoot Toad Relocation Program*:

> *Brian Leatherman and Justin Wood, Consulting Biologists, visited the site on November 11, 2004 to measure the size and extent of the existing ponds and to search for suitable mitigation pool creation sites. A subsequent preliminary assessment searching for pool creation sites was conducted in summer of 2017 simultaneous with other site surveys conducted by BonTerra Psomas Senior Biologist Marc Blain and Biologist Sarah Thomas.* ***The existing breeding habitat consists of three ponds.*** *Two are naturally occurring ephemeral ponds on the plateau above (east of) Grasshopper Canyon, and one is an artificially created cattle pond near the upper end of Grasshopper Canyon (Exhibit 1). Approximate dimensions and surface area of the respective ponds are shown in Table 1. The total surface area of the existence the surface area of the mitigation pools to be created, is 22,859 square feet.*

[11] BonTerra Psomas. September 2017. *DRAFT Western Spadefoot Toad Relocation Program* prepared for the FSEIR: NorthLake Specific Plan Residential Development Project, Los Angeles County, California.

Table 1 of the BonTerra Plan[12] (reproduced below as Table 2-2) includes the following information:

TABLE 2-2
DIMENSIONS OF EXISTING EPHEMERAL PONDS AND CATTLE POND
FROM DRAFT WESTERN SPADEFOOT RELOCATION PROGRAM

Pond	Shape	Dimensions (pond diameters)	Surface Area	Perimeter	Estimated Max. Depth
1 (upslope)	Oval	36 x 61 feet	1,847 sq. ft.	145 feet	1 ft. 2 in.
2 (downslope)	Circular	27.5 x 36 feet	791 sq, ft.	99 feet	1 ft. 9 in.
Cattle Pond	Oval	123 x 198 feet	20,221 sq. ft.	503 feet	3 ft. 6 in.
* Surface area (fourth column) was estimated by averaging diameters and using the formula A = π r2					

Appendix A of the BonTerra 2006 *Fairy Shrimp Report* provides dimensions for the pools that were determined during the wet-season surveys. These were larger estimates for the features, with the caveat that these appear to be estimates and no mention is given in the report of how the dimensions were obtained (as noted below these are inaccurate estimates). Table 2-3 below uses the largest dimension for each of the three pools.

TABLE 2-3
MAXIMUM DIMENSIONS OF EPHEMERAL PONDS AND CATTLE POND
FROM 2006 FAIRY SHRIMP ESTIMATES

Pond	Shape	Surface Area (square meters)	Surface Area (square feet)	Perimeter	Estimated Max. Depth
1 (upslope)	Oval	481	5,177 sq.ft.	Not Provided	51 cm (20.4 in.)
2 (downslope)	Circular	179.8	1,937 sq, ft.	Not Provided	56 cm (22.4 in.)
Cattle Pond	Oval	123 x 198 feet	64,583 sq. ft.	Not Provided	210 cm (84 in.)
* Surface area (fourth column) was estimated by averaging diameters and using the formula A = π r2					

Based on a review of aerial photographs over a period of years, between 1994 and 2021 the normal ponding area is less than the maximum dimensions stated in Table 2-3 and larger than the dimensions in Table 2-2. Exhibit 4 (of the WST Report [Appendix B-1]) is an aerial photograph from April 2011 that shows the limits of WST-occupied ponds with the near-maximum ponding.[13] The images for Ponds 1 and 2 are from December 2017, which show a very clear outline of the maximum or near-maximum extent of potential ponding (the same range of years was used for these ponds as well). Although Pond 3 (previously identified as VP-6 in the 2006 BonTerra fairy shrimp survey) is depicted on Exhibit 4 (of the WST Report [Appendix B-1]), the near-maximum extent from the 2006 *Fairy Shrimp Report* has been included in Table 2-4. Table 2-4 establishes the baseline for WST habitat "that must be recreated to preserve the WST population presently existing on the Project site". (Court Ruling at p. 17.)

[12] BonTerra Psomas. September 2017. *DRAFT Western Spadefoot Toad Relocation Program* prepared for the FSEIR: NorthLake Specific Plan Residential Development Project, Los Angeles County, California.

[13] Aerial photographs that show unambiguous ponding were examined on Google Earth Pro© include 6/1994, 12/2005, 3/2006, 7/2008, 6/2009, 4/2011, 12/2013, 8/2014, 5/2015, 2/2016, 7/2017, and 8/2019. As noted, the aerial from 4/2011 shows the pool at capacity and the areas was calculated using ArcGIS.

TABLE 2-4
REVISED DIMENSIONS OF EXISTING EPHEMERAL PONDS AND CATTLE POND

Pond	Shape	Dimensions	Surface Area	Perimeter[1]	Estimated Depth[2]
1 (upslope)	Oval	NA	2,600 square feet	190 feet	1 foot 2 inches
2 (downslope)	Circular	NA	1,300 square feet	110 feet	1 foot 9 inches
Cattle Pond	Oval	NA	35,284 square feet	790 feet	3 feet 6 inches
3	Oval	NA	2,178 square feet	177 feet	14 inches
Total			41,362 square feet (0.95 acre)		

[1] Perimeter measurements are based on review of aerial photographs over a period of years, between 1994 and 2021.
[2] Depths are from Table 1 of the BonTerra *DRAFT Western Spadefoot Toad Relocation Program.*

Special-Status Plants

Round-Leaved Filaree

Round-leaved filaree was observed during 2001 plant surveys, when 39 plants were observed within the Project's development boundary. However, this species was not observed during surveys conducted in 2014, indicating that this species may have been extirpated from the Project Site. Site visits on April 6 and 14, 2022, to the site location where the species was previously detected in 2001 did not find the population, consistent with the finding that the population may have been extirpated.

Paniculate Tarplant

Paniculate tarplant was observed in 2014 in a single population that consisted of several hundred individual plants, all of which occur in the Project's development boundary. The population was detected on April 14, 2022, consistent with the previous observations.

Southwestern Spiny Rush

Southwestern spiny rush was observed throughout Grasshopper Canyon and it was estimated that several hundred individual plants exist in the Project's development boundary. GLA conducted a focused survey and census in 2021 and found approximately 2,000 individuals in Grasshopper Creek.

Slender mariposa lily and club-haired mariposa lily

During botanical surveys conducted in 2014, BonTerra reported that approximately 1,709 individuals of slender/club-haired mariposa lily hybrids were observed at 36 locations on the Project Site. An additional 22 populations contained plants of varying densities, likely representing an additional 1,000 or more individuals. It is estimated that over 3,000 individuals occur on the Project Site; however, in the BonTerra *Draft Rare Plant Plan*, it was clarified that of the approximately 3,000 individuals observed on the Project Site, approximately 2,000 individuals are located within the Project's development boundary.

Crotch's Bumblebee

Surveys were conducted by GLA biologists experienced in conducting focused surveys for the CBB in areas of suitable habitat within the proposed development area as well as areas of onsite and offsite open space as depicted on Exhibit 1 of the CBB Survey Report (Attachment J).

GLA biologists performed focused surveys for the CBB within suitable habitat areas within the NorthLake Project site. Surveys followed a protocol developed by GLA which largely encompasses the CBB flight season (March to September) when the queen, daughters, males and new queens are generally active. Surveys are preferably spaced out throughout the flight season to take advantage of different blooming periods and floral resources. The survey protocol recommends that individual biologists conduct three focused surveys during the flight season, beginning within the three acres that contain the highest quality floral resources per every 50 acres of potential suitable habitat. Based on previous mapping by BonTerra[14], the Project Site supports up to 1001.8 acres of potential suitable habitat, and due to the overall size of the Project Site and distance between suitable habitat areas, four different biologists conducted three focused surveys each, with two or three biologists during each survey visit. In addition to the focused surveys listed in Table 1 below, CBB were observed on April 3, 2024 during other biological surveys conducted by GLA.

During each focused survey, two sampling approaches were implemented. During the first phase, the surveyor conducted one hour of visual survey effort within the three-acre flowering area identified as supporting the highest quality habitat as determined by the surveyor. If CBB were not detected during the first hour of searching, a second hour of survey effort was conducted. During the second hour, the surveyor could either choose to resurvey the same flowering area (if any *Bombus* species were detected prior) or the surveyor could choose to conduct a second hour of searching within another high quality three-acre flowering area on site. If CBB were not detected during the second hour of the survey effort, the second survey phase was implemented, in which the surveyor surveyed the best additional flowering areas throughout the site, as deemed appropriate. The surveyor scanned suitable flowering areas for bumblebee activity and focused on those areas. Minimal time was spent in lesser quality habitat. Depending on the size of the habitat area, the opportunistic survey effort generally did not exceed one hour. In addition, GLA biologists documented bumblebee activity incidentally during all other biological surveys.

Focused surveys were conducted by GLA biologists Jason Fitzgibbon, Chris Waterston, Stephanie Cashin, and Ian Rhodes on May 15, May 16, May 23 and June 27, 2024. Pursuant to the survey guidelines, the surveys were conducted during daytime hours when floral resources were in bloom and when it was sufficiently warm for bumblebee activity. Weather conditions during the surveys were conducive to a high level of bee activity. Table 1 of the CBB Survey Report summarizes the CBB survey visits.

CBB were detected within the proposed development areas and within proposed open space areas as depicted on Exhibit 1 of the CBB Survey Report. Based on previous vegetation mapping for the Project Site conducted for the Biological Technical Assessment Report (BTAR) prepared by BonTerra (2015), the Project Site contains areas of sage scrub communities, native grassland communities and wildflower fields that provide suitable nectar sources and therefore considered suitable habitat for the CBB. As recorded in the BTAR and depicted on Exhibit 2 of the CBB Survey Report, the following vegetation associations were confirmed by GLA to exhibit suitable conditions based on a combination of CBB survey observations and the presence of suitable

[14] BonTerra. December 2015. Biological Technical Assessment Report, NorthLake Specific Plan Development Project, Prepared for Woodridge Capital Partners, LLC 1999 Avenue of the Stars Suite 2850 Los Angeles, California 90067.

nectar plants: sage scrub communities, native grassland communities and California annual grassland/Wildflower fields.

2.1.5 RELEVANT PLANS, POLICIES, AND REGULATIONS

Federal

Federal Endangered Species Act[15]

The Federal Endangered Species Act (FESA) of 1973 protects plants and animals that the government has listed as "Endangered" or "Threatened". The FESA is implemented by enforcing Sections 7 and 9 of the Act. A federally listed species is protected from unauthorized "take" pursuant to Section 9 of the FESA. "Take", as defined by the FESA, means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or to attempt to engage in any such conduct. All persons are presently prohibited from taking a federally listed species unless and until (1) the appropriate Section 10(a) permit has been issued by the USFWS or (2) an Incidental Take Permit is obtained as a result of formal consultation between a federal agency and the USFWS pursuant to Section 7 of the FESA and the implementing regulations that pertain to it (*Code of Federal Regulations* [CFR], Title 50, Section 402). "Person" is defined in the FESA as an individual, corporation, partnership, trust, association, or any private entity; any officer, employee, agent, department or instrument of the federal government; any State, Municipality, or political subdivision of the State; or any other entity subject to the jurisdiction of the U.S. The Project Applicant is a "person" for purposes of the FESA.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 USC 661–666), enacted in 1934, applies to any federal project where the waters of any stream or other body of water are impounded, diverted, deepened, or otherwise modified. Project proponents are required to consult with the USFWS and the appropriate State wildlife agency. These agencies prepare reports and recommendations that document project effects on wildlife and identify measures that may be adopted to prevent loss or damage to wildlife resources. The term "wildlife" includes both animals and plants. Provisions of the Act are implemented through the National Environmental Policy Act (NEPA) process and Section 404 permit process.

Section 404 and 401 of the Clean Water Act of 1972

Section 404 of the Clean Water Act (CWA, 33 USC 1251 et seq.) regulates the discharge of dredged or filled material into "Waters of the U.S.", including wetlands. "Waters of the U.S." include navigable coastal and inland waters, lakes, rivers, streams, and their tributaries; interstate waters and their tributaries; wetlands adjacent to such waters; intermittent streams; and other waters that could affect interstate commerce. The USACE is the designated regulatory agency responsible for administering the 404 permit program and for making jurisdictional determinations. This permitting authority applies to all "Waters of the U.S." where the material has the effect of (1) replacing any portion of "Waters of the U.S." with dry land or (2) changing the bottom elevation

[15] On December 5, 2023, U.S. Fish and Wildlife Service (USFWS) issued a "Proposed Rule" to list the WST. Currently, the WST remains a California Species of Concern and the finding of significance would not change. The new federal status of "Proposed Threatened" would not change the finding that the impacts on the WST from the previously approved Project would be significant (see below). Under the CEQA Appendix G Guidelines, the proposed mitigation would remain adequate, and no additional mitigation would be necessary due to the new federal Proposed Rule. (Appendix H to the RPDSEIR, Effects of Potential Listing of Western Spadefoot Toad on NorthLake Project in Castaic, Los Angeles County, California (November 12, 2023) by Glenn Lukos Associates, Inc. [GLA 2023b])

of any portion of "Waters of the U.S.". These fill materials would include sand, rock, clay, construction debris, wood chips, and materials used to create any structure or infrastructure in the "Waters of the U.S.". Dredge and fill activities are typically associated with development projects; water-resource related projects; infrastructure development and wetland conversion to farming; forestry; and urban development.

Under Section 401 of the CWA, an activity requiring a USACE Section 404 permit must obtain a State Water Quality Certification (or waiver thereof) to ensure that the activity will not violate established State water quality standards. The U.S. Environmental Protection Agency (USEPA) is the federal regulatory agency responsible for implementing the CWA. However, the State Water Resources Control Board (SWRCB), in conjunction with the 9 California Regional Water Quality Control Boards (RWQCBs), has been delegated the responsibility for administering the Section 401 water quality certification program.

The RWQCB is the primary agency responsible for protecting water quality in California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act. The RWQCB's jurisdiction extends to all "Waters of the State" and to all "Waters of the U.S.", including wetlands (isolated and non-isolated). Section 401 requires the RWQCB to provide "certification that there is reasonable assurance that an activity which may result in the discharge to 'waters of the U.S.' will not violate water quality standards". Water Quality Certification must be based on a finding that the proposed discharge will comply with water quality standards, which contain numeric and narrative objectives that can be found in each of the 9 Regional Boards' Basin Plans.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 may have originally been intended to reduce hunting of migratory birds, but has been interpreted more broadly by some resource agencies in recent years. The broader interpretation is that bird nests containing eggs or young are protected under the MBTA from any disturbance that may directly or indirectly affect the success of the nesting attempt regardless of the intent of the activity that caused the disturbance. Although federal agencies have not enforced this interpretation, some State and local agencies have referred to it as a reason to require avoidance measures as part of project approval permits.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC 668) provides for the protection of the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) by prohibiting—except under certain specified conditions—the taking, possession, and commerce of these 2 bird species. The 1972 amendments increased penalties for violating provisions of the Act and strengthened other enforcement measures. A 1978 amendment authorizes the Secretary of the Interior to permit the taking of golden eagle nests that interfere with resource development or recovery operations. A 1994 Memorandum (59 CFR 22953, April 29, 1994) from President William J. Clinton to the heads of Executive Agencies and Departments sets out the policy concerning collection and distribution of eagle feathers for Native American religious purposes.

State

California Endangered Species Act

Pursuant to the CESA and Section 2081 of the *California Fish and Game Code*, an Incidental Take Permit from the CDFW is required for projects that could result in the take of a State-listed Threatened or Endangered species. Under the CESA, a "take" is defined as an activity that would

directly or indirectly kill an individual of a species, but the definition does not include "harm" or "harass", as the federal act does. As a result, the criteria for a take under the CESA is less strict than that under the FESA. A CDFW-authorized Incidental Take Permit under Section 2081(b) is required when a project could result in the take of a State-listed Threatened or Endangered Species.

California Fish and Game Code

California Native Plant Protection Act

The Native Plant Protection Act (NPPA; *California Fish and Game Code,* Sections 1900–1913) of 1977 directed the CDFW to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA gave the California Fish and Game Commission the power to designate native plants as "Endangered" or "Rare" and to protect Endangered and Rare plants from take. The CESA expanded on the original NPPA and enhanced legal protection for plants, but the NPPA remains part of the *California Fish and Game Code.* To align with federal regulations, CESA created the categories of "Threatened" and "Endangered" species. It converted all "Rare" animals in the Act as Threatened species, but did not do so for Rare plants. Thus, there are three listing categories for plants in California: Rare, Threatened, and Endangered. Because Rare plants are not included in CESA, mitigation measures for impacts to Rare plants are specified in a formal agreement between the CDFW and the project proponent.

Chapter 6 of the California Fish and Game Code

Sections 1600–1616 of the *California Fish and Game Code* require a State, local governmental agency, or public utility to notify the CDFW before beginning construction on a project that will (1) divert, obstruct, or change the natural flow or the bed, bank, channel, or bank of any river, stream, or lake; (2) use materials from a streambed; or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake. When an existing fish or wildlife resource may be substantially adversely affected, the CDFW is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement (SAA) that becomes part of the plans, specifications, and estimates documents for a project.

The term "stream," which includes creeks and rivers, is defined in the CCR as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term "stream" can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Stream-dependent riparian habitat is defined in the *California Fish and Game Code* (Section 2785) as "lands which contain habitat which grows close to and which depends upon soil moisture from a nearby freshwater source". Removal of stream-dependent riparian vegetation may also require a SAA from the CDFW.

Section 1802

State law confers upon the CDFW the trustee responsibility and authority for the public trust resource of wildlife in California. The CDFW may play various roles under the CEQA process. By State law, the CDFW has jurisdiction over the conservation, protection, and management of the wildlife, native plants, and habitat necessary to maintain biologically sustainable populations. The CDFW shall consult with lead and responsible agencies and shall provide the requisite biological

expertise to review and comment on environmental documents and impacts arising from project activities.

As a trustee agency, the CDFW has jurisdiction over certain resources held in trust for the people of California. Trustee agencies are generally required to be notified of CEQA documents relevant to their jurisdiction, whether or not these agencies have actual permitting authority or approval power over aspects of the underlying project (*California Code of Regulations* [CCR], Title 14, Section 15386). The CDFW, as a trustee agency, must be notified of CEQA documents regarding projects involving fish and wildlife of the state as well as Rare and Endangered native plants, wildlife areas, and ecological reserves. Although, as a trustee agency, the CDFW cannot approve or disapprove a project, lead and responsible agencies are required to consult with them. The CDFW, as the trustee agency for fish and wildlife resources, shall provide the requisite biological expertise to review and comment upon environmental documents and impacts arising from project activities and shall make recommendations regarding those resources held in trust for the people of California (*California Fish and Game Code*, Section 1802).

Sections 3503, 3503.5, and 3513

Nesting birds are protected in Sections 3503, 3503.5, and 3513 of the *California Fish and Game Code.* These sections state that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code. Section 3503.5 explicitly provides protection for all birds of prey, including their eggs and nests. Section 3513 makes it unlawful to take or possess any migratory non-game bird as designated in the MBTA.

Regional

County of Los Angeles Oak Tree Ordinance

Within Los Angeles County, the County of Los Angeles Oak Tree Ordinance (Ordinance No. 22.174.030) stipulates that a person shall not cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone of any tree of the oak tree genus that is 8 inches or more in diameter 4½ feet above mean natural grade or, in the case of oaks with multiple trunks, a combined diameter of 12 inches or more of the 2 largest trunks, without first obtaining a permit.

County of Los Angeles General Plan

The current General Plan requires the NLSP to address the following policies, as stated in Conservation/Natural Resources Element. The Project's consistency with the following policies is presented in Section 5.9, Land Use, of the SEIR.

Conservation/Natural Resources Element

- **Policy C/NR 3.1:** Conserve and enhance the ecological function of diverse natural habitats and biological resources.
- **Policy C/NR 3.10:** Require environmentally superior mitigation for unavoidable impacts on biologically sensitive areas, and permanently preserve mitigation sites.
- **Policy C/NR 3.11:** Discourage development in riparian habitats, streambeds, wetlands, and other native woodlands in order to maintain and support their preservation in a natural state, unaltered by grading, fill, or diversion activities.

Santa Clarita Valley Area Plan

The SCVAP 2012 requires the NLSP to address the following policies from its Conservation and Open Space Element. The Project's consistency with the following policies is presented in Section 5.9, Land Use, of the SEIR.

Conservation and Open Space Element

- **Policy CO-1.1.3:** In making land use decisions, encourage development proposals that preserve natural ecosystem functions and enhance the health of the surrounding community.
- **Policy CO-3.1.2:** Avoid designating or approving new development that will adversely impact wetlands, floodplains, threatened or endangered species and habitat, and water bodies supporting fish or recreational uses, and establish an adequate buffer area as deemed appropriate through site specific review.
- **Policy CO-3.1.3:** On previously undeveloped sites ("greenfields"), identify biological resources and incorporate habitat preservation measures into the site plan, where appropriate. (This policy will generally not apply to urban infill sites, except as otherwise determined by the reviewing agency).
- **Policy CO-3.1.5:** Promote the use of site-appropriate native or adapted plant materials, and prohibit use of invasive or noxious plant species in landscape designs.
- **Policy CO-3.1.6:** On development sites, preserve and enhance natural site elements including existing water bodies, soil conditions, ecosystems, trees, vegetation and habitat, to the extent feasible.
- **Policy CO-3.1.7:** Limit the use of turf-grass on development sites and promote the use of native or adapted plantings to promote biodiversity and natural habitat.
- **Policy CO-3.1.8:** On development sites, require tree planting to provide habitat and shade to reduce the heat island effect caused by pavement and buildings.
- **Policy CO-3.1.9:** During construction, ensure preservation of habitat and trees designated to be protected through use of fencing and other means as appropriate, so as to prevent damage by grading, soil compaction, pollution, erosion or other adverse construction impacts.
- **Policy CO-3.1.10:** To the extent feasible, encourage the use of open space to promote biodiversity.
- **Policy CO-3.2.1:** Protect wetlands from development impacts, with the goal of achieving no net loss (or functional reduction) of jurisdictional wetlands within the planning area.
- **Policy CO-3.2.3:** Ensure protection of any endangered or threatened species or habitat, in conformance with State and federal laws.
- **Policy CO-3.3.3:** Identify and protect one or more designated wildlife corridors linking the Los Padres and Angeles National Forests through the Santa Clarita Valley (the San Gabriel-Castaic connection).
- **Policy CO-3.3.5:** Encourage connection of natural open space areas in site design, to allow for wildlife movement.
- **Policy CO-3.4.1:** Coordinate with the United States Forest Service on discretionary development projects that may have impacts on the National Forest.

- **Policy CO-3.5.1:** Continue to plant and maintain trees on public lands and within the public right-of-way to provide shade and walkable streets, incorporating measures to ensure that roots have access to oxygen at tree maturity, such as use of porous concrete.
- **Policy CO-3.5.2:** Where appropriate, promote planting of trees that are native or climactically appropriate to the surrounding environment, emphasizing oaks, sycamores, maple, walnut, and other native species in order to enhance habitat, and discouraging the use of introduced species such as eucalyptus, pepper trees, and palms except as ornamental landscape features.
- **Policy CO-3.6.1:** Minimize light trespass, sky-glow, glare, and other adverse impacts on the nocturnal ecosystem by limiting exterior lighting to the level needed for safety and comfort; reduce unnecessary lighting for landscaping and architectural purposes, and encourage reduction of lighting levels during non-business nighttime hours.
- **Policy CO-3.6.2:** Reduce impervious surfaces and provide more natural vegetation to enhance microclimates and provide habitat. In implementing this policy, consider the following design concepts:
    - Consideration of reduced parking requirements, where supported by a parking study and/or through shared use of parking areas;
    - Increased use of vegetated areas around parking lot perimeters; such areas should be designed as bioswales or as otherwise determined appropriate to allow surface water infiltration;
    - Use of connected open space areas as drainage infiltration areas in lieu of curbed landscape islands, minimizing the separation of natural and landscaped areas into isolated “islands”; and
    - Breaking up large expanses of paving with natural landscaped areas planted with shade trees to reduce the heat island effect, along with shrubs and groundcover to provide diverse vegetation for habitat.
- **Policy CO-3.6.5:** Ensure revegetation of graded areas and slopes adjacent to natural open space areas with native plants (consistent with fire prevention requirements).

2.1.6 THRESHOLD CRITERIA

Threshold 2-1 Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

2.1.7 RELEVANT PROJECT CHARACTERISTICS

The Project includes the preservation of approximately 325.5 acres of undeveloped natural land. In addition, the southeastern reach of Grasshopper Creek would be preserved as a significant habitat mitigation and restoration area. Additionally, in accordance with the NLSP, whenever possible, overall plant material selection for a given area shall have compatible drought resistant characteristics and irrigation programming shall be designed to minimize water applications so that impacts to adjacent natural areas are minimized.

2.1.8 IMPACT ANALYSIS AND MITIGATION MEASURES

Western Spadefoot Toad

As described above, the Project Site contains a maximum of four ponded features that can support WST. These four ponded features will be potentially impacted by the Project. As shown in Table 2-4 above, the four ponded features total 0.95 acres of habitat for the WST. The loss of 0.95 acre of habitat for the WST would be considered significant before mitigation. With implementation of revised MM 5.2-9, below, the impact would be reduced to a less than significant level. Revised MM 5.2-9 is designed to recreate the optimal conditions for WST habitat that was observed and documented in the 2006 BonTerra fairy shrimp report.

Rationale For Expecting Success With Mitigation

As noted in the WST Report, and summarized herein, WST has shifted habitat use in portions of California from vernal pools to artificial ponds such as stock ponds and other ponding features of anthropogenic origin, many of which have created WST breeding areas quite by accident. As such, any assertions that it is difficult to create ponds that are suitable for WST breeding are not necessarily accurate. GLA has been involved in WST habitat creation projects that have been successful and provided an example of one such effort that has been well-studied since the seasonal ponds were created in 2005 and 2006 on Irvine Mesa in an area known as East Orange, which is now part of the Orange County Central Coastal Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) Reserve. The 15 created pools overall achieved performance standards after six years of monitoring and included breeding WST in eight of the pools as of the 2009/2010 rainfall season. It is important to note that the performance standards included a number of components that were focused on the quality of the created pools and included hydroperiod (length of ponding) as it was recognized that this is clearly the most critical component of WST pond creation. Presence of fairy shrimp, a common food source for WST larvae were an important pool component and these along with the egg masses and larvae were introduced from the impact pools to the created pools. It was understood that pools with the proper characteristics would ultimately support WST. Thus, the results of follow-up studies conducted up to seven years following completion of the initial program, showed that WST had expanded to 12 pools within the 15-pool complex. Importantly, even in a drought year the pools exhibited sufficient ponding for breeding, though as is often the case for WST in such years, desiccation resulted in the loss of many tadpoles. Revised MM 5.2-9, below, is based on GLA's expert and successful experience in creating ponds that are suitable for WST breeding. The *Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan*, which is incorporated into revised MM 5.2.9, also includes a ten-year monitoring and maintenance program and contingency measures that would be implemented should WST translocation of inoculum not be on a trajectory for meeting the final success criteria.

Special-status Plants

Round-Leaved Filaree

Round-leaved filaree was observed during 2001 plant surveys, when 39 plants were observed within the Project development boundary. However, this species was not observed during surveys conducted in 2014, indicating that this species may have been extirpated from the Project Site. Site visits on April 6 and 14, 2022 to the site location where the species was previously detected in 2001 did not find the population, consistent with the finding that the population may have been extirpated. If this species is not detected during pre-construction plant surveys, it would be considered extirpated, and no mitigation would be required.

As noted above, in November 2017, the California Native Plant Society removed this species from the "Inventory of Rare and Endangered Plants" changing the status from 1B.2 to CBR with the note: "Too common statewide"; with the additional comment: "counties that contain small, localized populations under severe threat should track *C. macrophylla* as a species of local concern." This species has over 600 reported occurrences in CalFlora statewide. Thus, this species no longer has special status in California. The round-leaved filaree is not listed on an official local or regional plan; nevertheless, there are only a few occurrences in northern Los Angeles County and is considered locally rare.[15] Therefore, potential impacts to this species, if determined to be present, would be considered significant under CEQA. With implementation of MM 5.2-5(a), below, the impact would be reduced to a less than significant level.

Rationale For Expecting Success With Mitigation

Round-leaved filaree is an annual herb that reproduces by seed in open areas such as grasslands and in openings in coastal sage scrub. Collection of seed with germination, propagation and translocation of propagated plants to suitable habitat/soils by a qualified nursery or similar institution as set forth in MM 5.2-5(a) below, will ensure a high probability of success for the translocation program. The round-leaved filaree translocation program also includes a ten-year monitoring and maintenance program and contingency measures that would be implemented should translocation sites not be on a trajectory for meeting the final success criteria.

Paniculate Tarplant

Paniculate tarplant was observed in 2014 in a single population that consisted of several hundred individual plants, all of which occur within the Project's development boundary. The population was detected on April 14, 2022, consistent with the previous observations. As noted, this species is listed as S4 in the CNDDB or "apparently secure within California". Moreover, while (1) the CRPR rank of 4 and the S4 Rarity Ranking, (2) over 700 reported population occurrences in CalFlora statewide–substantially exceeding the minimum threshold of 100 occurrences for the S4 category, and (3) that this species is not on any official local or regional plans, there are only a few occurrences in northern Los Angeles County and is considered locally rare. Therefore, removal of the Project Site population would be considered significant under CEQA and would require mitigation. With implementation of MM 5.2-5(b), below, the impact would be reduced to a less than significant level.

Rationale For Expecting Success With Mitigation

Paniculate tarplant is an annual herb that reproduces prolifically by seed in open areas such as grasslands, disturbed areas such as roadsides, as well as in openings in coastal sage scrub. Collection of seed with hand broadcasting to suitable habitat/soils over a period of three seasons to the translocation of seed as set forth in MM 5.2-5(b) habitat by a qualified biologist or botanist as set forth in MM 5.2-5(b) below, will ensure a high probability of success for the translocation program. The paniculate tarplant translocation program also includes a ten-year monitoring and maintenance program and contingency measures that would be implemented should translocation sites not be on a trajectory for meeting the final success criteria.

Southwestern Spiny Rush

Southwestern spiny rush was observed throughout Grasshopper Canyon and it was estimated that several hundred individual plants exist in the Project development boundary. GLA conducted a focused survey and census in 2021 and found approximately 2,000 individuals in Grasshopper Creek. As noted, this subspecies is listed as S4 in the CNDDB or "apparently secure within California". Moreover, while (1) the CRPR rank of 4 and the S4 Rarity Ranking, (2) over 400

reported occurrences in CalFlora statewide–substantially exceeding the minimum threshold of 100 occurrences for the S4 category, and (3) that this species is not on any official local or regional plans, there are only a few occurrences in northern Los Angeles County and it is considered locally rare. Therefore, removal of the Project Site population would be considered significant under CEQA and would require mitigation. With implementation of MM 5.2-5(c), below, the impact would be reduced to a less than significant level.

Rationale For Expecting Success With Mitigation

Southwestern spiny rush is a perennial rush that propagates from seed and vegetatively from rhizomes. Southwestern spiny rush grows along streams and also grows in areas with springs or seeps. Seed will be collected from southwestern spiny rush plants located within the impact boundaries by a qualified nursery or similar institution as set forth in MM 5.2-5(c) below. This will ensure a high probability of success for the translocation program. The collected seed will be stored for propagation of container plants. Once propagated, the container plants would be introduced to the translocation site. The southwestern spiny rush translocation program also includes a ten-year monitoring and maintenance program and contingency measures that would be implemented should translocation sites not be on a trajectory for meeting the final success criteria.

Slender Mariposa Lily and Club-Haired Mariposa Lily

BonTerra reported that approximately 1,709 individuals of slender/club-haired mariposa lily hybrids were observed at 36 locations on the Project Site during botanical surveys conducted in 2014; an additional 22 populations contained plants of varying densities, likely representing an additional 1,000 or more individuals. It is estimated that over 3,000 individuals occur on the Project Site. However, in the BonTerra *Draft Rare Plant Plan*, it was clarified that of the approximately 3,000 individuals observed in the Project Site, approximately 2,000 individuals are located within the Project's development boundary. Given the List 1B status and S2S3 CNDDB Rank for the slender mariposa lily and the S3 Rarity Rank for the club-haired mariposa lily and the CalFlora occurrences (95 and 117 respectively), impacts to this species would be considered significant under CEQA and mitigation would be required. With implementation of MM 5.2-4, below, the impact would be reduced to a less than significant level.

Rationale For Expecting Success With Mitigation

The slender/club-haired mariposa lily is a short-lived perennial bulb that reproduces from seed. As set forth in MM 5.2-4, translocation will be implemented through a combination methods including 1) collection of existing bulbs for translocation by qualified habitat restoration specialist and seed collection with propagation by a qualified nursery or similar institution for translocation following propagation. The slender/club-haired mariposa lily translocation program also includes a ten-year monitoring and maintenance program and contingency measures that would be implemented should translocation sites not be on a trajectory for meeting the final success criteria.

Crotch's Bumblebee

Project grading will impact the following vegetation alliances that support or could potentially support CBB based on the presence of suitable floral resources.

Sage Scrub Communities
A total of 634.70[16] acres of sage scrub would be impacted by Project implementation, which includes Purple sage scrub, California sagebrush–California buckwheat scrub, Black sage scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, California sagebrush–California buckwheat scrub/California annual grassland, and the burned sage scrub areas: burned Purple sage scrub, burned California sagebrush–California buckwheat scrub, burned Black sage scrub, and burned California sagebrush–California buckwheat scrub/California annual grassland. Impacts on these vegetation types would be considered significant due to the loss of this vegetation type in southern California and the potential for this habitat to support special status species.

Native Grassland Communities
A total of 24.23 acres[17] of Foothill needlegrass grassland and burned Foothill needle grass grassland would be impacted by Project implementation. Impacts on this vegetation type would be considered significant due to the limited distribution of this vegetation type in California.

California Annual Grassland/Wildflower Fields
A total of 342.85 acres[18] of California annual grassland/Wildflower fields would be impacted by Project implementation. Impacts on California annual grassland/Wildflower fields would be considered adverse and potentially significant because of the density and diversity of native plants found in this vegetation type and because of the general lack of similar areas in the Project vicinity.

Based on the detection of CBB within the NorthLake development area, it is expected that an Incidental Take Permit will be needed to authorize incidental take of CBB during grading. Mitigation for direct impacts to CBB and associated habitat will be fulfilled through compensatory mitigation at a minimum 2:1 suitable habitat that provides replacement of equal functions and values to those impacted by the NorthLake project, or as otherwise determined through the Incidental Take Permit process. Mitigation will be accomplished either through a combination of onsite conservation, offsite conservation on adjacent NorthLake owned lands, and/or through a CDFW-approved mitigation bank. If mitigation is not purchased through a mitigation bank, and lands are conserved separately, a cost estimate will be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity. The funding source will be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount will be established following the completion of a project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The Property Analysis Record will consider all management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development.

[16] BonTerra. December 2015, p. 60.
[17] Ibid, p. 60.
[18] Ibid, p. 61.

Based on areas of suitable habitat, the Project would provide 337.55 acres of mitigation within the onsite conservation areas and 156.7 acres of conservation on adjacent NorthLake ownership for a total of 492.2 acres of preservation. (Exhibit 3 to the CBB Survey Report.) Thus, based on impacts to up to 1,001.8 acres of suitable habitat which supports or potentially supports CBB, the mitigation ratio of 2:1 would be 2,003.6 acres. To achieve 2:1 mitigation, NorthLake will provide approximately 337.5 acres onsite, 156.7 acres on NorthLake-owned offsite property, and obtain 1,509.4 acres from a CDFW-approved mitigation bank or through purchase and long-term conservation of suitable habitat, or a combination of the two options to account for the remainder. Appendix B to the CBB Survey Memo (Feasibility Analysis of NorthLake Biological Resources Contributors, Attachment 2 [Table 3, Top 20 High Scoring Parcels from Regional Analysis]) is a Mitigation Feasibility Assessment that includes candidate properties with suitable habitat such as coastal sage scrub, chaparral, and native grasslands that contain suitable habitat for CBB.

The proposed mitigation will correspond to the requirements of the NorthLake Specific Plan Final Supplemental EIR (FSEIR) that were set forth in the previous approvals. With the implementation of the previously approved proposed mitigation set forth below, significant impacts on CBB would be reduced to less-than-significant consistent with the FSEIR measures excerpted below.

Rationale For Expecting Success With Mitigation

Regarding the mitigation, it is important to note that for a recently issued Incidental Take Permit[19] for CBB, the CDFW required a ratio of 1.5:1 consisting of a combination of restoration and enhancement. The preservation of Open Space Mitigation Areas, including onsite areas and adjacent offsite areas owned by NorthLake plus purchase of suitable habitat in a mitigation bank or other approved lands determined in coordination with CDFW results in conservation of substantial areas of high-quality chaparral and coastal sage scrub and other habitat types that are both suitable for and occupied by the CBB at a 2:1 ratio exceeding the amount required for the Incidental Take Permit referenced above.

Mitigation Measures

Western Spadefoot Toad

SDEIR Mitigation Measure 5.2-9 is revised as follows:

MM 5.2-9 A mitigation program for western spadefoot toad (WST) shall be implemented prior to construction, ground disturbance, or vegetation removal that would impact the WST breeding habitat, or areas within 1,000 feet of WST-occupied ponds within the Project Site. The mitigation program would include the components set forth below. A detailed methodology for this effort shall be reviewed by the CDFW and the LACDRP prior to implementation of the mitigation program. Results of the mitigation program shall be provided to the CDFW and the LACDRP.

- Prior to implementing the Spadefoot Relocation Plan, two focused surveys during average or above-average rainfall years will be conducted within the prior appropriate seasons. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e., 2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied pond as well as those identified in recent surveys.

[19] California Department of Fish and Wildlife, 2024. California Endangered Species Act Incidental Take Permit No. 2081-2023-035-06 for the Shady View Project in Chino Hills, California.

- Suitable sites for seasonal pond creation, within the Project open space, specifically within other NorthLake-owned properties, have been identified and 1.07 acres of seasonal pond habitat will be created. The specific location of the 1.07-acre pool complex is depicted on Exhibit 5 of the *NorthLake Castaic, Los Angeles County, California, Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan July 2022 (Revised March and June 2023)* (HMMP). As described in the WST Mitigation Implementation Plan, three pools would be created based on current grading plans. The combined size of the three pools (1.07 acres) exceeds the maximum combined size of potential WST habitat currently at the Project Site (0.95 acres, as shown in Table 2-4, above). The WST Mitigation Implementation Plan would address the following issues specific to the site or sites:
    - Soil Characteristics and whether clay liners will be necessary
    - Pool locations and site access routes for construction
    - Types of habitat potentially affected by construction and measures to restore damaged subject to temporary impacts
    - Watershed size and characteristics
    - Grading plan with cross section for each pool to be created
    - Specifications for clay liner (in needed) including source of clay and installation methods
    - Upland habitat characteristics, including soil suitability for burrowing and vegetative buffer, will also be addressed in the plan
- Following creation of the 1.07-acre pool complex or complexes and prior to grading of the impacted pools, each pool within each complex will be monitored during the rainy season to ensure that the created pools exhibit at least 60 days of ponding during an average or above-average rainfall year.
- Following documentation of adequate ponding for each created pool during an average or above-average rainfall year, and prior to grading of the impacted pools, soil inoculum from the impacted pools will be translocated to the created pools to provide a food source for WST.
- Following documentation of adequate ponding for each created pool during an average or above-average rainfall year, and prior to grading of the impacted pools, WST egg masses, larvae and metamorphs will be translocated to the created pools for at least two wet seasons where WST egg masses, larvae and metamorphs are present in the impact pools and suitable conditions to receive the WST egg masses, larvae and metamorphs are present in the created pools. In addition, data regarding successful breeding will be submitted to CDFW for concurrence that sufficient reproduction has occurred to allow impacts to the pools in the development area.
- During grading of the pools to be impacted, the Project Biologist will be present to rescue any adult WST that would be relocated to the created pool complex.

- Following the two seasons of translocation of WST egg masses, larvae and metamorphs, and successful breeding, the created pools will be monitored for ten years as set forth in HMMP Table 6 (Conceptual Schedule for Pond Creation Milestones) to document the progression of the WST toward the performance standards provided in the WST HMMP prepared for the project:
    - **Hydrological Monitoring Performance Standard.** Ponding duration of at least 60 days must be documented to occur during average or above average rainfall years prior to translocation of egg masses, larvae, metamorphs, or adults. Ponding duration of at least 60 days must also be documented during the 10-year monitoring period. At the end of the ten-year monitoring period, this performance standard will have been achieved if ponding duration equals or exceeds ponding duration of 60 days during average or above-average rainfall years. It is important to note that during below-average rainfall years, depending on the severity of drought conditions that the created ponds will not pond for sufficient duration to allow WST to reach maturity. Thus, during the ten-year monitoring period, it is to be expected that some years will not pond for 60 days. Nevertheless, the performance standard for hydrology will be considered achieved as long a ponding for 60 days occurs during average rainfall years. Finally, hydrology may be augmented at the direction of the Project Biologist, especially once breeding is observed and is threatened by declining water levels in the pools due to lower-than average rainfall. In the event that the Project Biologist determines that additional water should be added to any pond occupied by egg masses or larvae, it will be necessary to ensure protection of the egg masses and larvae by discharging water to the pool(s) in a manner that does not disturb the egg masses or larvae and does not result in the erosion of soil into the pool(s). This could be accomplished through temporary placement of large gravel at the discharge site (at the edge of the pool(s)) underlain by plastic that would allow the water to enter the pool(s) slowly and with no sediment.
    - **Performance Standard Prior to Grading**. Prior to Project grading that removes the impacted doner pools, during an average or above-average rainfall year, at least two of the three created ponds within the pond complex exhibits emergence of metamorphs in each pond to ensure breeding in subsequent years. Successful breeding would be determined by the presence of egg masses that are not present due to translocation but which occur due to reproduction. Should this occur during a below-average rainfall year, the condition would be satisfied as it would show that the pools are performing as intended. In any case, data regarding successful breeding will be submitted to CDFW for concurrence that sufficient reproduction has occurred to allow impacts to the pools in the development area.
    - **Performance Standard Post-Grading**. Following Project grading that removes the impacted donor pools, during an average or above-average rainfall year, at least two of the three created ponds within the pond complex will exhibit breeding as indicated by the

presence of WST egg masses, tadpoles/larvae/ or metamorphs, to confirm establishment of breeding WST for each pond complex created. Should this occur during a below-average rainfall year, the condition would be satisfied as it would show that the pools are performing as intended.

Special-Status Plants

DSEIR Mitigation Measures 5.2-5 and 5.2-4 are revised as follows:

Round-Leaved Filaree

MM 5.2-5(a) Mitigation for the round-leaved filaree shall consist of transplantation of round-leaved filaree to a mitigation site and establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*).[20] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from round-leaved filaree that are located within the impact boundaries and stored for propagation of container plants to provide for introduction of propagated plants to the translocation site depicted on Exhibit 4A of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the round-leaved filaree:

- A pre-grading survey shall be conducted for two seasons, prior to grading of the occupied area, during the peak flowering period (approximately March through May) by the Biological Monitor. The Biological Monitor shall clearly identify the extent of the round-leaved filaree location within the impact area with pin flags and record the extent of the population using sub-meter GPS for later collection. The pre-grading surveys shall also document the approximate coverage of native and non-native plants at the location of the population to be impacted.
- Prior to seed collection, the existing round-leaved filaree locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities.
- Collected seeds, up to one half, will be used to grow a minimum of 300 plants and the remaining half will be stored to allow for contingency purposes all of which would be planted at the receptor site once performance standards are achieved.

[20] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to this RPDSEIR).

- Receptor site or sites identified by GLA during site assessments in 2021 (see Exhibit 4A in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[21]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas.

Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP and CDFW. In developing the performance standards for the round-leaved filaree, it is important to consider the primary goal of the plan referenced above, which is to establish a self-sustaining population of this plant consisting of the number of individuals/population size determined during pre-construction surveys. With replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors:

- The number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe the translocated populations over a period of years to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track emergent plants along with flowering individuals which in combination provides the best and easiest indicators to track that the translocation is succeeding.
- Various threats to the plants must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of recruited individuals, with seed set, leading to future germination/successful reproduction.
- Habitat characteristics, including non-native grasses and herbaceous weeds, are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory.

Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the variability in the number of flowering individuals from year-to-year, the performance standards will have been achieved during at least three years of the ten-year monitoring program. Thus, the standards provide specific criteria showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction.

Year One Through Year Ten

- Flowering of a minimum of 100-percent of the total number of flowering plants counted during pre-construction surveys originating from container stock or seed bank. As noted, the number of container stock individuals planted or plants originating from seed following the initial establishment will equal or exceed the number impacted as determined during pre-

[21] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to this RPDSEIR).

construction surveys during at least three years of the ten-year monitoring period; and

- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial planting (30-percent).

Contingency Plan

In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards:

- If the receptor site is observed to be failing significantly to achieve the performance standards during the ten-year monitoring period (e.g., flowering of 100-percent is not achieved after three years with normal or above-normal rainfall), the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be propagated from the contingency seed supply held at the nursery for contingency purposes (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials.

The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, the container stock would be propagated from the contingency seed and the plants would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance, would be initiated as set forth above.

Paniculate Tarplant

MM 5.2-5(b) Mitigation for the paniculate tarplant shall consist of transplantation of paniculate tarplant by means of seed broadcasting to a mitigation site with establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*). [22] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from paniculate tarplant that are located within the impact boundaries and stored for introduction to the receptor site depicted on Exhibit 4A of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the paniculate tarplant:

- A pre-grading survey shall be conducted for two seasons during the peak flowering period (approximately June through August) by the Project

[22] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to this RPDSEIR).

Biologist. The Project Biologist shall clearly identify the extent of the paniculate tarplant location within the impact area with perimeter pin flags and sub-meter GPS for later use during seed collection. The pre-grading survey shall also document the approximate coverage of native and non-native plants at the location of the population to be impacted.

- Prior to seed collection, the existing paniculate tarplant locations marked during pre-construction surveys shall be monitored every two weeks by the Project Biologist or a qualified Seed Collector under the direction of the Project Biologist to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities.
- One third of the collected seeds will be used to broadcast on the receptor site during an initial year and one third would be retained for the second year at the receptor site. The remaining one-third of the seed would be held for contingency purposes until performance standards are achieved. Once they are achieved, the contingency seed would be distributed into the mitigation site.
- The receptor site identified by GLA during 2021 (see Exhibit 4A in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[23]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas.

Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP (and CDFW). In developing the performance standards for the paniculate tarplant, it is important to consider the primary goal of the plan as set forth above, which is to establish a self-sustaining population of this plant consisting of the number of individuals/population size determined during the largest population number of the two years of pre-construction surveys. With replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors:

- The number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe the translocated populations over a period of years to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track flowering individuals to confirm that the translocation is succeeding.
- Various threats to the plants must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of recruited individuals, with seed set, leading to future germination/successful reproduction.

[23] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to this RPDSEIR).

- Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory.

Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the variability in the number of flowering individuals from year-to-year, the performance standards will have been achieved during at least three years during the ten-year monitoring program. Thus, the annual standards provide specific criteria showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction.

Year One Through Year Ten

- Flowering of a minimum of 100-percent of the total number of flowering plants counted during the larger of the two years during which pre-construction monitoring was conducted. This would be achieved during at least three years of the ten-year monitoring period); and
- Habitat subject to translocation must exhibit same or less cover by non-native grasses; and forbs than during the initial planting (30-percent).

Contingency Plan

In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards:

- If the receptor site is observed to be failing significantly to achieve the performance standards during the ten-year monitoring period (e.g., flowering of 100-percent is not achieved after three years with normal or above-normal rainfall), the Biological Monitor will identify an alternate site(s) in which to install the contingency seed held at the nursery for contingencies purposes (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials.

The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, contingency seed would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance would be initiated as set forth above.

Southwestern Spiny Rush

MM 5.2-5(c) Mitigation for the southwestern spiny rush includes two components to ensure long-term persistence of southwestern spiny rush in northern Los Angeles County. Mitigation includes 1) preservation of streambed habitat within Marple Canyon that contains 523 individuals of the spiny rush, and 2) planting of southwestern spiny rush at a mitigation site with establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan)*.[24] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seed will be collected from southwestern spiny rush plants located within the impact boundaries. The collected seed will be stored for propagation of container plants. Once propagated, the container plants would be introduced to the translocation site depicted on Exhibit 4B of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan.* The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the southwestern spiny rush:

- A pre-grading survey shall be conducted during a single season during the peak flowering period (approximately March through May) by the Biological Monitor. The Biological Monitor shall identify the extent of the southwestern spiny rush location within the impact area using sub-meter GPS for later seed collection.
- Prior to seed collection, the existing southwestern spiny rush locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities.
- Collected seeds will be used to grow a minimum of 600 plants to allow for contingency purposes all of which would be planted at the receptor site. Half of the seed collected will be retained by the nursery for additional propagation as a contingency measure.
- Receptor site or sites identified by GLA during site assessments in 2021 (see Exhibit 4B in *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*[25]) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas.

[24] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to this RPDSEIR).

[25] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to this RPDSEIR).

Performance criteria have been developed in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* and pre-approved by the LACDRP and CDFW. In developing the performance standards for the southwestern spiny rush, it is important to consider the primary goal of the plan as set forth above, which is to provide for a combination of preservation and establishment of a self-sustaining population of this plant consisting of the 300 individuals, which in combination of the preservation in Marple Canyon would mitigate impacts to this species. In order to achieve survival of 200 plants within Grasshopper Creek, 300 individuals will be planted initially to allow for natural attrition. With the combined preservation and replacement of the existing population, the impacts would be fully mitigated. This requires consideration of the following factors:

- Southwestern spiny rush is a perennial plant and the number of flowering individuals in any given year does not vary substantially. However, based on environmental conditions, it is not expected that populations change significantly over the period of years needed to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track the existing population within Marple Canyon along with established individuals in Grasshopper Creek to determine progress.
- Various threats to the plants established within Grasshopper Creek must be minimized during the ten-year monitoring and maintenance period to ensure survival, germination, and ultimate flowering of planted and recruited individuals, with seed set, leading to future germination/successful reproduction.
- Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory.

Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the expected stability in the number of flowering individuals from year-to-year, the performance standards will have been achieved at the end of the ten-year monitoring program. Thus, the annual standards provide a guide showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standards are met in at least three years of the ten-year monitoring period then the program is considered successful. Program funding shall be suitably established to the County's satisfaction.

Marple Canyon Year One Through Year Ten

- Persistence of Marple Canyon population totaling 523 individuals with no more than ten-percent reduction due to such factors such as drought. Thus, there would be a minimum of 471 individuals at the end of the ten-year monitoring period.

Grasshopper Creek Year One

- Survival of 80-percent of the 200 established individuals.
- Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year.

Grasshopper Creek Year Two

- Survival of 90-percent of the 200 established individuals.
- Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year.

Grasshopper Creek Year Three through Ten

- Survival of 100-percent of the 200 established individuals.
- Following quantitative monitoring that will occur between March and June, the number of additional container stock needed to provide for establishment of 200 plants will be determined with planting to following during fall of the same year.

Contingency Plan

In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards:

- If the Grasshopper Creek receptor site is observed to be failing significantly to achieve the performance standard during the ten-year monitoring period (e.g., survival of 100-percent of 200 established individuals is not achieved by the end of ten years), the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be propagated from the contingency seed supply held at the nursery for the (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials.

The alternate site(s) will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with LACDRP and CDFW. Once an approach has been determined in coordination with LACDRP and CDFW, the container stock would be propagated from the contingency seed and the plants would be installed at the alternate site(s) and a ten-year program, that included monitoring and maintenance, would be initiated as set forth above.

Slender Mariposa Lily and Club-Haired Mariposa Lily

MM 5.2-4 Mitigation for the club-haired mariposa lily and the slender mariposa lily shall consist of transplantation of lilies to a mitigation site and establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*).[26] The *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved by the LACDRP and CDFW shall oversee its implementation. Seeds will be collected from lilies that are located within the impact boundaries and bulbs will be subsequently excavated and stored for later transplantation to the translocation site depicted on Exhibit 5 of the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth the following activities necessary to fully mitigate the significant impacts to the club-haired mariposa lily and the slender mariposa lily:

- A pre-grading survey shall be conducted for two seasons following emergence of leaves and during the peak flowering period (approximately March through June) by the Biological Monitor. The Biological Monitor shall clearly identify each lily location within the impact area with a pin flag for later collection. The pre-grading survey shall also document the approximate coverage of native and non-native plants at each lily population to be impacted.
- Prior to seed collection, the existing lily locations marked during pre-construction surveys shall be monitored every two weeks by the Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities.
- Individual lily bulbs shall be excavated and collected following the seed collection and once the bulbs have entered their winter dormancy period (approximately September 1). The bulbs shall be stored by a qualified nursery or institution with appropriate storage facilities and all non-target bulbiferous species shall be discarded.
- A portion of the collected seeds will be used to grow 500 slender/club-haired mariposa lilies for contingency purposes and stored a native plant nursery until needed as determined by the project biologist.
- Receptor site or sites identified in BonTerra's *Feasibility Analysis of NorthLake Biological Mitigation Requirements* and refined by GLA (as shown on Exhibit 5 of the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan*) shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement. The receptor site or sites have been shown to exhibit similar

[26] Glenn Lukos Associates. July 2022 [Revised October and December 2022, February and April 2024]. *NorthLake Castaic, Los Angeles County, California, Special-Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* (Appendix B-2 to this RPDSEIR).

soils, associated native species, and topographical features to the impact areas.

- Receptor sites on lands currently owned by NorthLake will be managed by SMMC or other approved entities. Prior to commencing the actions set forth in this plan, the applicant shall submit final agreements to CDFW and the County with the acceptable entities that will hold the Conservation Easement(s) (CE) and provide long-term management.
- Funding for this measure shall be suitably established to the County's satisfaction.
- Performance criteria have been developed in the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan,* dated February 2023, and pre-approved by the LACDRP and CDFW. The performance criteria shall address (1) native and non-native plant coverage requirements (mitigation site conditions should be consistent with lily populations in the impact area) and (2) percentage of lilies that exhibit emergent leaves that that bloom each year as follows (because the salvaged plantings will be phased over a three-year period as described above, the monitoring period would be ten years for each phase or a minimum of 13 years beginning from the start of phase 1. As set forth in Table 3 of the of the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan*, under the phased translocation, 40-percent of plants would be translocated in year 1, 40-percent in year 2 and 20-percent in year 3):

Year One

- Emergence of leaves of a minimum of 70-percent of the translocated bulbs
- Flowering of a minimum of 50-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Two

- Emergence of leaves of a minimum of 60-percent of the translocated bulbs
- Flowering of a minimum of 40-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Three

- Emergence of leaves of a minimum of 50-percent of the translocated bulbs
- Flowering of a minimum of 30-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Four

- Emergence of leaves of a minimum of 50-percent of the translocated bulbs
- Flowering of a minimum of 30-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Five

- Emergence of leaves of a minimum of 60-percent of the translocated bulbs
- Flowering of a minimum of 40-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Six

- Emergence of leaves of a minimum of 70-percent of the translocated bulbs
- Flowering of a minimum of 50-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Seven

- Emergence of leaves of a minimum of 70-percent of the translocated bulbs
- Flowering of a minimum of 50-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Eight

- Emergence of leaves of a minimum of 80-percent of the translocated bulbs
- Flowering of a minimum of 60-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Nine

- Emergence of leaves of a minimum of 90-percent of the translocated bulbs
- Flowering of a minimum of 70-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Ten

- Emergence of leaves of a minimum of 100-percent of the translocated bulbs
- Flowering of a minimum of 70-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

The monitoring shall be conducted for ten years (for each phase) from installation of the translocated bulbs or from installation of container plants. As noted, this could result in two separate and unrelated ten-year monitoring efforts, including one that originates with bulb installation and a subsequent effort that begins with container stock installation. If the performance standards are not being met during the first year, additional measures may be suggested as determined appropriate by the Project Biologist as set forth in the Contingency Plan set forth in the *Special-Status Plants Impact Assessment and Habitat Mitigation and Monitoring Plan* as set follows:

- If any of the translocation/receptor sites are observed to be failing significantly to achieve the performance standard during the ten-year monitoring period, the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be stored at a nursery for the first year of the program.
- If the receptor sites appear on track to meet the performance standards no sooner than year seven of the monitoring and maintenance period, the remaining plant material may be planted at the receptor sites (if space allows) or additional acceptable receptor sites will be identified.
- Seeds and/or bulbs will continue to be harvested from lilies maintained in the nursery and installed in the receptor sites on an as-needed basis to ensure receptor sites are progressing toward final performance.
- If the receptor sites fail to achieve the performance standards by the tenth year of the program, the monitoring period may be extended if the Project Biologist in consultation with LACDRP and CDFW, determines that the site is continuing to progress and can ultimately achieve the performance standards. Alternatively, if it is determined that a particular receptor site is not able to meet performance standards, then additional receptor sites will be identified to make up the difference. Thus, for example, if a receptor site received 500 bulbs, at the 80-percent success criteria it must have 400 emergent plants or 300 flowering plants to be successful. If the site only exhibits 40-percent emergent plants and 30-percent of flowering Mariposa lilies, then the site would be credited with the partial success achieved and an additional site where the shortfall could be made up would be identified.
- Potential seed sources from additional donor sites shall also be identified in case it becomes necessary to collect additional seed for use on the site following performance of remedial measures.

Crotch Bumble Bee

The previously approved Project is already required to provide mitigation for Coastal Sage Scrub and other flowering resources as set forth below. Coastal Sage Scrub and other flowering resource mitigation is more than adequate for the CBB. In fact, Coastal Sage Scrub is the preferred habitat for CBB. As set forth above, mitigation of flowering resources at a 2:1 ratio exceeds what CDFW requires for the CBB. Based on areas of suitable habitat, the Project would provide 337.55 acres of mitigation within the onsite conservation areas and 156.7 acres of conservation on adjacent NorthLake ownership for a total of 492.2 acres of preservation. (Exhibit 3 to the CBB Survey Report.) Thus, based on impacts to up to 1,001.8 acres of suitable habitat which supports or potentially supports CBB, the mitigation ratio of 2:1 would be 2,003.6 acres. To achieve 2:1 mitigation, NorthLake will provide approximately 337.5 acres onsite, 156.7 acres on NorthLake-owned offsite property, and obtain 1,509.4 acres from a CDFW-approved mitigation bank or through purchase and long-term conservation of suitable habitat, or a combination of the two options to account for the remainder. Appendix B to the CBB Survey Memo (Feasibility Analysis of NorthLake Biological Resources Contributors, Attachment 2, Table 3, Top 20 High Scoring Parcels from Regional Analysis) is a Mitigation Feasibility Assessment that includes candidate properties with suitable habitat such as Coastal Sage Scrub, chaparral, and native grasslands that contain suitable habitat for CBB.

MM 5.2-6 (Coastal Sage Scrub)

> The loss of sage scrub habitat within the impact area is considered a significant impact. Sage scrub habitat shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but shall be no less than 2:1 for habitat restoration, enhancement or preservation, or combination thereof. A total of 634.70 acres of sage scrub would be impacted by Project implementation, which includes Purple sage scrub, California sagebrush–California buckwheat scrub, Black sage scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, California sagebrush–California buckwheat scrub/California annual grassland, and the burned sage scrub areas: burned Purple sage scrub, burned California sagebrush–California buckwheat scrub, burned Black sage scrub, and burned California sagebrush–California buckwheat scrub/California annual grassland. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, and preservation shall depend on the initial quality of the habitat area to be restored, enhanced or preserved and would be determined by the Project Applicant and the LACDRP. Sage scrub habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. Where restoration or enhancement is the proposed mitigation, the Project Applicant shall develop a Habitat Mitigation and Monitoring Program (HMMP) and shall submit it to the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to the issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration

contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants of suitable sage scrub species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), Peirson's morning-glory will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP and according to its specified materials, methods, and performance criteria, which shall include the following items

a. **Responsibilities and Qualifications**. The responsibilities and qualifications of the Project Applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures and/or State or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency.

b. **Performance Criteria**. Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The HMMP shall state that the use of the mitigation site by special status wildlife species (e.g., coastal California gnatcatcher), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off.

c. **Site Selection.** The mitigation sites shall be determined in coordination with the Project Applicant and the LACDRP. The site(s) shall be located in dedicated open space areas (or areas available for dedication), and shall be contiguous with other natural open space areas. Mitigation sites include onsite, NorthLake-owned offsite property, and obtaining acres from a CDFW-approved mitigation bank or through purchase and long-term conservation of suitable habitat, including areas where restoration or enhancement is needed, or a combination of the two options to account for the remainder. The Project Applicant shall demonstrate acquisition of suitable lands for restoration, enhancement, or preservation prior to issuance of the Project grading permit.

d. **Native Plant and Seed Materials Procurement**. For restoration or enhancement, at least three years prior to mitigation implementation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin: i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. All container plants shall be propagated from seed of local origin as defined above. No plant or seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the' following order: (a) project impact

areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations.

e. **Wildlife Surveys and Protection.** The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., coastal California gnatcatcher]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. The HMMP shall also describe potential restrictions on these management tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits).

f. **Site Preparation and Plant Materials Installation.** For restoration or enhancement, mitigation site preparation shall include, as necessary (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, decompacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photodegradable'] fiber roll); (f) application of salvaged native plant materials (i.e., duff) as available, and supervised by a biological monitor, (g) temporary irrigation installation; (h) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials including specification of approved herbicides); (i) planting of container species; and (j) seed mix application.

g. **Schedule.** An implementation schedule shall be developed for restoration or enhancement, that includes planting and seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below).

h. **Maintenance Program**. The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal-including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) replacement of dead container plants (as needed); (g) application of remedial seed mixes (as needed); (h) herbivory control; and (i) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. The mitigation site shall be maintained for a period of five years to ensure the successful sage scrub habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria.

i. **Monitoring Program**. The Monitoring Program for restoration or enhancement shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring (e.g., randomly placed point-intercept transects); (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the Project Applicant has been released from maintenance requirements by the LACDRP.

j. **Long-term preservation**. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.

MM 5.2-7 (Grassland/Wildflower field)

The loss of California annual grassland/wildflower fields within the impact area is considered to be a significant impact. California annual grassland/wildflower fields shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 24.23 acres of Foothill needlegrass grassland and burned Foothill needle grass grassland would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). California annual grassland/wildflower fields habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit It to the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified

restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for burrowing owls. Habitat restoration/enhancement shall consist of seeding of suitable California annual grassland/wildflower fields plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and according to its specified materials, methods, and performance criteria, which shall include the following items:

- The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration enhancement programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency.
- Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program.
- The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas or areas available for dedication as open space, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owls and other wildlife species; e.g., opportunities for escape and refuge from stochastic events such as fire, flood, etc.; (3) consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible. soil types and microhabitat conditions suitable for the special status plant species listed above.
- At least two years prior to mitigation plant and seed installation associated with restoration of enhancement, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement

site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations.

- The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owls, to determine the species' occupation of the mitigation site(s). The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits).
- For restoration or enhancement, mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) temporary irrigation installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)--including specification of approved herbicides; and (g) seed mix application. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage.
- An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below).
- The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal-including specification of approved herbicides; (d) maintenance of erosion control measures; (e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the

restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria for restoration or enhancement.

- The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photodocumentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP.
- Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.

MM 5.2-8 (Needlegrass Grassland)

The loss of foothill needle grass grassland within the impact area is considered to be a significant impact. Foothill needle grass grassland shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP), but the ratio shall be no less than 2:1 for habitat restoration, enhancement, or preservation or combination thereof. A total of 342.85 acres of California annual grassland/Wildflower fields would be impacted by Project implementation. Habitat restoration is the creation of native target habitat that does not currently exist; enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. Preservation is conservation of existing habitat that exhibits the functions needed to support target species such as the CBB. The mitigation ratio for habitat restoration, enhancement, or preservation shall depend on the initial quality of the habitat area to be restored, enhanced, or preserved and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). Foothill needlegrass grassland habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a

qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for the burrowing owl. Habitat restoration/enhancement shall consist of seeding of suitable foothill needlegrass grassland plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and according to its specified materials, methods, and performance criteria, which shall include the following items:

a. **Responsibilities and Qualifications**. The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency.

b. **Performance Criteria**. Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for the burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off.

c. **Site Selection**. The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas or areas available for dedication, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owls and other wildlife species; e.g., opportunities for escape and refuge from stochastic events such as fire, flood, etc.; (3) consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible, soil types and microhabitat conditions suitable for the special status plant species listed above.

d. **Seed Materials Procurement.** At least two years prior to mitigation plant and seed installation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa

Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area. in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations.

e. **Wildlife Surveys and Protection**. The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owls, to determine the species' occupation of the mitigation site(s). The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits).

f. **Site Preparation and Plant Materials Installation**. For restoration or enhancement, mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, decompacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photodegradable'] fiber roll); (f) temporary irrigation installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)--including specification of approved herbicides; and (h) seed mix application. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage.

g. **Schedule**. An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below).

h. **Maintenance Program**. The Maintenance Program for restoration or enhancement shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal- including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shalt reflect the habitat requirements for burrowing owls; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation

site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria.

i. **Monitoring Program.** The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP.

j. **Long-term preservation**. Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.

2.1.9 CUMULATIVE IMPACTS

This cumulative impact analysis considers potential impacts to sensitive biological resources that would result from combined, incremental impacts of the Project when added to other past, present, and reasonably foreseeable future projects having closely related impacts. The following cumulative impact analysis is based on a review of related projects in the vicinity of the Project Site, the Project's direct and indirect impacts with implementation of mitigation measures, existing conditions in the Project vicinity, and an analysis of aerial photographs.

The Project would have potentially significant adverse impacts on biological resources. Several mitigation measures (MM 5.2-1 through MM 5.2-22, including as modified above) would be implemented to reduce these impacts to less than significant levels. Cumulative projects in the area are expected to have similar potential impacts to the Project on biological resources in the Project vicinity due to similar development activity and/or similar existing conditions. The cumulative impact on biological resources would be considered greater than the Project alone. However, when considering all the proposed and existing projects in the Project area, the previously approved Project contributes a relatively small portion of the impacts in the area due to its relatively small impact acreage, and the location adjacent to existing development. The Project is not expected to contribute a significant impact to the Project area. Incremental impacts would not be cumulatively considerable, and no additional mitigation is required.

2.2 TRAFFIC – VEHICLE MILES TRAVELLED

2.2.1 INTRODUCTION

This section supplements the SEIR Traffic section, Section 5.1.1. At the time the previously approved Project traffic analysis was prepared, level of service (LOS) was the metric used to evaluate transportation impacts. The previously approved Project would result in significant and unavoidable impacts using the LOS methodology, specifically at the Ridge Route Road at Lake Hughes intersection under Existing Plus Project and Horizon Year (2028) scenarios. At the time this RPDSEIR was undertaken, VMT had replaced LOS as the appropriate methodology for evaluating a project's transportation impacts under the CEQA Guidelines. This analysis was prepared in accordance with CEQA and the Los Angeles County Department of Public Works Transportation Impact Analysis Guidelines for CEQA analysis (July 2020, Version 1.1, updated September 2020; "TIA Guidelines"). The purpose of this analysis is to use the VMT metric to identify potential significant impacts related to transportation due to the implementation of the proposed Project. Using the VMT metric, the previously Approved Project would result in a less than significant impact determination. Impacts to the other traffic impact issues (plan consistency, hazardous design and emergency access) would also be less than significant. This analysis is based on the Northlake Specific Plan Transportation Analysis for CEQA, November 19, 2024, Appendix C-1 to this RPDSEIR and Los Angeles County Department of Public Work's Approval Letter dated December 2, 2024, Appendix C-2 to this RPDSEIR.

The previously approved Northlake Traffic Impact Analysis (TIA)[27] is included in Appendix C-1 to the Northlake Specific Plan Transportation Analysis for CEQA, November 19, 2024 (Appendix C-1 to this RPDSEIR) for information purposes only, as the approved TIA evaluated project impacts using the LOS metric which is no longer the applicable metric for identifying significant impacts under CEQA. The approved TIA represents a conservative, worst-case analysis of the Project's effect on LOS and therefore an update is not required.

2.2.2 METHODOLOGY

This analysis evaluates the Project's impact on VMT, potential conflicts with current transportation planning programs (plans, ordinances, and policies), and increased hazards due to the Project's geometric design features, emergency access and construction traffic.

Project Description

The NLSP was adopted by the Board of Supervisors on June 1, 1992, and includes the development of 2,337 single family residential units, 1,286 multi-family units (for a total of 3,623 units), 169,884 square feet of commercial uses, 545,589 square feet of light industrial uses, an 18-hole golf course, school, parks and open space. In 2019[28], changes to the land use plan were approved (referred to herein as the previously approved Project) and include the development of 1,143 single family residential units, 1,341 multifamily residential units, 345 age qualified single family residential units, 315 affordable mixed-use housing units and 6 market-rate live-work units, for a total of 3,150 residential units. The previously approved Project would also construct highway

[27] Stantec, 2016

[28] In 2019 the Project was approved by the Los Angeles County Board of Supervisors. Subsequently, due to a superior court ruling, the County rescinded the Project approvals. The Project applicant is currently proposing to recirculate portions of the NLSP SEIR. At the time the previously approved Project traffic analysis was prepared, LOS was the metric used to evaluate transportation impacts. VMT is now the metric used to evaluate a transportation impact per Senate Bill 743. Los Angeles County has updated their Transportation Impact Analysis Guidelines to utilize the VMT metric.

commercial (e.g., retail near the highway), a middle school (as an option), private and public recreational parks, and a fire station.

Table 2-5 summarizes the NLSP land uses and the 2019 previously approved Project land uses.

TABLE 2-5
NORTHLAKE SPECIFIC PLAN PROJECT LAND USE SUMMARY

Category	NLSP			Previously Approved Project			Difference		
	(AC)	(DU)	(SQ. FT.)	(AC)	(DU)	(SQ. FT.)	(AC)	(DU)	(SQ. FT.)
Residential	600.3	3,623	--	362	3,150	--	-238.3	-794	--
Single Family	504.8	2,337	--	235	1,488	--	-269.8	-593	--
Multi-Family	95.5	1,286	--	107	1,341	--	11.5	-201	--
Affordable Mixed-Use Housing/Live-Work***	0	0	--	20	321*	--	10.8	321	--
General Commercial	9.2	--	100,188		--	38,700**		--	-61,488
Highway Commercial	4	--	69,696	2	--	32,175**	2	--	-37,521
Industrial	50.1	--	545,589	0	--	0	-50.1	--	-545,589
School	23.1	--	--	44	--	--	20.9	--	--
Recreation/Park	167	--	--	167	--	--	0	--	--

* For the purposes of the VMT analysis, the affordable mixed-use housing / market-rate live-work units are treated as multi-family units.

** Square footage per Northlake Design Guidebook

*** 315 affordable mixed-use units and 6 market-rate live-work units.

Mandatory CEQA Impact Criteria

Signed by the Governor in 2013, SB 743 requires the Governor's Office of Planning and Research (OPR) to identify new metrics for the identification of transportation related impacts within CEQA. Regulatory changes to CEQA guidelines that implement SB 743 were approved on December 28, 2018, establishing VMT as a new metric to replace LOS for transportation analysis. Within CEQA, a project's effect on vehicle delay shall not constitute a significant transportation impact (Section 15064.3(a)). Thresholds for determining a project's significant transportation impact shall be pursuant to section 15064.3 of the CEQA Guidelines. OPR released a Technical Advisory that contains recommendations for assessing VMT, thresholds of significance, and mitigation measures. OPR and the California Natural Resources Agency (CNRA) have concluded that VMT is the most appropriate metric to evaluate a project's transportation impacts. On July 1, 2020, statewide implementation occurred.

The Los Angeles County Public Works (LACPW) Department published the TIA Guidelines that provides recommendations for assessing VMT for development in unincorporated Los Angeles County. As such, the VMT analysis has been prepared in accordance with the County's guidelines and guidance from County Public Works staff. The previously approved Project is evaluated as a land use plan and VMT per service population is the metric used for the VMT impact analysis. An increase in the NLSP VMT on a per capita basis would result in a significant impact. This methodology is used because the NLSP was approved prior to SB 743 adoption and Project modifications are being made after SB 743 adoption.

2.2.3 THRESHOLD CRITERIA

2.2.3.1 Would the project conflict or be inconsistent with State CEQA Guidelines Section 15064.3, Subdivision (b)?

2.2.3.2 Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

2.2.3.3 Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

2.2.3.4 Would the project result in inadequate emergency access?

2.2.4 IMPACT ANALYSIS AND MITIGATION MEASURES

Project-Level VMT Analysis

The County's VMT Tool uses data from the Southern California Association of Government's Regional Transportation Plan/Sustainable Communities Strategy (SCAG RTP/SCS) travel demand forecasting model and was specifically designed to be used to develop project-specific daily residential VMT per capita and daily employment VMT per employee metrics for residential, office, and industrial land use development projects in the unincorporated areas of the County of Los Angeles.[29]

The estimated VMT for the NLSP establishes the baseline for the currently proposed Project to be evaluated against for determining a potential significant CEQA transportation impact. This is due to the approval occurring before SB 743 and modifications happening after SB 743. Unlike a brand new project, the previously approved Project does not need to be evaluated against the County baseline, as determined from the County's VMT Tool.

Table 2-6 summarizes the Project's VMT, service population, and the VMT per service population estimated for the NLSP and for the previously approved Project (VMT calculations are attached to Appendix C-1). The VMT estimates presented here are intended to compare the allowed uses of the NLSP and the previously approved Project, using VMT per service population as the basis of comparison. Therefore, the same assumptions to calculate the VMT per service population are applied to both the NLSP and the previously approved Project to provide an equal point of comparison. In regard to the on-site commercial, parks, and school, these uses are assumed to primarily serve the Project residents, therefore the VMT associated with these uses is primarily captured in the residential VMT totals, with any additional visitor VMT being generally equivalent between the NLSP and for the previously approved Project. As shown in Table 2-6, the previously approved Project would generate less VMT and have a VMT per service population rate lower than the NLSP. Due to the VMT reduction, the previously approved Project's impacts would be less and the Project would not result in any new or increased significant transportation impacts.

[29] County of Los Angeles VMT Tool User Guide, Los Angeles County Public Works. December 2020.

TABLE 2-6
NLSP AND PREVIOUSLY APPROVED PROJECT VMT SUMMARY

Category	NLSP VMT	Previously Approved Project VMT
Single Family Residential	260,013	165,568
Multi-Family Residential	77,860	100,623
Commercial Retail	8,765	3,670
Light Industrial	13,869	--
Recreation/Park	1,320	2,640
School	2,640	2,640
Project VMT	**364,467**	**275,141**
Service Population	**13,485**	**10,705**
VMT per Service Population	**27.0**	**25.7**
See Appendix C-1 for the VMT and Service Population Worksheets.		

The VMT estimates presented above use data from a travel demand model and are based on location and land use types only. The travel demand mode data does not consider the unique features of a specific project. For the previously approved Project, there are a number of features that tend to reduce VMT such as constructing a pedestrian network, integrating affordable housing, constructing bicycle trails, and expanding the transit network. VMT reduction ranges from the California Air Pollution Control Officers Association's (CAPCOA) Handbook for Analyzing Greenhous Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (GHG Handbook) are noted below.

Pedestrian Network: The previously approved Project would promote a high level of walkability by providing access to recreational destinations. Pedestrian facilities in the neighborhood would include multi-use trails, enhanced parkways, and neighborhood pedestrian trails. Neighborhood trails connect homes to the larger network, bringing all community amenities within pedestrian, bicycle, or equestrian access and reducing the need for automobiles.[30] The GHG Handbook's T-18 Provide Pedestrian Network Improvement measure cites up to a 6.4% potential reduction in VMT, however, the previously approved Project is not taking any quantitative credit for this project feature.

Bicycle Trails: The previously approved Project would construct a Class I Bike Path, Class II Bike Lanes, and Class III Bike Route. Per the Northlake Design Guidebook, a Class I Bike Path is planned along Northlake Boulevard and Ridge Route Road south of Northlake Boulevard. Class II bike lanes are planned for Local Collectors "A" and "B" and Fire Access Road. Class III Bike Route is planned along Ridge Route Road north of Northlake Boulevard. The GHG Handbook's T-19A Construct or Improve Bike Facility measure cites up to a 0.08% potential reduction, however, the previously approved Project is not taking any quantitative credit for this project feature.

Affordable Housing: The previously approved Project includes affordable housing, which represents approximately 10% of the total number of residential units. The GHG Handbook's T-4 Integrate Affordable and Below Market Rate Housing measure cites up to a 28.6% potential reduction in VMT, however, the previously approved Project is not taking any quantitative credit for this project feature.

[30] Northlake Design Guidebook, April 2018.

Expand Transit Network: The Project would provide a community shuttle and service ("tram") for the Project residents and guests. The tram would service local destinations within the Project Site as well as regional destinations outside the site. The Northlake Design Guidebook provides a conceptual diagram of a well-connected public transit route within the Project site, providing access to local destinations. The GHG Handbook's T-25 Extend Transit Network Coverage or Hours measure cites up to a 4.6% potential reduction in VMT, however, the previously approved Project is not taking any quantitative credit for this project feature.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

Cumulative VMT Impact Analysis

The previously approved Project would have a less than significant VMT impact at the Project-level and would, therefore, also have a less-than-significant cumulative VMT impact.[31]

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

2.2.5.1 Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

The Project does not conflict with the General Plan, any program plan, ordinance, or policy addressing the circulation system. The Project does not propose to amend or adjust roadway classifications, roadway network, transit routes, or bicycle network under existing conditions and future conditions as identified in the General Plan.

The Project would enhance the pedestrian experience by constructing multi-use trails, enhanced parkways, and neighborhood pedestrian trails. Neighborhood trails connect homes to the larger network, bringing all community amenities within pedestrian, bicycle, or equestrian access and reducing the need for automobiles. The Project would also construct a Class I Bike Path, Class II Bike Lanes, and Class III Bike Route. Per the Northlake Design Guidebook, a Class I Bike Path is planned along Northlake Boulevard and Ridge Route Road south of Northlake Boulevard. Class

[31] "A project that falls below an efficiency-based threshold that is aligned with long-term goals and relevant plans has no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than significant project impact would imply a less than significant cumulative impact, and vice versa." Technical Advisory on Evaluating Transportation Impacts in CEQA, Governors' Office of Planning and Research, December 2018, page 6.

II bike lanes are planned for Local Collectors "A" and "B" and Fire Access Road. Class III Bike Route is planned along Ridge Route Road north of Northlake Boulevard. Lastly, the Project would expand the transit network by creating a route alignment and bus stop locations within the Project Site. Therefore, the Project does not conflict with the General Plan, any program plan, ordinance, or policy addressing the circulation system.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

2.2.5.2 Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Project would involve construction of a new internal circulation system. According to the Santa Clarita Valley Area Plan 2012 EIR, hazards due to roadway design would be evaluated on a project-by-project basis. The Project would include implementation of the Access and Circulation Plan that provides circulation and design standards for the layout of arterial highways and local collector streets in support of the Northlake land use plan. Because the NLSP, including the Access and Circulation Plan, was evaluated as part of the Northlake 1992 EIR and approved as part of the NLSP, no significant impacts are anticipated. Further, all roadway designs would comply with applicable design standards and requirements set forth in the NLSP and would be subject to review and approval by the LACPW. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

Would the project result in inadequate emergency access?

Development of the Project Site will not alter or impede emergency response routes or plans set in place by the County. Access during construction will be addressed in the Project's construction traffic management plan.

Emergency vehicles would access the Project Site using Ridge Route Road and use the internal street network. North of the Project Site, existing Ridge Route Road can be accessed from Templin Highway. Vehicular circulation within the Project Site would be accommodated by public and private roadways, which would be constructed consistent with applicable Los Angeles County Department of Public Works design standards for local roads. According to the California Fire Code (2016), fire apparatus access roads need to be no less than 20 feet wide and shall always

be unobstructed, which the internal Project streets will meet. Based on the previously approved Project Site plan, the internal streets and intersections, including the Project cul-de-sacs, would accommodate a fire truck.

The Project driveways are designed to comply with turning radius requirements for emergency vehicles and will not cause hazardous driving conditions. The Project's detailed design will be completed in compliance with California Fire Code requirements and not impair emergency vehicle access in the vicinity of the Project during construction and in ongoing operation. Compliance with the California Fire and Building Codes will be mandated through the plan check and approval process. This process will also ensure that adequate access for emergency services is provided, and the County's emergency response plan will be upheld during construction. Emergency access is further discussed below in Section 2.3, Wildfire, of this RPDSEIR. Therefore, the Project's impact on emergency access would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

Would the project result in construction VMT impacts?

Construction of the proposed Project would generate temporary VMT associated with construction activities. It is anticipated that construction of the proposed Project would be phased based on market demand.

Construction-related VMT would primarily be associated with mass grading including movement of soils within the Project Site, delivery of building materials and construction equipment, removal of construction debris, and construction workers commuting to/from the Project Site. The amount of construction VMT would vary daily depending on the nature of the activity. In general, phased construction of the proposed uses is not anticipated to result in substantial construction related VMT, except possibly for the initial demolition and clearing stages, which would generate the highest number of heavy truck VMT. All grading materials are anticipated to be balanced on the Project Site; therefore, the primary source of construction related VMT would occur during the building phases of the Project. Construction traffic is expected to access the Project Site from I-5 at Lake Hughes Road, which leads to Ridge Route Road, and which is the most direct and shortest route from the site to the regional freeway system. Construction workers would primarily be from the southern California region. In some cases, specialized workers will be housed temporarily in the local area for the duration of their work activity. The distance construction workers travel to jobsites is a function of the worker's home location and the jobsite location, which is continually changing due to the short-term nature of construction work. Construction related VMT is variable, short-term, and is substantially lower than the project's operational VMT. As such, construction related VMT would be less than significant.

As described in Mitigation Measure 5.11-3 to the previously approved Project (which would be implemented here as well), to minimize traffic impacts during construction, a Construction Traffic Management Plan will be prepared and submitted to the County; this plan will describe safe detours, provide temporary traffic-control measures during construction activities, and identify

requirements to be met when one or more travel lanes are obstructed during construction. To reduce traffic congestion, the plan would also include, as necessary, appropriate, and practicable, the following activities: implementing temporary traffic controls (e.g., a flag person) during all phases of construction to maintain smooth traffic flow; implementing signage for detours, if needed; assigning dedicated turn lanes for movement of construction trucks and equipment on and off the site; scheduling construction activities that affect traffic flow on the arterial system to off-peak hours; consolidating truck deliveries; rerouting construction trucks away from congested streets or sensitive receptors; and synchronizing signals to improve traffic flow. Conducting construction activities in compliance with the Construction Traffic Management Plan would reduce potential impacts related to construction traffic to less than significant levels.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

2.3 WILDFIRE

2.3.1 INTRODUCTION

This section supplements the SEIR Section 5.5, Fire Hazards, Emergency Response, and Environmental Safety. Specifically, this analysis supplements the analysis of wildfire risk and emergency evacuation in the event of a wildfire event. For this RPDSEIR, wildfire is a standalone section that incorporates the new threshold questions from CEQA Appendix G, which were added in December 2018 as a part of a comprehensive update to the CEQA Guidelines. The previously approved Project was concluded to result in less than significant impacts with implementation of identified regulatory standards related to wildfire risk and emergency evacuation. These determinations were upheld by the Superior Court; as such recirculation was not required.

The purpose of this analysis is to identify potential significant impacts related to wildfire risk and emergency evacuation with implementation of the previously approved Project, as described in Section 1.2, Project Summary. This analysis is based on the following technical reports, which address the previously approved Project:

- *Wildland Fire Risk Report, NorthLake Project* (Wildfire Report), prepared by Firesafe Planning Solutions, dated December 4, 2024 (Appendix D-1 to this RPDSEIR);
- *NorthLake Specific Plan Wildland Fire Evacuation Scenarios – Evacuation Time Estimates Memorandum* (Wildfire Evacuation Memo), prepared by Consulting Services, Inc., dated August 9, 2024 (Appendix D-2 to this RPDSEIR);
- *NorthLake Drainage Memorandum* (Drainage Memo), prepared by Sikand Engineering, dated May 17, 2023 (Appendix D-3 to this RPDSEIR); and
- *Wildland Fire Risk Report, NorthLake Project Addendum #1, December 2024* (Appendix K to this RPDSEIR)

These analyses support the significance determinations for the previously approved Project presented in the SEIR.

2.3.2 METHODOLOGY

California Attorney General Guidelines

The California Attorney General's (AG) *Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act* (AG Guidelines), published in October 2022, encompasses the threshold questions for the topic of wildfire in Appendix G of the CEQA Guidelines established in 2018, as previously discussed. The Wildland Fire Risk Report (Wildfire Report) states it addresses the following tasks from the AG Guidelines:

1) Determine if project impact will substantially impair an adopted emergency response plan or emergency evacuation plan;
2) Determine the project-specific Wildland Fire Hazard and Wildland Fire Risk to quantify issues that may exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
3) Determine if the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment;
4) Determine if people or structures will be exposed to significant risks due to the completion of the project; and
5) Consider whether a project will "expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires".

Wildfire Report Methodology

The Wildfire Report examined the topography (i.e., slope, aspect, elevation, location of development related to upslope and downslope areas), weather history and weather conditions during extreme fire conditions, fire history, wildland fuels (i.e., type, configuration, continuity, and density), and current/anticipated infrastructure (i.e., roads, fuel modification, fire resources, and water distribution and storage system). The current and future (i.e., in place by the time of development) regulations, codes, standards, guidelines, and recommended practices relating to wildland fire safety were also considered. It was assumed that the previously approved Project would comply with all current and future regulations in the development of the Project Site and the construction of the structures. The report provides results of computer calculations that measured the fire intensity, flame lengths, rate of spread, and fire travel distance (arrival times) from worst-case scenario wildfires in both the extreme (Diablo wind) and the predominant (Onshore wind) wind conditions (ten different wildfire scenarios). The results of the fire behavior calculations have been incorporated into the analysis of the interfaces of the previously approved Project with adjacent wildlands and the potential ingress/egress routes that would be used at the site daily and under emergency conditions where evacuation might be possible or necessary. The analysis of wildland fire risk starts with the review of the hazards, the likelihood of an event, and the intensity of that event which is then examined against the vulnerability (exposure and susceptibility) to provide a "level of risk". This was accomplished using fire modeling (BehavePlus and FlamMap) software as provided by the U.S. Forest Service (Firesafe, Wildfire Report 2024).

Wildfire Evacuation Memo Methodology

The Wildfire Evacuation Memo estimated the evacuation time for all ten of the wildfire scenarios modeled in the Wildfire Report. The estimated evacuation time is based on consideration of the population of the Project area, the average number of vehicles owned by each household, the relative location of households in relation to the roadway network, and the available roadway

capacity. The number of residential units and the average vehicle ownership per household in the Castaic community was used to estimate the potential number of Northlake vehicles that would need to be evacuated during a wildland fire event. Households in the Castaic community own an average of 2.34 vehicles per household. A conservative roadway capacity estimate of 500 vehicles per hour per lane (VPHPL) was used in this analysis to represent extreme congested conditions under a worst-case evacuation scenario. The analysis is also based on a worst-case assumption that all residents of dwelling units under evacuation are assumed to be at home and would attempt to evacuate using all available vehicles for each household. Analysis also considers the existing residential neighborhoods just south of the Project Site (i.e., Northlake Hills and Wildwood), which also rely on Ridge Route Road for evacuation. Traffic from the three evacuation (i.e., egress) points would proceed south along Ridge Route Road towards the Lake Hughes Road intersection. For a worst-case condition, the analysis assumes that no vehicles would be evacuated to the north towards Templin Highway (Stantec, Wildfire Evacuation Memo 2024a).

The focus of the evacuation analysis is on Ridge Route Road within the NLSP area and south to Lake Hughes Road where Ridge Route Road enters the existing Castaic community. Conditions on Lake Hughes Road and on Ridge Route Road south of Lake Hughes Road can affect the overall capacity of vehicles passing through the Ridge Route Road/Lake Hughes Road intersection. For the evacuation analysis, it is assumed that these downstream conditions are being actively managed by County emergency management personnel and that sufficient capacity is available to receive and/or stage the evacuating residents (Stantec, Wildfire Evacuation Memo 2024a).

In addition, the Genasys Protect application (app), formerly known as Zone Haven, is an evacuation management tool that helps communities, and first responders, more effectively plan, communicate, and execute evacuations. It is a platform where residents can look up their addresses using the search bar and use the zone map to find evacuation information for their area.

Pre-established evacuation zones help fire, law, and emergency service agencies prepare for, streamline, and reduce confusion around the evacuation process so that roads are clear for those who need to evacuate quickly. By evacuating the most at-risk zones first, emergency personnel are able to manage the traffic flow and more easily prevent the traffic jams that occur when an entire town or city tries to evacuate all at the same time. The pre-established zones also provide a common reference system for all first responders and the community.

Evacuation routes are always incident-specific because the best route to take is always relative to the location and type of threat. When an emergency evacuation occurs, residents will be asked to check the County's alerts and open the Genasys Protect app to review the status of their zone. When it is time to evacuate, residents will be asked to follow the direction of the law enforcement directing traffic.

The Genasys Protect mobile app for Apple and Android contains all the same functions as the website, with the additional feature of being able to follow a zone to receive push notifications about status changes to that zone. It should be noted that the Genasys Protect is not a navigation tool like Google or Apple Maps, which means it cannot plot directions or receive evacuation directions.

All zones in Genasys Protect are published by the County and are authoritative. Genasys works directly with each county served and all information for a zone or county listed on the site has been approved by the county. The County worked directly with Genasys to add and approve all

of the information for specific zones, and the appointed emergency response personnel update the statuses and information during emergencies.

The Project site is within zone CAS-RIDGE. The first three letters represent the city's name or if in an unincorporated area - the county, the E is short for Evacuation, and the last three numbers are the unique code that distinguishes the zone from the others in the immediate area. This system is consistent across the county and makes it easy for first responders to plan and execute evacuations. The zone identifier system provides each zone with a globally unique identification so there is no confusion about which zone is being referenced.

During an incident, first responders may need to split the zone into multiple sections in order to evacuate community members or repopulate a zone in the most effective way. If a zone contains a letter on the end (example: E005-A, E005-B, E005-C), this means that the original zone (E005) was split up into smaller areas for better management of the evacuation.

Fire Hazards Reduction Programs

The Los Angeles County Fire Department (LACoFD) has multiple Fire Hazards Reduction Programs, including the Defensible Space Inspection Program and Vegetation Management Program. The Defensible Space Program is a joint effort between the LACoFD and the County of Los Angeles Agricultural Commissioner Weights and Measures Department, Weed Hazard and Integrated Pest Management Bureau. These measures create "Defensible Space" for effective fire protection, and the Department's Defensible Space Unit enforces the Fire Code as it relates to brush clearance on improved parcels, coordinates inspections and compliance efforts with fire station personnel, and provides annual defensible space training to fire station personnel. The Vegetation Management Program is an ongoing effort to analyze the history and effects of wildland fires in Los Angeles County, and LACoFD has developed fuel management projects with stakeholders, including cities, community groups, and other agencies; experimentation with various methods of reducing or removing fuels in fire prone areas, as well as evaluation of environmental impacts and effects of these practices (Los Angeles County Fire Department 2024).

2.3.3 THRESHOLD CRITERIA

If located in or near State responsibility areas or lands classified as VHFHSZ, would the project:

2.3.3.1 Substantially impair an adopted emergency response plan or emergency evacuation plan?

2.3.3.2 Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

2.3.3.3 Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

2.3.3.4 Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

2.3.4 IMPACT ANALYSIS

2.3.4.1 Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The Project area does not have an adopted emergency evacuation plan. Neither construction nor operation of the Project would impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. The area's emergency response would be enhanced by implementation of the previously approved Project with the addition of the proposed fire station and improvements to the public roadways. This evacuation analysis for the previously approved Project would be the first formal process that can be found in a search of the available records. Previous evacuations in the area from several incidents over the past years have provided the emergency staff with experience that is helpful for future actions. One example is the closure of Interstate 5 due to an emergency. In previous closures, the action was to take traffic off the freeway at Lake Hughes Road, which results in almost immediate gridlock. Shutting the freeway at Hasley Canyon Road or State Route 126 provides for better redirection of the freeway traffic and leaves the Castaic area more evacuation options (Firesafe, Wildfire Report 2024). Project Design Features (PDFs) that would reduce the impact of the previously approved Project on emergency response and evacuation include:

PDF-3: Evacuation Plan: A detailed Evacuation Plan would be prepared and shall include, at a minimum, the below described evacuation plan elements, actions during a wildfire, and actions during site evacuation due to wildfire:

Evacuation Plan Elements

Coordination with applicable agencies: During development of the Evacuation Plan, the applicant will communicate with public agencies that may provide emergency response to the Project area in the event of a disaster, such as a wildfire, and emergency assistance is needed. Public agencies could include LACPW, LACoFD, Los Angeles County Sheriff's Department (LASD), County Supervisor's Office, California Department of Transportation (Caltrans), California Highway Patrol (CHP), and companies providing utility services for the community.

Evacuation zones map: The Evacuation Plan will categorize the Project into Evacuation Zones; the Project Site is within zone CAS-RIDGE. The purpose of the Evacuation Zones is to aid agencies and/or emergency personnel in quickly identifying areas of the Project to plan for the evacuation timing, the evacuation order, and the evacuation routes so that traffic flow is managed and traffic bottlenecks are avoided. For example, the Priority Area under evacuation would be identified by the applicable Evacuation Zones.

Ingress and egress routes: The Evacuation Plan will identify regional and local ingress and egress routes such as the I-5 freeway, Lake Hughes Road Interchange, Ridge Route Road Interchange, and the Ridge Route Road and Lake Hughes Road intersection.

Street routes: The Evacuation Plan will detail the Project's internal circulation and provide evacuation routes using the Project's main three evacuation points: "B" Street at Ridge Route Road, Northlake Boulevard at Ridge Route Road, and "A" Street at Ridge Route Road.

Detour plan: In the event an evacuation point is not available, the evacuation plan will identify alternative routes to an available evacuation point.

Pre-identified safe refuge areas: The Evacuation Plan will provide a map with pre-identified safe refuge areas.

Evacuation traffic control plans: The Evaluation Plan will include traffic control plans such as, but not limited to, deployment of portable generators to intersections with traffic signals, changeable message signs to inform motorists, and modification of signal timing to allow emergency personnel to operate the traffic signals manually.

Resident outreach and education: Resident outreach will be conducted to educate residents on what evacuation zone they are in, evacuation routes, evacuation points, emergency contacts, pre-identified safe refuge areas, and notification systems to enlist.

Actions During a Wildfire

Initial action: LACoFD would assess the event and communicate with LASD if an evacuation order, evacuation warning, or a shelter in place notice is needed. LASD will coordinate with other agencies such as (but not limited to) Caltrans and CHP to close routes into the area. This could mean closing sections of the I-5 freeway or diverting local traffic in the Castaic community near Lake Hughes Road.

Community notifications: The County of Los Angeles will notify the community before, during and after an emergency. Communication will be done via an emergency alert system, Alert LA County, commercial media, amateur radio, and websites. The emergency alert system is broadcasted directly by LASD.[32] Alert LA County is a Community Mass Notification System that is an emergency system used to contact County residents through phone calls, text messages, and email.[33] Commercial media refers to television stations in the surrounding area. Amateur radio refers to Los Angeles County Disaster Communications Service (DCS) works ham radio operators throughout the County. Lastly, websites such as the Los Angeles County Website and National Weather Service will provide up to date fire information and shelter sites. Social media could also be used to notify residents. Residents would be notified of available evacuation routes, shelter locations, refuge areas, and animal shelters.

Response organization contact list: The Evacuation Plan will include a list of contacts that will implement the evacuation plan, such as, but not limited to, LACPW, LACoFD, LASD, Caltrans, CHP, school district, and utilities.

Site Evacuation Due to Wildfire

Evacuation of the Priority Area: Emergency personnel would determine the Priority Area and provide community notifications to the affected evacuation zones on an evacuation warning, evacuation order, or a shelter in place.

Identification of available/open evacuation points closest to the Priority Area: Community notifications would include information related to the availability of the nearest evacuation points. At this time emergency personnel would monitor the movement of the fire and provide updates to the availability of the evacuation points.

[32] The County of Los Angeles Emergency Survival Guide, County of Los Angeles, Chief Executive Office, Office of Emergency Management, 2022.

[33] www.lacounty.gov/emergency accessed February 2025.

Deployment of emergency personnel to direct evacuation: Based on the movement of the wildfire, emergency personnel would open or close the available evacuation points and help reroute vehicles so residents can efficiently exit the area and avoid traffic bottlenecks.

The Wildfire Evacuation Memo determined that all modeled scenarios allowed all vehicles to evacuate within the allowable time limit. This assumes that an evacuation point would only temporarily close (approximately 90 minutes at most) and would reopen after the fire is no longer a threat to that area. The closure of the southerly segments of Ridge Route Road would result in a temporary pause on evacuations. Since Ridge Route Road is the only egress route, a "shelter in place" recommendation may be made in an event where Ridge Route Road cannot reopen. However, an evacuation route directly onto the I-5 freeway from Ridge Route Road would provide an alternative to Ridge Route Road but would require a substantial amount of evaluation and coordination with Caltrans to implement (Stantec 2024a).

From a wildland fire perspective, the Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. Project Site-specific evacuation plans would be completed as an integral part of Resident Information and Community Communications efforts by the Project sponsors, builders, and the homeowner's associations (HOAs) who would have the ongoing responsibility for this information (Stantec 2024a). In addition, the Genasys Protect app is an evacuation management tool that will be available to assist future residents and first responders to effectively evacuate in the event of a wildfire occurrence. Based on the findings of both the Wildfire Report and Wildfire Evacuation Memo, there would be less than significant impacts related to emergency response and evacuation due to a wildland fire affecting the previously approved Project area or surrounding area during construction and operations, and no mitigation is required.

Information provided to Stantec by the Los Angeles County Department of Regional Planning indicates that there is currently one cumulative (i.e., related) project in the vicinity of the Project Site: the Centennial Specific Plan. This project will not utilize Ridge Route Road for access; therefore, traffic generation from this project would not affect the findings of the evacuation analysis (Stantec 2024a).

There would be less than significant cumulative impacts related to emergency response and evacuation.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than Significant Impact.

2.3.4.2 Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The Wildfire Report examined the Project-specific wildland fire hazards and the resulting risks with application of required regulatory standards and PDF-3 above and PDF-4 below and determined that the resulting level of risk is no greater than similar communities in the area and generally better than projects constructed prior to the current regulatory standards. Neither

construction nor operation of the Project would exacerbate wildfire risks, thereby exposing occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire. As described in further detail below, during construction, the Project would be required to implement all applicable Federal, State and local regulations pertaining to wildfire. Consistent with current regulations, all dwelling units during operations would be protected with automatic fire sprinklers and the site design would implement appropriate fuel breaks, fire breaks and fuel modification zones. The Project would create buffer zones and defensible space within and adjacent to the proposed development, with particular attention to ensuring that vegetation would not touch structures or overhang roofs. Structures and homes would be fire hardened in accordance with Chapter 7A of the Building Code, Section R337 of the Residential Code and the specific requirements of LACoFD during the development review process for the site-specific locations. On-site, gravity fed, water supply/storage would be provided to ensure fire flow during power outages for the required duration established in the Fire Code (Firesafe 2024). The Fire Management Program specified in the NLSP requires compliance with the County Fire Code and all other regulatory standards.[34] PDFs above and beyond the regulatory standards that provide additional wildfire protection are listed below.

PDF-4: Wildfire Prevention and Protection Features: The Project includes several features that would both help prevent a wildfire from starting from within the site and protect the on-site population and structures if a wildfire occurred on or near the site. These features include:

- The Project includes increased housing density and a consolidated design to reduce or eliminate, where possible, wildland fuels within the interior of the site and to keep the edge of the site as an identifiable interface.
- The Project has been designed to avoid and minimize low-density urban development patterns or leapfrog-type developments (i.e., those with undeveloped wildland between developed areas).
- Decreasing the extent and amount of “edge,” or interface area, where development is adjacent to undeveloped wildlands.
- The Project would establish the legal obligations within the codes, covenants, and restrictions (CCR’s) to ensure that defensible space measures are retained over time.
- Undergrounding of power lines throughout the entire Project Site except for the SCE overhead transmission lines that bisect the site.
- The Project design limits development along steep slopes and amidst rugged terrain to decrease exposure to rapid fire spread and increase accessibility for firefighting. Only a few locations have wildland fuels below (lower than proposed structures) the site and these sites would have additional protections such as radiant heat walls, increased built-in fire protection features, and/or placement of the structure so that the effects of “underslung fuels” are reduced.
- Structures and features have been sited to maximize the role of low-flammability landscape features and roadways that may buffer the development from fire spread.
- The Project would expand existing fire resources in the region, including a new fire station location and more water storage than required resulting in additional regional fire duration capacity.
- Proposed development has been situated within the existing or planned ingress/egress and designated evacuation routes to efficiently evacuate the on-site

[34] NorthLake Draft SEIR, Appendix B [NorthLake Specific Plan], pages IV-10 through IV-13.

population and the existing community population, consistent with evacuation plans, while simultaneously allowing emergency access.

The size, location, and configuration of the Project makes it unlikely that a fire would affect the entire site at a single time but rather the fire would affect sections of the site's interface over a period of time allowing for resources to be redistributed and for evacuation opportunities after the fire front has passed a specific location. Travel within the site should be viable at all times given the distance from the wildland fuels and the wildland fire protection features. The modeling indicates there would always be some portion of the community that is not impacted or has already been impacted and is now no longer a significant risk to the occupants/evacuees. The Project Site would have three egress points available for evacuation efforts should law enforcement deem it necessary. Additionally, the combination of fuel modification, hardened structures, the placement of the structures, and features on the topography relative to the wildland fuels creates a community that is capable of "sheltering in place" if necessary. While never a first choice by emergency service providers, if moving the population is a greater risk, this community as designed and as it would be constructed would be capable of a sheltering operation without undue risk to the residents.

All ten fire scenarios that have been modeled have at least one evacuation point that is viable for four hours or more except one, the Freeway Spots scenario. In the Freeway Spots scenario, all three evacuation points would be viable for an estimated 30 minutes until it is limited by fire and would reopen in an estimated 60 to 90 minutes depending on location. All fire scenarios were run under extreme conditions which have been recorded in previous fires or which are likely to occur in the future and are considered the worst-case scenarios. Fires with wildland fuels, such as adjacent to the Project Site, tend to burn in "ribbons of fire" which have a flaming front and little fire behavior behind the flaming front. For this reason, once the fire has passed, so has most of the risk associated with the fire. Residents closest to the impacted areas should be moved first and then the evacuation area expanded based on risk to the community and/or evacuation routes. It may be necessary to shelter in place for short periods of time in areas which are less at risk or would not be affected before the evacuation is completed. The Wildfire Report concluded that while fire would be expected to affect portions of the Project Site before the entire population is evacuated, options exist to change routes, use areas of refuge on a temporary basis, or shelter populations that are not currently at risk until those at risk have been moved to safer areas (Firesafe 2024).

The Project traffic engineer, Stantec, modeled scenarios to validate the time needed to empty the at risk or priority populations and the entire Project Site. With each modeled scenario, the number of people at risk determines the number of dwelling units that would be a priority to evacuate (hereby referred to as priority area). In some instances, the entire Project Site is in the priority area. After the priority area has evacuated, the remainder of the site would evacuate. Based on worst-case assumptions, discussed above, the Wildfire Evacuation Memo estimated that it would require between 1 and 3.5 hours to evacuate the priority area (for the eight scenarios where the priority area is not the entire Project Site) and between 3.5 and 5.75 hours to evacuate the entire Site. For the Freeway Spots scenario, the Wildfire Evacuation Memo estimates it would require an estimated 2.5 hours to evacuate the priority area and 5 hours to evacuate the entire Project Site (Stantec 2024a). As discussed above, for the Freeway Spots scenario the three egress points would each be viable for approximately 30 minutes. Therefore, in such a scenario the remaining on-site population would shelter in place until one or more evacuation points reopen (estimated to be in 60 to 90 minutes) and then evacuation would continue.

Evacuation reduces exposure to pollutant concentrations generated by a wildfire. Therefore, the combined effects of the fuel modification, roadside clearance, building code requirements, and the site design/placement of the structures work together to protect the community from a wildfire.

The Project Site would, in fact, provide a buffer to some of the existing communities by removing or modifying the wildland fuels that are upwind from them. With the fuel modification and roadside clearance in place, the probability of a fire originating from the Project Site is lower than the adjacent communities without this protection. To access the wildlands, it would be necessary to traverse the 200-foot-wide fuel modification zone. Ignitions from the normal sources associated with development would be much less likely to occur (Firesafe 2024). There would be less than significant impacts related to exacerbation of wildfire risk that would expose the population to fire-related pollutant concentrations during construction and operations, and no mitigation is required.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than Significant Impact.

2.3.4.3 Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Construction of the Project would not require the installation of associated infrastructure that would exacerbate fire risk. In addition, the Wildfire Report concluded that none of the proposed infrastructure would exacerbate the wildfire risk for the Project Site during operations. In fact, the improved water supply for the general area, placement of fuel modification zones, and establishment of a community that has the option to “shelter in place” if needed provides an alternative to existing residents in the immediate area where this level of protection does not exist. If evacuation to the south is not possible, nearby communities would be safer on the Project Site development areas than they would be in some of the current neighborhoods due to the protections provided as part of the previously approved Project (Firesafe 2024). There would be less than significant impacts related to installation and maintenance of infrastructure that could exacerbate wildfire risk during construction and operations, and no mitigation is required.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than Significant Impact.

2.3.4.4 Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

As proposed, the Project would not expose people or structures on the Project Site, either directly or indirectly, during construction or operations, to a significant risk of loss, injury or death due to

a wildland fire in the undisturbed areas adjacent to the site due to the use of fuel modification, defensible space, fire sprinklers, placement of the structure on the landscape/topography, street widths, amount of fire protection water available, and placement of fire hydrants at specified intervals, hardening of the structures to comply with the current wildland interface regulations, and availability of firefighter resources within the Project Site, and the regional assets available to combat a wildland fire by LACoFD and the other associated agencies (CalFire, USFS, mutual aid fire resources, call when needed fire resources) who routinely assist in the suppression of wildfires in the region (Firesafe 2024).

During construction, the Project would be required to comply with all applicable federal, State and local rules and regulations governing construction fire safety, including Chapter 33 of the California State Fire Code entitled, Fire Safety During Construction and Demolition, which provides requirements for precautions against fire and requires readily accessible means of reporting emergencies, access roadways and fire department water supplies to all areas where combustible construction is occurring. This section also requires the development, implementation and maintenance of an approved, written Site Safety Plan establishing a fire prevention program at the Project Site applicable throughout all phases of the construction, repair, alteration or demolition work. This plan addresses the requirements of the Fire Code, the duties of staff and staff training requirements. The Site Safety Plan must be submitted and approved before the issuance of a building permit. The Project would also be required to comply with California (Cal/OSHA) regulation section 5141.1, which protects outdoor employees exposed to wildfire smoke and poor air quality through monitoring air quality levels, required trainings and instructions, and control of harmful exposures to workers by providing respiratory protective equipment and portable air filters. A Project-specific Construction Monitoring Plan and Stormwater Pollution Prevention Plan (SWPPP) would be required to ensure all appropriate erosion control measures and best management practices (BMPs) are implemented during construction activities. The BMPs would include, but would not be limited to, physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of infiltration swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion from occurring during construction. In the event that a wildland fire is followed by a rain event, and results in downstream flooding or landslides as a result of post-fire runoff, the BMP measures required to be implemented under the SWPPP would reduce the risk of runoff, post-fire slope instability, and drainage changes.

Per the approved hydrology study[35] and latest County policies, the Project has been designed with upstream debris basins that are engineered to contain debris flows from upstream natural areas that have burned in wildfires. Upstream flows are conveyed into these basins where debris settles, and clear water would then be conveyed downstream through a conduit. Based on the approved hydrology study for the Project, Sikand concluded the proposed flows during operations exiting the Project Site would mimic the existing conditions and as such would not result in downslope or downstream flooding (Sikand, Northlake Drainage Memo 2023).

In addition, the increase in wildfire risk due to human caused ignitions was assessed. (See Wildland Fire Risk Report NorthLake Project Addendum #1 December 2024, Appendix K.) Development of the Project Site would introduce additional wildfire risk factors as compared to existing conditions. Specifically, increased human habitation in a wildlife-urban interface increases the fire risk from arson, children playing with fire, and debris-burning; increased vehicular traffic increases fire risk from sparks, catalytic converters, and discarding of cigarettes; and the introduction of residences within the site would create a wildland-urban interface that increases the general potential for human-ignited wildfires. The Project would introduce

[35] NorthLake Hydrology Study, 2017 (Appendix D-4 to this RPDSEIR).

residences within the site creating a wildland-urban interface that increases the general potential for human-ignited wildfires. All of these factors could expose Project occupants to pollutant concentrations from wildfire or the uncontrolled spread of wildfire near or into the development footprint. Although additional opportunities for wildfires would occur, factors associated with the changes in the wildland fuels and topography would have an offsetting effect. The ignition gradient along lateral development could lower ignition probabilities when new development areas are located nearest to the previous urban development, while outlying development patterns in the wildland areas may have higher probabilities for wildfire. This builds on the concept that, at a point of development density, wildland fuels are reduced/eliminated or fragmented to a point where fire suppression efforts are more effective. A higher level of development would also have a greater concentration of emergency services resources to aid the protective actions needed to bring the incident to a close.

As noted above, the Project would not expose people or structures on the Project Site, either directly or indirectly, to a significant risk of loss, injury or death due to a wildland fire caused by human ignitions due to the use or implementation of:

- fuel modification,
- defensible space,
- fire sprinklers,
- placement of the structure on the landscape/topography,
- street widths,
- amount of fire protection water available,
- placement of fire hydrants at specified intervals,
- hardening of the structures to comply with the current wildland interface regulations,
- availability of firefighter resources within the Project Site, and
- the regional assets available to combat a wildland fire by LACoFD and the other associated agencies (CalFire, USFS, mutual aid fire resources, call when needed fire resources) who routinely assist in the suppression of wildfires in the region.

The Project would avoid human-ignited wildfire risk by:

- Prohibiting smoking in wildland and wildland interface,
- Banning solid fuel outfire fires within the community without spark arrestor and only in approved devices, and
- Limiting access to vulnerable open space.

The Project would minimize, prevent and reduce human-ignited wildfire risk by providing:

- Fuel Breaks and Fire Breaks which reduce fire intensity and forward progress in the direction of the community,
- Undergrounding of utilities, pump stations, switch gear to make them less impacted by wildfires,
- Annual inspections for wildland interface (common areas) to insure readiness

- Defensible space inspections to educate and inform homeowners on what can be accomplished to make the structure more resistant to wildland fires,
- Community cleanup programs (ongoing) to assist in removing wildland fuels from the interface and the community as a whole,
- Back up of critical infrastructure (water, communications, traffic control, electrical) to ensure that they are functional when needed,
- Fuel modification zones which slow or stop the forward progression of the wildland fire
- Defensible space which eliminates or greater reduces the fire pathways between the native fuels and the ignition zone around the structure,
- Roadside clearance zones which increase the utility of the roads for evacuation while reducing the impact of possible ignition sources by reducing fuels near the roads by creating a buffer area,
- New fire suppression resources which are closer/faster to the incident in order to intercede before the fire reaches a point where it exceeds the local resources and become a large wildland fire,
- Hardened structures to wildland fire impacts through physical construction, distance and configuration of items on or near the structure which might ignite, and
- Placement of structures relative to the potential wildland fires to reduce or eliminate the possible ignition of the structure or the vegetation around it.

Finally, the Project would compensate and offset human-ignited wildfire risk through:

- Increased detection of ignition which result in actions which limit the size and scope of the fire with early intervention by citizens or emergency personnel,
- Rapid suppression capabilities (as opposed to longer responses to areas without immediate access),
- Fire prevention and public education programs to reduce, eliminate and prevent wildland fires by changing behavior and practice which could elevate the risk of a wildland fire or its impacts,
- Community information and communication systems to keep residents informed and aware of risks, actions needed and increases the ability to plan for future actions such as evacuation prior to being in harm's way, and
- Preplanned evacuation areas/routes which are known to residents to insure that, if evacuation is needed, it can be completed quickly and in the most efficient and effective manner.

As such, the increased wildfire risk from human-ignited wildfire would be less than significant.

As shown above, there would be less than significant impacts related to downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes during construction and operations, and no mitigation is required.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than Significant Impact.

2.4 REVISED ALTERNATIVES ANALYSIS

2.4.1 INTRODUCTION

This section[36] provides an updated Alternatives analysis in direct response to the Court Ruling. The Court Ruling stated the following:

> ***ISSUE TWO: THE REASONABLE RANGE OF ALTERNATIVES PRESENTED IN THE SEIR IS DEFICIENT FOR FAILING TO CONSIDER AN ALTERNATIVE THAT WOULD PRESERVE THE GRASSHOPPER CREEK HABITAT:***
>
> *CEQA requires the lead agency to consider a reasonable range of alternatives to evaluate whether an alternative to the Project exists that will reduce or better mitigate the significant environmental impacts of a project. PRC 21002; Guidelines section 15126.6. An EIR is to "ensure that all reasonable alternatives to proposed projects are thoroughly assessed" by the decisionmakers. Laurel Heights Improvement Association v. Regents of the University of California (1988) 47 Cal.3d 376, 400.*
>
> *The SEIR's alternate analysis for the Project does not include an alternative that would protect Grasshopper Creek (AR 2403-2426), and for that reason is fatally flawed.*
>
> *[…]*
>
> *Without necessarily finding a violation of section 15151, the Court finds that the County's exclusion of the "creek avoidance" alternative from the range of alternatives is not supported by substantial evidence. That failure is a violation of Guidelines section 15126.6 and, therefore, of PRC 21002. The failure invalidates the approvals given for the Project and requires the submittal of an amended EIR that includes an appropriate analysis section for consideration by the County's decisionmakers.*

The analysis is provided below in response to the Court Ruling to support the SEIR's discussions and impact conclusions and the County's associated findings. The analysis considers two alternatives that look to avoid impacts to Grasshopper Creek: (1) the Creek Avoidance Alternative and (2) the Partial Creek Avoidance Alternative. The analysis is based, in part, upon:

1) Creek Avoidance Alternative Assessment, July 2021 (Revised June 2022), by Sikand Engineering Associates (Appendix F-1 to this RPDSEIR);
2) Geotechnical/Hydrological Review of Creek Avoidance Alternative Design Northlake, Vesting Tentative Tract Map No. 7336, Castaic, Los Angeles County, California by G_3SoilWorks, July 14, 2021 (Appendix F-2 to this RPDSEIR);
3) Glenn Lukos Technical Memorandum, Biological Conditions with Grasshopper Creek Avoidance Alternative, July 1, 2021 (Appendix F-3 to this RPDSEIR);

[36] The Alternatives analysis is contained in Section 6.0 of the SDEIR and incorporated herein by reference except where expressly superseded.

4) Sikand Engineering Associates Technical Memorandum Re: Partial Creek Avoidance Alternative, July 12, 2022 (Revised October 14, 2024) (Appendix F-4 to this RPDSEIR); and

5) Northlake Specific Plan Alternatives VMT Analysis, February 27, 2025, by Stantec (Appendix F-5 to this RPDSEIR).

In summary, the previously approved Project consists of development of Phase 1, Phase 2, and associated off-site external map improvements in both Phase 1 and Phase 2 areas totaling 65.13 acres, including remedial grading, drainage features, and road and utility alignments. Phase 1 comprises 1) development of a 720-acre portion of the Project Site with a total of 2,295 dwelling units, including 288 single-family units on approximately 41 acres, 1,341 multi-family units on approximately 41 acres, 345 senior multi-family units on approximately 49 acres, 315 affordable units and 6 market-rate live/work units (included within 20 acres of commercial use). Of the 315 affordable units, 95 would be designated as senior-living affordable units. The market-rate live-work units and deed restricted affordable mixed-use units are considered multi-family residential units under some impact methodologies. Phase 1 also includes, and lots are also provided for commercial development (22 acres), open space and parks (412 acres), roadways (86 acres), school pad (21) and a fire station pad (1 acre).

The remainder of the Project Site, referred to as the Phase 2 area, would be developed with 855 single family homes, 386 acres of parks, trails, and open space, 23 acres of school uses, and 36 acres of associated roadway and infrastructure improvements.

2.4.2 CREEK AVOIDANCE ALTERNATIVE

Description of the Alternative

The Creek Avoidance Alternative (CAA) assumes the same design basis as the previously assessed screening alternative in the SEIR (Section 6.5, Alternatives Deemed Not Feasible, Section 6.5.1 Creek Avoidance Alternative): avoid disturbing the creek bottom that runs through the Project Site while developing a viable land plan effectuating the approved NLSP. The existing landform is created by landslides that traverse the Project Site from the westerly side of Grasshopper Creek to the easterly side of the Site boundary. Typically, per standard engineering and design practices and Los Angeles County requirements, all underlying landslides would be removed and recompacted to provide suitable soil conditions for Project development. Grasshopper Creek has several existing landslides directly underneath the creek bottom that extend from approximately 10 feet to 200 feet easterly and westerly of the creek bottom. A 300-foot setback[37] from the creek bottom was determined to be an appropriate buffer for the CAA. Thus, the developable area for the CAA would commence at the creek setback line and ascend easterly to the easterly boundary of this Alternative. Unlike the previously approved Project, the CAA would require the realignment and new construction of Ridge Route Road, export of approximately 8.2 million cubic yards (mcy) of soils from the Project Site, and the construction of three clear span bridges to access the Project from Ridge Route Road.

[37] This setback was based on three considerations: 1) Topography ascending to the east from the creek can be rather steep (locally 1.5:1 to 1:1 +/-). The 300-foot setback generally removes the toe of development into areas with 3:1 to 4:1 slope gradients. 2) The irregular / meandering path of the creek bed required a suitable setback to accommodate a design that would allow a toe for a fill slope configuration, as development is proposed for the easterly slopes and developable pads will need to be graded. 3) The 300-foot setback allowed the proposed fill slope to begin further east / upslope of the upper portions of most of the small to moderate size landslides which are located along the east side of the creek bed. (Creek Avoidance Alternative Assessment, July 2021 (Revised June 2022), by Sikand Engineering Associates, Appendix F-1.)

The developable acreage for the CAA decreases from 364 acres to 286 acres, thereby reducing the amount of area available for development. After incorporating other conditioned site elements such as a 23-acre school site and 1 acre fire station (as per the NLSP), along with 167 acres of recreation and park areas, under the CAA the residential unit count would be reduced to 1,815 units (of which 165 units would be affordable). Compared to the 3,150 dwelling units (of which 315 units would be affordable) under the previously approved Project, the CAA would result in a reduction of 1,335 dwelling units. The CAA would have similar commercial acreages as the previously approved Project. Proportionately, the affordable unit count would be reduced from 315 to 165 units. The CAA is shown on Figure 2, NorthLake Creek Avoidance Alternative.

TABLE 2-7
LAND USE STATISTICAL SUMMARY TABLE
FOR THE CREEK AVOIDANCE ALTERNATIVE[a]

Use	Dwelling Units	Area (Acres)
Residential	1,815	264
Mixed Use Residential/Commercial	–	20[a]
Highway Commercial	–	2
Parks	–	26
Open Space- Manufactured Slope	–	285
Open Space- Undisturbed	–	636
Roadways	–	71
Fire Station Pad	–	1
School Pad	–	23
Totals	***1,815***	***1,329***

[a] This overlay provides for a development option of attached single-family residences and age-restricted areas designated for homeowners that are 55 years of age and older. Lot sizes and configurations would be similar to those in the Single-Family area with the addition of the Attached Single-Family designation as an option. It should be noted that development within these areas may or may not be age-restricted.

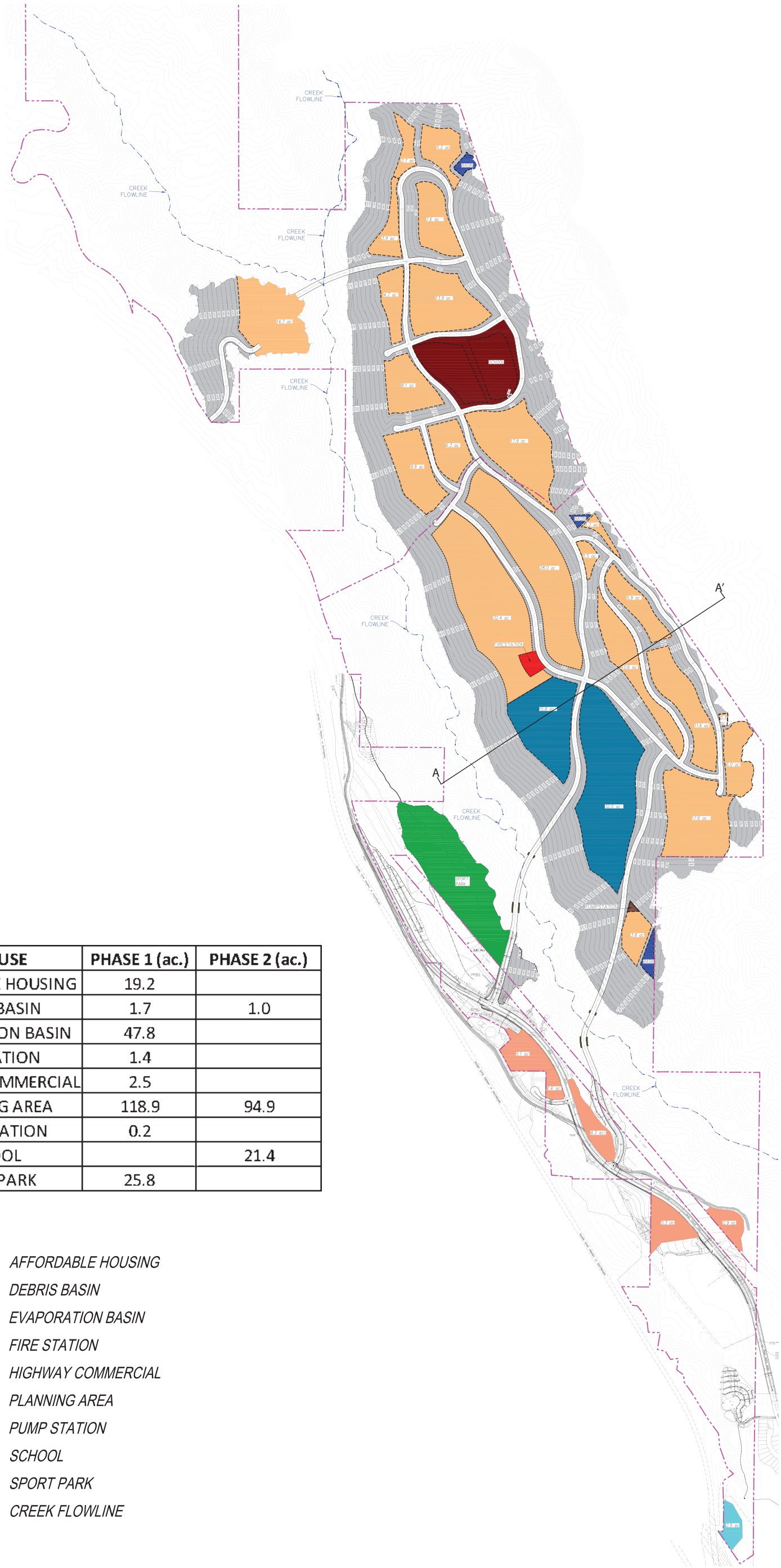
The CalEEMod parameters assume 26.4 acres for this use based on an assumption that the affordable housing would be 10 percent of the total units; thus, the acreage would likewise be 10 percent. This acreage does not affect any other aspect of emissions modeling and the small change in acreage also would not affect the modeling results.

Source: Sikand Engineering 2022.

Comparative Analysis of Environmental Impacts

Aesthetics

Similar to the previously approved Project, the CAA would alter the existing visual condition of the Project Site through introduction of development on a previously disturbed, undeveloped site. The CAA would comply with the design guidelines set forth in the NLSP and as described in Section 4.0, Project Description, of the DSEIR, including requirements for grading, circulation, landscape, architecture, and signage. The CAA would limit the graded area to a 735-acre portion of the NLSP situated on the eastern side of Grasshopper Creek. The area defined for grading and development would be 29 percent smaller than the previously approved Project. Therefore, the visual impacts would be reduced when compared to the previously approved Project due to the smaller development area. As with the previously approved Project, implementation of the CAA would not affect scenic resources along a State scenic highway. Similar to the previously approved Project, development under the CAA would conform to the lighting design guidelines set forth in the NLSP; therefore, potential impacts would be less than significant. However, the impacts of lighting would be reduced when compared to the previously approved Project due to



LAND USE	PHASE 1 (ac.)	PHASE 2 (ac.)
AFFORDABLE HOUSING	19.2	
DEBRIS BASIN	1.7	1.0
EVAPORATION BASIN	47.8	
FIRE STATION	1.4	
HIGHWAY COMMERCIAL	2.5	
PLANNING AREA	118.9	94.9
PUMP STATION	0.2	
SCHOOL		21.4
SPORT PARK	25.8	

LEGEND:

- *AFFORDABLE HOUSING*
- *DEBRIS BASIN*
- *EVAPORATION BASIN*
- *FIRE STATION*
- *HIGHWAY COMMERCIAL*
- *PLANNING AREA*
- *PUMP STATION*
- *SCHOOL*
- *SPORT PARK*
- *CREEK FLOWLINE*

Source: G SoilWorks 2021

NorthLake Creek Avoidance Alternative

Exhibit 2

NorthLake Specific Plan, Recirculated Portions of the Supplemental Draft EIR

N W E S

Map not to scale

PSOMAS

(12/05/2024 PLO) R:\Projects\WCP\3WCP000200\Graphics\ex_Creek_Avoidance.pdf

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the smaller development area. No significant impacts would occur with either the previously approved Project or the CAA.

Impact conclusions would be consistent with the previously approved Project.

Air Quality

To determine how the CAA would affect air quality emissions, the California Emissions Estimator Model (CalEEMod) was used to calculate construction-source and operational-source criteria air pollutant emissions from direct and indirect sources. Emissions from both the previously approved Project and the CAA were modeled with CalEEMod and without planned project design features and/or mitigation measures to provide an apples-to-apples comparison. The emissions were calculated using the same model version as was used for the original SEIR to allow for a direct comparison of the previously approved Project with the alternative.

Table 2-8, Comparison of Estimated Maximum Daily Construction Emissions for the Creek Avoidance Alternative without Mitigation, summarizes the maximum emissions for each criteria air pollutant for the two scenarios (previously approved Project and CAA) as well as the percent change from the previously approved Project and the CAA.

TABLE 2-8
COMPARISON OF ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS FOR THE CREEK AVOIDANCE ALTERNATIVE WITHOUT MITIGATION

	Emissions (lbs/day)					
	VOC	**NO_x**	**CO**	**SO_x**	**PM10**	**PM2.5**
Previously Approved Project Maximum Emissions[a]	49	584	363	1	64	43
Creek Avoidance Alternative Maximum Emissions	69	1,109	443	2	188	77
Difference	***+41%***	***+90%***	***+22%***	***100%***	***+194%***	***+79%***
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
CAA Exceeds SCAQMD Thresholds?	**No**	**Yes**	**No**	**No**	**Yes**	**Yes**

lbs/day: pounds per day; VOC: volatile organic compound; NO_x: nitrogen oxides; CO: carbon monoxide; SO_x: sulfur oxides; PM10: respirable particulate matter 10 microns or less in diameter; PM2.5: fine particulate matter 2.5 microns or less in diameter; SCAQMD: South Coast Air Quality Management District.

Values are higher of summer or winter.

[a] Values represent 2018 calculated emission from DSEIR Table 5.1-6, the highest of all years analyzed.

Source: SCAQMD 2019 (thresholds); see Appendix E for CalEEMod model outputs.

Although the development footprint would be reduced by approximately 29 percent (which includes an associated reduction in overall site grading), the CAA would result in increased criteria air pollutant emissions during construction as compared to the previously approved Project because excavated soils would need to be exported offsite instead of distributed onsite (the previously Approved Project was a balanced site requiring no import or export of soil or associated off-site truck trips[38]). Due to the additional construction equipment and truck trips required to export 8.2 mcy of excavated soils offsite, which would not be required under the previously approved Project, the CAA would result in increases of all criteria pollutants compared to the previously approved Project. As shown in Table 2-8, construction of the CAA would result in significant increases of criteria pollutants ranging from 22 percent to 194 percent. The previously

[38] An estimated 99 16-cy truck trips per hour, or approximately 792 truck round trips per day, for 652 days, would be required to export 8.2 mcy of soil. (Detailed calculations in Appendix E for CalEEMod model outputs)

approved Project concluded that the construction activity resulting in regional and local emissions of nitrogen oxides (NO_x) would be significant and unavoidable with implementation of mitigation measures. Like the previously approved Project, the CAA would exceed the South Coast Air Quality Management District's (SCAQMD) regional emissions threshold for NO_x, but to a significantly greater extent than the previously Approved Project. Additionally, the CAA would be expected to exceed the SCAQMD thresholds for particulate matter (PM10 and PM2.5) prior to the implementation of mitigation measures.

Given that the CAA's construction NO_x emissions would be approximately 11 times the SCAQMD threshold (1,109 pounds per day with a 100 pounds per day threshold), it can be concluded the CAA would continue to result in a significant and unavoidable impact after mitigation as there are no additional feasible mitigation measures (same as the previously Approved Project, but to a significantly greater extent (90%)). Further, as the estimated PM10 and PM2.5 emissions would be greater than the previously approved Project and exceed the SCAQMD significance thresholds (unlike the previously Approved Project), construction of the CAA can be considered to result in a greater significant impact after mitigation including new significant impacts to PM10 and PM2.5.

Table 2-9, Comparison of Estimated Daily Operational Emissions for the Creek Avoidance Alternative without Project Design Features, on the following page summarizes the operations phase emissions for each criterial air pollutant for the two scenarios as well as the percent change from the previously approved Project and the CAA.

TABLE 2-9
COMPARISON OF ESTIMATED DAILY REGIONAL OPERATIONAL EMISSIONS FOR THE CREEK AVOIDANCE ALTERNATIVE WITHOUT PROJECT DESIGN FEATURES

	Emissions (lbs/day)					
	VOC	**NO_x**	**CO**	**SO_x**	**PM10**	**PM2.5**
Previously Approved Project Emissions	182	328	1,100	6	351	99
Creek Avoidance Alternative Emissions	110	165	582	2	186	53
Difference	-61%	-50%	-53%	-33%	-53%	-53%
SCAQMD Significance Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
CAA Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**

lbs/day: pounds per day; VOC: volatile organic compound; NOx: nitrogen oxides; CO: carbon monoxide; SO_x: sulfur oxides; PM10: respirable particulate matter 10 microns or less in diameter; PM2.5: fine particulate matter 2.5 microns or less in diameter; SCAQMD: South Coast Air Quality Management District.

* Some totals may not add due to rounding. Highest of Winter or Summer model runs shown.

Source: SCAQMD 2019 (thresholds); see Appendix E for CalEEMod model outputs.

The previously approved Project concluded that long-term operational emissions for carbon monoxide (CO), volatile organic compounds (VOC), NO_x, PM10, and PM2.5 would remain significant and unavoidable with implementation of project design features and mitigation measures. As shown in Table 2-9, operation of the CAA would result in decreases of all criteria pollutants, ranging from 33 percent to 61 percent. This is consistent with the reduction in proposed land uses, particularly residential dwelling units, and the related decrease in vehicle trips. Like the previously approved Project, the CAA would exceed the SCAQMD threshold for VOC, NO_x, CO, and PM10 emissions. However, unlike the previously approved Project, the CAA would not exceed the SCAQMD thresholds for PM2.5 before consideration of project design features and mitigation measures. Therefore, the CAA would partially avoid a significant unavoidable impact related to emissions of these criteria pollutants.

Overall impact conclusions for regional construction emissions for the CAA would be consistent with the previously approved Project, although daily emissions of all criteria pollutants except SO_x would be substantially higher. Impact conclusions for operational emissions from the CAA would be reduced and would partially avoid a significant and unavoidable impact related to emissions of PM2.5.

Biological Resources

The CAA would involve disturbance of on- and off-site areas; however, the development footprint would be reduced by approximately 29 percent compared to the previously approved Project. The area that would not be developed contains some significant biological resources. As with the previously approved Project, the CAA would continue to have the potential to significantly impact biological resources. However, due to the reduced development footprint, impacts to Foothill needlegrass, black sage scrub, California annual grassland/Wildflower fields, California sagebrush–California buckwheat scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, slender/club-haired mariposa lily, and southern California walnut as well as impacts to California gnatcatcher and an open water area would be reduced under this alternative. Impacts to WST would be similar to the previously approved Project, based on the locations of the three pond locations that have been established to support WST, as discussed above in Section 2.1 of the RPDSEIR. Impacts to CBB would be reduced as impacts to suitable habitat would be less than the previously approved Project.

While the CAA would avoid direct impacts on Grasshopper Creek, geotechnically-required grading to remediate the upper landslides would result in the loss of up to two-thirds of the creek's current tributary (surface) water and eliminate subsurface water. The latter would occur because the remedial grading needed would in turn eliminate the landslide debris and bedding planes that store and transmit the subsurface flows. This substantial reduction in surface and subsurface water would adversely impact habitat productivity in Grasshopper Creek. Elimination of the subsurface water source would result in the elimination of the phreatophytic[39] vegetation, which contributes to the conditions within Grasshopper Creek that are associated with the biological values. In short, the conditions that contribute to the important biological functions in Grasshopper Creek would be eliminated and the creek would no longer be able to maintain the existing conditions. These water sources support southwestern spiny rush (a special status species) and the suite of other riparian phreatophytes in and near the creek, as discussed above in Section 2.1, Revised Biological Impact Analysis. Therefore, the CAA would result in significant indirect impacts to southwestern spiny rush and other riparian phreatophytes in and near the creek. However, impacts to paniculate tarplant would be avoided as this species is not dependent on the water sources within the landslide masses.

In summary, impacts to Foothill needlegrass, black sage scrub, California annual grassland/Wildflower fields, California sagebrush–California buckwheat scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, slender/club-haired mariposa lily, and southern California walnut, California gnatcatcher, and an open water area would be reduced but would remain significant. Impacts to CBB would be reduced as impacts to suitable habitat would be less than the previously approved Project. Impacts to WST would be similar to the previously approved Project. Indirect impacts to Grasshopper Creek would remain significant. Impacts to southwestern spiny rush would remain the same as the previously approved Project. Impacts to paniculate tarplant would be avoided; therefore, implementation of MM 5.2-5(b), above, would not be required.

[39] A phreatophyte is a plant that depends on perennial groundwater (subsurface water) that lies within their root zones.

Impact conclusions would be consistent with the previously approved Project except for impacts to paniculate tarplant, which would be avoided.

It was determined and upheld by the Superior Court that the previously approved Project would not have impacts to wildlife movement under CEQA, including as to mountain lions. Despite this finding, the Project Applicant voluntarily accepted a condition of approval (Condition of Approval No. 51) to provide for wildlife movement post project development. A preliminary Wildlife Connectivity Plan was adopted as part of this condition of approval for the previously approved Project. It is anticipated that the Wildlife Connectivity Plan would also apply to the CAA alternative. Therefore, impact conclusions related to wildlife movement would be consistent with the previously approved Project.

Cultural Resources

The CAA would involve disturbance of on- and off-site areas that would occur with implementation of the NLSP; however, this alternative would result in a reduced development footprint. However, because potential impacts would involve archaeological and paleontological resources that have not yet been discovered, there is no way to tell if the reduction in development area would reduce actual impacts. Therefore, as with the previously approved Project, development of the CAA would have the potential to impact unknown archaeological and paleontological resources during ground disturbing activities. Consistent with the previously approved Project, these impacts would be reduced to less than significant levels with implementation of identified mitigation measures.

Impact conclusions would be consistent with the previously approved Project.

Energy

The CAA would result in an increased construction demand for energy, related to the fuel required for operation of additional construction equipment and truck trips required to export 8.2 mcy of soils compared to the previously approved Project, which would have balanced excavated soil onsite. The long-term operational demand for energy would be reduced compared with the previously approved Project commensurate with the reduction in the development footprint and proposed land uses. Consistent with the previously approved Project, impacts related to energy would be less than significant.

Impact conclusions would be consistent with the previously approved Project, although construction demand for energy related to soil export would be greater.

Geology and Soils

The CAA would involve development of the Project Site including off-site areas that would occur with implementation of the previously approved Project; however, this alternative would result in a smaller impact footprint. As with the previously approved Project, development of the CAA would expose people and structures to seismic ground shaking and the Project Site would be subject to soil erosion and loss of topsoil. Further, the presence of unsuitable soils and potentially expansive soils within the area identified for development under this alternative would result in a potentially significant impact that could be mitigated to a less than significant level, same as the previously approved Project.

While the grading footprint would be reduced under the CAA, a review of the alternative by G_3SoilWorks concluded its implementation would result in unacceptable increases in risks to the proposed uses and would be infeasible from engineering geologic, geotechnical, and hydrogeologic perspectives. The CAA would require three clear span bridges to provide access

from the west to east side of the canyon. Neither the sidewalls nor the creek bottom present suitable conditions for bridge foundation embedment and expose the bridges to high risks of instability. Also, the keyway/buttress assemblies along the western revised earthwork limits would be less effective than the original plan and would provide less protection against future instabilities.

As discussed above under "Biological Resources", above, the CAA would result in the elimination of most water sources to Grasshopper Creek. This loss would also result in a substantial reduction in sediment recharge leading to scouring of the bottom and banks and eventual downcutting. This, in turn, would lead to a recurrence of the conditions that produced the existing landslides on the Project Site. These conditions would represent substantial risks to the proposed development, including compromising the integrity of proposed bridges (on top of the instability risk discussed above), risk of spillage and/or interruption of associated utilities, and slope instabilities and endangerment to the development above the slopes. The increased risk of substantial adverse effects due to the likelihood of instabilities of the underlying geologic and geotechnical conditions, which could not be mitigated to a less than significant level because the risks would be a direct result of the CAA's implementation, represents a new significant and unavoidable impact.

Impact conclusions would be greater than the previously approved Project, including a new significant and unavoidable impact.

Greenhouse Gas Emissions

As discussed above for air quality, to determine how the CAA would affect greenhouse gas (GHG) emissions, CalEEMod was used to calculate construction-source and operational-source GHG emissions. Emissions from both the previously approved Project and the CAA were modeled with CalEEMod and without planned project design features and/or mitigation measures to provide an apples-to-apples comparison. The emissions were calculated using the same model version as was used for the original SEIR to allow for a direct comparison of the previously approved Project with the alternative.

Table 2-10, Comparison of Estimated GHG Emissions for the Creek Avoidance Alternative without Project Design Features, summarizes the amortized construction and annual GHG emissions for the two scenarios as well as the percent change from the previously approved Project and the CAA.

TABLE 2-10
COMPARISON OF ESTIMATED GHG EMISSIONS FOR THE CREEK AVOIDANCE ALTERNATIVE WITHOUT PROJECT DESIGN FEATURES

	Previously Approved Project	**Creek Avoidance Alternative**
Construction Emissions (Amortized) ($MTCO_2e$/yr)	961	2,216
Operational Emissions ($MTCO_2e$/yr)	66,083	36,769
Total Annual Emissions ($MTCO_2e$/yr)	**67,044**	**38,985**
Difference	***N/A***	***-58%***

$MTCO_2e$: metric tons of carbon dioxide equivalent; N/A: not applicable

Notes:

- Totals may not add due to rounding variances.

Detailed calculations in Appendix E for CalEEMod model outputs.

The CAA would result in increased GHG emissions during construction related to the operation of additional construction equipment and truck trips required to export 8.2 mcy of soils compared

to the previously approved Project, which would have excavated soils balanced onsite. As shown in Table 2-10, amortized construction GHG emissions would be approximately 2.3 times higher than for the previously approved Project. However, the total annual GHG emissions would be reduced by an estimated 58 percent, commensurate with the reduction in the development footprint and proposed land uses. Consistent with the previously approved Project, impacts related to GHG emissions would be less than significant.

Impact conclusions would be consistent with the previously approved Project.

Hazards, Emergency Response, and Environmental Safety

The CAA would involve disturbance of a smaller development area. This alternative would generate a smaller population and would thereby expose fewer residents to hazards, including wildfire hazards, in comparison to the previously approved Project. However, as discussed above under "Geology and Soils", implementation of the CAA would result in "unacceptable increases in risks" to the three proposed bridges, among other components, due to both existing and proposed geologic and geotechnical conditions. This would result in greater hazards related to emergency access and response and emergency evacuation, as the bridges would provide access from the east side to the west side of the canyon. This would represent a new significant and unavoidable impact, which could not be mitigated to a less than significant level because the risks would be a direct result of the CAA's implementation. Comparative wildfire hazards discussed further under "Wildfire" heading below.

Impact conclusions would be greater than the previously approved Project, including a new significant and unavoidable impact.

Hydrology and Water Quality

As with the previously approved Project, there is a potential for construction-related surface erosion with the CAA. Potential impacts from this alternative would be less than the previously approved Project because of a reduced development footprint. Surface runoff from a developed condition (with either this alternative or the previously approved Project) would have a different composition in comparison to the existing condition, which is undeveloped. This runoff is likely to include a similar type of pollutants commonly found in urban runoff. The previously approved Project and this alternative would be required to comply with applicable regulations related to water quality that would minimize potential short-term, construction-related and long-term, operational water quality impacts.

Similar to the previously approved Project, development under the CAA would increase the amount of storm water runoff and alter existing drainage patterns due to the increase in the amount of impervious surfaces. The previously approved Project was designed assuming existing Grasshopper Creek would be graded and filled with the tributary drainage areas being captured and routed through the Project Site in a covered storm drain system. At the downstream end of the Project Site was a series of regional basins (retention and detention) that were designed to mitigate increases to storm drain runoff volume due to site development and to satisfy hydromodification requirements.[40] Since these basins are located within the footprint of the existing creek, they could not be utilized for the CAA. The only place where infiltration would be feasible on the Project Site was within the creek bottom area. Therefore, for hydromodification and Low Impact Development (LID) purposes, the use of infiltration for the CAA would be

[40] Hydromodification control criteria must be implemented by project applicants to control potential adverse impacts of changes in hydrology that may result from projects located within natural drainage systems; Los Angeles County Public Works, Low Impact Development, Standard Manual, February 2014.

considered infeasible. Similarly, there would not be enough irrigation demand to implement a harvest and re-use program. Biofiltration would therefore be required to meet the LID volume criteria. The CAA would reduce the hydromodification impacts compared to the previously approved Project, because there would be debris in the creek which would reduce the effects of "hungry water" as these alternative releases the developed "Q" (i.e., runoff) into the existing drainage course. However, there would still be some degree of impact. To reduce this impact, the CAA would require that drainage acceptance letters for any hydraulic impacts be obtained from all downstream owners but whether such letters could be obtained is speculative. As such, this impact could not be feasibly reduced to a less than significant level. This would represent a new significant and unavoidable impact.

Additionally, as discussed above under "Biological Resources" and "Geology and Soils", while the CAA avoids direct grading of Grasshopper Creek, the CAA would result in the elimination of most water sources to the creek. This loss would result in a substantial reduction in sediment recharge leading to scouring of the bottom and banks and eventual downcutting. Therefore, the CAA would substantially alter the existing drainage pattern of Grasshopper Creek that would result in substantial erosion on-site and a change in hydrologic conditions downstream due to on-site changes. This would represent a new significant and unavoidable impact, which could not be mitigated to a less than significant level because the impact would be a direct result of the CAA's implementation.

Impact conclusions would be greater than the previously approved Project, including a new significant and unavoidable impact.

Land Use and Planning

The CAA would result in the development of a primarily residential project, similar to the previously approved Project; however, the CAA would include development of a reduced area and approximately 42 percent fewer dwelling units (1,815 units versus 3,150 units). The amount of park acreage associated with the CAA would be similar and other land uses, including commercial, would be consistent with the previously approved Project. The CAA would also comply with design guidelines outlined in the NLSP to ensure compatibility with the existing character of the area. Because the types of land uses under this alternative would be the same as that allowed with the previously approved Project, this alternative would be consistent with relevant goals and policies of applicable local and regional planning programs. However, because the number of housing units would be reduced, this alternative would not provide as many housing opportunities and would not contribute as much towards the County's Regional Housing Needs Assessment (RHNA) allocation as the previously approved Project. In particular, the affordable unit count would be reduced from 315 units to 165 units, proportional to the reduction in dwelling units as a whole. The 2016 Los Angeles Countywide Comprehensive Parks Needs Assessment (PNA) estimated that Los Angeles County had a median of 3.3 acres of park space per 1,000 people (LA County 2016). In the 2022 Los Angeles Countywide Comprehensive Parks Needs Assessment Plus (PNA+), it was estimated that there are 99 acres of regional recreation and conservation areas in Los Angeles County per 1,000 residents (LA County 2022). Because the amount of park acreage would be similar to the previously approved Project, the CAA would have a higher on-site ratio of parklands to residents than the previously approved Project. The reduction in residential dwelling units while maintaining the same acreage of commercial development would result in a higher ratio of residential to commercial uses; however, the number of employment opportunities may be reduced based on the demand for different types of commercial uses to serve a smaller overall population. Therefore, it is not possible to predict a change to the jobs-housing balance associated with the CAA when compared to the previously approved Project. However, because the commercial uses would primarily support on-site residential uses, the CAA would encourage a reduction in VMT through the reduction of trips to off-site commercial

uses. Therefore, the CAA would support the County General Plan (Guiding Principle 3, Policy LU 5.10) and the 2012 SCVAP (Policy ED 2.5, LU-5.2.3, CO-8.2.13). Therefore, the CAA would be consistent with goals and policies of relevant local and regional planning programs and would meet the goals and policies of the NLSP.

Impact conclusions would be consistent with the previously approved Project.

Noise

Development of the CAA would involve similar construction activities and generate peak daily on-site noise levels similar to the previously approved Project. The construction scenario for both the previously approved Project and the CAA is approximately 11 years. However, there would be additional construction truck trips during the approximately 2.5-year grading phase to export approximately 8.2 mcy of soils, or about 13,400 cy of soils per workday. An estimated 1 million truck trips would be required to export soil during the grading phase. If all truck trips related to soil export occur during the mass grading phase, there would be an estimated 1,587 truck trips per day. The Interstate (I) 5 freeway has 108,000 average annual vehicle trips proximate to the Project Site of which 17,496 are trucks[41]. The addition of 1,587 daily truck trips attributable to the Project's export of soils would add 1% to the total number of vehicles and 9% to the volume of trucks along the I-5 freeway. An increase of this magnitude would result in noise increases of less than 3 decibels (dBA) which is not considered a perceptible change in outdoor environments. The DSEIR evaluated off-site construction traffic noise for local roadways. For the previously approved Project, it was estimated that there could be 250 to 300 worker trips on Ridge Route Road north of Lake Hughes Road at the start and end of the construction day for peak building periods. It was also estimated that a maximum of 10 one-way truck trips per hour could occur during the workday for the previously approved Project. The CAA would have comparable levels of traffic during construction phases except for the grading phase which involves the removal of 8.2 mcy of soils. This would involve an estimated 120 14-cy truck trips per hour which is substantially higher than the 10 truck trips per hour estimated for the previously approved Project. For the previously approved Project, the 10 truck trips per hour in addition to the 250-300 worker trips would result in noise level increases of approximately 2 dBA Community Noise Equivalent Level (CNEL) which is below the noise threshold of 3 dBA CNEL. If all the truck trips associated with the soil export under the CAA travelled along this route, the construction phase of the CAA could result in approximately 16 times more truck trips than the 10 trucks analyzed in the DSEIR and is anticipated to result in noise levels in excess of the 3 dBA CNEL noise threshold. For the previously approved Project, short-term construction noise levels were found to be less than significant with mitigation except for blasting activity, which would be significant and unavoidable. Due to the magnitude of anticipated truck traffic associated with the export of 8.2 mcy of soil from the site, CAA related construction traffic noise would exceed the 3 dBA CNEL noise threshold and result in an unavoidable significant impact.

Vibration generation associated with the CAA is anticipated to involve similar types and quantities of equipment. While the CAA will involve substantially more truck trips associated with the export of 8.2 mcy of soil, trucks travelling on paved roadways generate low levels of vibration that are very localized to the roadway and would not result in significant levels of vibration. Other sources of vibration associated with the construction phase, such as blasting, would be similar to those discussed in the DSEIR and would likewise have potentially significant vibration impacts.

[41] Caltrans 2021 (December). California 2020 Public Road Data. https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/california-public-road-data/prd-2020-a11y.pdf

Long-term, operational noise levels related to traffic would be reduced due to a reduction in anticipated vehicle trips, including those that would impact off-site residential uses due to Project-generated traffic on Ridge Route Road north of Castaic Lake Road and Ridge Route Road north of Lake Hughes Road. Though the magnitude of traffic noise increases would be less under the CAA due to less vehicle trips, the increase in traffic noise under the CAA would be expected to exceed the noise threshold of 3 dBA CNEL and would also result in significant traffic noise impact. As with the previously approved Project, long-term operational noise and vibration impacts would be significant and unavoidable.

Impact conclusions would be consistent with the previously approved Project except for construction truck traffic noise which would be significant and unavoidable.

Public Services and Utilities

The CAA would create new demand for public services including fire protection services and police services, but the level of demand for service calls and regular patrols would be reduced when compared to the previously approved Project due to reduction of uses. Generation of school-age children would also be reduced as compared to the previously approved Project. Overall, impacts to public services would be less than significant with this alternative and the previously approved Project.

The CAA would increase demand on local utility providers (i.e., water, sewer, solid waste, electricity, natural gas, and telephone), but the level of demand would be less compared to the previously approved Project due to the reduction in development requiring utility service. Consistent with the previously approved Project, the CAA would continue to require the installation of on-site and off-site utilities to serve proposed uses and the impacts associated with installation of this infrastructure would be similar to the previously approved Project.

However, as discussed above under “Geology and Soils”, the CAA would require three clear span bridges to provide access from the west to east side of the canyon. Neither the sidewalls nor the creek bottom present suitable conditions for bridge foundation embedment and expose the bridges to high risks of instability. Additionally, the hydrogeological changes to Grasshopper Creek that would result with development of the CAA would lead to compromising the integrity of the proposed bridges and risk of spillage and/or interruption of associated utilities that would be attached to the bridges. This would represent a new significant and unavoidable impact, which could not be mitigated to a less than significant level because the impact would be a direct result of the CAA’s implementation.

Impact conclusions would be greater than the previously approved Project, including a new significant and unavoidable impact.

Traffic, Access, and Circulation

Construction-related traffic for the CAA would be greater than for the previously approved Project despite the reduced development footprint and proposed land uses, due to truck trips required to export 8.2 mcy of soils. An estimated 99 16-cy truck trips per hour, or approximately 792 truck round trips per day, for 652 days, would be required to export soil during the grading phase (Detailed calculations in Appendix E for CalEEMod model outputs). Construction is proposed for a period of eight hours per day, Monday through Friday. It is estimated that soil export would result in one to two truck trips every two minutes, assuming use of 16-cy trucks. To minimize traffic impacts during construction, MM 5.11-3 requires that a Construction Traffic Control Plan be prepared and submitted to the County of Los Angeles. This plan will describe safe detours, provide temporary traffic-control measures during construction activities, and identify

requirements to be met when one or more travel lanes are obstructed during construction. With implementation of MM 5.11-3, required for the previously approved Project, the presence of a significantly larger number of haul trucks, in addition to the routine construction traffic addressed in the SEIR, consistently during construction hours over the approximate 2.5-year grading phase–as a worst-case scenario–would not result in a new or more severe impact to transportation, including emergency access, in the Project area.

Operation of the CAA would result in an approximate 28 percent reduction in average daily traffic (ADT) and 37 percent in VMT from residential land uses. Non-residential development for the CAA would be reduced by 162 acres and would there also have reduced ADT and VMT (Stantec 2025 [Appendix F-5 to this RPDSEIR]). As with the previously approved Project, the CAA would not conflict with the Los Angeles County Congestion Management Program, would provide or accommodate non-vehicular transportation facilities, and would not conflict with adopted policies supporting alternative transportation. Like the previously Approved Project, the CAA results in less residential VMT than the NLSP and as such the VMT impact would be less than significant.

Impact conclusions would be reduced compared to the previously approved Project.

Wildfire

As with the previously approved Project, the Project Site is within a designated Very High Fire Hazard Severity Zone (VHFHSZ) and would be essentially surrounded by undeveloped lands in the VHFHSZ category. A portion of the Project Site would be graded and developed with structures, roadways, and manufactured slopes. This development would eliminate the natural vegetation and wildfire “fuel” sources and some of the manufactured slopes within the footprint of the Project Site would be landscaped and regularly irrigated. Therefore, the outer fringes of the Project Site would be the main interface of exposure to potential wildfire risks. Fire hazards on private property are increased when adjacent to non-irrigated natural vegetation that has not been modified to minimize potential fuel sources because suburban development is a potential source of wildfire ignition. With application of the Fire Management Program specified in the NLSP, which would require compliance with the County Fire Code and all other regulatory standards, impacts related to development within a VHFHSZ were determined to be less than significant for the previously approved Project. This determination is supported by the Wildfire Report prepared by Firesafe (2024) and summarized above. The Wildfire Report notes that the CAA has vegetation present on both sides of all three Project Site access roadways compared to the previously approved Project that has this condition for one of the three roadways.

The CAA would involve disturbance of a smaller development area. This alternative would generate a smaller population and would thereby expose fewer residents to potential wildfire hazards in comparison to the previously approved Project. Regarding Project Site-specific wildfire risk, the Wildfire Report concludes all ten fire scenarios that have been modeled have at least one evacuation point that is viable for four hours or more except one, the Freeway Spots scenario, same as the previously approved Project. For the previously approved Project and the CAA, the two southernmost evacuation points remain the same. The third, northern, evacuation point would be different for the CAA. In the Freeway Spots scenario, all three evacuation points for the CAA would be viable for an estimated 30 minutes, same as the previously approved Project. However, unlike the Project, one of the evacuation points would reopen sooner (estimated 60 minutes) and one evacuation point would remain closed. All fire scenarios were run under extreme conditions that have been recorded in previous fires or which are likely to occur in the future and are therefore considered worst-case scenarios (Firesafe 2024). The Wildfire Evacuation Memo determined it would generally require less time to evacuate the priority area and Project Site than the previously approved Project, as expected due to a smaller on-site population, except for the Freeway Spots scenario. This scenario would require more time to evacuate the priority area, but less time to

evacuate the Project Site– 3.25 hours for the priority area and 4.5 hours to evacuate the Project Site compared to 2.5 hours and 5 hours, respectively, compared to the previously approved Project (Stantec 2024a).

In addition, although the CAA would introduce additional wildfire risk factors as compared to existing conditions due to reasons such as increased human habitation in a wildlife-urban interface increases the fire risk from arson, children playing with fire, and debris-burning; that increased vehicular traffic increases fire risk from sparks, catalytic converters, and discarding of cigarettes; and that the introduction of residences within the site would create a wildland-urban interface that increases the general potential for human-ignited wildfires, the CAA may also assist in avoiding, preventing, and offsetting human human-ignited wildfire risk for reasons including but not limited to prohibiting smoking in wildland and wildland interface, providing fuel breaks and fire breaks which reduce fire intensity and forward progress in the direction of the community, and preplanned evacuation areas/routes which are known to residents to insure that, if evacuation is needed, it can be completed quickly and in the most efficient and effective manner. Consistent with the previously approved Project, impacts related to human-ignited wildfire would be less than significant.

With application of the Fire Management Program specified in the NLSP, which would require compliance with the County Fire Code and all other regulatory standards, as well as the other regulatory requirements and project design features, impacts related to development within a VHFHSZ were determined to be less than significant for the previously approved Project. This determination is supported by the Wildfire Report prepared by Firesafe (2024) and summarized above. However, as discussed above under “Geology and Soils”, implementation of the CAA would result in “unacceptable increases in risks” to the three proposed bridges, among other components, due to both existing and proposed geologic and geotechnical conditions. This would result in greater hazards related to emergency access and evacuation in the event of a wildfire, as the bridges would provide the access from the east side to the west side of the canyon. This would represent a new significant and unavoidable impact, which could not be mitigated to a less than significant level because the risks would be a direct result of the CAA’s implementation.

Impact conclusions would be greater than the previously approved Project, including a new significant and unavoidable impact related to geotechnical risks to the proposed bridges and resulting increased emergency response and evacuation risk.

Conclusions

Ability to Avoid or Substantially Lessen the Significant Impacts of the Project

Development of the Project Site with the CAA would decrease development intensity compared to the previously approved Project. Although the degree of impacts for many topics may be similar or less with this alternative, from an engineering geologic, geotechnical, and hydrologic perspective, the alternative is not feasible. Consistent with the previously approved Project, the CAA would result in significant and unavoidable impacts related to air quality (construction NOx, PM10, and PM2.5 and operational VOC and NOx), noise, and traffic. As discussed above, the CAA would result in new significant and unavoidable impacts related to geology and soils, hazards and hazardous materials, hydrology and water quality, traffic (VMT) and wildfire (greater hazards related to emergency access and evacuation due to both existing and proposed geologic and geotechnical conditions).

Attainment of Project Objectives

The CAA would not provide as many housing opportunities (1,815 units versus 3,150 units) and would not contribute as much towards the County's RHNA allocation as the previously approved Project. In particular, the affordable unit count would be reduced from 315 units to 165 units, proportional to the reduction in dwelling units as a whole. As such, the CAA does not meet the following objective to the same degree as the previously approved Project:

- Specific Plan III, Housing, Goal i: To develop housing that satisfies the needs of the present and future residents of the NorthLake community.

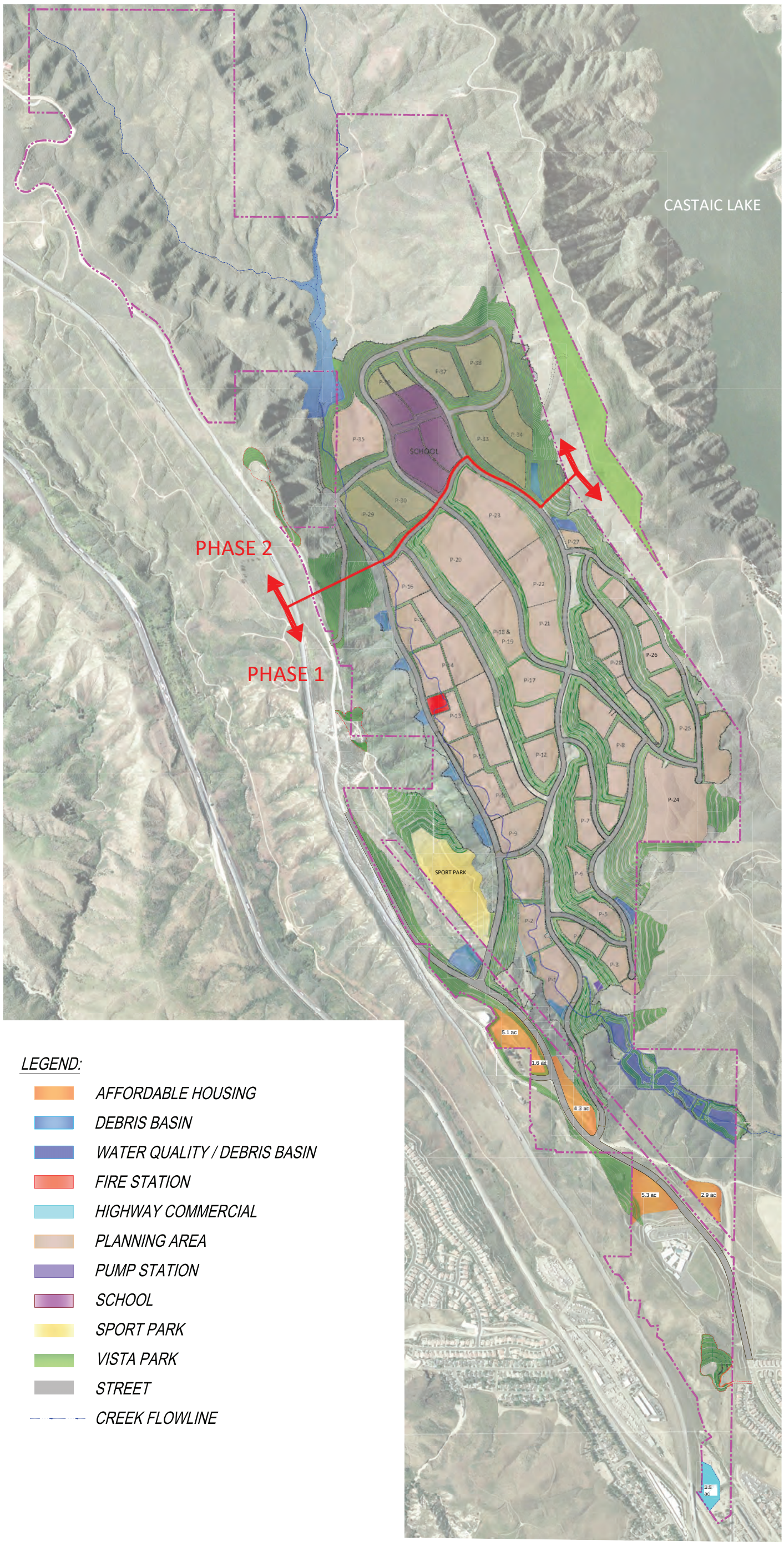
The CAA would not meet the following objectives due to the adverse indirect impacts to Grasshopper Creek and resulting geotechnical and hydrogeological risks to the development compared to the previously approved Project:

- Specific Plan I, Land Use, Goal i: To encourage high quality design in all development projects compatible with and sensitive to the natural and man-made environment.
- Specific Plan IV, Open Space/Recreation, Goal ii: To preserve and protect sites with scenic and/or recreational value.
- Specific Plan IV, Open Space/Recreation, Goal iii: To reduce the risk to life and property from seismic occurrences, flooding, erosion, wildland fires and landslides.
- Specific Plan VII, Safety, Goal i: Protection of life and property.
- Specific Plan VII, Safety, Goal ii: Reduction of adverse economic, environmental and social conditions resulting from fires and geologic hazards.

2.4.3 PARTIAL CREEK AVOIDANCE ALTERNATIVE

Description of the Alternative

The Partial Creek Avoidance Alternative (PCAA) would leave Phase 1 as designed in the previously approved Project but reduces the scope of Phase 2 development. The reduced Phase 2 design avoids a cluster of smaller and larger landslides in the northern portion of Project Site, which result in adverse geotechnical, hydrological, and biological affects as discussed above in Section 2.2.2, Creek Avoidance Alternative. This alternative is therefore proposed to avoid disturbing the landslides and the associated risk of additional loss of creek area. This alternative design would reduce the total disturbance area in Phase 2 by 61 percent, which would preserve a portion of Grasshopper Creek and the associated sensitive habitat within this area of the Project Site. Specifically, disturbance to the northern portion of Grasshopper Creek on the Project Site would be reduced by approximately 20 percent. This alternative provides a balanced site within the proposed Phase 2 grading footprint and does not require any additional import or export of soil, same as the previously approved Project. Furthermore, this alternative greatly reduces the raw earthwork of Phase 2 by approximately 10 mcy. This alternative would maintain the same amount of housing provided on the Project Site as the previously approved Project. The PCAA would include the agreed upon affordable mixed-use housing (315 units), and 6 market-rate live-work units; and preserves the school and fire station sites, commercial sites, and sports park proposed in the previously approved Project. The PCAA is shown on Figure 3, NorthLake Partial Creek Avoidance Alternative, and summarized in Table 2-11, Land Use Statistical Summary Table for the Partial Creek Avoidance Alternative, in the following page.



LEGEND:

- *AFFORDABLE HOUSING*
- *DEBRIS BASIN*
- *WATER QUALITY / DEBRIS BASIN*
- *FIRE STATION*
- *HIGHWAY COMMERCIAL*
- *PLANNING AREA*
- *PUMP STATION*
- *SCHOOL*
- *SPORT PARK*
- *VISTA PARK*
- *STREET*
- *CREEK FLOWLINE*

Source: SIKAND 2024

NorthLake Partial Creek Avoidance Alternative

Exhibit 3

NorthLake Specific Plan, Recirculated Portions of the Supplemental Draft EIR

N W E S

Map not to scale

PSOMAS

(12/11/2024 PLO) R:\Projects\WCP\3WCP000200\Graphics\ex_Partial_Creek_Avoidance.pdf

D:\Projects\3WCP\Northlake\Graphics\SEIR\Graphics\ex_Partial_Creek_Avoidance.ai

TABLE 2-11
LAND USE STATISTICAL SUMMARY TABLE
FOR PARTIAL CREEK AVOIDANCE ALTERNATIVE

Use	Phase 1		Phase 2	
	Number of Units	Area (Acres)	Number of Units	Area (Acres)
Residential: Single-Family	288	41	855	53
Residential: Multi-Family	1,341	107	–	–
Residential: Affordable Senior[a]	345	49	–	–
Mixed Use Residential/Commercial[b]	321	20	–	–
Highway Commercial	–	2	–	–
Park(s)				
• Trails	–	7.8	–	–
• Grasshopper Creek Park	–	11	–	–
• Enhanced Parkway	–	38	–	–
• Castaic Lagoon Park	–	17	–	–
• Ridge Route Park	–	–	–	–
• Lower Ridge Route BT		2.2		
• North Valley Paseo Park	–	–	–	–
• North Valley Park	–	–	–	–
• Sports Park	–	26	–	–
• Cody Dog Park	–	1	–	–
• Vista Park	–	--	–	27
Open Space- Manufactured Slope	–	151	–	67
Open Space- Undisturbed	–	158	–	407
Roadways	–	86	–	14
Fire Station Pad	–	1	–	–
School Pad	–	21	–	22
Totals	***2,295***	***739***	***855***	***590***

[a] This overlay provides for a development option of attached single-family residences and age-restricted areas designated for homeowners that are 55 years of age and older. Lot sizes and configurations will be similar to those in the Single-Family area with the addition of the Attached Single-Family designation as an option. It should be noted that development within these areas may or may not be age-restricted.

[b] The Project would designate 315 mixed-use units as affordable units and 6 residential units as market-rate live-work units, which would combine residential living space with commercial space.

Source: Sikand Engineering 2022.

Comparative Analysis of Environmental Impacts

Aesthetics

Similar to the previously approved Project, the PCAA would alter the existing visual condition of the Project Site through introduction of development on a previously disturbed, undeveloped site. The PCAA would comply with the design guidelines set forth in the NLSP and as described in Section 4.0, Project Description, of the DSEIR, including requirements for grading, circulation, landscape, architecture, and signage. The PCAA would limit the graded area to a 739-acre portion of the NLSP. It is expected that the overall visual appearance under this alternative would be similar to the previously approved Project and would not represent a significant change or a significant impact; however, the area defined for development (i.e., grading footprint) would be 25 percent smaller than the previously approved Project. Therefore, the visual impacts would be

reduced when compared to the previously approved Project due to the smaller development area. As with the previously approved Project, implementation of the PCAA would not affect scenic resources along a State scenic highway. Similar to the previously approved Project, development under the PCAA would conform to the lighting design guidelines set forth in the NLSP; therefore, potential impacts would be less than significant. However, the impacts of lighting would be reduced when compared to the previously approved Project due to the smaller development area. No significant impacts would occur with either the previously approved Project or the PCAA.

Impact conclusions would be consistent with the previously approved Project.

Air Quality

The PCAA would result in decreased criteria pollutant emissions during construction due to the 25 percent reduction in grading footprint (from 979 acres to 739 acres) and reduction in earthmoving by 10 mcy with no soil export (the site would be balances [i.e. cut and fill would be the same] like the previously Approved Project). Construction of the previously approved Project was estimated to exceed the SCAQMD threshold for NOx by almost six times prior to mitigation and be significant and unavoidable with implementation of mitigation. As with the previously approved Project, it is anticipated the impact would remain significant and unavoidable as it cannot be assured the amount of Tier 4 Final engines needed to reduce the impact to a less than significant level would be available. The long-term operational air quality emissions would be the same as the previously approved Project since the total amount of proposed residential land uses remains the same. Operation of the previously approved Project was estimated to exceed the SCAQMD thresholds for VOC, NOx, CO, PM10, and PM2.5 by between approximately 1.75 and 5.5 times, depending on the pollutant. Long-term direct and cumulative regional emissions would remain significant and unavoidable.

Impact conclusions would be consistent with the previously approved Project.

Biological Resources

The PCAA would involve disturbance of on- and off-site areas; however, the development footprint would be reduced by approximately 25 percent when compared to the previously approved Project. The area that would not be developed contains some significant biological resources, therefore, development under this alternative would preserve a portion of the biological resources. However, as with the previously approved Project, the PCAA would continue to have the potential to significantly impact biological resources but due to the reduced development footprint, impacts to Foothill needlegrass, black sage scrub, California annual grassland/Wildflower fields, California sagebrush–California buckwheat scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, slender/club-haired mariposa lily, and southern California walnut as well as impacts to California gnatcatcher and an open water area would be reduced under this alternative. Impacts to the paniculate tarplant would be similar to the previously approved Project. Impacts to CBB would be reduced as impacts to suitable habitat would be less than the previously approved Project. Impacts to WST would be similar to the previously approved Project, based on the locations of the three pond locations that have been established to support WST, as discussed above in Section 2.1 of the RPDSEIR. Notably, the PCAA would reduce impacts to Grasshopper Creek, and associated phreatophytic vegetation including southwestern spiny rush (a special status species), by 20 percent compared to the previously approved Project. Consistent with the previously approved Project, these impacts would be reduced to less than significant levels with implementation of mitigation measures identified (and revised) above and in Draft SEIR Section 5.2, as applicable.

The *NorthLake Partial Creek Avoidance Alternative and Associated Wildlife Movement Enhancements Memo* was prepared by Glenn Lukos Associates (GLA 2023a; Appendix G to this RPDSEIR) to determine the effects of the PCAA on wildlife movement compared with the previously approved Project. It was determined and upheld by the Superior Court that the previously approved Project would not have impacts to wildlife movement under CEQA, including as to Mountain Lions. Despite this finding, the Project Applicant voluntarily accepted a condition of approval (Condition of Approval No. 51) to provide for wildlife movement post project development. Exhibit 1 of the *NorthLake Partial Creek Avoidance Alternative and Associated Wildlife Movement Enhancements Memo* depicts the preliminary Wildlife Connectivity Plan adopted as a condition of approval for the Project. It is anticipated that if the previously approved Project is approved, the same or a functionally equivalent Wildlife Connectivity Plan would be adopted as depicted on Exhibit 1 of the *NorthLake Partial Creek Avoidance Alternative and Associated Wildlife Movement Enhancements Memo*. In addition, it is anticipated that the Wildlife Connectivity Plan would also apply to the PCAA alternative. The PCAA's reduced northerly footprint would result in implications regarding the Wildlife Connectivity Plan. Under the previously approved Project, wildlife would have an unobstructed path from the nearby culvert under I-5 to the Castaic Lake environs. However, the PCAA would eliminate the northernmost approximately 2,200 feet of development assumed for the previously approved Project, leaving a broad corridor across the northern end of the Project Site, including a variety of pathways along drainages and other suitable topographic features. See Exhibit 2 of the *NorthLake Partial Creek Avoidance Alternative and Associated Wildlife Movement Enhancements Memo* (Appendix G to this RPDSEIR).

Exhibit 3 of the *NorthLake Partial Creek Avoidance Alternative and Associated Wildlife Movement Enhancements Memo* depicts the Project Site in the context of the *South Coast Missing Linkages Project: A Linkage Design for the Sierra Madre-Castaic Connection* (Penrod 2005) that discusses "permeability" for a suite of wildlife species. The previously approved Project would fully avoid areas of permeability for the Mountain Lion; however, the previously approved Project would encroach into the Least Cost Corridor areas of mule deer permeability. When areas of highest permeability (i.e., most ideal for animal passage) are considered, those areas are north of the Project Site, and thus would not be impacted by the Project. As such, the previously approved Project would have a less than significant impact on mule deer movement. The PCAA, because it eliminates development at the northern end of the Project Site, also fully avoids areas of permeability for the Mountain Lion, to an even greater extent. Exhibit 4 of the *NorthLake Partial Creek Avoidance Alternative and Associated Wildlife Movement Enhancements Memo* shows that with the PCAA, encroachment into the area of Least Cost Corridor areas for mule deer permeability would be reduced substantially and encroachment would be entirely outside the areas of highest permeability. Similar to the previously approved Project, the PCAA would result in less than significant impacts on mule deer movement in the identified wildlife corridor.

As discussed above, the PCAA would eliminate approximately 2,200 feet of development in the northern portion of the site when compared to the previously approved Project, which would enable wildlife movement along multiple paths between the northern I-5 under-crossing and Castaic Lake. Additionally, the PCAA would also enable wildlife movement along the more southerly of the two I-5 undercrossings, connecting wildlife movement to Castaic Lake. The PCAA would also enable wildlife movement along pathways through the southerly part of the Project's development area, consistent with the preliminary Wildlife Connectivity Plan adopted as a condition of approval of the Project.

By eliminating development at the northern end of the Project Site, the PCAA would enable enhanced wildlife movement when compared with the previously approved Project, resulting in a less than significant impact related to wildlife movement.

Impact conclusions would be consistent with the previously approved Project.

Cultural Resources

The PCAA would involve disturbance of on- and off-site areas that would occur with implementation of the NLSP; however, this alternative would result in a reduced development footprint. However, because potential impacts would involve archaeological and paleontological resources that have not yet been discovered, there is no way to tell if the reduction in development area would reduce actual impacts. Therefore, as with the previously approved Project, development of the PCAA would have the potential to impact unknown archaeological and paleontological resources during ground disturbing activities. Consistent with the previously approved Project, these impacts would be reduced to less than significant levels with implementation of identified mitigation measures.

Impact conclusions would be consistent with the previously approved Project.

Energy

The PCAA would result in a reduced construction demand due to the smaller development footprint in Phase 2 but similar operational demand for energy compared with the previously approved Project commensurate with the reduction in the development footprint. Consistent with the previously approved Project, impacts related to energy would be less than significant.

Impact conclusions would be consistent with the previously approved Project.

Geology and Soils

The PCAA would involve development of the Project Site including off-site areas that would occur with implementation of the previously approved Project; however, this alternative would result in a smaller development footprint. As with the previously approved Project, development of the PCAA would expose people and structures to seismic ground shaking and the Project Site would be subject to soil erosion and loss of topsoil. Further, the presence of unsuitable soils and potentially expansive soils within the area identified for development under this alternative would result in a potentially significant impact that could be mitigated to a less than significant level, same as the previously approved Project. Because the PCAA avoids a cluster of landslides in the northern portion of the Project Site, this alternative would not result in the safety issues and new geotechnical impact associated with the CAA. Like the previously approved Project, grading for the PCAA would be balanced on-site with no import or export of soil necessary.

Impact conclusions would be consistent with the previously approved Project.

Greenhouse Gas Emissions

The PCAA would result in decreased GHG emissions during construction due to the 25 percent reduction in grading footprint (from 979 acres to 739 acres) and reduction in earthmoving by 10 mcy with no soil export. The long-term operational GHG emissions would also be reduced compared with the previously approved Project commensurate with the reduction in the development footprint. As with the proposed Project, impacts would be less than significant with incorporation of the identified mitigation measures.

Impact conclusions would be consistent with the previously approved Project.

Hazards, Emergency Response, and Environmental Safety

The PCAA would involve disturbance of a smaller development area, but have the same size residential population as the previously approved Project. The proposed reduction in the scale of Phase 2 in the PCAA would provide an improved firebreak between the developed portion of the Project Site and wildland areas. Because the PCAA avoids a cluster of landslides in the northern portion of the Project Site, this alternative would not result in emergency response and evacuation issues, and new hazards, associated with the CAA. Consistent with the previously approved Project, these impacts would less than significant. Comparative wildfire hazards are discussed further under "Wildfire" heading below.

Impact conclusions would be consistent with the previously approved Project.

Hydrology and Water Quality

As with the previously approved Project, there is a potential for construction-related surface erosion with the PCAA. Potential impacts from this alternative would be less than the previously approved Project because of a reduced development footprint. Surface runoff from a developed condition (with either this alternative or the previously approved Project) would have a different composition in comparison to the existing condition, which is undeveloped. This runoff is likely to include a similar type of pollutants commonly found in urban runoff. The previously approved Project and this alternative would be required to comply with applicable regulations related to water quality that would minimize potential short-term, construction-related and long-term, operational water quality impacts.

The PCAA would involve development of on-site and off-site areas same as the previously approved Project; however, this alternative would result in reduced impacts related to hydrology and water quality due to a reduced development footprint. Similar to the previously approved Project, development under this alternative would increase the amount of storm water runoff and alter existing drainage patterns due to the increase in the amount of impervious surfaces. The previously approved Project was designed assuming existing Grasshopper Creek would be graded and filled with the tributary drainage areas being captured and routed through the Project Site in a covered storm drain system. At the downstream end of the Project Site was a series of regional basins (retention and detention) that were designed to mitigate increases to storm drain runoff volume due to site development and to satisfy hydromodification requirements. This alternative would include application of similar BMPs would ensure that impacts to storm drain infrastructure and off-site, downstream hydrology are less than significant. Specifically, an on-site storm drain system would be constructed to detain flows such that they are released from the site at pre-development levels. Additionally, this alternative preserves the portion of Grasshopper Creek in the northern portion of the Project Site. As with the previously approved Project, hydrology and water quality impacts resulting from this alternative would be less than significant.

Impact conclusions would be consistent with the previously approved Project.

Land Use and Planning

The PCAA would result in the development of a primarily residential project, similar to the previously approved Project; however, the PCAA would include development of a reduced area with the same amount of residential uses. The amount of park and recreation acreage associated with the PCAA would be less (130 acres versus 167 acres) than with the previously approved Project. However, undisturbed open space acreage would be increased (572 acres versus 328 acres) due to the reduction in Phase 2 development area. Other land uses, including commercial, would be consistent with the previously approved Project. The PCAA would also comply with

design guidelines outlined in the NLSP to ensure compatibility with the existing character of the area. Because the types of land uses under this alternative would be the same as that allowed with the previously approved Project, this alternative would be consistent with relevant goals and policies of applicable local and regional planning programs. As the PCAA would maintain the same amount of residential uses, the PCAA contributes the same towards the County's RHNA allocation as the previously approved Project. The 2016 PNA estimated that Los Angeles County had a median of 3.3 acres of park space per 1,000 people (LA County 2016). In the 2022 PNA+, it was estimated that there are 99 acres of regional recreation and conservation areas in Los Angeles County per 1,000 residents (LA County 2022). Because the amount of park acreage under this alternative would not directly correlate to the number of units constructed, the PCAA would have a higher on-site ratio of parklands to residents than the previously approved Project. As with the previously approved Project, the PCAA supports the County General Plan (Guiding Principle 3, Policy LU 5.10) and the 2012 SCVAP (Policy ED 2.5, LU-5.2.3, CO-8.2.13). Therefore, the PCAA would be consistent with goals and policies of relevant local and regional planning programs and would meet the goals and policies of the NLSP.

Impact conclusions would be consistent with the previously approved Project.

Noise

Development of the PCAA would involve similar construction activities and generate peak daily on-site noise levels similar to the previously approved Project. However, the total duration of construction noise would be reduced due to the reduction of the development footprint (with balanced grading). As with the previously approved Project, short-term construction noise and vibration levels would be less than significant with mitigation except for blasting activity, which would be significant and unavoidable.

Long-term, operational noise levels related to traffic would be similar to the previously approved Project, including those that would impact off-site residential uses due to Project-generated traffic on Ridge Route Road north of Castaic Lake Road and Ridge Route Road north of Lake Hughes Road. As with the previously approved Project, long-term operational noise and vibration impacts would be significant and unavoidable.

Impact conclusions would be reduced compared to the previously approved Project.

Public Services and Utilities

The PCAA would create new demand for public services including fire protection services and police services similar to the previously approved Project. Generation of school-age children would also be similar to the previously approved Project. It is noted the PCAA would maintain the school and fire station sites provided under the previously approved Project. Overall, impacts to public services would be less than significant with this alternative and the previously approved Project.

The PCAA would also increase demand on local utility providers (i.e., water, sewer, solid waste, electricity, natural gas, and telephone) similar to the level of demand of the previously approved Project. Consistent with the previously approved Project, the PCAA would continue to require the installation of on-site and off-site utilities to serve proposed uses and the impacts associated with installation of this infrastructure would be similar to the proposed Project. Consistent with the previously approved Project, potential impacts resulting from the PCAA would be less than significant.

Impact conclusions would be consistent with the previously approved Project.

Traffic, Access and Circulation

Construction-related traffic for the PCAA would be reduced compared to the previously approved Project as total duration of construction would be reduced due to the reduction of the development footprint. As discussed above, to minimize traffic impacts during construction, MM 5.11-3 requires that a Construction Traffic Control Plan be prepared and submitted to the County of Los Angeles.

Operation of the PCAA would result in similar ADT from residential land uses. Non-residential development for the PCAA would be reduced by 64 acres and would therefore also have reduced ADT and VMT (Stantec 2025 [Appendix F-5 to this RPDSEIR]). As with the previously approved Project, the PCAA would not conflict with the Los Angeles County Congestion Management Program, would provide or accommodate non-vehicular transportation facilities, and would not conflict with adopted policies supporting alternative transportation. The PCAA would have the same residential VMT as the previously Approved Project, and since that VMT is less than the NLSP VMT, PCAA VMT impacts would be less than significant.

Impact conclusions would be consistent compared to the previously approved Project.

Wildfire

As with the previously approved Project, the Project Site is within a designated VHFHSZ and would be essentially surrounded by undeveloped lands in the VHFHSZ category. A portion of the Project Site would be graded and developed with structures, roadways, and manufactured slopes. This development would eliminate the natural vegetation and wildfire “fuel” sources and some of the manufactured slopes within the footprint of the Project Site would be landscaped and regularly irrigated. Therefore, the outer fringes of the Project Site would be the main interface of exposure to potential wildfire risks. Fire hazards on private property are increased when adjacent to non-irrigated natural vegetation that has not been modified to minimize potential fuel sources because the suburban development is a potential source of wildfire ignition. The proposed reduction in the development area of Phase 2 in the PCAA would provide an improved firebreak between the developed portion of the site and wildland areas. The PCAA would involve disturbance of a smaller development area. This alternative would generate the same sized residential population as the previously approved Project.

In addition, although the PCAA would introduce additional wildfire risk factors as compared to existing conditions due to reasons such as increased human habitation in a wildlife-urban interface increases the fire risk from arson, children playing with fire, and debris-burning; that increased vehicular traffic increases fire risk from sparks, catalytic converters, and discarding of cigarettes; and that the introduction of residences within the site would create a wildland-urban interface that increases the general potential for human-ignited wildfires, the PCAA may also assist in avoiding, preventing, and offsetting human human-ignited wildfire risk for reasons including but not limited to prohibiting smoking in wildland and wildland interface, providing fuel breaks and fire breaks which reduce fire intensity and forward progress in the direction of the community, and preplanned evacuation areas/routes which are known to residents to insure that, if evacuation is needed, it can be completed quickly and in the most efficient and effective manner. Consistent with the previously approved Project, impacts related to human-ignited wildfire would be less than significant.

Regarding Project Site-specific wildfire risk, the Wildfire Report concludes all ten fire scenarios that have been modeled have at least one evacuation point that is viable for four hours or more except one, the Freeway Spots scenario, same as the previously approved Project. For the previously approved Project and the PCAA, all three evacuation points remain the same. In the Freeway Spots scenario, all three evacuation points for the PCAA would be viable for an

estimated 30 minutes and would reopen in an estimated 90 minutes (at 120 minutes from the start of the fire), same as the previously approved Project. All of the fire scenarios were run under extreme conditions that have been recorded in previous fires or which are likely to occur in the future and are therefore considered worst-case scenarios (Firesafe 2024). The Wildfire Evacuation Memo determined it would generally require the same or less time to evacuate the priority area and the Project Site than the previously approved Project, except for five scenarios (the SSWat40Line scenario, Freeway Spots scenario, LakeSpotat40 Scenario, NNEat70Line scenario and Templin Trigger). For the SSWat40Line scenario, this scenario would require .25 hours more to evacuate the priority area and the same time to evacuate the entire Project Site – 2.25 hours for the priority area and 4.25 hours for the Project Site compared to 2 hours for the priority area and 4.25 hours for the Project site, respectively, compared to the previously approved Project (Stantec 2024a). For the Freeway Spots Scenario, this scenario would require .25 hours more to evacuate the priority area and the same time evacuate the entire Project Site – 2.75 hours for the priority area and 5 hours for the Project Site compared to 2.5 hours and 5 hours, respectively, compared to the previously approved Project (Stantec 2024a). For the LakeSpotat40 scenario, this scenario would require .25 hours more to evacuate the priority area and the same time to evacuate the entire Project Site – 1.5 hours for the priority area and 3.5 hours for the Project Site compared to 1.25 hours for the priority area and 3.5 hours for the Project site, respectively, compared to the previously approved Project (Stantec 2024a). For the NNEat70Line scenario, this scenario would require .25 hours more to evacuate the priority area and less time to evacuate the entire Project Site – 1.75 hours for the priority area and 4.5 hours for the Project Site compared to 1.5 hours for the priority area and 4.75 hours for the Project site, respectively, compared to the previously approved Project (Stantec 2024a). For the Templin Trigger scenario, this scenario would require more time to evacuate the entire Project Site (there is no priority area – 5.5 hours compared to 3.75 hours for the previously approved Project (Stantec 2024a).

With application of the Fire Management Program specified in the NLSP, which would require compliance with the County Fire Code and all other regulatory standards, impacts related to development within a VHFHSZ were determined to be less than significant for the previously approved Project. This determination is supported by the Wildfire Report prepared by Firesafe (2024a) and Wildfire Evacuation Memo prepared by Stantec (2024a), summarized above.

Impact conclusions would be consistent with the previously approved Project.

Conclusions

Ability to Avoid or Substantially Lessen the Significant Impacts of the Project

Development of the Project Site with the PCAA would decrease the development disturbance area compared to the previously approved Project, although the uses remain the same. Although the degree of impacts for some topics may be less with this alternative, the overall impact conclusions would be consistent with the previously approved Project. Consistent with the previously approved Project, the PCAA would result in significant and unavoidable impacts related to air quality, noise, and traffic (VMT). No additional significant or more significant impacts would occur with this alternative.

Attainment of Project Objectives

The PCAA provides the same number of residential units as the previously approved Project, but on a smaller Phase 2 development area. As such, the PCAA contributes the same as the previously approved Project regarding the County's RHNA allocation as the previously approved Project. As with the previously approved Project, the affordable unit count would be maintained

at 315 units. However, the PCAA provides significantly less active recreational and open space area (37 fewer acres). Accordingly, the PCAA does not meet the following objective to the same degree as the previously approved Project:

Specific Plan 4, Open Space/Recreational Area, Goal i: To improve opportunities for a variety of outdoor recreational experiences

2.4.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of an environmentally superior alternative. Section 15126.6(e)(2) of the CEQA Guidelines states that if the No Project Alternative is the environmentally superior alternative, then the EIR shall also identify an environmentally superior alternative among the other alternatives.

Table 2-12, Alternatives Impact Comparison, on the following page shows a comparison of impacts for each impact area for all alternatives (including the CAA and PCAA) to the previously approved Project.

TABLE 2-12
ALTERNATIVES IMPACT COMPARISON

Environmental Topic	Proposed Project[a]	Alternative 1: No Project/No Development	Alternative 2: No Project /Development Pursuant to the NLSP	Alternative 3: No Industrial	Alternative 4: Phase 1 Development	Recirculated Alternative 1: Creek Avoidance Alternative	Recirculated Alternative 2: Partial Creek Avoidance Alternative
Aesthetics	Less than Significant	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project
Air Quality	Significant and Unavoidable	Less than Proposed Project	More Emissions; Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	More Construction Emissions; Partial Avoidance of Operational Significant and Unavoidable Impact, Consistent with Proposed Project	Consistent with Proposed Project
Biological Resources	Mitigated to Less than Significant	Less than Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Paniculate tarplant Impacts Avoided, Consistent with Proposed Project	Smaller Footprint, Reduced Impacts. Consistent with Proposed Project
Cultural Resources	Mitigated to Less than Significant	Less than Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project
Energy	Less than Significant	Less than Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Reduced Demand, Consistent with Proposed Project	Consistent with Proposed Project
Geology and Soils	Mitigated to Less than Significant	Less than Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	New Significant and Unavoidable Impact	Consistent with Proposed Project
Greenhouse Gas Emissions	Mitigated to Less than Significant	Less than Proposed Project	More Emissions; Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Less Emissions, Consistent with Proposed Project	Less Emissions, Consistent with Proposed Project
Hazards, Emergency Response, and Environmental Safety	Less than Significant	Less than Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	New Significant and Unavoidable Impact	Consistent with Proposed Project
Hydrology and Water Quality	Mitigated to Less than Significant	Less than Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	New Significant and Unavoidable Impact	Consistent with Proposed Project

TABLE 2-12
ALTERNATIVES IMPACT COMPARISON

Environmental Topic	Proposed Project[a]	Alternative 1: No Project/No Development	Alternative 2: No Project /Development Pursuant to the NLSP	Alternative 3: No Industrial	Alternative 4: Phase 1 Development	Recirculated Alternative 1: Creek Avoidance Alternative	Recirculated Alternative 2: Partial Creek Avoidance Alternative
Land Use	Less than Significant	Policies not met to same extent; Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Less than Proposed Project	Consistent with Proposed Project
Noise	Significant and Unavoidable	Less than Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Less than Proposed Project	Consistent with Proposed Project; New Significant and Unavoidable Impact (construction truck traffic)	Less than Proposed Project (construction)
Public Services and Utilities	Mitigated to Less than Significant	Less than Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	New Significant and Unavoidable Impact	Consistent with Proposed Project
Traffic, Access, and Circulation	Less Than Significant[c]	Less than Proposed Project	Greater than Proposed Project	Consistent with Proposed Project	Less than Proposed Project	Less than Proposed Project	Consistent with Proposed Project
Wildfire[b]	Less than Significant	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	New Significant and Unavoidable Impact	Consistent with Proposed Project

[a] For the sake of consistency with the DSEIR, Proposed Project is used to refer to the previously approved Project.
[b] At the time of the DSEIR, there was no separate wildfire impact section in CEQA Guidelines Appendix G; rather wildfire was included under Hazards, Emergency Response, and Environmental Safety. Wildfire impact conclusions for Alternatives 1 through 4 were derived from that analysis. The Proposed Project prior wildfire analysis is superseded by the wildfire analysis contained in this RPDSEIR.
[c] Under the LOS methodology the Proposed Project resulted in a significant and unavoidable impact traffic impact. Under the required VMT methodology, which replaced the LOS methodology, the Proposed Project has a less than significant traffic impact.

The No Project/No Development Alternative has the least impact to the environment because it would not involve any construction activities and would not introduce development of any uses that would generate potential operational impacts. Specifically, there would be no impacts associated with air quality, GHG emissions, noise or traffic, each of which are considered significant and unavoidable impacts for the previously proposed Project. The No Project/No Development Alternative would not require the provision of additional public services and facilities and would not result in an increased demand for utilities or service systems. Additionally, no impacts associated with development would occur, including impacts related to aesthetics, biological resources, cultural resources, geology and soils, and hydrology and water quality. While this alternative would avoid the significant and unavoidable effects of the previously approved Project, the benefits of the previously approved Project associated with providing commercial lands to accommodate the projected labor force and to develop housing that satisfies the needs of the present and future residents of the NorthLake community and the County's RHNA allocation would not occur; none of the Project objectives would be met.

Alternative 4, the Phase 1 Development, was determined to be the environmentally superior alternative in the SEIR. This was due to the reduction in development area footprint as well as the reduction in proposed dwelling units and reduced impacts to Grasshopper Creek. In addition, the impact levels would be less than the previously approved Project for traffic and noise, primarily due to the reduction in dwelling units and the length of construction.

Based on the alternatives analysis in this RPDSEIR, in compliance with Section 15126.6(e)(2) of the State CEQA Guidelines, Recirculated Alternative 2, the Partial Creek Avoidance Alternative, would be the environmentally superior alternative among all six Project alternatives summarized in Table 2-12 above as it reduces the development footprint, thus reducing biology impacts and greenhouse gas emissions and would have less construction noise impacts (though construction noise would still be significant and unavoidable). However, the significant and unavoidable impacts to air quality would not be reduced to below a level of significance. All other impacts would be similar to the previously approved Project. On balance, Recirculated Alternative 2 would result in the greatest reduction in impacts compared to the previously approved Project while maintaining the same amount of housing. For these reasons, Recirculated Alternative 2 is the environmentally superior alternative. As compared to project objectives, the PCAA provides significantly less active recreational and open space area (37 fewer acres). Accordingly, the PCAA does not meet the following objective to the same degree as the previously approved Project:

- Specific Plan 4, Open Space/Recreational Area, Goal i: To improve opportunities for a variety of outdoor recreational experiences.

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APPENDIX A

COURT RULING

FILED
Superior Court of California
County of Los Angeles

JAN 11 2021

Sherri R. Carter, Executive Officer/Clerk
R. Inostroza
BY: R. INOSTROZA, DEPUTY

STATEMENT OF DECISION ON VERIFIED PETITION OF MANDATE AND COMPLAINT FOR INJUNCTIVE RELIEF

WRIT GRANTED

RULINGS ON PETITIONERS' REQUESTS FOR JUDICIAL NOTICE

CENTER FOR BIOLOGICAL DIVERSITY and ENDANGERED HABITATS LEAGUE v. COUNTY OF LOS ANGELES, et al, and Real Parties in Interest, NORTHLAKE ASSOCIATES, et al, Case No. 19STCP01610

INTRODUCTION:

The Project is the Northlake Specific Plan (the "Project"). The applicant is NorthLake Associates, LLP and related entities.

The Project is residential project to be built on 1,330 acres of disturbed but undeveloped land north of Castaic and east of the Interstate 5 Highway (the "I-5"). The site is 3.5 miles on the side that parallels the I-5 and about a half mile wide. The I-5 is a divided highway at this point with the northbound lanes separated from the southbound to create an island of undeveloped land between the two segments. (This isolated middle area becomes important in discussing wildlife connectivity issues.) The Project site's western edges are variable distances from the I-5's southbound lanes ranging between 50 feet and about 500 feet. AR 8474, 8480.The land between the southbound I-5 and the site's western edges is undeveloped.

The County Planning Commission by a divided vote (3-1) approved the Project on April 18, 2018.

The Board of Supervisors by a divided vote (4-1) approved the Project on April 2, 2019.

Petitioners filed a verified Petition for Writ of Mandate on May 1, 2019. The Petition was argued on September 24, 2020, and stood submitted once the Court received the transcript.

Petitioners in their writ of mandate action allege the County's approvals of the Project violated the California Environmental Quality Act ("CEQA"), Public

Resources Code (PRC) 21000 et seq.[1] Petitioners allege four causes of action, but only two were briefed and argued. The causes of action that were argued are the first, that alleges various findings made in the supplemental environmental impact report (SEIR) and the approvals based thereon are not supported by substantial evidence; and the third, that alleges the County failed to recirculate the SEIR when the applicant made changes in the Project after the public comment period was closed. The causes of action that have been abandoned are: the second, alleging that a statement of overriding considerations for the Project is not supported by substantial evidence (the briefs fail even to cite the applicable Guidelines section 15093 for SOCs); and the fourth, alleging violation of California's Planning and Zoning Laws (Gov. Code section 65300 et seq.).

The Court grants relief on the first cause of action, finding the SEIR is deficient in its alternates analysis and in failing to define adequate mitigation measures for the relocation of an amphibian and plants of special concern due to the loss of their habitat. The Court does not find that the SEIR required re-circulation, and, therefore, denies relief on the second cause of action.

GENERAL DESCRIPTION OF THE PROJECT AND PROJECT SITE:

The Project site is 3.5 miles long but tapering at each end with maximum width of half a mile. The site drops 1,200 feet north to south. The site on its west side overlooks the I-5 and on its east side rises to a ridge that overlooks the Castaic Lake Reservoir state recreation area. Hills having steep slopes stud the site's western boundary. For aerial photos and diagrams, see AR 3618-3620, 4114-4118, 8256 et al.

National forests surround the area. The Los Padres National Forest is located to the north and west, and the Angeles National Forest is located to the east and southeast. AR 3826 (map). The Project site lies within the Sierra Madre-Castaic Connection which links the wildlife protected areas of Los Padres and Angeles National Forests. AR 3612-21, 31172-34, 30100-10, 30132.

Grasshopper Canyon bisects the site along the north-south axis. AR 3903 and 7760. Grasshopper Creek lies at the bottom of Grasshopper Creek. The development plan will fill-in Grasshopper Canyon with dirt excavated elsewhere on the site to create level building areas. Thirty-three million cubic yards of earth will be excavated and moved within the site to accommodate the planned construction. The fill-in will eliminate the blue-stream Grasshopper Creek at the bottom of the Canyon. The Creek's water shed creates a biological habitat for plants and animal species. The destruction of Grasshopper Canyon will have a significant impact on biological resources. The SEIR Biological Resources Assessment provides:

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[1] CEQA Guidelines (authorized in PRC 21083) are codified in title 14, section 15000 et seq. of the California Code of Regulations.

> Grasshopper Canyon and Grasshopper Creek comprise the dominant topographic features of the Project site and therefore contain biological resources unique to these areas. While the majority of the Project site consists of scrub and grassland habitats, Grasshopper Canyon contains various riparian vegetation types.... AR 7758.

The Project requires the relocation of five species of rare plants and the western spadefoot toad, a species of special concern, now living in the habitat created by Grasshopper Canyon.

The Project, in two phases, will build out with 2,295 dwelling units, with additional units allowed up to a unit cap of 3,150 dwelling units allowed. AR 455. (A build-out of 3,150 dwelling units would house a population of about 9,734 residents.) The dwelling units will be mix of condominiums, apartments, live/work space and detached dwelling units. AR 499. From the photographs, the completed Project will have the appearance of two- and three-story apartment blocks. AR 10457-58. The Regional Planning Commission required that some 315 units be deed restricted as affordable housing, 95 of which are to be senior-living affordable units. AR 10163. The Project will include a 23-acre school site in phase 2 and a 1.4 acre pad for a future fire station. AR 7391. Project-related improvements that would extend outside the site include a 4.64 acre connection with a park on the state recreational land, 2.39 acres in trail connections, and a 5 acre pad for a water tank.

SUMMARY OF ADMINISTRATIVE PROCEEDINGS AND ACTION ON PETITION:

The Northlake Specific Plan was considered two times, 25 years apart by the County—in 1987-1992 and in 2015-2019. The 1992 proposal would preserve Grasshopper Canyon and its Creek, but the 2018/2019 proposal would fill-in the Canyon to make building sites.

The Northlake Specific Plan in 1992.

The County voted approval of the Northlake Specific Plan in 1992. AR 450, 1818. The DEIR for the current Project states for the 1992 project:

> The NorthLake Specific Plan included a statistical summary of uses allocated within very general land use areas.... At the time of the 1992 approvals, it had been anticipated that a focused Site Plan review and follow-up CEQA review would be conducted, as more project-specific level details were developed to implement phases of the NorthLake Specific Plan. AR 1818.

The 1992 Northlake Specific Plan included residential, commercial (13.2 acres), industrial (50.1 acres) and recreational uses (including a "championship golf course") on the same 1,330 acre site, but it would protect Grasshopper Canyon as a "landform feature and natural resource" of the site. AR 2682, 2688. The DEIR advises: "Subsequent to the 1992 approval of the Northlake Specific

Plan, market conditions and changes in property ownership placed development ... on hold." AR 1818. The development approvals expired in April 2013. AR 1818, 1826.[2] The current applicant, by letter dated April 3, 2018, abandoned the development agreement the County had approved in 1992. AR 10168.

The Northlake Specific Plan in 2017-2019

The steps taken by the County are presented in chronological order in the Findings made by the Board of Supervisors (AR 449-468) and are not repeated here. The Court does note that the applicant changed its Project by eliminating industrial uses and reducing commercial uses after the public comment period had ended. Based on this, petitioners argue that a recirculation of the SEIR is required.

The Planning Commission after an Initial Study released its supplemental environmental impact report (SEIR) on May 2, 2017. AR 14020, 1703.Two SEIR errata were subsequently released to address Project changes made during the public review process. Public hearings were held on May 24, 2017 at a Northlake Elementary School in Castiac and on February 21, 2018 before the Planning Commission.

In between, the Planning Commission released the Final SEIR on January 20, 2018. AR 9579-80.

The Commission, at the February 21, 2018 hearing, instructed the applicant to consider adding an affordable housing component and continued the hearing to April 18, 2018. On April 5, 2018, the Planning Commission released a Supplemental Memorandum that included the applicant's response to the Commission's comments at the February 21 hearing. AR 10163-66. The applicant agreed to these changes in the SEIR development plan: the elimination of industrial uses and a reduction in commercial uses; an increase in dwelling units from 1,974 to 2,295 units (AR 455); the relocation of 323 dwelling units from a phase 2 site to space vacated by industrial uses, with the build-out of those units to occur in phase 1 and in a location closer to the southbound I-5; the placing of affordable housing deed-restrictions on 315 units. AR 10174. The April 5, 2018 Supplemental Memo included another Errata to the SEIR. The new Errata announced that recirculation of the SEIR was not required, saying: "The Revised Project would not create a new significant impact or substantial increase in the severity of previously identified effects." AR 10185.

After a further hearing on April 18, 2018, the Planning Commission adopted entitlements and CEQA findings, certified the SEIR, and approved the Northlake Specific Plan. AR 552. The vote was 3 to 1. AR 453. The Center for Biological Diversity, Santa Monica Mountains Conservancy, and Golden State

[2] The County in its June 15, 2017 response to the CDFW letter asserts: "It should be noted that the 1992 Specific Plan is still a valid approval.... The Proposed Project can be viewed as a less dense alternative to the previously approved 1992 Northlake Specific Plan Project."

Environmental Justice Alliance filed appeals from the Commission's approvals to the Board of Supervisors.

On August 28, 2018, the County released an Errata to the Northlake Specific Plan including as Attachment E a Health Risk Assessment. AR 8345-8738.

In mid-September 2018, the County circulated a 47-page letter from Glenn Lukos Associates Regulatory Services dated September 13, 2018 (the Tony Bomkamp letter). The SEIR that the Planning Commission approved had been prepared by BonTerra Psomas, the applicant's consultant. The Lukos Associates' letter, which biologist Tony Bomkamp prepared and signed, described the letter as an "Independent Review of Biological Resources Assessment by BonTerra Psomas for the Northlake Final Supplemental EIR." The Bomkamp letter addresses the objections to the Project raised by the three appellants. AR 15999-16043 (not all pages included). County and Real Parties in their Joint Opposition Brief refer to the Bomkamp letter as containing the opinions of "the Peer Review Expert Biologist."

The Board of Supervisors conducted a public hearing on the Northlake Specific Plan and the appeals on September 25, 2019. The Board Chair allowed the three appellants a total of four minutes to present their objections. The Board voted (four ayes, with Supervisor Kuehl abstaining) to reject the appeals, and to uphold the Planning Commission approvals and to make findings to certify the SEIR. AR 454-458, 553, 12475-12477 (hearing record). The Board instructed staff to draft the necessary findings.

On April 2, 2019, the Board held a public hearing and adopted findings and conditions for vesting the tentative tract map, adopted the Final Supplemental Environmental Impact Report (FSEIR); and made finings and statement of overriding considerations. AR 12570; 448-760; 859-956. Four supervisors voted aye; Supervisor Kuehl abstained. A Notice of Determination (NOD) was filed and posted on April 4, 2019. AR 1-5.

On May 1, 2019, petitioners Center for Biological Diversity and Endangered Habitats League commenced this action by filing their verified Petition against the County of Los Angeles, its Board of Supervisors, its Planning Commission and its Department of Regional Planning (collectively "County") and Real Parties-In-Interest.

THE COURT DENIES PETITIONERS' FOUR REQUESTS FOR JUDICIAL NOTICE:

The Court will first address petitioners' requests that the Court take judicial notice of documents in support of petitioners' briefs. Petitioners filed four requests of judicial notice ("RJN"). Petitioners rely upon Evidence Code sections 452(c) and 453.

The administrative record (AR) was certified on February 3, 2020. The certified AR is "the record of proceedings related to the subject matter of the action or proceeding." PRC 21167(a). If a court receives documents offered through an RJN during the briefing, the court is, in effect, an augmenting the AR with the additional documents.

The parties' briefs were filed shortly after the AR was certified: the opening brief on February 7, 2020; the County's and Real Parties' Joint Brief on May 11, 2020; and Petitioners' reply on June 17, 2020.

County and Real Parties filed objections to the RJN because the documents tendered through the RJNs were not included in the administrative record and did not qualify as exceptions to PRC 21167. County and Real Parties argue that under CEQA review is limited to the evidence that was before the agency when it made the decision challenged by the petition, citing Western States Petroleum Association v. Superior Court (1995) 9 Cal.4th 559, 576. Evidence that was not before the agency when the project was approved is "extra-record" evidence and is not admissible, subject to limited exceptions. Id. at 576. This exclusion is to ensure that courts do not "engage in independent fact finding rather than engaging in a review of the agency's discretionary decision." Friends of the Old Trees v. Cal. Dept. of Forestry & Fire Protection (1997) 52 Cal.App.4th 1383, 1391.

The Supreme Court in Western States specified limits for extra record evidence that may be admitted under exceptional circumstances:

> *Extra record evidence is admissible under this exception only in those rare instances in which (1) the evidence in question existed before the agency made its decision, and (2) it was not possible in the exercise of reasonable diligence to present this evidence to the agency before the decision was made so that it could be considered and included in the administrative record.* (Id. at 578; emphasis original.)

With this background, the Court turns to the documents which the petitioners offer into evidence in their RJNs.

Petitioners offered for judicial notice a 53-page memorandum from the director of CDFW (California Department of Fish and Wildlife) to respond to a request that the Southern California/Central Coast Mountain Lion be listed as a threatened species under the California Endangered Species Act (codified as Fish and Game Code 2050 et. seq.). See, RJN filed March 2, 2020. County/Real Parties filed an opposition on May 11, 2020; petitioners filed a Reply on June 17, 2020. Petitioners in their Reply advised that the California Fish and Game Commission had granted "candidate species" status to the Central Coast/South mountain lion population.

Next, on June 17, 2020, petitioners filed a Supplemental Request for Judicial Notice to put into evidence the Los Angeles County After Action Review

of the Woolsey Fire that ignited on November 8, 2018. (The Report is undated but was prepared after the April 2, 2019 date when the County approved the Project.) The Report has 108 pages with a 35-page appendix "History and Context Prior to the Woolsey Fire" with Exhibits A, B and C. The Exhibit A provides a tabulation of wildfires occurring in the Santa Monica Mountains from1897 to present. The County and Real Parties filed their opposition to the Supplemental RJN on June 29, 2020.

The certified AR is "the record of proceedings related to the subject matter of the action or proceeding." PRC 21167(a).

The Court declines to receive the CDFW report re the local mountain lion population and the County's After-Action Report for the Woolsey Fire because the documents were not available before the County approved the Project. Documents that were not considered nor available for consideration at the time action was taken may not be received in a mandamus action reviewing an administrative decision. Western States, supra, at 578.

Petitioners rely on Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora (2007) 155 Cal.App.4th 1214, but that case is not apposite. In Tuolumne County the issue was whether the EIR for a shopping center was deficient because it omitted analysis of street alignments that were imposed as a condition to project approval. The appellate court held that the whole of the project was a legal issue, and, in that case, the issue could be decided by the appellate court because the documents pertinent the street alignment were included in the administrative record. That is not the case here: the reports that petitioners want the Court to judicially notice did not exist as the time the Project approval and are not part of the administrative record.

Petitioners' Second Supplemental RJN filed on September 2, 2020 seeks to introduce three pages from the California Fish and Game Commission's California Policy for Native Plants. The Native Plant Policy was adopted by the Commission on June 11, 2015. Petitioners argue that, since the SEIR concludes that the Project's impacts will be reduced to less than significant levels by transplantation, the CDFW's view about the efficacy of transportation should be considered. AR 7398; Pets.' Br. at 23.

The Native Plant Policy excerpt that Petitioners offer in their Second Supplemental Request did exist before the Board approved the Project. The issue under Western States is whether petitioners could have presented the documents "in the exercise of reasonable diligence...to the agency before the decision was made." Petitioners provide no declaration to show they exercised reasonable diligence but were unable to offer the Native Plant Policy to support their arguments to the Board of supervisors. The Court will not take judicial notice of the Native Plant Policy as petitioners have not shown their failure to provide the document to the County is excused by their failure after exercise of reasonable diligence.

Petitioners' Third Supplemental Request for Judicial Notice was filed on December 17, 2020. (The courtesy copy arrived in the courtroom on January 6, 2021.) The third RJN provides night-time photographs of a mountain lion entering the site area from undercrossing (or tunnel) No. 2 taken by an automated wildlife camera at about 3 a.m. on November 4, 2020. The six photographs are authenticated in the declaration of Chad Christensen, an employee of the Mountains Recreation and Conservation Authority (MRCA), an affiliate of the Santa Monica Mountains Conservancy. (The photos show the mountain lion on MRCA conservation land immediately west of the Project site at the location of tunnel No. 2.) Petitioners argue that the photographs do not contradict evidence in the AR but rather confirm statements in the EIR (AR 7642, 7635) that "mountain lions may occur on the Project site." County and Real Parties filed objections based on the Western States decision.

The Court declines to receive the mountain lion photographs because they were not available when the County approved the Project and therefore were unavailable to provide to the decisionmakers when the Project was approved. Western States, supra, at 578. The Court also overrules the evidentiary objections.

ISSUE ONE: COUNTY'S DECISION TO NOT RECIRCULATE THE SEIR IS SUPPORTED BY SUBSTANTIAL EVIDENCE:

Petitioners argue that recirculation of the SEIR was required under PRC 21092.1 because the new information that the County released on April 5, 2018 is "significant new information." Recirculation is required for "significant new information" under PRC 21092.1. The phrase is interpreted in Guidelines section 15088.5(a), subd. (1) and (2), reading:

> (a) A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification.... "Significant new information" requiring recirculation includes, for example, a disclosure showing that:
> (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
> (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

The parties dispute whether the "Supplemental Memo for Project Update and Response" that the Planning Commission staff released on April 5, 2018 is "significant new information" of the type that requires recirculation.

The Planning Commission decided that issue in the negative. On April 5, 2018, it issued an Errata to conform to Guidelines section 15088.5 that stated: "The Revised Project would not create a new significant impact or substantial

increase in the severity of previously identified effects." AR 10185. And a new Section 11 was added to the FSEIR to state: "The Final SEIR and Errata merely ... makes insignificant modifications to the adequate SEIR." AR 445.

The Court, on this point, agrees with the County. It finds the County's conclusion that the new information added by the Supplemental Memo on April 5, 2018 did not require recirculation is supported by substantial evidence.

Petitioners identify as the "significant new information" the applicant's proposed Project changes "to replace the industrial and commercial uses next to the freeway with residential uses." See, Pets.' Br. at p. 33, citing the staff's notice to Planning Commissioners. AR 10163-166. Petitioners previously raised the issue in their pre-filing letter of April 17, 2018, saying: "[T]he 'Supplemental Memo'... disclosed [] revisions to the Project ... which removed virtually all of the commercial and industrial uses in favor of more dwelling units. Such revisions effect (sic) the traffic analysis, and by extension the air quality analysis and GHG analysis, as well as the studies supporting those analyses." AR 28001.

This "significant new information" that petitioners identify was contained in a packet of documents that were released on April 5, 2018 with a "Supplemental Memo for Project Update and Response." The Supplemental Memo included the applicant's April 3, 2018 letter response to the Commission's comments from the February 21 hearing. AR 10168-10170. The applicant in its letter made these changes to the proposed development: it eliminated industrial uses and confined reduced commercial uses to centrally located mixed use locations (AR 455); it increased the dwelling units from 1,974 to 2,295 units (AR 455); it relocated 323 dwelling units from a phase 2 site to a now empty industrial site, thus building those units earlier as phase 1 development and placing them closer to traffic on the southbound I-5; and it deed-restricted low income housing for 315 units. AR 10174.

Petitioners do not support with evidence their assertion that the changes made in the Supplemental Memo require the recirculation of the SEIR. The elimination of industrial and commercial uses from the Project will not cause "a new significant environmental impact." The addition of 323 dwelling units to the Project newly approved for 2,297 dwelling units alone does not qualify as a "substantial increase in the severity of the environmental impact." Both the previous approval for 1,974 units and the new approval for 2,297 units are still within the cap of 3,150 dwelling units. The SEIR analyzes the environmental impacts for a build-out of 3,150 dwelling units.

Petitioners' argument is more narrow: petitioners argue that where the 323 new dwelling units are to be placed on the site constitutes a "substantial increase" in environmental impact because those units will be placed closer to the I-5 traffic than other housing groupings. A Project map (AR 8480) shows the locations previously designated for industrial or commercial uses where the

323 new dwelling units will be placed. All of these units are designated as "affordable units," except the eight live/work units. The 323 units will be placed in five groupings on both sides of Ridge Route Road. Their distances from the I-5 traffic is not provided, but petitioners assert that some units, apparently those at the most northly location, are 470 feet from the I-5. If so, the map shows that most of the units at that location would be at a greater distance than 470 feet from the I-5.[3]

Petitioners' argument, to narrow it further, is based on studies that have suggested that it may be hazardous to reside within 500 feet of a freeway. Pets.' Br., pp. 33-34. Petitioners cite to the Center's letter to the County dated April 16, 2018 and specifically to its page 28 where it states "... the scientific literature cited above indicates that the closer people live to a freeway, the more severe and pervasive the potential impacts are upon these persons." AR 28001. County/Real Parties point out that petitioners rely on general studies and provide no evidence that the locations for the build-out of the 323 units are significantly more hazardous than other housing scheduled for construction in phase 1.

The traffic analysis including for air quality and GHG studies has already been completed in the SEIR for the 1,974 units that were scheduled for construction in phase 1. The draft EIR discussed the air quality effects on multi-family homes within 900 to 1500 feet of the I-5's southbound lanes. AR 1898. Petitioners do not demonstrate that an increase of 323 more homes, even if some are sited at a distance of 500 feet from the I-5, is "significant new information" that requires recirculation under Guidelines section 15088.5.

Petitioners argue also that a Board resolution adopted on December 18, 2018 requesting further information about the Woolsey Fire (AR 28976) is "significant new information." (The Woolsey Fire began on November 8, 2018.) The Court does not understand this argument because the criteria for recirculation applies when "significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review." Guidelines section 15088.5(a). The SEIR errata published on April 5, 2018 could not refer to the later occurring Woolsey Fire nor change SEIR's conclusions (AR 10177) as to fire hazard or greenhouse gas emissions. After the Woolsey Fire, the Center sent letters to the County dated April 1, 2019 and February 11, 2019 (AR 28962 and 28970) to argue that the Board's finding that more wildfires are the "new normal" should be evaluated, but that information was not included in the County's new information released on April 5, 2018 and therefore could not be argued as a basis for recirculation.

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[3] The record does not disclose precisely where the 323 houses will be placed, other than in the color-coded patches found at AR 8480, so the Court is unable to determine whether any units will be built within 470 feet of the I-5 and, if so, how many. The opposing brief at footnote 16, points out that petitioners "fail to differentiate the Project's development footprint, which is the building areas, from the Project Site boundary." Opp. Br., p. 14, fn. 34.

The County's decision that the Errata that recirculation was not required because of new information released with the Supplemental Memo of April 5, 2018 is supported by substantial evidence. The Court denies relief under the second cause of action.

ISSUE TWO: THE REASONABLE RANGE OF ALTERNATIVES PRESENTED IN THE SEIR IS DEFICIENT FOR FAILING TO CONSIDER AN ALTERNATIVE THAT WOULD PRESERVE THE GRASSHOPPER CREEK HABITAT:

CEQA requires the lead agency to consider a reasonable range of alternatives to evaluate whether an alternative to the Project exists that will reduce or better mitigate the significant environmental impacts of a project. PRC 21002; Guidelines section 15126.6. An EIR is to "ensure that all reasonable alternatives to proposed projects are thoroughly assessed" by the decision-makers. Laurel Heights Improvement Association v. Regents of the University of California (1988) 47 Cal.3d 376, 400.

The SEIR's alternate analysis for the Project does not include an alternative that would protect Grasshopper Creek (AR 2403-2426), and for that reason is fatally flawed.

The applicant for the 1992 Project submitted "a land plan ... that avoided [filling-in] the creek bottom that runs through the middle of the project." "This land plan placed development on one side of the creek...to minimize grading. This plan was attempting to avoid impacting the creek habitat...." AR 2403 (Project DSEIR).

In re-presenting the Project in 2015 the current applicant discarded any consideration of this "creek avoidance" alternative at the screening stage. AR 2403. The DSEIR considered four alternatives: no project; the proposed Project; no industrial uses; and a development limited to Phase 1. AR 24189 (CDFW's letter June 15, 2017). Objectors criticized the SEIR for its failure to include a "creek avoidance' alternative in its alternatives discussion. AR 7492 (letter from Santa Monica Mountains Conservancy of May 22, 2017; AR 24189 (CDFW letter of June 4, 2017; and AR 7537 (petitioners' letter).

An applicant has considerable leeway to determine the range of reasonable alternatives, but that discretion is governed by the "rule of reason" and any exclusion of a reasonable alternative for economic reasons must be justified by substantial evidence. Preservation Action Council v. City of San Jose (2006) 141 Cal.App.4th 1336, 1352-57. The applicant's exclusion of the "creek avoidance" alternative is not supported by substantial evidence in the record.

The inclusion of a "creek avoidance" alternative in a range of alternatives that should be considered is appropriate for many separate reasons. The Court includes these reasons for its ruling to require the consideration of a "creek avoidance" alternative in a reasonable range of alternatives. The "creek avoidance" alternative would: (1) preserve Grasshopper Creek with its regionally

significant wildlife habitat; (2) avoid as a mitigation requirement a need to relocate from Grasshopper Creek its population of special interest species Western spadefoot toad; (3) avoid as a mitigation requirement a need to relocate the rare plant species found in the Grasshopper habitat; (4) avoid adverse impacts to the Castaic Lake recreational lands that are east of the site (see CDFW letter, AR 7397); and (5) reduce substantially the grading and earth movement needed to fill-in Grasshopper Canyon (with the grading own adverse impacts on air quality and GHG emissions).

That an alternative exists that may protect the habitat of an amphibian and plant species of special concern in itself requires a consideration of the "creek avoidance" in a reasonable range of alternatives. Whether that alternative would meet the major economic objectives of the Project and whether it would protect the existing habitat for species of special concern cannot be predicted, but those issues should be considered in an alternatives analysis. The exclusion of a "creek avoidance" alternative requires that the approvals for the Project be voided so that a more appropriate alternatives analysis can be provided.

County and Real Parties give four reasons for screening out any consideration of a "creed avoidance" alternative. (Opp. Br., pp. 27-33; see also discussion in the SEIR. AR 7561, 7500, 7562, 7570.) These specific reasons, in the Court's view, demonstrate affirmatively the need to analyze the "creek avoidance" alternative, rather than eliminating it from an alternatives analysis.

The County and Real Parties argue that the "creek avoidance" alternative will nonetheless require the excavation of 10 million cubic yards of soil to buttress the building sites. That argument concedes these benefits: a reduction in the earth excavation of 23 million cubic yards, plus the preservation of the Grasshopper Creek habitat; this reason, therefore, fails to justify the screening out of the "creek avoidance" from the alternatives analysis. The applicant, secondly, argues that the "creek avoidance" alternative would require the elimination of the industrial and commercial uses in the Project. That depends on the development plan. The 1992 Project included 50 acres of industrial uses, as well as a greater number of housing units, and would still preserve the Grasshopper Creek habitat. This argument, however, was mooted when the applicant on April 3, 2018 eliminated the industrial and commercial uses. AR 10168-69 (applicant letter to the Planning Commission). This reason surely does not justify an alternative analysis that screens out the "creek avoidance" alternative. The applicant, thirdly, argues that the "creek avoidance" alternative would require that Grasshopper Creek be spanned by utility pipelines to serve housing on both sides. Whether that creates a possibility of "accidental spills" may be evaluated in an alternatives analysis; the possibility, however, is speculative, and does not justify any screening out a "creek avoidance" alternative. The final reason given for not studying a "creek avoidance" alternative is that it would reduce the Project's developable acreage. That

result would not necessarily make a "creek avoidance" alternative infeasible, and it is not, therefore, a basis to screen out a "creek avoidance" alternative.

The four reasons given by the County for screening out the "creek avoidance" alternative, whatever their merits, are not supported by substantial evidence in the record.

Given that Grasshopper Creek and its riparian habitat is a dominant physical feature of the site and connects to the state recreational lands east of the site, the County's failure to consider an alternative that would preserve Grasshopper Canyon is a failure to provide an EIR to serve as an informational document for the decision-makers. That role is mandated for an EIR in Guidelines section 15151. That section reads:

> An EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences.

Without necessarily finding a violation of section 15151, the Court finds that the County's exclusion of the "creek avoidance" alternative from the range of alternatives is not supported by substantial evidence. That failure is a violation of Guidelines section 15126.6 and, therefore, of PRC 21002. The failure invalidates the approvals given for the Project and requires the submittal of an amended EIR that includes an appropriate analysis section for consideration by the County's decisionmakers.

ISSUE THREE: THE BASELINE AND MITIGATION MEASURES PROVIDED IN THE SEIR TO PROTECT THE WESTERN SPADEFOOT TOADS ARE NOT SUFFICIENT UNDER CEQA:

A project has a significant effect on the environment if it will eliminate a species of special concern from the Project site. Guidelines 15065. Section 15065(a) provides:

> A lead agency shall find that a project may have a significant effect on the environment ... where there is substantial evidence ... that any of the following conditions may occur (1) The project ... threaten[s] to eliminate a plant or animal community ....

In that event, section 15065(b)(2) requires the project proponent to:

> implement mitigation requirements relating to such species and habitat pursuant to an approved habitat conservation plan or natural community conservation plan.

The Western spadefoot toad ("WST") is a California species of special concern. AR 3665 (CDFW letter); see AR 3644 defining "species of special concern." A self-sustaining WST population exists at the Project site in and adjacent to Grasshopper Canyon. AR 3689. The WST habitat in Grasshopper

Creek and nearby seasonal wet areas will be eliminated by the Project. Grasshopper Canyon itself will be filled in and levelled for building sites. The DSEIR acknowledges the Project will destroy the WST habitat along Grasshopper Canyon.

> Since this Grasshopper Canyon population is one of few known populations in the region and Project impacts would result in the loss of these populations (or a substantial portion thereof), impacts to this species would be considered significant... AR 1943.

The County has approved Mitigation Measure 5.2-9 to relocate the WST population to a new habitat that the applicant is to create (at an as yet unspecified location) and monitored for five years.

The parties dispute, first, the sufficiency of the baseline biological surveys for the site, and, thus, dispute not only the number of individuals in the WST community that are to be relocated but also the number and characteristics of the breeding pools that will have to be created to sustain the population in a new habitat. The applicant's Biological Technical Report, Appendix D relies on a single biological survey for its count of WST: "The western spadefoot was observed incidentally during previous amphibian surveys, and in the focused surveys conducted for the species in 2014 (Bon Terra 2000b, 2014c)." AR 1943. Petitioners argue the BonTerra's surveys underestimate the WST population on the site because the surveys were taken during draught years when the WST numbers were reduced.

The parties dispute, secondly, that the mitigation measures ensure that the relocation of the WST to a new habitat will be successful. The Biological Technical Report asserts that "[i]mplementation of Mitigation Measure 9 [MM 2.5-9] would reduce this impact [on the WST] to less than significant level." Id. Petitioners argue the mitigation measures are inadequate to assure that result.

The mitigation measures approved by the County to mitigate the loss of WST habitat will require that the existing WST population on the project site be captured and relocated to new WST habitat. The DSEIR promises:

> "Implementation of MM 5.2-9 which requires a western spadefoot relocation program, would reduce this impact to a less than significant level through translocation of individuals to suitable habitat. This measure would result in substantial avoidance of direct impacts to the western spadefoot and as a result the western spadefoot is expected to persist in the region following project implementation." AR 1943.

The actual mitigation measure MM 2.5-9 reads in its entirety:

> A relocation program for western spadefoot toad will be conducted prior to construction during the spring at the height of the breeding season for

this species....Results of the relocation program shall be provided to the CDFW and the LACDRP.

(a)Prior to implementing the Spadefoot Relocation Plan, a focused survey will be conducted within the prior appropriate season. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e.2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied pond as well as others.

(b)The intent of the Relocation Plan is to capture and relocate as many western spadefoot toads as possible. Western spadefoot toads shall be relocated on or off site to an area of suitable habitat, as reviewed by the CDFW and the LACDRP. The relocation site shall be of similar (or better) quality as the habitat within the project impact area where the western spadefoot toads are captured. If no suitable habitat is available for relocation, suitable habitat shall be created.

Petitioners, to reiterate, argue that the WST relocation project violates CEQA because (1) the baseline definition of the WST population understates the extent of the habitat of the species on the Project site; and (2) the mitigation plan to relocate the existing WST population is unformulated and therefore does not assure the WST will be successfully introduced at another location.

These arguments, in the Court's view, are well taken.

The applicant has prepared a detailed relocation plan for the Western spadefoot toad. There is the Relocation Plan itself (AR 7831-7846) and a feasibility analysis (AR 8385-8417). The Relocation Plan specifies the steps that are to be taken to remove the WST population (including larvae, tadpoles and mature specimens) from their existing habitat and to replant them in or near pools that have been constructed to match the dimensions and depths of the pools from the original habitat and inoculized with soils from their original habitat. The pools would be situated in areas having similar vegetation to the original habitat. The feasibility study identifies six sites that could be constructed to recreate the original habitat (two at the site's north end and two on the adjacent state recreational area). The pools apparently are to be replenished by rainfall only.

The Relocation Plan, however, is designed to duplicate the conditions for the WST habitat that were identified in the 2014 BonTerra Psomos focused survey. That survey and earlier incidental surveys were allegedly taken in drought years, and, therefore, as petitioners argue, underestimate the extent of the WST habitat and the number of WST individuals. (In drought years the adult WST may stay underground in hibernation.) The parties have not, so far as the Court can ascertain, provided the rainfall data for the years in which the surveys were taken nor established whether those years had below average rainfall. The

petitioners, however, assert that surveys taken in 2014 and general surveys taken in 2004 and 2005 were drought years. This issue was raised during the public comment periods, and the Court is unable to find evidence in the record to refute that the surveys were taken in drought years. The issue bears on whether the implementation of MM 2.5-9 will reduce the impact on the WST to less than significant. Petitioners argue that there are 8 to 10 seasonable pools in which the WST have been observed to breed and where larvae and tadpoles live, but the Relocation Plan intends to construct only three breeding pools. If petitioners are correct, Relocation Plan is inadequate to maintain the WST population.

The County's biologist, Joseph Decruyenaere, criticized the SEIR, telling the Planning Commission: "Mitigation for the spadefoot needs to address impacts to all 8 previously documented breeding pools, not just the two that have been observed since 2014." AR 25823. The CDFW in its June 15, 2017 letter spotted the same problem, telling the Planning Commission: "the Department considers the 2014 surveys not adequate for determining the extent of the western spadefoot toad." AR 7395.

The Errata later attempted to address this issue by requiring additional surveys to determine the extent of the WST habitat. The Errata (AR 8330) provides:

> Prior to implementing the Spadefoot Relocation Plan, a focused survey will be conducted within the two prior appropriate seasons prior to the issuance of a grading permit. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e. 2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied pond as well as others.

The Relocation Plan as a mitigation measure is intended to reduce the impacts of the destruction of the WST habitat to less than significant. This requires that the habitat that is to be destroyed must be measured in a manner that obtains its maximum dimensions so that those potential dimensions may be realized in the new circumstances at the site where the WST is relocated. The applicant's focus on its 2014 (or 2015) survey is inadequate because it ignores information indicating that with average or greater than average rainfall the extent of the WST habitat is larger with more breeding pools to support a larger WST population. The Errata, in other words, is inadequate because it establishes a restriction on the number of breeding ponds that will be duplicated at the new WST habitat, e.g. those identified in the 2014 survey plus any identified in "two prior appropriate seasons" before a grading permit is issued. This restricts the extent of a recreated WST colony because it establishes fewer than the maximal number of breeding pools. What happens if the applicant establishes three breeding pools based on the 2014 survey and a year later there is deluge rainfall? The site unlike Grasshopper Canyon may not naturally expand the

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number of breeding pools. The WST has survived in Grasshopper Canyon through wet years and draught years. The evidence indicates Grasshopper Canyon has the potential to increase its number of breeding pools in wet years and thus to support a larger WTS population. This potential will be lost if the applicant mechanically duplicates the number of breeding pools that it finds from surveys taken before the grading of Grasshopper Canyon begins.

Concluding on the first issue, the applicant has not established a baseline for the WST habitat that must be re-created to preserve the WST population presently existing on the Project site. The mitigation measure for the WST is inadequate for that reason.

On the second issue, petitioners argue the relocation plan provided in MM 5.2-9 is inadequate. While the MM 5.2-9 requires the newly created habitat be monitored for five years the steps that will be taken to ensure success are unspecified. (The amphibian relocation plan is described in the SEIR, Appendix C (Biological Resources Plan) at AR 7839.) The CDFW also raised objections to the relocation plan. AR 7390-7405 (CDFW letter of June 15, 2017). The CDFW notes the applicant has not identified a specific site for relocation and does not promise that successful transplantation can be accomplished. AR 7396. The CDFW, as a trustee agency, does not have authority to approve or disapprove a project; however, it is required to be consulted and may comment as to projects that involve fish and wildlife, rare and endangered native plants, wildlife areas and ecological reserves.

The promise the applicant will create a habitat in which the transplanted WST population will flourish is deferred mitigation. The parties concede that the success of an alternate habitat is uncertain and will require on-going attention during and maybe beyond the monitoring period. The standard governing the acceptability of deferred mitigation measures is provided in Guidelines section 15126.4(a)(1)(B), reading:

> Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures shall not be deferred until some future time. The specific details of a mitigation measure, however, may be developed after project approval when it is impractical or infeasible to include those details during the project's environmental review, provided the agency (1) commits itself to the mitigation; (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard that will be considered, analyzed, and potentially incorporated in the mitigation measure.

The Court does not find a specific response to the contention that the applicant's deferred mitigation for the loss of the WST habitat does not provide sufficient detail, lacking particularly a specified location for a successful

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reconstruction of the Grasshopper Canyon WST community. The applicant relies on the September 13, 2018 letter from Glenn Lukos Associates (the Tony Bomkamp letter) to supply substantial evidence that the applicant will succeed in transplanting the WST population. The Bomkamp letter does not make any commitment; it merely points to the process described in the SEIR (AR 7839) and says Bomkamp personally has been involved in establishing "seasonal pools for western spadefoot toads" in Orange County, without providing further detail. AR 16011.

More is required by Guidelines section 15126 for mitigation measures that are deferred. The MM standards required for future projects are that the mitigation measure itself "inform [the lead agency] what it is to do and what it must accomplish, and they commit [the agency] to mitigating impacts before proceeding." See, Center for Biological Diversity v. Department of Fish & Wildlife (2015) 234 Cal.App.4th 214, 240, 245. The deferred mitigation to create a new habitat for the WST community is inadequate in detail and commitment. The mitigation measures to assure relocation of the WST population at the Project site does not comply with CEQA requirements.

ISSUE FOUR: THE MITIGATION MEASURES PROVIDED IN THE SEIR TO PROTECT THE RARE PLANTS ARE NOT SUFFICIENT UNDER CEQA:

Five special status plant species have been identified during surveys to exist at various locations on the Project site. These are the round-leaved filaree, the club-haired mariposa lily and the slender mariposa lily (collectively lilies); the paniculate tarplant, and the southwestern spiny rush. AR 1926-29. As special status plant species, a destruction of their habitat must be mitigated to less than significance. Guidelines 15065(a)(1). The loss of these plants through the site development is to be mitigated by the transplantation of all existing individual plants as well as seeds or bulbs that are found. The FSEIR states:

> A less than significant impact would be achieved through implementation of MM 5.2-2, MM 5.2-3 and MM 5.2-11... which require a Riparian Restoration Program be developed and approved by USACE [US Army Corps of Engineers], CDFW, and LACDRP prior to issuance of grading permits, ... AR 8564

MM 5.2-4 specifies procedures for the lilies. Seeds are to be collected and bulbs excavated for transplantation to a mitigation site and established as a self-sustaining population. A Biological Monitor is to prepare a Mitigation Plan for approval of LACDRP and is to oversee its implementation. AR 8568.

MM 5.2-5 specifies procedures for the round-leaved filaree, paniculate tarplant, and southwestern spiny rush. The Project applicant is to prepare procedures to collect and store the plants and seeds, create an alternate site to include soil preparation, irrigation, methods to control competing plants at the new site and prepare a list of "County-approved success criteria."

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The CDFW challenges the adequacy of the mitigation measures, pointing out that the sites for transplantation are not selected, that the procedures to accomplish transplantation are not specified, and that success criteria are yet to be determined. CDFW believes that the rare plants cannot be transplanted on the site as the available patches after development will be fragmented. The CDFW is likewise dubious about transplantation off-site:

> The Department has concerns when the DSEIR states it will transplant species off-site as this implies other areas will be subject to impact by this action. This additional impact would then need mitigation as this ecosystem is now being altered. AR 7398.

CDFW was concerned that the mariposa lilies might not survive transplantation, saying it was unaware of any population created by seeding or translocation having been successful "at demonstrating long-term self-sustaining population."

CDFW expressed dissatisfaction with the generality of the mitigation measures, saying:

> MM7 [now MM 5.2-4 and -5] does not allow the Department to comment on the appropriateness of the location, technique, success criteria, monitoring methods, density, length of time monitoring is required, or the method proposed for long-term protection and funding. AR 7399.

The deficiencies identified in the CDFW letter demonstrate that the deferred mitigation measures for transplantation of the rare plants do not satisfy the CEQA standards set forth in Guidelines section 15126.4(a)(1)(B).

The applicant relies on the Glenn Lukos Associates (Bomkamp) letter to supply the evidence that deferred mitigation measures for the relocation of the six plant varieties are guidance enough. AR16015-18. Bomkamp's letter advises that there are various locations where the soil conditions are suitable to re-establish the individual plant varieties, but, beyond that, no information is provided to address the deficiencies identified by the CDFW. Further detail is required for the mitigation measures proposed for the rare plants in order to mitigate the destruction of their habitat to a less than significant threshold.

The mitigation measures for successful relocation of the rare plants found at the Project site do not comply with CEQA requirements.

ISSUE FIVE: THE SEIR'S CONCLUSION THAT THE PROJECT LIKELY WILL NOT CREATE A NEW IMPEDIMENT TO MOUNTAIN LION USE OF UNDERCROSSINGS ADJACENT TO THE PROJECT IS SUPPORTED BY SUBSTANTIAL EVIDENCE:

The term "Sierra Madre-Castiac Connection" is used to describe a "habitat linkage" between the Los Padres National Forest and the Angeles National Forest. AR 31172-73. These protected forest areas are separated by the I-5. The I-5 due to its structure and high traffic volume has been a barrier to the passage by animal species from one national forest to the other. Petitioners

12/12/2011

argue that the I-5 barrier has prevented mountain lions from passing readily between protected forest environments for breeding purposes and, thus, furthered a loss of genetic diversity in the species.

There are three tunnels (or undercrossings) beneath the southbound lanes of the I-5 along frontage that parallels the 3.5 mile Project site. The tunnel locations are described with photographs in the SEIR Appendix D (Wildlife Crossing Assessment Memo). AR 7847-7859.

Petitioners' narrow argument is that the Project will impede the passage of special status animals, and in particular mountain lions, crossing under the southbound lanes of the I-5 once the Project is built out because animals then will be deterred from entering the Project site to use the existing tunnels adjacent to the Project's western edge. There are three undercrossings opposite the Project site. Their locations are shown on a map overlay at AR 7852. Undercrossing No. 1 is opposite the extreme south point of the site; undercrossing No. 2 is opposite the mid-point of the site; and undercrossing No. 3 is opposite the north end of the site. These three tunnels are apparently used to provide utility crew access; they were not built as wildlife corridors. Animals travelling through these particular tunnels (going from east to west) would cross under the southbound I-5 lanes to an island of undeveloped land between the I-5's northbound and southbound lanes. There are tunnels under the northbound lanes, but those tunnels are not directly opposite to tunnels Nos. 2 and 3 to provide a straight route under both branches of the I-5. AR 7409.

There is a fourth tunnel that is five miles north of the Project site at Templin Highway. This undercrossing is a double lane public highway. The I-5's northbound and southbound at this point are joined. The Templin Highway passes entirely under the I-5's eight lanes of traffic. An animal using the Templin highway undercrossing would have access to a national forest on both sides of the I-5.

Undercrossing No. 3 is at the southern end of the Sierra Madre-Castiac Connection. The Connection runs for 17 miles northward of the Project site.

The County in its FSEIR impliedly concluded that tunnels Nos. 1, 2 and 3 were not being used by large animals and that, therefore, the build-out of the Project would not create a new impediment to the movement of mountain lions between the two national forests separated by the I-5. The Court finds the County's determination is supported by substantial evidence. The Court, therefore, rejects petitioners' argument that the Project will have a significant adverse effect on the range of mountain lions.

The premise of petitioners' argument is that animals of special concern—mountain lions being the paradigm--use or may in the future use the undercrossings to traverse the I-5 in search of a broader mating pool. The

01/12/2021

Project, they argue, will foreclose this opportunity to enhance genetic diversity, and, therefore, would limit the range and eventually the survival of any local species imperiled by a lack of genetic diversity. Petitioners rely on Guidelines section 15065 in their argument. Section 15065 provides that a project will a significant effect if it "substantially reduce(s) the number or restrict(s) the range of an endangered, rare or threatened species."

Petitioners' argument finds support in the record from the CDFW's letter of June 15, 2017 (AR 7390-7405) which in Comment #3 (DSEIR's "Analysis of Wildlife Crossing and Use of Site") states that:

> The South Coast Wildlands Missing Linkages Report7 (2005) identified the Project area and adjacent crossings in the linkage design [for the Sierra Madre-Castiac Connection] and considers this area as highly suitable for American badger, mule deer, pacific kangaroo rat, California spotted owl, and western pond turtle—the latter two being species of special concern. AR 7394.

The CDFW recommended that "the DSEIR include studies that track wildlife dispersal, including that for large mammals, across the Project site and across the three under-crossings discussed above, and discuss how the Project will affect the use and dispersal patterns." Id.

The applicant followed the CDFW's recommendation, but further studies did not provide support for petitioners' arguments. The further studies included site visits by experienced biologists employed by Bon Terra Psomos, the applicant's consultant, and the study of aerial photographs to identify terrain features and vegetative covering that would encourage animal use. Only at undercrossing No. 4, the underpass at Templin Highway five miles north of the Project site, did the biologists locate evidence of large animal (mule deer) presence.

The use of the undercrossings by large animals was thoroughly discussed in the SEIR and a response was made to the CDFW letter in the FSEIR dated January, 2018. AR 7409-11. The Bomkamp letter of September 13, 2018 addressed the studies as to whether the tunnels had provided significant wildlife corridors. AR 16008-10. The County had the best available information on the topic when it approved the Project in April 2019. The County's implied determination that the Project will not interfere with mountain lion crossings of the I-5 is supported by substantial evidence.

PREPARATION OF JUDGMENT AND ORDERS:

The Court denies petitioners' challenge to the Project based on alleged the SEIR having an inadequate analysis of aesthetics (viewshed) impacts; an inadequate disclosure and analysis of the air quality and public health impacts; and an inadequate wildfire analysis.

The Court shall enter judgment for petitioners on the first cause of action based on its rulings on Issues 2, 3 and 4 above that find the SEIR to be inadequate. The Court shall enter judgment for the County and Real Parties on the third cause of action based on its ruling on issue 3. Petitioners did not submit briefs in support of their second and fourth causes of action, and the Court shall enter judgment for the County and Real Parties on those causes of action.

The Court directs the petitioners to prepare and lodge a judgment and any orders appropriate to implement this Statement of Decision within ten days.

The Court Clerk shall enter and serve the Statement of Decision on the parties by U.S. Mail this date.

JANUARY 11, 2021

RICHARD L. FRUIN, JR.
Superior Court of California
County of Los Angeles

APPENDIX B-1

WESTERN SPADEFOOT TOAD IMPACT ASSESSMENT AND HABITAT MITIGATION AND MONITORING PLAN

DRAFT

NORTHLAKE
CASTAIC, LOS ANGELES COUNTY, CALIFORNIA

WESTERN SPADEFOOT TOAD (*Spea hammondii*)

IMPACT ASSESSMENT

AND

HABITAT MITIGATION AND MONITORING PLAN

July 2022 [Revised March and June 2023 and April 2024]

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I. INTRODUCTION/BACKGROUND

The project involves the phased development of up to 3,150 residential units, 9.2 acres of commercial uses, 13.9 acres of industrial uses, 799.5 acres of parks and open space, a 22.9-acre school site and a 1.4-acre pad for a future fire station (Project). Subsequent to the publication of the Final SEIR, the Regional Planning Commission requested that the Applicant include an affordable housing component in the Project. The Applicant made minor revisions to the Project to include an affordable component. Specifically, the Applicant eliminated 108,283 square feet (SF) of industrial use and 13,197 SF of commercial uses and reallocated 323 units from the Phase 2 area of the Project to the Phase 1 area. The County of Los Angeles Planning Commission approved the NorthLake Project [Exhibits 1 and 2] on April 18, 2018, and the Los Angeles County Board of Supervisors approved the Project on April 2, 2019. Exhibit 1 is a Regional Map for the site and Exhibit 2 is a vicinity map showing the project location.

On January 11, 2021 the Los Angeles Superior Court ruled (Court Ruling) on the Center For Biological Diversity and Endangered Habitats League v. County Of Los Angeles, et al, and Real Parties in Interest, NorthLake Associates, et al, Case No. 19STCPO1610, finding that relative to the Western Spadefoot Toad (WST) that the Supplemental Environmental Impact Report (SEIR) was deficient in failing to adequately delineate the WST baseline and failing to provide adequate mitigation measures for the relocation of the WST. The ruling on the WST is as follows:

> ***ISSUE THREE: THE BASELINE AND MITIGATION MEASURES PROVIDED IN THE SEIR TO PROTECT THE WESTERN SPADEFOOT TOADS ARE NOT SUFFICIENT UNDER CEQA:***
>
> *A project has a significant effect on the environment if it will eliminate a species of special concern from the Project site. Guidelines 15065. Section l 5065(a) provides:*
>
> > *A lead agency shall find that a project may have a significant effect on the environment ... where there is substantial evidence ... that any of the following conditions may occur (1) The project ... threaten[s] to eliminate a plant or animal community ....*
>
> *In that event, section 15065(b)(2) requires the project proponent to:*
>
> > *implement mitigation requirements relating to such species and habitat pursuant to an approved habitat conservation plan or natural community conservation plan.*[1]

[1] The Court appears to have taken CEQA Guidelines Section 15065(b)(2) out of context. Section 15065(b)(2) provides "Furthermore, where a proposed project has the potential to substantially reduce the number or restrict the range of an endangered, rare or threatened species, the lead agency need not prepare an EIR solely because of such an effect, if: (A) the project proponent is bound to implement mitigation requirements relating to such species and habitat pursuant to an approved habitat conservation plan or natural community conservation plan." Here, the County prepared a comprehensive SEIR, and there is no approved habitat conservation plan or natural community conservation plan applicable to the Project site. As such, Section 15065(b)(2) is inapplicable.

The Western spadefoot toad ("WST") is a California species of special concern. AR 3665 (CDFW letter); see AR 3644 defining "species of special concern." A self-sustaining WST population exists at the Project site in and adjacent to Grasshopper Canyon. AR 3689. The WST habitat in Grasshopper Creek and nearby seasonal wet areas will be eliminated by the Project. Grasshopper Canyon itself will be filled in and levelled for building sites. The DSEIR acknowledges the Project will destroy the WST habitat along Grasshopper Canyon.

> *Since this Grasshopper Canyon population is one of few known populations in the region and Project impacts would result in the loss of these populations (or a substantial portion thereof), impacts to this species would be considered significant ... AR 1943.*

The County has approved Mitigation Measure 5.2-9 to relocate the WST population to a new habitat that the applicant is to create (at an as-yet unspecified location) and monitored for five years.

The parties dispute, first, the sufficiency of the baseline biological surveys for the site, and, thus, dispute not only the number of individuals in the WST community that are to be relocated but also the number and characteristics of the breeding pools that will have to be created to sustain the population in a new habitat. The applicant's Biological Technical Report, Appendix D relies on a single biological survey for its count of WST: "The western spadefoot was observed incidentally during previous amphibian surveys, and in the focused surveys conducted for the species in 2014 (Bon Terra 2000b, 2014c)." AR 1943. Petitioners argue the BonTerra's surveys underestimate the WST population on the site because the surveys were taken during draught years when the WST numbers were reduced.

The parties dispute, secondly, that the mitigation measures ensure that the relocation of the WST to a new habitat will be successful. The Biological Technical Report asserts that "[i]mplementation of Mitigation Measure 9 [MM 2.5-9) would reduce this impact [on the WST] to less than significant level. " Id. Petitioners argue the mitigation measures are inadequate to assure that result.

The mitigation measures approved by the County to mitigate the loss of WST habitat will require that the existing WST population on the project site be captured and relocated to new WST habitat. The DSEIR promises:

> *"Implementation of MM 5.2-9 which requires a western spadefoot relocation program, would reduce this impact to a less than significant level through translocation of individuals to suitable habitat. This measure would result in substantial avoidance of direct impacts to the western spadefoot and as a result the western spadefoot is expected to persist in the region following project implementation." AR 1943.*

The actual mitigation measure MM 2.5-9 reads in its entirety:

A relocation program for western spadefoot toad will be conducted prior to construction during the spring at the height of the breeding season for this species.... Results of the relocation program shall be provided to the CDFW and the LACDRP.

(a) Prior to implementing the Spadefoot Relocation Plan, a focused survey will be conducted within the prior appropriate season. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e.2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied pond as well as others.

(b) The intent of the Relocation Plan is to capture and relocate as many western spadefoot toads as possible. Western spadefoot toads shall be relocated on or off site to an area of suitable habitat, as reviewed by the CDFW and the LACDRP. The relocation site shall be of similar (or better) quality as the habitat within the project impact area where the western spadefoot toads are captured. If no suitable habitat is available for relocation, suitable habitat shall be created.

Petitioners, to reiterate, argue that the WST relocation project violates CEQA because
(l) the baseline definition of the WST population understates the extent of the habitat of the species on the Project site; and (2) the mitigation plan to relocate the existing WST population is unformulated and therefore does not assure the WST will be successfully introduced at another location.

These arguments, in the Court's view, are well taken.

The applicant has prepared a detailed relocation plan for the Western spadefoot toad. There is the Relocation Plan itself (AR 7831-7846) and a feasibility analysis (AR 8385-8417). The Relocation Plan specifies the steps that are to be taken to remove the WST population (including larvae, tadpoles and mature specimens) from their existing habitat and to replant them in or near pools that have been constructed to match the dimensions and depths of the pools from the original habitat and inoculized with soils from their original habitat. The pools would be situated in areas having similar vegetation to the original habitat. The feasibility study identifies six sites that could be constructed to recreate the original habitat (two at the site's north end and two on the adjacent state recreational area). The pools apparently are to be replenished by rainfall only.

The Relocation Plan, however, is designed to duplicate the conditions for the WST habitat that were identified in the 2014 BonTerra Psomos focused survey. That survey and earlier incidental surveys were allegedly taken in drought years, and, therefore, as petitioners argue, underestimate the extent of the WST habitat and the number of WST individuals. (In drought years the adult WST may stay underground in hibernation.) The parties have not, so far as the Court can ascertain, provided the rainfall data for the years in which the surveys were taken nor established whether

those years had below average rainfall. The petitioners, however, assert that surveys taken in 2014 and general surveys taken in 2004 and 2005 were drought years. This issue was raised during the public comment periods, and the Court is unable to find evidence in the record to refute that the surveys were taken in drought years. The issue bears on whether the implementation of MM 2.5-9 will reduce the impact on the WST to less than significant. Petitioners argue that there are 8 to 10 seasonable pools in which the WST have been observed to breed and where larvae and tadpoles live, but the Relocation Plan intends to construct only three breeding pools. If petitioners are correct, Relocation Plan is inadequate to maintain the WST population.

The County's biologist, Joseph Decruyenaere, criticized the SEIR, telling the Planning Commission: "Mitigation for the spadefoot needs to address impacts to all 8 previously documented breeding pools, not just the two that have been observed since 2014. " AR 25823. The CDFW in its June 15, 2017 letter spotted the same problem, telling the Planning Commission: "the Department considers the 2014 surveys not adequate for determining the extent of the western spadefoot toad." AR 7395.

The Errata later [sic] attempted to address this issue by requiring additional surveys to determine the extent of the WST habitat. The Errata (AR 8330) provides:

> *Prior to implementing the Spadefoot Relocation Plan, a focused survey will be conducted within the two prior appropriate seasons prior to the issuance of a grading permit. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e. 2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied pond as well as others.*

The Relocation Plan as a mitigation measure is intended to reduce the impacts of the destruction of the WST habitat to less than significant. This requires that the habitat that is to be destroyed must be measured in a manner that obtains its maximum dimensions so that those potential dimensions may be realized in the new circumstances at the site where the WST is relocated. The applicant's focus on its 2014 (or 2015) survey is inadequate because it ignores information indicating that with average or greater than average rainfall the extent of the WST habitat is larger with more breeding pools to support a larger WST population. The Errata, in other words, is inadequate because it establishes a restriction on the number of breeding ponds that will be duplicated at the new WST habitat, e.g. those identified in the 2014 survey plus any identified in "two prior appropriate seasons" before a grading permit is issued. This restricts the extent of a recreated WST colony because it establishes fewer than the maximal number of breeding pools. What happens if the applicant establishes three breeding pools based on the 2014 survey and a year later there is deluge rainfall? The site unlike Grasshopper Canyon may not naturally expand the number of breeding pools. The WST has survived in Grasshopper Canyon through wet years and draught years. The evidence indicates Grasshopper Canyon has the potential to increase its number of breeding pools in wet years and thus to support a larger WTS population. This potential will be lost if the applicant mechanically duplicates the number of

breeding pools that it finds from surveys taken before the grading of Grasshopper Canyon begins.

Concluding on the first issue, the applicant has not established a baseline for the WST habitat that must be re-created to preserve the WST population presently existing on the Project site. The mitigation measure for the WST is inadequate for that reason.

On the second issue, petitioners argue the relocation plan provided in MM 5.2-9 is inadequate. While the MM 5.2-9 requires the newly created habitat be monitored for five years the steps that will be taken to ensure success are unspecified. (The amphibian relocation plan is described in the SEIR, Appendix C (Biological Resources Plan) at AR 7839.) The CDFW also raised objections to the relocation plan. AR 7390-7405 (CDFW letter of June 15, 2017). The CDFW notes the applicant has not identified a specific site for relocation and does not promise that successful transplantation can be accomplished. AR 7396. The CDFW, as a trustee agency, does not have authority to approve or disapprove a project; however, it is required to be consulted and may comment as to projects that involve fish and wildlife, rare and endangered native plants, wildlife areas and ecological reserves.

The promise the applicant will create a habitat in which the transplanted WST population will flourish is deferred mitigation. The parties concede that the success of an alternate habitat is uncertain and will require on-going attention during and maybe beyond the monitoring period. The standard governing the acceptability of deferred mitigation measures is provided in Guidelines section 15126.4(a)(l)(B), reading:

> *Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures shall not be deferred until some future time. The specific details of a mitigation measure, however, may be developed after project approval when it is impractical or infeasible to include those details during the project's environmental review, provided the agency (1) commits itself to the mitigation; (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard that will be considered, analyzed, and potentially incorporated in the mitigation measure.*

The Court does not find a specific response to the contention that the applicant's deferred mitigation for the loss of the WST habitat does not provide sufficient detail, lacking particularly a specified location for a successful reconstruction of the Grasshopper Canyon WST community. The applicant relies on the September 13, 2018 letter from Glenn Lukos Associates (the Tony Bomkamp letter) to supply substantial evidence that the applicant will succeed in transplanting the WST population. The Bomkamp letter does not make any commitment; it merely points to the process described in the SEIR (AR 7839) and says Bomkamp personally has been involved in establishing "seasonal pool for

western spadefoot toads" in Orange County, without providing further detail. AR 16011.

More is required by Guidelines section 15126 for mitigation measures that are deferred. The MM standards required for future projects are that the mitigation measure itself "inform [the lead agency] what it is to do and what it must accomplish, and they commit [the agency] to mitigating impacts before proceeding." See, Center for Biological Diversity v. Department of Fish & Wildlife (2015) 234 Cal. App.4th 214, 240, 245. The deferred mitigation to create a new habitat for the WST community is inadequate in detail and commitment. The mitigation measures to assure relocation of the WST population at the Project site does not comply with CEQA requirements.

II. IMPACT ASSESSMENT

The purpose of this WST Assessment (Impact Assessment) and Habitat Mitigation and Monitoring Plan (HMMP) is to evaluate potential impacts to WST associated with the Project and to develop a feasible and effective mitigation program that reduces the potential impacts to less than significant in accordance with the California Environmental Quality Act (CEQA) Appendix G Guidelines. The Court Ruling includes certain statements that are addressed as part of the Impact Assessment component of this document as well aspects of the proposed HMMP to ensure that the HMMP fully and accurately addresses the concerns raised by the Court Ruling.

Before setting forth the proposed mitigation program, the following issues relative to potential impacts to WST and associated habitat are addressed below:

- Status of the WST within northern Los Angeles County
- Identification of the specific features on the Project site occupied by the WST
- Quantification of the habitat area on the Project site occupied by the WST

This HMMP proposes to collect additional data regarding the WST population within the occupied features as part of pre-construction monitoring. Nevertheless, the performance standards are "habitat based" with the recognition, that with creation of suitable habitat and translocation of a substantial number of egg masses and larvae, the translocated population will be self-sustaining and will persist for the long-term. The habitat-based impact analysis is necessary because the previous surveys that identified WST within seasonal pools on the site did not include a census regarding the number of WST egg masses, larvae, or metamorphs. Thus, the available baseline data does not include numbers of egg masses, larvae, or metamorphs that could be used to inform the performance standards for the proposed pond creation and translocation program. Therefore, the impact assessment and mitigation is focused on the total area of documented occupied habitat. As discussed below, impacts to the WST will be fully mitigated through the creation of an equal or greater area of suitable habitat in conjunction with the translocation of WST egg masses, larvae, and metamorphs during a minimum of two seasons with ideal conditions for such relocation efforts, which will occur only after the hydrology performance standards for the created pools have been achieved to ensure that the relocation of egg masses, larvae, and metamorphs will be successful.

A. Status of WST in Castaic and Nearby Areas of Los Angeles County

The Court Ruling reiterated comments that were submitted on the SEIR. Specifically, the Court Ruling stated:

> *Since this Grasshopper Canyon population is one of few known populations in the region and Project impacts would result in the loss of these populations (or a substantial portion thereof), impacts to this species would be considered significant … AR 1943.*

The Court suggests that WST are very rare within the Castaic area and the surrounding areas of northern Los Angeles County. Exhibit 3 shows WST locations from the California Natural Diversity Database (CNDDB) from the Whitaker Peak and surrounding 7.5 Minute Quadrangles.[2] Including the Northlake site, a total of 35 locations for the WST are shown on Exhibit 3 plus additional locations nearby to the southeast. While all of these are not extant, many are, and based on the extent and distribution, it is expected that other populations that have not been formally identified add to the regional population associated with the depicted portion of northern Los Angeles County. As such, just within the surrounding area, there are many known WST populations in addition to the one located at the Project site. As such, WST populations are not rare in the nearby areas.

B. Identification of Specific Features Occupied by the WST

WST was observed on the NorthLake Project site during various general and focused amphibian surveys as well as during focused surveys for listed fairy shrimp within seasonal pools. As discussed below, contrary to various statements that the fairy shrimp surveys in 2004/2005 occurred during a drought year; the 2004/2005 rainfall season was nearly double of normal seasonal rainfall with approximately 36 inches[3] of rain compared with the average of approximately 20 inches. Exhibit 4 depicts Vernal Pool (VP) 1, VP 2, VP 6, and Stock Pond (SP) 1. While numerous ephemeral ponds and features have been observed on the Project site over time with respect to various surveys for different species, at no time have more than 3 features been observed to contain WST and one additional feature was observed to contain potential WST habitat, despite no WST being observed.

---

[2] The California Natural Diversity Database (CNDDB) is an inventory of the status and locations of rare plants and animals in California maintained by the California Department of Fish and Wildlife (CDFW). (https://wildlife.ca.gov/Data/CNDDB.) CNDDB staff work with partners to maintain current lists of rare species, as well as to maintain an ever-growing database of GIS-mapped locations for these species.

[3] The January 17, 2006 BonTerra Fairy Shrimp Focused Survey included the following: "The precipitation from the winter of 2004-05 was well above average. The average rainfall for northwestern Los Angeles County is 20 inches per year. The accumulated rainfall for the months of October 2004 to February 2005 was 44 inches at the Del Valle Weather Station, approximately six miles to the southwest of the project site (Table 1) [based on the monthly totals cited by BonTerra the total from October 2004 through February 2005 actually was 34.59 inches and with an additional 1.24 inches in March which BonTerra included in the 2006 BonTerra Fairy Shrimp Focused Survey, thus the total was 35.83 inches]."

1. 2004/2005 Wet Season Fairy Shrimp Surveys

A determination for the extent of suitable habitat for WST is possible from the data collected during wet-season fairy shrimp surveys in 2004/2005, which was one of the wettest rainfall years in the last 50 years[4]. Appendix A of the January 17, 2006, BonTerra fairy shrimp report documents the results of the surveys including descriptions of eight ponded features identified during the surveys.[5] Ponding was recorded along with water depths during the surveys and the presence of a suite of invertebrates, amphibians (including WST), and other species such as waterfowl. Features identified in that report, including VP 1, VP 2, VP 6, and Stock Pond (SP) 1 exhibited sufficient ponding to support WST as noted in the comments in Appendix A of the report. It is important to note that fairy shrimp surveys during the 2004/2005 survey season began on November 27, 2004 and extended to April 9, 2005 ensuring that the surveys fully captured a sufficient segment of the breeding season for the WST.[6]

Critically, features BonTerra identified as VP 3, VP 4, VP 5, and VP 7 during the surveys in 2005 and documented in the 2006 Report were too shallow (i.e., no more than a few inches at maximum depth) and dried out throughout the course of the surveys and thereby lacked sufficient depth and duration to support WST. This is particularly important information, because if these features were too shallow and therefore failed to pond for sufficient duration during the 2004/2005 rainfall season, which was an exceptionally wet year, their lack of suitability for WST is unambiguously established. No amphibians or fairy shrimp were detected in these features during an extra-optimal year. For these features, there is no potential for WST to successfully breed. Feature VP 6, appears to have exhibited sufficient ponding but did not support WST at the same time they were observed in SP 1 and VP 1 but did support western toad larvae leading to the conclusion that the habitat is at least potentially suitable during such above-average years.

Based on the more than double average rainfall (this is further addressed below) during the 2004/2005 rainfall season, features listed as VP 1, VP 2, and SP 1 in the 2006 BonTerra Report

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[4] The January 17, 2006 BonTerra Fairy Shrimp Focused Survey included the following: "**The precipitation from the winter of 2004-05 was well above average**. The average rainfall for northwestern Los Angeles County is 20 inches per year. The accumulated rainfall for the months of October 2004 to February 2005 was 44 inches at the Del Valle Weather Station, approximately six miles to the southwest of the project site (Table 1) [based on the monthly totals cited by BonTerra the total from October 2004 through February 2005 actually was 34.59 inches and with an additional 1.24 inches in March which BonTerra included in the 2006 BonTerra Fairy Shrimp Focused Survey, thus the total was 35.83 inches]. There was an initial, early rainfall during October 19 and 26, 2004. A total of 4.72 inches fell at the Del Valle Weather Station during October 2004. November 2004 rainfall totaled 0.17 inch at Del Valle. The majority of the rains came during the months of December 2004 through February 2005. The Del Valle Weather Station rainfall total was 6.82 inches in December 2004, 12.46 inches in January 2005, 10.42 inches in February 2005 [and 1.24 inches in March 2005]. The above average rainfall enabled the wet season survey to comprehensively sample the ponds for representative invertebrates present. The ponds inundated on December 27 and 28, 2004, during a rainfall event that delivered 4.5 inches over two days and remained inundated above the 0.39-inch (3 cm) standing water criteria until the final site visit on April 9, 2005."

[5] BonTerra Consulting. January 17, 2006. *Results of Focused Presence/Absence Surveys for Fairy Shrimp at the NorthLake Specific Plan and Castaic High School Project Site, Near the Community of Castaic in Unincorporated Los Angeles County*.

[6] WST breeding season is typically late winter to the end of March. See: S. Morey, 2000. California Wildlife Habitat Relationships System California Department of Fish and Wildlife California Interagency Wildlife Task Group.

are the only features documented to support WST; while one additional feature, VP-6, is the only other feature with potential (at least in extreme rainfall years).

2. 2014 Wet Season Fairy Shrimp Surveys and Western Spadefoot Toad Surveys

In 2014, surveys for fairy shrimp and amphibians, were conducted and the nomenclature for the features mapped and surveyed in 2004/2005 was modified. The features that previously supported WST were identified as Ponds 8, 9, & 7, respectively, in the 2014 90-Day BonTerra fairy shrimp report.[7] As noted in the 90-day report, WST tadpoles were observed in Pond 8 (Previously VP 1) and Pond 7 (Previously SP 1). WST was not observed in Pond 9 (VP 2) due to lack of sufficient ponding in 2014 which exhibited lower-than-average rainfall. BonTerra also conducted focused surveys for WST in 2014 and the results are summarized below (note: the 2014 WST Report used a different nomenclature for the pools than the 2006 and 2014 fairy shrimp reports adding to the potential confusion).

> *Western spadefoot toad was detected at both Pond 1 and Pond 2 during the surveys (Exhibit 4). Western spadefoot toad tadpoles were detected in Pond 2 on March 31, 2014. Advertising adult males and foraging adults of both sexes were observed at Pond 1 on March 31, April 7 and 15, and May 7, 2014. Amplexing (mating) pairs were observed at Pond 1 on April 7 and 15, 2014. Metamorphs were observed at Pond 1 on May 21, 2014. Photographs of Pond 1 and Pond 2 are presented in Attachment A, and photographs of the western spadefoot toad tadpoles, metamorphs, and adults on the project site are presented in Attachment B.*
>
> *Tadpoles observed at Pond 2 were at Gosner stage 26-30[l] a little more than halfway to metamorphosis, and at least one hind limb bud was visible on each of the tadpoles examined. Given that western spadefoot toad larvae have been documented metamorphosing within three weeks of egg-hatching (Lanoo 2005), tadpoles could have potentially metamorphosed within 12 days of the first observation on March 31, 2014. The pool had diminished significantly by the April 7, 2014, survey and no tadpoles were observed. It is unlikely that the tadpoles observed during the March 31 survey had metamorphosed by the second survey on April 7.*
>
> *Up to 15 male spadefoot toads were observed vocalizing at Pond 1 on April 15, representing the peak of breeding activity observed during surveys. The observation of metamorphs on May 21 indicates successful breeding at Pond 1.*[8]

[7] BonTerra Psomas. September 24, 2014. 90-Day Report for the Wet Season Presence/Absence Survey for Vernal Pool Branchiopods Conducted on the NorthLake Specific Plan Project Site, Los Angeles County, California.

[8] BonTerra Psomas. October 2, 2014. Results of Focused Presence/Absence Surveys for the Arroyo Toad and Western Spadefoot Toad on the NorthLake Specific Plan Project Site, Los Angeles County, California

TABLE 1 – POND NOMENCLATURE CLARIFICATION AND WST SURVEY RESULTS

Ponded Features Observed 2004/2005 Fairy Shrimp Survey (AR 3828)[a]	Observed in 2004/05 Fairy Shrimp Survey? (Y/N; Survey ID)	Ponded Features Observed 2014 Fairy Shrimp Survey[b] (AR 3848)	Observed in 2014 Fairy Shrimp Survey (Y/N; Survey ID)	Ponded Features Observed 2014 WST Survey [c] (AR 3904)	Observed in 2014 WST Survey? (Y/N; Survey ID)	Draft Western Spadefoot Toad Relocation Program Identifier[e]
VP 1	**Y** (AR 3833)	Pond 8	**Y** (AR 3868-3871)	Pond 2	**Y** (AR 3897)	Pond 2
VP 2	**Y** (AR 3834)	Pond 9	N		N	Pond 1
VP 3	N	Pond 4	Not Surveyed		N	
VP 4	N	Pond 5	Not Surveyed		N	
VP 5	N	Pond 6	Not Surveyed		N	
VP 6[d]	N		Not Surveyed		N	
VP 7	N		Not Surveyed		N	
SP 1	**Y** (AR 3835)	Pond 7	**Y** (AR 3852 – 3855)	Pond 1	**Y** (AR 3897)	Cattle Pond
		[a] Stock Pond = SP; Vernal Pool = VP; Administrative Record citation = AR, followed by the page number. [b] Ponds 1-3 were different ponds located off site [c] Only ponds shown on Exhibit 4 (Ponds Occupied by WST). [d] VP 6 appears to have exhibited sufficient ponding but did not support WST at the same time they were observed. It is designated as Pond 3 for the purposes of this report. [e] Adopted nomenclature for this report.				

Thus, based on the most optimal conditions for the period during which surveys were conducted on the Project site, there is little question that the SEIR identified the only three sites occupied by WST, despite comments to the contrary including from the County Biologist.

One final note, BonTerra's *DRAFT Western Spadefoot Toad Relocation Program*[9] refers to the three features that have been identified as exhibiting both suitable habitat and supporting the WST as Pond 2 (VP 1, Pond 8), Pond 1 (VP 2, Pond 9) & Cattle Pond (SP 1 and Pond 7). For purposes of this report, the nomenclature in BonTerra's *DRAFT Western Spadefoot Toad Relocation Program* will be used, thus the three features will be identified as Pond 1, Pond 2, and Cattle Pond as set forth and clarified in Table 1, above. In addition, the feature designated VP 6 by BonTerra exhibited suitable ponding but WST were not detected. This feature, which is now designated as Pond 3, will be subject to mitigation as well as being subject to pre-construction surveys and will serve as a potential collection site based on the presence or absence of WST as determined by the

[9] BonTerra Psomas. September 2017. *DRAFT Western Spadefoot Toad Relocation Program* prepared for the FSEIR: NorthLake Specific Plan Residential Development Project, Los Angeles County, California.

pre-construction surveys. As noted, features VP 3, VP 4, VP 5, and VP 7 do not exhibit potential for supporting WST and are not further addressed in this plan.

C. Quantification of the Habitat Area Occupied by the WST

The Court Ruling includes certain statements regarding WST habitat and relocation. Specifically, the Court states:

> *The Relocation Plan, however, is designed to duplicate the conditions for the WST habitat that were identified in the 2014 BonTerra Psomos focused survey. That survey and earlier incidental surveys were allegedly taken in drought years, and, therefore, as petitioners argue, underestimate the extent of the WST habitat and the number of WST individuals. (In drought years the adult WST may stay underground in hibernation.) The parties have not, so far as the Court can ascertain, provided the rainfall data for the years in which the surveys were taken nor established whether those years had below average rainfall. The petitioners, however, assert that surveys taken in 2014 and general surveys taken in 2004 and 2005 were drought years. This issue was raised during the public comment periods, and the Court is unable to find evidence in the record to refute that the surveys were taken in drought years.*

As already noted, the Court's contention that rainfall in 2014 was during a drought period is accurate; however, the statement that 2004/2005 was a drought year is incorrect. As reported above, in the 2006 Fairy Shrimp Report, BonTerra included a detailed table (Table 1 on page 6) with monthly rainfall data showing that the 2004/2005 rainfall year totaled about 35.83 inches, when March is included in the data. Thus, 2004/2005 exhibited nearly double the average rainfall for the region, which is approximately 20 inches, and this detailed information was clearly in the Project record. Furthermore, the extent of the pools was determined during the 2004/2005 rainfall season as described on page 2 of the *DRAFT Western Spadefoot Toad Relocation Program*, BonTerra, that sets for the method for determining the size of the three ponds to be impacted:

> *Brian Leatherman and Justin Wood, Consulting Biologists, visited the site on November 11, 2004 to measure the size and extent of the existing ponds and to search for suitable mitigation pool creation sites. A subsequent preliminary assessment searching for pool creation sites was conducted in summer of 2017 simultaneous with other site surveys conducted by BonTerra Psomas Senior Biologist Marc Blain and Biologist Sarah Thomas.* ***The existing breeding habitat consists of three ponds.*** *Two are naturally occurring ephemeral ponds on the plateau above (east of) Grasshopper Canyon, and one is an artificially created cattle pond near the upper end of Grasshopper Canyon (Exhibit 1). Approximate dimensions and surface area of the respective ponds are shown in Table 1. The total surface area of the existence the surface area of the mitigation pools to be created, is 22,859 square feet.*

Grading for the Project would result in the loss of Pond 1, Pond 2 and the Stock Pond. On page 2 of the *DRAFT Western Spadefoot Toad Relocation Program*, BonTerra sets for the method for determining the size of the three ponds to be impacted. Grading would also impact the feature

originally designated VP 6 and now identified as Pond 3, which was determined to have sufficient ponding for WST; however, WST was not detected during the 2004/2005 surveys or in subsequent surveys. Nevertheless, Pond 3 will be subject to mitigation due to its potential for supporting WST.

Table 1 of the BonTerra Plan (reproduced below as Table 2) includes the following information:

TABLE 2
DIMENSIONS OF EXISTING EPHEMERAL PONDS AND STOCK POND FROM DRAFT WESTERN SPADEFOOT RELOCATION PROGRAM

Pond	Shape	Dimensions (pond diameters	Surface Area*	Perimeter	Estimated Max. Depth
1 (upslope)	Oval	36 x 61 feet	1,847 sq. ft.	145 feet	1 ft. 2 in.
2 (downslope)	Circular	27.5 x 36 feet	791 sq, ft.	99 feet	1 ft. 9 in.
Stock Pond	Oval	123 x 198 feet	20,221 sq. ft.	503 feet	3 ft. 6 in.
* Surface area was estimated by averaging diameters and using the formula A = π r2					

Appendix A of the BonTerra 2006 Fairy Shrimp Report provides dimensions for the pools that were determined during the wet-season surveys, which provide larger estimates for the features, with the caveat that these appear to be estimates; no mention is given in the report of how the dimensions were obtained (as noted below these are inaccurate estimates). Table 3 below uses the largest dimension for each of the three pools.

TABLE 3
MAXIMUM DIMENSIONS OF EPHEMERAL PONDS AND STOCK POND FROM 2006 FAIRY SHRIMP ESTIMATES

Pond	Shape	Surface Area (square meters)	Surface Area (square feet)*	Perimeter	Estimated Max. Depth
1 (upslope)	Oval	481	5,177 sq.ft.	Not Provided	51 cm (20.4 in.)
2 (downslope)	Circular	179.8	1,937 sq, ft.	Not Provided	56 cm (22.4 in.)
Stock Pond	Oval	123 x 198 feet	64,583 sq. ft.	Not Provided	210 cm (84 in.)
* Surface area was estimated by averaging diameters and using the formula A = π r2					

Based on a review of aerial photographs over a period of years, between 1994 and 2021 the normal ponding area is less that the maximum dimensions stated in Table 3 and larger than the dimensions in Table 2. Exhibit 4 is an aerial photograph that shows the limits of WST occupied ponds with the near-maximum ponding derived from an aerial photograph from April, 2011 as shown.[10] The

[10] Aerial photographs that show unambiguous ponding were examined on Google Earth Pro© include 6/1994, 12/2005, 3/2006, 7/2008, 6/2009, 4/2011, 12/2013, 8/2014, 5/2015, 2/2016, 7/2017, and 8/2019. As noted, the aerial from 4/2011 shows the pool at capacity and the areas was calculated using ArcGIS.

images for Ponds 1 and 2 are from December 2017, which show a very clear outline of the maximum or near-maximum extent of potential ponding (the same range of years was used for these ponds as well). VP-6 is depicted on Exhibit 4, the near-maximum extent from the 2006 Fairy Shrimp Report has been included in Table 4. Table 4 establishes the baseline for WST habitat "that must be re-created to preserve the WST population presently existing on the Project site." (Court Ruling at p. 17.)

TABLE 4
REVISED DIMENSIONS OF EXISTING EPHEMERAL PONDS AND STOCK POND

Pond	Shape	Dimensions	Surface Area	Perimeter[1]	Estimated Depth[2]
1 (upslope)	Oval	NA	2,600 square feet	190 feet	1 foot 2 inches
2 (downslope)	Circular	NA	1,300 square feet	110 feet	1 foot 9 inches
Stock Pond	Oval	NA	35,284 square feet	790 feet	3 feet 6 inches
3	Oval	NA	2,178 square feet	177 feet	14 inches
Total			41,362 square feet (0.95 acre)		
				[1] Perimeter measurements are based on review of aerial photographs over a period of years, between 1994 and 2021.	[2] Depths are from Table 1 of the BonTerra *DRAFT Western Spadefoot Toad Relocation Program*

D. Summary of Impacts to Habitat

Based on the above evaluation, the NorthLake site contains three features that were documented to support the WST, as WST were only observed at these three features; one additional feature designated VP-6 in the 2006 BonTerra fairy shrimp report and designated Pond 3 for this plan was observed to support the western toad during the 2004/2005 surveys but no WST were observed and this feature is not occupied by WST. Thus, a total of 0.95 acre of habitat for the WST will be potentially impacted by the Project as shown in Table 4. The loss of 0.95 acre of habitat for the WST would be considered significant before mitigation. With mitigation, the impacts would be reduced to less than significant.

E. Quantification of Impacts to Upland Habitat

Section II(B)(2) above provides a summary of WST observations within the Stock Pond and Seasonal Pond 1 during the 2014 focused surveys as well as for Pond 2 and Vernal Pond 6, to the extent that these last two features remain occupied during suitable years. Assuming occupation, the upland habitat for the Stock Pond and seasonal pools, using CDFW's standard value of a 1,000-foot radius from the ponds, accounts for a total of approximately 188 acres of upland habitat that would occur in the development area. As discussed below, the restoration ponds are adjacent to undeveloped lands under the ownership of NorthLake and well as lands within the State-owned Castaic Recreation Area

that would remain undeveloped. Thus, there will be sufficient upland areas adjacent to the created ponds to support WST foraging and aestivation.

III. HABITAT MITIGATION AND MONITORING PLAN

Development of a feasible and effective mitigation program requires an understanding of the habitat requirements of WST so that created habitat exhibits suitable conditions to allow for a complete breeding cycle for WST. Habitat requirements for the WST are set forth below; however, before describing the conditions that will be necessary to establish it is helpful to consider some historical background for WST in California as set forth in *Amphibian Declines: The Conservation Status of the United States Species*:

> *Western spadefoot toads have been eliminated wherever urban development and irrigated agriculture have destroyed areas where they once lived (e.g., Fisher and Shaffer, 1996). On the other hand, as with all North American spadefoot toads,* ***western spadefoot toads readily breed in ephemeral artificial impoundments such as stock tanks and pools that form at the base of road and railroad grades, and they have colonized many areas where natural pools are rare or nonexistent****. Thus, the distribution of western spadefoot toads probably differs from historical conditions…*
>
> *…Historical versus Current Abundance. Patterns of abundance have been influenced substantially by human activities.* ***Wherever human activities have created ephemeral impoundments where natural pools are rare or absent, western spadefoot abundance is probably higher than in the past. Examples can be found in the Coast Ranges south of San Francisco Bay, which have an abundant supply of manmade stock tanks****, and in places along the eastern edge of the Great Valley and the nearby foothills, where a variety of human activities on the grazing lands have created breeding pools where suitable natural pools are rare or absent.*[11]

The observations document the shift in habitat use from natural vernal pools and other seasonal wetlands to artificial features such as stock ponds. This is true of the NorthLake site, where about 90-percent of the occupied habitat consists of an artificial stock pond and shows that creation of habitat for WST occurs inadvertently in a variety of settings. Thus, creation of suitable habitat for WST is not difficult in the proper setting with suitable soils and topography. Breeding habitat requirements are described by Morey:

> *Breeding habitat. Western spadefoot toads breed most frequently in temporary pools such as vernal playas, vernal pools, stock tanks, and pools that form at the base of road and railroad grades, but they occasionally breed in intermittent*

[11] Morey, Stephen. 2005. Western Spadefoot in Michael Lannoo (Ed). *Amphibian Declines: The Conservation Status of the United States Species*. Accessed online at: https://amphibiaweb.org/cgi/amphib_query?where-genus=Spea&where-species=hammondii.

streams where larvae develop in more or less isolated pools as the streams dry. In order to support metamorphosis, breeding pools must remain filled long enough to accommodate at least the minimum larval period—in nature about 30 d (days). There is almost always substantial mortality due to desiccation among larvae born in pools lasting fewer than 35 d (days) after the eggs are laid (Feaver, 1971; Morey, 1998). Nevertheless, it is not uncommon for western spadefoot toads to breed in pools that remain filled for only 3–4 wk, usually with unfortunate consequences for larvae. Feaver (1971), for example, observed the desiccation of entire cohorts of larvae in 17 of 23 vernal pools in the Central Valley (Fresno County).

Given these considerations, establishment of the ponds that hold water for a minimum of 60 days during normal rainfall years is the goal to ensure that the created ponds exhibit optimal conditions for persistence and maturation of WST larvae resulting in metamorphosis in most years when breeding occurs. A detailed discussion of WST ecology/biology is provided below.

A. Western Spadefoot Toad Ecology/Biology

The biology, life history, and ecological requirements of WST are relatively well known. This species has a narrow home range and often forms large aggregations around breeding sites that include a variety of shallow pool types, such as vernal pools, seasonal ponds and can include artificial basins and even road ruts. Specific adaptive traits that allow WST to utilize ephemeral pools for breeding also provides rationale for successful relocation of the species to created pool habitats. These traits include accelerated embryonic and larval development in rapidly drying temporary pools, a high tolerance to heat, and a broad food base for larvae and adults that includes many common invertebrate species. These and other aspects of its life history make WST highly vulnerable to local extinction, but also make WST an ideal candidate for inclusion in an adaptive management program, including a capture and release program.

1. Species Description

WST is a 1.5- to three-inch toad characterized by its relatively smooth skin, a dusky green or gray dorsum with tubercles tipped in orange, and a whitish venter without markings. WST is easily distinguished from other toad species in the south coast region by its pale gold eyes with a vertical elliptical pupil ("cat's eye"), teeth in their upper jaw, and the wedge-shaped spade found on each hind foot. Juvenile toads are similar to adults, but they often have more distinct spotting. The call of this toad is a coarse trill, but to some it sounds snore-like, lasts about one second, and is audible at great distances.

2. Habitat Ecology, Reproduction, and Natural History

WST occupy coastal sage scrub, chaparral, woodlands, grasslands or mixed grassland/sage scrub habitats associated with vernal pools and other ephemeral seasonal ponds. However, there is a strong selection for grassland habitats by WST.[12,13] WST have been shown to burrow in areas characterized

[12] Morey, S. 2000. Western Spadefoot (*Spea hammondii*). California Wildlife Habitat Relationships Systems, California Department of Fish and Wildlife.
[13] Baumberger, K. L., Eitzel, M. V., Kirby, M. E., & Horn, M. H. 2019. Movement and habitat selection of the western spadefoot (*Spea hammondii*) in southern California. PloS one, 14(10).

by non-native grass duff in the genera *Bromus* and *Avena.*[13] In addition to inhabiting vernal pools, WST will also occupy artificial features such as stock ponds, abandoned borrow sites, and other types of depressional areas created by activities such as construction or off-road vehicle use. The presence of vernal pools, rain pools, and other seasonal ponds are key to the survival of the species, which are essential for breeding and egg laying. In fact, their entire post-metamorphic home range is centered on such pools.

WST is almost entirely nocturnal and most above ground activity is restricted to rainy nights during the breeding season. Holland and Goodman (1998) note that breeding efforts are directly associated with rainfall.[14] After periods of warm rain (10 Celsius – 12.8 degrees Celsius), typically in late winter and early spring, WST emerge from burrows and often form large (>1,000 individuals) aggregations. The critical thermal minimum for WST is 9 degrees Celsius and this species waits until water temperatures are at least 10 degrees Celsius before laying eggs.[15,16] Breeding usually takes place between January and March, but WST may emerge and become surface active between October and April if rain thresholds are met.

WST enter the water only to breed. Water temperature is critical to breeding, and temperatures between 9 degrees Celsius and 30 degrees Celsius are required for WST to successfully reproduce.[17] The duration of standing water is also critical and must be present for approximately four or more weeks in order for the larvae to metamorphose.[18] Morey observed that successful metamorphosis occurred in pools that filled between 36 to 133 days; the fastest time he observed completion of larval development was 30 days.[19] The breeding pools must be free of fish, bullfrogs, and crayfish in order for WST to successfully reproduce and metamorphose. Holland and Goodman (1998)[14] also report that toads may use pools in riparian and stream habitats with suitable conditions for breeding, which are also free of exotic pests.

Eggs are deposited in irregular small clusters, about 25-30 centimeters in diameter, which are attached to vegetation or debris in shallow temporary pools or infrequently in ephemeral stream pools. Eggs usually hatch within six days, but hatching is also water temperature dependent.

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[14] Holland, D.C., and R.H. Goodman Jr. 1998. A guide to the amphibians and reptiles of MCB Camp Pendleton, San Diego County, California. Final report prepared for AC/S Environmental Security Resources Management Division under Contract M00681-94-0039.

[15] Brown, H.A. 1966. Temperature adaptation and evolutionary divergence in allopatric populations of the spadefoot toad, *Scaphiopus hammondii*. PhD Dissertation, University of California, Riverside, California.

[16] Brown, H.A. 1967. Embryonic temperature adaptations and genetic compatibility of two allopatric populations of the spadefoot toad, *Scaphiopus hammondii*. Evolution 21: 742-761.

[17] Newman, R.A. 1998. Ecological constraints on amphibian metamorphosis: interactions of temperature and larval density with responses to changing food level. Oecologia 115: 9-16.

[18] Feaver, P.E. 1971. Breeding pool selection and larval mortality of three California amphibians: *Ambystoma tigrinum californiense* Gray, *Hyla regilla* Baird and Girard, and *Scaphiopus hammondii* Girard. MA Thesis, Fresno State College, Fresno, California.

[19] Morey, S. R. 1996. Pool duration influences age and body mass at metamorphosis in the western spadefoot toad: implications for vernal pool conservation. Pp. 86-91. In: Witham, C., E. Bauder, D. Belk, W. Ferren, and R. Ornduff (editors). Ecology, conservation, and management of vernal pool ecosystems. Proceeding from a 1996 conference. California Native Plant Society, Sacramento, CA.

WST exhibit numerous adaptations to successfully breed in rapidly drying temporary pools, including rapid embryonic and larval development, cannibalism, a high tolerance to heat, and the production of growth inhibitors that affect other larvae.[14]

WST larvae consume detritus, plankton, and algae, but they are also carnivorous. WST tadpoles forage on dead vertebrates and many other invertebrates[20], including fairy shrimp, mosquito larvae, smaller tadpole species[21], butterfly and moth larvae, beetles, termites, ants,[22,23] crickets, flies, earthworms, and any other invertebrates that are small enough to swallow.[24,25,26] Complete larval development occurs rapidly, often within three weeks[14], but may take as long as 11 weeks in cooler conditions. The rate of development is controlled by water temperature, evaporation, and availability of food resources. Larvae subjected to water volume reduction (rapid drying) show significant acceleration of metamorphosis.[27] Individuals may take up to two years to mature.[28]

WST do not move far from breeding pools during the year,[29] where they remain in underground burrows for a relatively long period of dormancy (aestivation) for eight to nine months. The burrows are approximately one meter in depth. The soils associated with these burrows are usually hard and compact during the dry summer months[30] and often contain significant amounts of clay, or silt mixed with indurate layers of gravel or cobbles.

IV. WESTERN SPADEFOOT TOAD MITIGATION

BonTerra prepared a *DRAFT Western Spadefoot Relocation Program* (BonTerra Plan) dated September 2017. BonTerra incorporated the most up-to-date information regarding WST biology into the plan and included sound elements in the relocation program including such factors as pond design. As such, this plan incorporates the best aspects of the BonTerra Plan while proposing additional components to provide the optimal HMMP for the WST. As noted above, the focus of

[20] Bragg, A.N. 1964. Further study of predation and cannibalism in spadefoot tadpoles. Herpetologica 20: 17-24.
[21] Bragg, A.N. 1962. Predation on arthropods by spadefoot tadpoles. Herpetologica 18: 144.
[22] Dimmett, M. A., and R. Ruibal. 1980a. Exploitation of food resources by spadefoot toads *(Scaphiopu*s). Copeia 4: 854-862.
[23] Whitaker, J.O., D. Rubin, and J.R. Munsee. 1977. Observations on food habits of spadefoot toads, genus *Scaphiopus*. Herpetologica 33: 468-475.
[24] Stebbins, R.C. 1972. Amphibians and reptiles of California. California Natural History Guides (31). University of California Press, Berkeley, Los Angeles, London.
[25] Morey, S. R., and D. A. Guinn. 1992. Activity patterns, food habits, and changing abundance in a community of vernal pool amphibians. Pp. 149-158. *In*: D. F. Williams, S. Byrne, and T. A. Rado (editors), Endangered and sensitive species of the San Joaquin Valley, California: Their biology, management, and conservation. The California Energy Commission, Sacramento, California, and the Western Section of the Wildlife Society.
[26] Farrar, E.S., and J.D. Hey. 1997. Carnivorous spadefoot *(Spea bombifron*s) tadpoles and fairy shrimp in western Iowa. Journal of the Iowa Academy of Science 104: 4-7.
[27] Denver, R.J., N. Mirhadi, and M. Phillips. 1998. Adaptive plasticity in amphibian metamorphosis: response of *Scaphiopus hammondii* tadpoles to habitat dessication. Ecology 79: 1859-1872.
[28] Denver, R.J. 1998. Hormonal correlates of environmentally induced metamorphosis in the western spadefoot toad, *Scaphiopus hammondi*. General and Comparative Endocrinology 110: 326- 336.
[29] Zeiner, D. C., W. F. Laudenslayer, Jr., and K. E. Mayer (editors). 1988. California's wildlife. Volume I. Amphibians and reptiles. California Statewide Wildlife Habitat Relationships System, California Department of Fish and Game, Sacramento, California.
[30] Ruibal, R., L. Tevis, Jr., and V. Roig. 1969. The terrestrial ecology of the spadefoot toad *Scaphiopus hammondi*i. Copeia 3: 571-584.

this HMMP is on replacement of suitable habitat for WST through establishment of three seasonal pools with optimal hydrology. The proposed translocation of egg masses, larvae (tadpoles) and metamorphs during two average or above-average rainfall seasons from the impacted pools to established pools will ensure that the project impacts are fully mitigated.

A. Summary of Plan

This Plan proposes to relocate soils from the original breeding ponds affected by Project grading. The WST breeding pool habitat removed by the Project will be mitigated through the establishment of 1.07 acres of WST breeding pond habitat that is adjacent to larger areas of open space on NorthLake holdings and State-owned open space. An additional key component of the program is management of pools established for WST and adjacent upland aestivation habitats. Implementation of this program will ensure the long-term preservation of the species and its habitat. The mitigation program will be conducted under the direction of a qualified biologist with appropriate experience in habitat restoration, vernal pools, and knowledge of the ecology and life cycle of WST.

The key components of this mitigation creation plan include:

(1) identifying sites for potential WST pond establishment;
(2) identifying sites for clay salvage to be used in pool creation as needed;
(3) establishment of the 1.07 acres of WST breeding pond habitat within three ponds on the site (total acreage as opposed to number of ponds is all that is relevant);
(4) native revegetation along the perimeter of the ponds and the incorporation of a buffer area;
(5) implementation of a hydrological monitoring program to ensure that adequate ponding is present for optimal larval development in established pools;
(6) translocation of soil from the original breeding ponds and VP 6 to the created WST breeding ponds, and relocation of healthy egg masses, larvae, and/or metamorphs from the original breeding ponds to the created ponds for a minimum of two successful breeding cycles;
(7) enhancement of the aquatic and terrestrial environment surrounding the created ponds, including relocation of algal and invertebrate inoculum from the original breeding ponds to the mitigation pools that would provide a food base for WST larvae;
(8) measures to restrict public access from future unintended impacts/maintenance at the created pond site;
(9) measures to ensure the created ponds are suitable for foraging and breeding prior to salvage and translocation efforts; and
(10) implementation of a monitoring program, lasting up to ten years, that would track the progress of the mitigation project. The mitigation program will follow the general standards of practice for minimizing disease transmission among amphibians[31].

1. Identifying Sites for Pond Creation

The site selection process consisted of a site survey of the Project Site and adjacent areas under NorthLake ownership to determine if there was/were suitable location(s) for WST pond establishment. Suitable areas for seasonal pond creation were identified within NorthLake ownership. Specifically, suitable areas on terraces above Grasshopper Creek were identified

[31] Declining Amphibian Populations Task Force. 1998. The DAPTF fieldwork code of practice. Froglog 27.

downstream and beyond the southern boundary of the development within NorthLake ownership. The location of three ponds is depicted on Exhibits 5 and 6 and the grading for each of the ponds has been designed by the project civil engineer. The ponds will be constructed in open space and exhibit a minimum of 500-foot buffers from development, with buffers extending well beyond 1,000 feet as shown on Exhibit 6. Currently, a public trail/road extends along the northern edge of the proposed ponds. During grading of the ponds, the roads will be relocated to the north to provide a minimum of 20 feet between the ponds and road edge closest to the ponds. In addition, post-and-cable fencing will be placed between the public trail/road with appropriate signage to prevent access by the public into the ponds.

As part of site selection, this HMMP has identified specific sites(s)/area(s) that would be protected and depicts these site(s)/area(s) on accompanying exhibits. The plan specifies what resource(s) would occur/be protected in conserved site(s)/area(s) on Exhibit 9. The Santa Monica Mountains Conservancy (SMMC) will serve as landowner, land manager, and endowment holder for the Marple Canyon spiny rush preservation site. The Mountains Recreation and Conservation Authority (MRCA) will serve as the Conservation Easement (CE) Grantee. Likewise, the SMMC is a potential landowner, land manager, and endowment holder for the mitigation areas within NorthLake holdings, with the MRCA holding the CE (the applicant is also exploring other entities that meet the above requirements and as of yet, no decision has been made regarding the long-term management of NorthLake holdings where mitigation would be conducted). The plan provides specific information on how the Lead Agency would enforce the long-term protection and funding of mitigation lands.

2. Identifying Sources of Clay Onsite for Pool Creation

The project biologist will consult with the project's soils/geotechnical consultant to identify area of clay suitable for use in creating pool linings or bottoms to maximize water-holding capacity and thereby ensuring ponding durations sufficient to support WST as discussed in more detail under Section 5 below.

3. Pond Design and Creation Methods

The created ponds will be constructed as relatively deep seasonal ponds that would support ponding depths during average or above average rainfall years (30-42 inches of ponding)[32,33] with the ability to sustain the hydrology for sufficient durations (minimum of 60 days) to support the full WST lifecycle.

The mitigation program has incorporated design measures proven to be successful for relocating amphibian species that breed in seasonal ponds.[34,35] To ensure the created ponds have appropriate

[32] De Weese, J. Vernal pool construction monitoring methods and habitat replacement evaluation. Pp. 217-223 *in* Witham et al. (eds.) Ecology, conservation, and management of vernal pool ecosystems. California Native Plant Society, Sacramento.
[33] Rowe, C. and W. Dunson. 1993. Relationships among abiotic parameters and breeding effort by three amphibians in temporary wetlands of central Pennsylvania. Wetlands 13: 237-246.
[34] Weyrauch, S. and J. Amon. 2002. Relocation of amphibians to created seasonal ponds in southwestern Ohio. 2002. Ecological Restoration 20: 31-36.
[35] Biebighauser, T. 2003. A guide to creating vernal ponds. U.S. Forest Service, Morehead, KY.

hydrology for optimum fitness of WST, i.e., 60 days or longer, the ponds will be located within valleys, specifically on terraces with sufficient watershed that will naturally capture slope runoff to support adequate ponding. The terraces are well-above the flowline of Grasshopper Creek and are not subject to erosion or flooding from the stream. Each pond as determined during the design by the project engineer, exhibits a supporting watershed between seven and ten times larger than the created pond. As needed, berms will be constructed on the downstream or down-gradient perimeter of each pond to further enhance ponding potential. In addition, based on soils at the creation site, depicted on Exhibit 7, which is largely Sorrento loam, 2 – 5 percent slopes and also Castaic-Balcom silty clay loam, a clay layer would be installed reaching a depth of approximately 12 inches below the surface to create an impermeable layer to provide the necessary ponding duration. The clay liner will be a minimum of 12 inches thick and will extend beyond the ultimate perimeter of the created pond by roughly ten feet. The created ponds will exhibit a depth of up to 42 inches at maximum ponding depth.[36] Therefore, the created ponds will equal or exceed the habitat potential of the original breeding ponds by providing a longer and more consistent inundation period.

Grading will be conducted in a manner that will minimize disturbance to the surrounding landscape, native vegetation, and wildlife use of the mitigation site. The areas where the ponds would be created support a predominance of non-native grassland and do not support areas of native scrub or chaparral. Specifically, the areas where the ponds would be created consist of grasslands dominated by rip gut brome (*Bromus diandrus*), slender wild oats (*Avena barbata*) and hare barley (*Hordeum murinum leporinum*) and would most closely match the *Avena* spp. – *Bromus* spp. Herbaceous Semi-Natural Alliance: Wild oats and annual brome grasslands alliance in the Manual of California Vegetation.[37] Exhibit 8 includes vegetation cover in the areas of the proposed ponds and areas immediately adjacent. A biological monitor will be present on site to ensure that any adjacent native habitats or other sensitive biological resources will not be disturbed during project grading. Pond hydrology will rely entirely on seasonal precipitation and overland run off from the surrounding watershed.

In addition, project design will incorporate construction of low soil mounds adjacent to the ponds to provide easily accessible burrowing and aestivation habitats that will further enhance aestivation areas surrounding the pools. Areas for aestivation are necessary for the life cycle of WST and other amphibians associated with created ponds.[38,39] The mounds will be graded in a manner that does not reduce hydrological input to the pools from the surrounding watershed. Thus, sufficient space between the mounds will be provided to ensure that water is not blocked from entering the pools.

Prior to grading, the perimeter of the ponds will be clearly marked on the surface of the ground according to the appropriate micro-site design and size. A transit or other appropriate surveying instrument will be used to record elevations to 0.10 foot at various locations both inside and outside of the created ponds. Following the excavation and grading of the ponds, the excavated soil will

[36] The depths for Pond 1, Pond 2 and the Cattle Pond are provided in Table 4.
[37] https://vegetation.cnps.org/alliance/535
[38] Gibbons, J. 2003. Terrestrial habitat: A vital component for herpetofauna of isolated wetlands. Wetlands: 23: 630-635.
[39] Ruibal, R. et al. 1969. The terrestrial ecology of the spadefoot toad, *Scaphiopus hammondi*i. Copeia 3: 571-584.

be used to construct WST burrowing habitat in the form of elongate soil mounds that will extend the length of the pond and will be approximately two to three feet in height.

If grading occurs within the nesting bird season, a qualified biologist will conduct a nesting bird survey within three days of grading, and if no active nests are located within 150 feet of the grading boundary, work may proceed. These surveys shall include the areas within 300 feet of the edge of the grading areas.

Following completion of grading, which will relocate the trails to the north as noted above [depicted on Exhibit 5], fencing will be installed to prevent public access and would consist of three-strand post and cable fencing. Signage would also be installed on the fencing to notice the public that the pools support special-status species that are protected under state law.

4. Native Revegetation

Native revegetation of the perimeter of the ponds shall provide species diversity and composition consistent with mixed grassland/sage scrub habitat surrounding the original breeding ponds. All species in the plant palette are native to the site and the soils on the site are suitable for the plant palette. As depicted on Exhibit 7, the areas around the ponds where the small-flowered filaree and paniculate tarplant would be planted consist of a mix of the Sorrento loam and Castaic Balcom clay loam, both of which would be suitable for paniculate tarplant with the California macrophyla occurring on the Castaic Balcom clay loam. Because the original breeding ponds do not exhibit a tree canopy, no tree canopy is proposed for the area around the mitigation pools. It is also important to note that the revegetation program is not required mitigation for impacts to specific vegetation alliances and reference sites are not proposed. Rather, the plant palette and performance standards were selected to ensure that the proposed native habitat would enhance WST foraging and nearby aestivation areas with vegetation components typical of upland areas occupied by WST within the region. The proposed plant palette is not an exact analog for vegetation alliances on the site; rather consist of native scrub and grassland species common on the site and are known to perform well in revegetation efforts.

The revegetation area shall be seeded and planted with container stock and will extend between 15 and 50 feet around the edge of the created ponds (based on site conditions) to provide non-breeding season habitat for WST, with the container stock located near the edge of the planting zone to protect the pools from deep rooted species. The seed palette shall not include any woody riparian trees or large shrubs as they grow deep root systems that may weaken the clay liner (if needed) and cause ponding failure over time should such species colonize the pools. As WST utilizes non-native grasses and duff as habitat, complete removal of non-native grasses shall not be necessary beyond that which occurs during grading needed as a part of this mitigation program and subsequent weeding during the five-year maintenance period. For the 15-to 50-foot revegetation area, the seed mix will be selectively applied around the perimeter of the created ponds in areas of habitat that requires enhancement. Habitat requiring enhancement shall be defined as areas of low or no cover by native species or areas where vegetation was removed during grading. The Project Biologist shall determine these areas of undesirable habitat within the 15- to 50-foot buffer for each pond establishment area prior to seed installation to determine the areas subject to revegetation. Due to variation in seed and container stock availability, seeding rates and quantities as well as container stock may be adjusted at the time of mitigation

implementation under the discretion of the Project Biologist. A sample container stock and seed palette is outlined in Table 4 below. Seed and container stock will be sourced from onsite or from areas of north Los Angeles County. Performance Standards for the revegetation areas around the ponds are provided below and were determined based on milestones to be achieved to meet the final five-year goal of 70-percent cover by native species. As noted, with the approach, it will not be necessary to rely on reference sites in order to provide suitable upland habitat for WST.

a. Monitoring Plan for Grassland and Scrub Revegetation Areas

First-Year Monitoring

Success Standard: A minimum of 30-percent coverage by native species;
100-percent of proposed canopy species present;
50-percent of proposed understory present
No greater than 40-percent coverage by non-native species.

Second-Year Monitoring

Success Standard: A minimum of 40-percent coverage by native species;
100-percent of proposed canopy species present
60-percent of proposed understory present
No greater than 30- percent coverage by non-native species.

Third-Year Monitoring

Success Standard: A minimum of 50-percent coverage by native species;
100-percent of proposed canopy species present
60-percent of proposed understory present
No greater than 20- percent coverage by non-native species.

Fourth-Year Monitoring

Success Standard: A minimum of 60-percent coverage by native species;
100-percent of proposed canopy species present
75-percent of proposed understory present
No greater than 10- percent coverage by non-native species.

Fifth-Year Monitoring

Success Standard: A minimum of 70-percent coverage by native species;
100-percent of proposed canopy species present
85-percent of proposed understory present
No greater than 5- percent coverage by non-native species with zero tolerance for species considered highly invasive by Cal-IPC.

TABLE 5
Sample Container Stock and Seed Palette

Botanic Name	**Common Name**	
Canopy Container Stock (one-gallon containers)		**Plants/Acre**
Artemisia californica	California sagebrush	100
Eriogonum fasciculatum	California buckwheat	100

Salvia leucophylla	Purple sage	50
Salvia mellifera	Black sage	50
	Container Stock Total	**300**
Understory Seed Mix		**Lbs/Acre**
Acmispon glaber	Deerweed	0.5
Corethrogyne filaginifolia	Common sandaster	4.0
Croton setiger	Turkey-mullein	4.5
Deinandra fasciculata	Clustered tarweed	3.0
Eriogonum fasciculatum	California buckwheat	2.0
Festuca microstachys	Small fescue	2.0
Hordeum brachyantherum	Meadow barley	2.0
Stipa pulchra	Purple needlegrass	2.0
Stipa lepida	Foothill needlegrass	0.5
	Total Seed	**20.5**

5. Hydrological Monitoring Program

Following completion of grading of the created pools, they will be monitored during the first rainy season, following construction and must exhibit ponding for a minimum of 60 days during an average or above-average rainfall season before eggs, larvae, and/or metamorphs can be translocated from the impact pools. The rainy season in California generally ranges from October through April. Due to the high variability of rainfall in California, the monitoring period may be shifted from year to year depending on the actual occurrence of rainfall. Hydrological monitoring will occur following the first rainfall event of one inch or greater in a 24-hour period. Visits will be conducted at each pond following storm events of one inch or greater during a 24-hour period. Subsequent visits shall occur on a weekly basis until no ponding is observed (because these systems are dynamic, each pond is treated separately). Air and water temperature, pH, specific conductance, general turbidity, and aquatic invertebrates observed in the ponds will also be sampled at regular intervals. During drought conditions or years where rainfall amounts are below average, hydrology would be augmented through introduction of potable water that would be added to the ponds via water trucks. Where this occurs, the ponds would be filled to the capacity typical of a normal rainfall year to determine whether the ponds are capable sustained ponding for the 60-day minimum period required before translocation can occur.

Permanent stations for photo-documentation will be established during the first monitoring event. Photos shall be taken each monitoring period from the same vantage point and in the same direction each year and shall reflect the progress of the mitigation effort.

6. Translocation of Western Spadefoot Toad Eggs, Larvae, and/or Metamorphs

The original breeding ponds were last surveyed in 2014 and surveys will be conducted for two years, during average or above average rainfall years, for presence of WST eggs, larvae, and/or metamorphs prior to grading within 1,000 feet of the breeding ponds. During these two survey seasons, data will be collected regarding the number of egg masses, larvae, metamorphs and adults

for use in refining the translocation component of the program. Once the hydrological performance standard has been achieved, translocation of eggs, larvae and metamorphs can occur. In the event WST eggs, larvae, and/or metamorphs are detected once WST ponds are constructed and hydrology performance standards achieved, the translocation program would be conducted such that egg masses, larvae, and/or metamorphs are relocated in a manner that ensures the highest probability of success. This would include even distribution of egg masses, larvae and metamorphs among the three created ponds (given that the area of the created ponds exceeds that of the impacted ponds, even distribution would ensure that overcrowding does not occur in the created pools). Translocation events shall occur for a minimum of two successful breeding cycles to ensure that no further translocation events are warranted. Specifically, translocation efforts over two or more years would ensure that egg masses and larvae from WST that are aestivating in earlier seasons would be captured. The goal of the program is to translocate the vast majority of egg masses, larvae and metamorprhs during the two (or more years) that the translocation is conducted. Egg masses, larvae, and/or metamorphs would be collected from the original breeding ponds using a dip-net, placed into a sterile bucket, and immediately translocated to the created ponds. Equipment used for WST translocation will be sterilized prior to each translocation event to prevent the spread of disease. A drift fence and pit-trap array would be utilized adjacent to the original breeding ponds to capture any potential WST adults to be translocated to the created ponds.

Biological systems are highly dynamic and because the ephemeral/seasonal ponds used for breeding by WST can vary dramatically from year to year or even from rainfall event to rainfall event, the Project Biologist will have discretion as set forth below in implementation of the mitigation program. Emphasis will be placed on monitoring the created ponds in concert with the original breeding ponds and to implement the relocation in a manner that ensures the highest potential for long-term success as described above. Due to the variable nature of winter and spring storm systems, it is possible that rainfall totals from the same storm can vary significantly over a limited area such that ponds that exhibited extensive ponding during previous monitoring may show substantially reduced ponding while other ponds have filled. The Project Biologist will have discretion to make in-field decisions based on expertise and experience to ensure the highest probability of success. An example of such discretion would be in a case where the original breeding ponds are drying down very quickly after eggs are laid or when the larvae are very small. In such an instance, it may be necessary to collect all of the eggs and larvae and relocate them before the pond dries down and the opportunity for relocation of WST eggs and/or larvae is lost. Translocation of WST from the original breeding ponds to the created ponds may occur during the entire mitigation program, provided the original breeding ponds have not been impacted by project development.

Because there is good access to the Stock Pond, if determined necessary by the Project Biologist, potable water could be added as noted above by water truck to extend ponding duration, thereby extending the period wherein collection could occur, which in turn would maximize the number of egg masses, larvae, and metamorphs that would be translocated. Similarly, should the created ponds require augmented hydrology due to low rainfall conditions, such augmentation of the hydrology for the created ponds would occur.

7. Inoculum Collection

A flat-end shovel, or similar instrument will be used to carefully scrape intact areas of the existing ponds prior to grading consisting of about a 3 cm thick of the surface layer biomass from the original breeding ponds. Inoculum will be placed in boxes and relocated to the created ponds that have met the appropriate hydrologic parameters. The inoculum will be evenly spread by hand and then lightly raked into the soil surface of the ponds using the flat end of the rake.

8. Pond Creation Habitat Suitability

The created ponds shall demonstrate the ability to support foraging and breeding habitat prior to any salvage efforts. Following the completion of grading and installation of the clay liner, the ponds shall be artificially filled with water and monitored on a weekly basis to determine if they support ponding periods of 60 days or longer. Alternatively, if pond creation is completed four weeks prior to the first rain event of the year, the ponds shall instead be filled through natural means and monitored on a weekly basis to determine the ponding duration.

These created ponds will be constructed to function as seasonal features, with no connectivity to a permanent water source. Ponding durations of a maximum of five months are expected to occur during only above-average rainfall years, and ponds would remain dry throughout the remainder of the year. Seasonal ponds do not support WST predators, including fish, bullfrogs, and crayfish that require perennial water for survival. Therefore, these created ponds will not support predators of WST egg masses and/or metamorphs.

9. Responsible Parties for Project Implementation

Applicant: Woodridge Capital Partners, LLC
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Los Angeles, CA 90067
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Preparers of Plan: Glenn Lukos Associates, Inc.
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10. Annual Presence/Absence Surveys

Annual presence/absence surveys for other potential on-site breeding habitat areas shall be conducted at an appropriate time of year as determined by the Project Biologist.

11. Ten-Year Monitoring Period

A ten-year monitoring program, as described in detail below, shall commence following the completion of pond creation and initial WST/Inoculum translocation event.

12. Schedule

Grading of the created ponds and associated watershed will occur outside the rainy season and outside the avian nesting season and thus would occur between August 15 and October 15. Hydrology monitoring to ensure that the ponds hold water for at least 60 days during an average or above-average rainfall year will begin at the start of the rainy season that immediately follows grading of the created ponds. Monitoring of the existing pools for WST egg masses and larvae, will be conducted concurrently with the hydrology monitoring of the created pools. Grading of the ponds to be impacted cannot be initiated until it has been demonstrated that the created pools have successfully achieved the hydrology performance standards and egg masses and/or larvae have been successfully translocated to the creation ponds. Table 5 below provides a conceptual schedule for grading of the mitigation pool with the associated components to ultimately transfer WST larvae and egg masses from impact ponds to created ponds. As described in the Performance Standard subsections below, it will be necessary to meet hydrology performance standards before WST can be translocated and the existing pools can be subject to impacts. Very low or low rainfall years could prevent performance standard achievement for hydrology, which in turn could result in schedule delays.

Table 6: Conceptual Schedule for Pond Creation Milestones

Activity	Timeline
Identify Site and Prepare Grading Plans	Completed
Identify Areas of Clay Soils	Complete before Grading
Grade and Create 1.07 acres of Mitigation WST Ponds	Summer/Fall Year 1
Revegetate Pond Perimeter of Created Ponds	Fall/Winter Year 1
• Monitor Revegetation Area	Year 1 – Spring
• Monitor Revegetation Area	Year 2 – Spring
• Monitor Revegetation Area	Year 3 – Spring
• Monitor Revegetation Area	Year 4 – Spring
• Monitor Revegetation Area	Year 5 – Spring
Initiate Hydrology Monitoring of Created Ponds	Winter/Spring Year 1
Continue Hydrology Monitoring of Created Ponds	Winter/Spring Year 2
Initiate Inoculum Collection from Impact Ponds	Summer/Fall Year 1
Continue Inoculum Collection	Summer/Fall Year 2
Introduce Inoculum to Ponds (Assumes Successful Hydrology)	Summer/Fall Year 2
Continue Inoculum Transfer to Ponds	Summer Year 3
Initiate WST Transfer (Assumes Successful Hydrology)	Winter/Spring Year 3
Initiate WST Transfer (Assumes Successful Hydrology)	Winter/Spring Year 4
Document success of initial first year WST Transfer	Spring Year 4

Document success of second year WST Transfer and successful breeding as discussed below.	Spring Year 5
Grading of Impact Pools to Occur at this Milestone (Fall Year 5)	
• Monitor Pools for WST (Initiate following two seasons of successful transfer)	Year 6 – Spring
• Monitor Pools for WST	Year 7 – Spring
• Monitor Pools for WST	Year 8 – Spring
• Monitor Pools for WST	Year 9 – Spring
• Monitor Pools for WST	Year 10 – Spring
• Monitor Pools for WST	Year 11 – Spring
• Monitor Pools for WST	Year 12 – Spring
• Monitor Pools for WST	Year 13 – Spring
• Monitor Pools for WST	Year 14 – Spring
• Monitor Pools for WST	Year 15 – Spring

VII. PERFORMANCE STANDARDS

Following creation of the ponds, confirmation of hydrology performance standards and translocation of inoculum (and WST, including egg masses, larvae, and adults as available), surveys will be performed each year for ten years to determine habitat suitability and presence of WST. Translocation of WST shall occur for a minimum of two successful breeding cycles to ensure that no further translocation events are warranted. Translocation efforts shall be conducted at an appropriate time of year when WST is most likely to be present. As needed, potable water may be used to augment natural hydrology during lower-than-average rainfall years to maximize establishment of the translocated populations. It is likely that during any five-year period in southern California at least two of those years will lack rainfall patterns and intensity to allow for ponding or ponding of sufficient duration sufficient for successful reproduction of WST, thus the need for augmented water in the created ponds. If the performance standards are not achieved by the end of the monitoring period, monitoring will be continued until performance standards are achieved.

A. Ten-Year Monitoring Program

Monitoring of hydrology and WST will begin during the rainy season (generally occurring between October and April) and will be initiated after the first rainfall event of one inch or greater in a 24-hour period during the first rainfall season following pond creation. Visits will be conducted at each pond following storm events of one inch or greater during a 24-hour period until no ponding is observed (because these systems are dynamic, each pond is treated separately). Once a pond retains water, it will be visited weekly until ponding is no longer observed. The following data will be recorded during each weekly visit: depth of surface water in pond, aerial extent of ponding, qualitative observations of pond utilization by WST (if any), estimates of WST egg masses, larvae, and/or metamorphs populations (if any), presence of emergent vegetation, presence of algae, fairy shrimp, water temperature, and electroconductivity. As noted, hydrology may be augmented using potable water to extend ponding duration (and depth) during lower-than average rainfall years, to maximize reproduction and overall population size. At the end of the monitoring period, the data from the ponds

will be combined and evaluated. In instances where rainfall for any year meets or exceeds the average rainfall +/- 25 percent (15-25 inches), then the following performance standards will be evaluated:

1. Hydrological Monitoring/Performance Standard

As noted above, hydrological monitoring will be conducted prior to translocation of inoculum, WST egg masses, tadpoles/larvae and metamorphs. As noted, the created ponds must hold water for a minimum of 60 days during an average rainfall year prior to translocation activities. Hydrological monitoring will also continue as part of the regular ten-year monitoring program is initiated. During each season following the first rain event of one inch or greater, each created pond will be monitored for ponding, including depth, extent, with duration to be calculated as the season continues. Hydrology augmentation may occur at the direction of the Project Biologist to maximize the potential for success. This will allow for documentation of maximum depth, extent and duration of ponding for each created pond. As noted above, during each monitoring visit, air and water temperature, pH, specific conductance, general turbidity, and aquatic invertebrates observed in the ponds will also be recorded.

***Performance Standard*:** Ponding duration of at least 60 days must be documented to occur during average or above average rainfall years prior to translocation of egg masses, larvae, metamorphs, or adults. Ponding duration of at least 60 days must also be documented during the 10-year monitoring period. At the end of the ten-year monitoring period, this performance standard will have been achieved if ponding duration equals or exceeds ponding duration of 60 days during average or above-average rainfall years. It is important to note that during below-average rainfall years, depending on the severity of drought conditions that the created ponds will not pond for sufficient duration to allow WST to reach maturity. Thus, during the ten-year monitoring period, it is to be expected that some years will not pond for 60 days. Nevertheless, the performance standard for hydrology will be considered achieved as long a ponding for 60 days occurs during average rainfall years. Finally, as noted, hydrology may be augmented at the direction of the Project Biologist, especially once breeding is observed and is threatened by declining water levels in the pools due to lower-than average rainfall. In the event that the Project Biologist determines that additional water should be added to any pond occupied by egg masses or larvae, it will be necessary to ensure protection of the egg masses and larvae by discharging water to the pool(s) in a manner that does not disturb the egg masses or larvae and does not result in the erosion of soil into the pool(s). This could be accomplished through temporary placement of large gravel at the discharge site (at the edge of the pool(s)) underlain by plastic that would allow the water to enter the pool(s) slowly and with no sediment.

2. Monitoring for Breeding WST

During each monitoring visit that detects ponding of at least six inches, the ponds will be surveyed for signs of WST breeding which would be indicated by the presence of WST egg masses and/or WST tadpoles. It is important to note, that following translocation of egg masses and larvae it will be necessary for metamorphs to emerge and reach adulthood for future breeding years. Thus, during the monitoring events following translocation, it will be necessary to document emergence of metamorphs, which will be required to ensure breeding in subsequent years. Site grading of the impacted pools may not occur until successful breeding has been documented in at least two of the three created ponds. Successful breeding would be determined by the presence of egg masses that are not present due to translocation but which occur due to reproduction.

***Performance Standard Prior to Grading*:** Prior to Project grading that removes the impacted doner pools, during an average or above-average rainfall year, at least two of three of the created ponds within the pond complex exhibits emergence of metamorphs in each pond to ensure breeding in subsequent years. As noted, Successful breeding would be determined by the presence of egg masses that are not present due to translocation but which occur due to reproduction. Should this occur during a below-average rainfall year, the condition would be satisfied as it would show that the pools are performing as intended. In any case, data regarding successful breeding will be submitted to CDFW for concurrence that sufficient reproduction has occurred to allow impacts to the pools in the development area.

***Performance Standard Post-Grading*:** Following Project grading that removes the impacted donor pools, during an average or above-average rainfall year, at least two of the three created ponds within the pond complex will exhibits breeding as indicated by the presence of WST egg masses, tadpoles/larvae/ or metamorphs, to confirm establishment of breeding WST for each pond complex created. Should this occur during a below-average rainfall year, the condition would be satisfied as it would show that the pools are performing as intended.

VII. ANNUAL MONITORING REPORT

An annual report will be prepared and submitted by December 31st of each calendar year to the County of Los Angeles and CDFW. The annual report will provide a detailed description of mitigation activities, qualitative and quantitative monitoring data related to performance standards, weather conditions, problems encountered, and any remedial measures. These reports will also include the following:

- List of names, titles, and companies of all persons who prepared the content of the annual report and participated in monitoring activities for that year;
- Qualitative monitoring data including site conditions and species observations;
- Copies of monitoring photographs;
- Vicinity map indicating location of WST Mitigation Site; and
- Maps identifying monitoring areas, transects, seeding zones, etc. as appropriate.

VII. CONTINGENCY MEASURES

A. Initiating Procedures

If a performance standard is not met for all or any portion of the mitigation project in any monitoring year, or if the approved success criteria are not met, the Project Biologist will prepare an analysis of the cause(s) of failure and, if determined necessary by CDFW and/or the County of Los Angeles, propose remedial actions for approval. If the mitigation site has not met one or more of the success criteria or performance standards, the responsible party's maintenance and monitoring obligations shall continue until CDFW and the County of Los Angeles gives final approval that the mitigation obligations have been satisfied.

B. Contingency Mitigation

Although this Plan is expected to be successful, two options are possible, including remediation of the existing pools should they not hold water for sufficient duration, which could include re-installation of the clay liner and/or increasing pool depths. The second option would include alternative location(s) that may be used in the event that any of the proposed areas do not achieve success criteria. Should the proposed plan not be successful for some unanticipated reason, there are nearby sites which can be utilized as replacement site(as) such that the mitigation criteria are fulfilled. Such sites would be presented to the County and CDFW for concurrence prior to utilization. BonTerra identified potential WST pond locations at the north end of the Project Site that could accommodate 0.52 acre of WST habitat.[40] Other potential areas include nearby Marple Canyon which GLA previously identified as a location where up to one acre of seasonal pool habitat could be created.

C. Compensation for Temporal Loss

Should contingency mitigation be required, the Project Biologist will implement measures to compensate for temporal loss of the habitat that has failed. As described above, the proposed plan includes creation of three ponds that would account for 1.07 acres within three ponds and should one or more of the ponds fail, in order to address temporal loss, the replacement ratio would be 1.5 to one (1.5:1) for any of the three ponds that failed to meet performance standards, which can be accommodated in the contingency mitigation sites noted above that provide for approximately 1.5 acres ensuring that an approximate 1.5:1 ratio is achieved.

VIII. RATIONALE FOR EXPECTING SUCCESS

As noted in the introductory comments and associated quotations in Section III above, WST has shifted habitat use in portions of California from vernal pools to artificial ponds such as stock ponds and other ponding features of anthropogenic origin, many of which have created WST breeding areas quite by accident. As such, any assertions that it is difficult to create ponds that are suitable for WST breeding are not necessarily accurate. This is not to discount that attempts to create suitable breeding habitat for WST can fail, because some do fail where they are not properly constructed. GLA has been involved in WST habitat creation projects that have been successful and provide an example of one such effort that has been well-studied since the seasonal ponds were created in 2005 and 2006 on Irvine Mesa in an area known as East Orange which is now part of the Orange County Central Coastal NCCP/HCP Reserve. The 15 created pools overall achieved performance standards after six years of monitoring and included breeding WST in eight of the pools as of the 2009/2010 rainfall season.[41] It is important to note that the performance standards included a number of components that were focused on the quality of the created pools and included hydroperiod (length of ponding) as it was recognized that this is clearly the most critical component of WST pond creation. Presence of fairy

[40] BonTerra. September 2017.*DRAFT* Western Spadefoot Relocation Program. NorthLake Specific Plan Residential Development Project Los Angeles County, California

[41] Glenn Lukos Associates. September 23, 2010. East Orange Planned Community (EOPC) 6th Annual Translocation and Monitoring Report for the Western Spadefoot Toad (*Spea hammondii*). Prepared for the Irvine Company.

shrimp, a common food source for WST larvae were an important pool component and these along with the egg masses and larvae were introduced from the impact pools to the created pools. It was understood that pools with the proper characteristics would ultimately support WST. Thus, as noted below, the results of follow-up studies conducted up to seven years following completion of the initial program, showed that WST had expanded to 12 pools within the 15-pool complex as outlined below.

Follow-up studies conducted in 2016 during a drought found WST breeding in 12 of the 14 pools[42] as reported by Baumberger et al. 2020:

> Twelve of the 14 mitigation pools at Irvine Mesa held water for >30 d. During our 2016 surveys, two of the mitigation pools built by Glenn Lukos Associates, Inc. merged (Pools 5 and 9) and we considered them as one pool (Pool 9). We detected *S. hammondii* tadpoles in eight of the Irvine Mesa mitigation pools but documented successful breeding through metamorphosis at only seven of these pools in April 2016 due to desiccation and/or water quality[43]

Thus, even in a drought year the pools exhibited sufficient ponding for breeding, though as is often the case for WST in such years, desiccation resulted in the loss of many tadpoles. The following rainfall season, 2016/2017 was an above-average rainfall year and resulted in optimal ponding durations for the WST. During the 2017 monitoring it was determined that 12 of the pools supported tadpoles or metamorphs with fairy shrimp in all the pools and extensive breeding was present.[44] An important insight comes from these observations: if properly constructed, with sufficient water holding capacity, ponding duration, and food sources, once established, WST will increase in such ponds until a level of equilibrium is achieved (i.e., self-sustaining population), and the pools arrive at their carrying capacity. Thus, it is not necessary to achieve occupancy of all pools in a pool complex in the short term (*e.g.*, five or even ten years) providing the pools exhibit ponding durations needed for the complete reproductive cycle for WST.

In addition to the successful WST translocation efforts summarized above, WST pools have been successfully created in the Santa Clarita Area, specifically at the Former Whittaker-Bermite Facility in the City of Santa Clarita site as reported by Psomas as reported in the final annual monitoring report.[45] Psomas reported the successful translocation of approximately 184 egg masses, 478 tadpoles, and 27 adult western spadefoots were translocated from OU3/Area 14 Primary and OU2/Area 25 Basins to OU2/Areas 28 and 36, OU2/Areas 1 (OU6) and 1A-South, OU3/Area 14 Secondary, and OU5/Area 11 Basins. The egg masses averaged 15 to 30 eggs per mass, and tadpoles were all small (1cm to 3cm) in length.

---

[42] As noted by Baumberger in the excerpt from the 2020 report, Pools 5 and 9 merged and were considered a single pool explaining the difference between 14 or 15 pools that were created.

[43] Baumberger, Katherine L.; Backlin, Adam R.; Gallegos, Elizabeth A.; Hitchcock, Cynthia J.; and Fisher, Robert (2020) "Mitigation Ponds Offer Drought Resiliency for Western Spadefoot (Spea hammondii) Populations," *Bulletin of the Southern California Academy of Sciences*: Vol. 119: Iss. 1. Pp. 5-6.

[44] The Nature Conservancy. 2017. Western Spadefoot (*Spea hammondii*) Breeding Assessment for East Orange, Irvine Mesa, and Shoestring Canyon, Orange County, California, 2017. Unpublished Report.

[45] Results of the Western Spadefoot Pre-Activity Clearance Surveys and Translocation Efforts on the Former Whittaker-Bermite Facility in the City of Santa Clarita, Los Angeles County, California (Streambed Alteration Agreement No. 1600-2010-0366-R5)

IX. PROPOSED MITIGATION MEASURE

The originally approved WST mitigation measure is as follows:

MM 5.2-9 A relocation program for western spadefoot toad shall be conducted prior to construction during the spring at the height of the breeding season for this species (February through May, or as determined by a qualified Biologist monitoring a known location of this species). A detailed methodology for this effort shall be reviewed by the CDFW and the LACDRP prior to implementation of the relocation program. Results of the relocation program shall be provided to the CDFW and the LACDRP.

> • Prior to implementing the Spadefoot Relocation Plan, a focused survey will be conducted within the prior appropriate season. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e., 2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied pond [sic] as well as others.
> • The intent of the Relocation Plan is to capture and relocate as many western spadefoot toads as possible. Western spadefoot toads shall be relocated on or off site to an area of suitable habitat, as reviewed by the CDFW and the LACDRP. The relocation site shall be of similar (or better) quality as the habitat within the project impact area where the western spadefoot toads are captured. If no suitable habitat is available for the relocation, suitable habitat shall be created.

Mitigation Measure 5.2-9 is recommended to be modified as follows:

MM 5.2-9 A mitigation program for western spadefoot toad (WST) shall be implemented prior to construction, ground disturbance, or vegetation removal that would impact the WST breeding habitat, or areas within 1,000 feet of WST-occupied ponds within the Project site. The mitigation program would include the components set forth below. A detailed methodology for this effort shall be reviewed by the CDFW and the LACDRP prior to implementation of the mitigation program. Results of the mitigation program shall be provided to the CDFW and the LACDRP.

> • Prior to implementing the Spadefoot Relocation Plan, two focused surveys during average or above-average rainfall years will be conducted within the prior appropriate seasons. If any additional ephemeral ponds are determined to be occupied besides those identified in recent surveys (i.e., 2015), the Spadefoot Relocation Plan will be modified to include replacement of the additional occupied ponds as well as those identified in recent surveys.
>
> • Suitable sites for seasonal pond creation, within the Project open space, specifically within other NorthLake owned properties, have been identified and 1.07 acres of seasonal pond habitat will be created. The specific location of the 1.07-acre pool complex is depicted on Exhibit 5 of the NorthLake Castaic, Los Angeles County, California, Western Spadefoot Toad Impact Assessment and Habitat Mitigation and Monitoring Plan July 2022 (Revised March and June 2023) (HMMP). As described in the WST Mitigation Implementation Plan, three based

on current grading plans. The size of the three pools (1.07 acres) exceeds the maximum combined size of potential WST habitat currently at the Project Site (0.95 acres, as shown in Table 4, above). The WST Mitigation Implementation Plan would address the following issues specific to the site or sites:

- Soil Characteristics and whether clay liner will be necessary
- Pool locations and site access routes for construction
- Types of habitat potentially affected by construction and measures to restore damaged subject to temporary impacts
- Watershed size and characteristics
- Grading plan with cross section for each pool to be created
- Specifications for clay liner (if needed) including source of clay and installation methods
- Upland habitat characteristics, including soil suitability for burrowing and vegetative buffer, will also be addressed in the plan

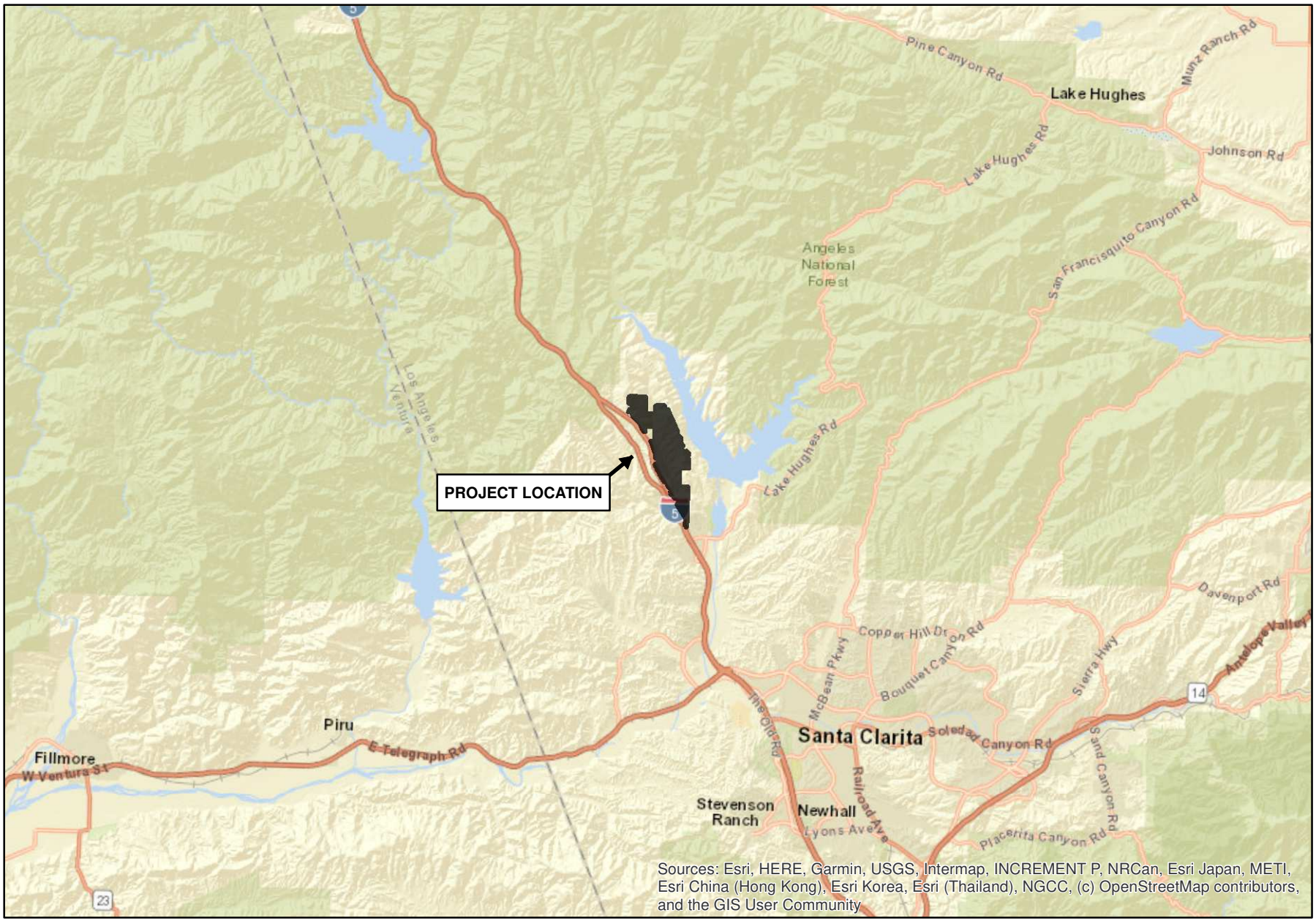
• Following creation of the 1.07-acre pool complex or complexes and prior to grading of the impacted pools, each pool within each complex will be monitored during the rainy season to ensure that the created pools exhibit at least 60 days of ponding during an average or above-average rainfall year.

• Following documentation of adequate ponding for each created pool during an average or above-average rainfall year, and prior to grading of the impacted pools, soil inoculum from the impacted pools will be translocated to the created pools to provide a food source for WST.

• Following documentation of adequate ponding for each created pool during an average or above-average rainfall year, and prior to grading of the impacted pools, WST egg masses, larvae and metamorphs will be translocated to the created pools for at least two wet seasons where WST egg masses, larvae and metamorphs are present in the impact pools and suitable conditions to receive the WST egg masses, larvae and metamorphs are present in the created pools. In addition, data regarding successful breeding will be submitted to CDFW for concurrence that sufficient reproduction has occurred to allow impacts to the pools in the development area.

• During grading of the pools to be impacted, the Project Biologist will be present to rescue any adult WST that would be relocated to the created pool complex.

• Following the two seasons of translocation of WST egg masses, larvae and metamorphs, and successful breeding, the created pools will be monitored for ten years to document the progression of the WST toward the performance standards provided in the WST HMMP prepared for the Project.



Source: ESRI World Street Map

N

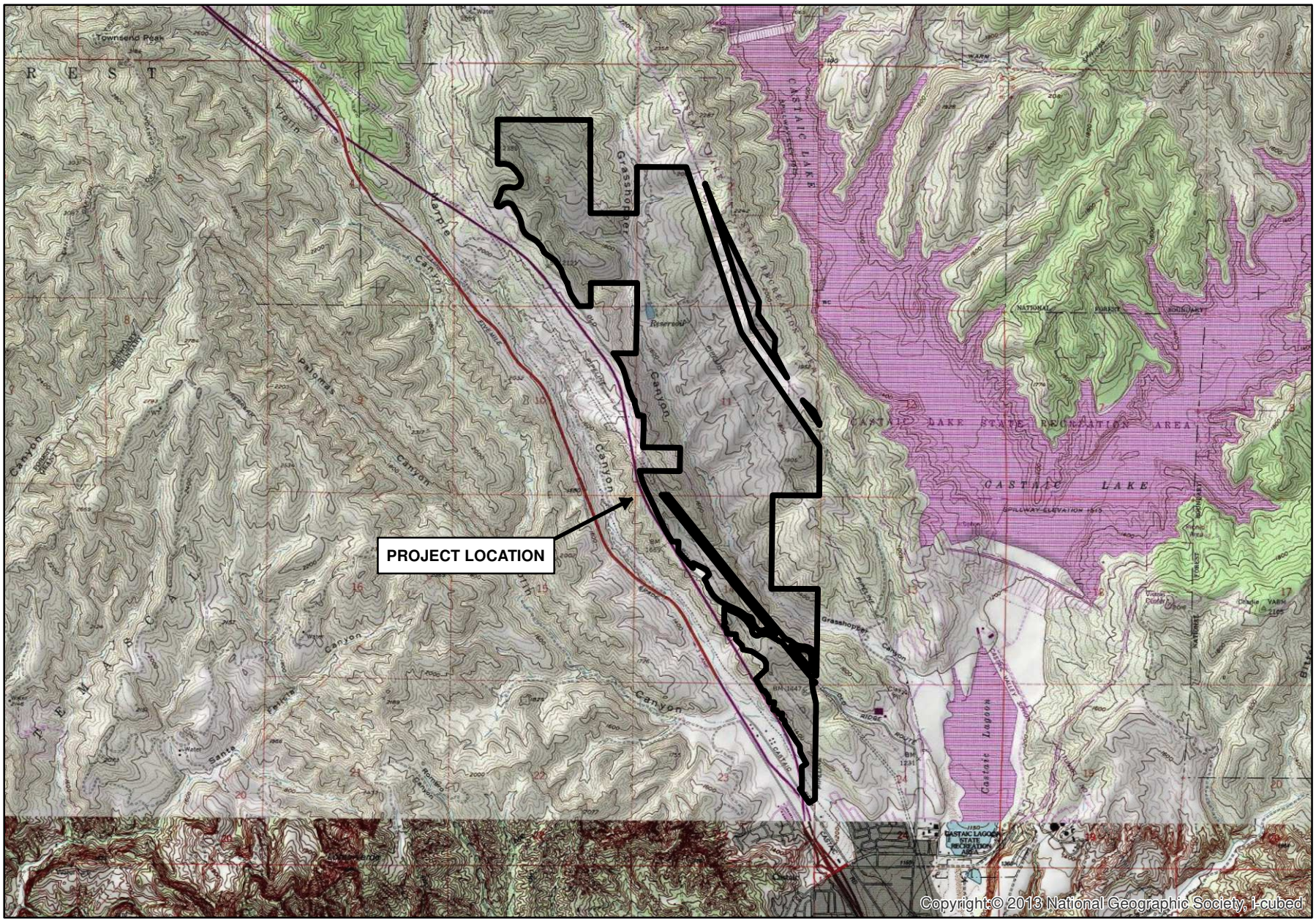
0 2 4 8 Miles

NORTHLAKE SPECIFIC PLAN

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1

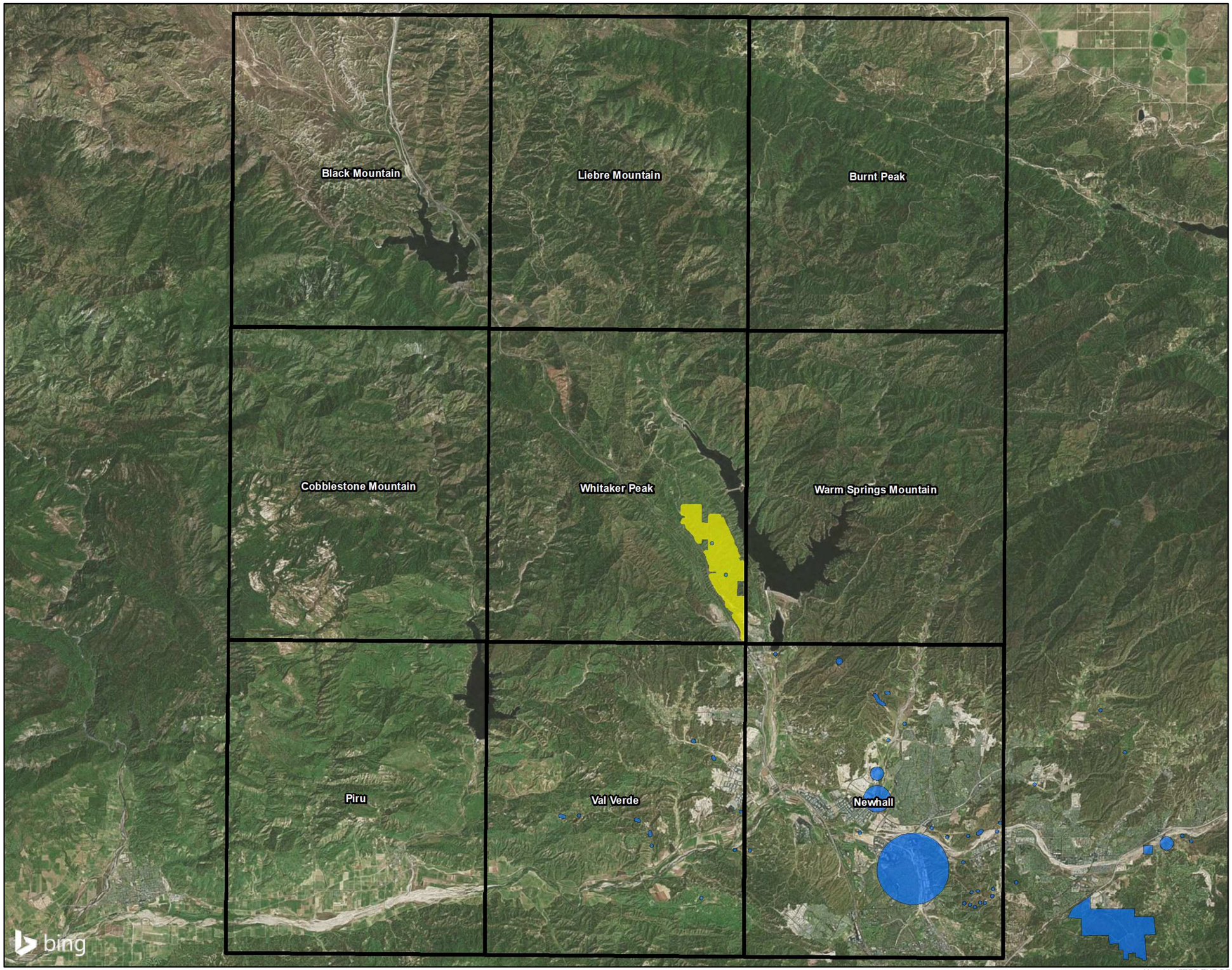


NORTHLAKE SPECIFIC PLAN

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2



Project Location

USGS Quadrangles

Western Spadefoot CNDDB Observation

N

0 1.5 3 6

Miles

1 inch = 3 miles

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: March 12, 2021

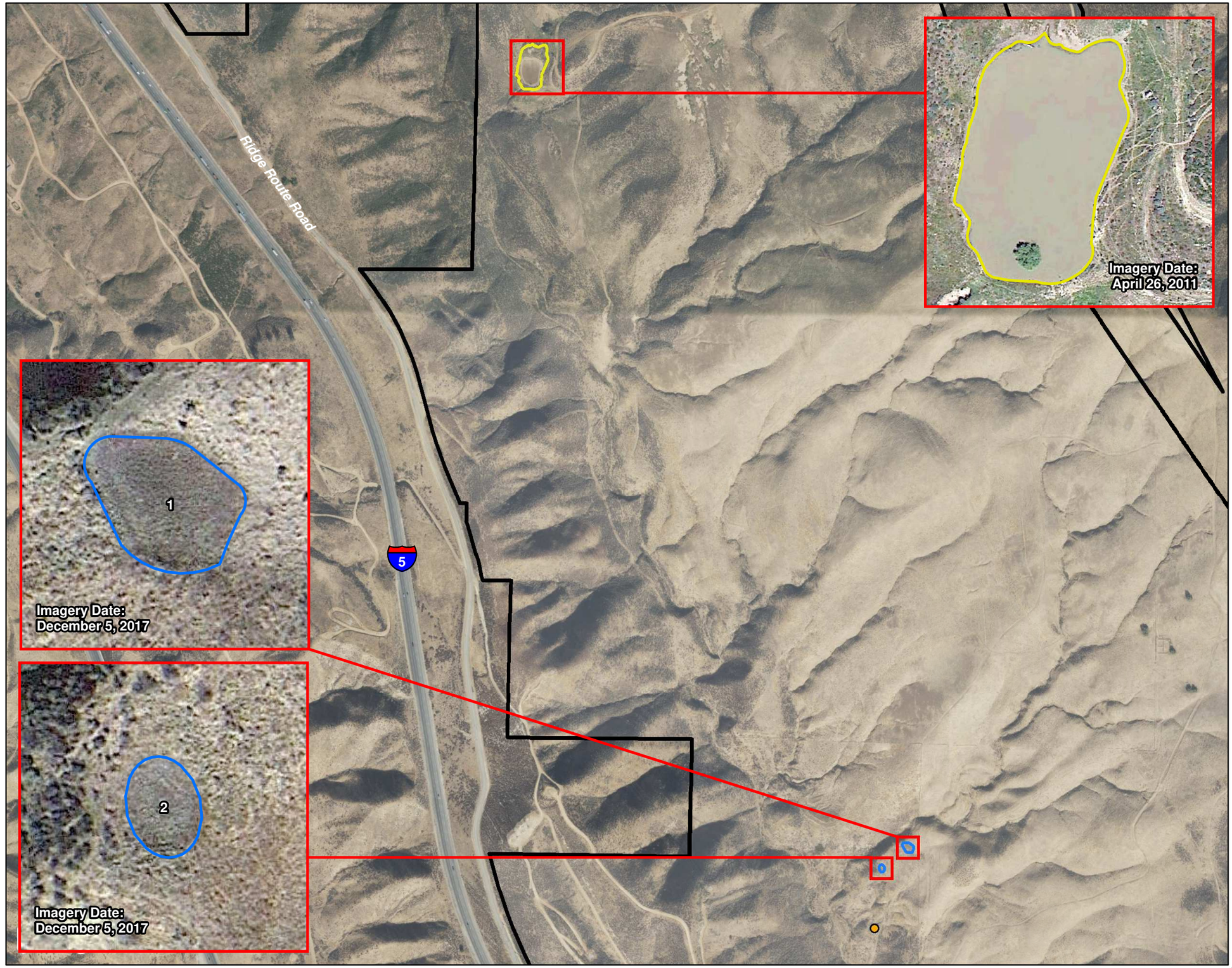
NORTHLAKE SPECIFIC PLAN

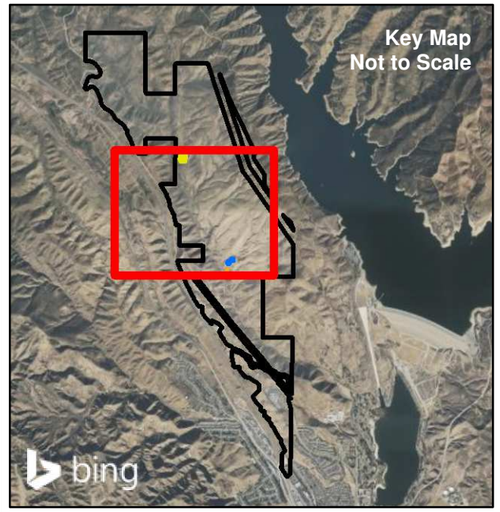
Western Spadefoot CNDDB Map

GLENN LUKOS ASSOCIATES

Exhibit 3

X:\1100 AFTER THE REST\1115-06WOOD\1115-06_GIS\CNDDB_GIS\1115-6_CNDDB_WesternSpadefoot.mxd





Project Location

Stock Pond: 0.80 acre

Seasonal Pond
#1: 0.06 acre
#2: 0.02 acre

Approximate
VP-6 Location

N

0 275 550 1,100
Feet

1 inch = 550 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: May 10, 2022

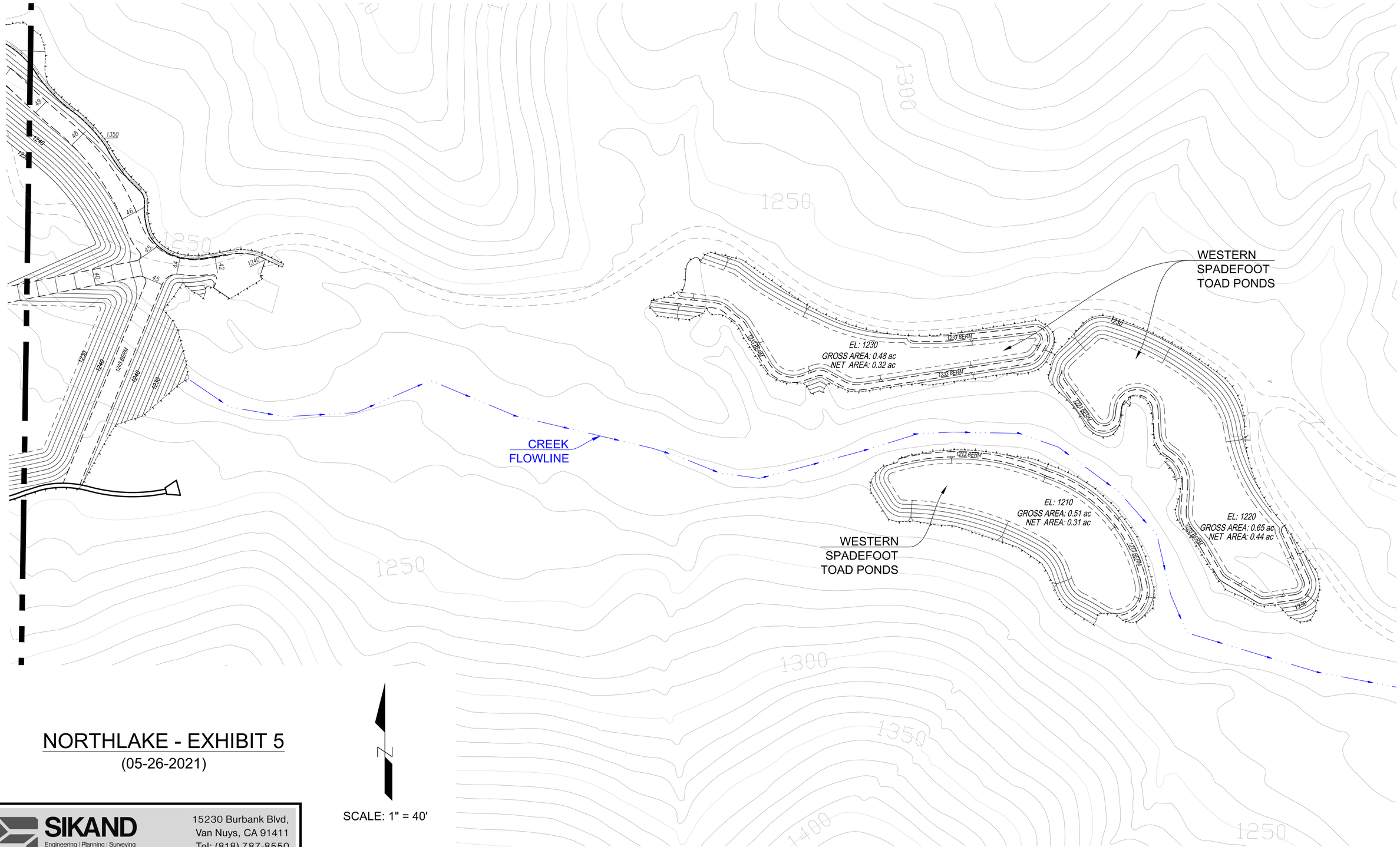
NORTHLAKE SPECIFIC PLAN

Pond Map

GLENN LUKOS ASSOCIATES

Exhibit 4

X:\1100 AFTER THE REST\1115-06WOOD\1115-06_GIS\PondsGIS\1115-6_Ponds.mxd



NORTHLAKE - EXHIBIT 5

(05-26-2021)

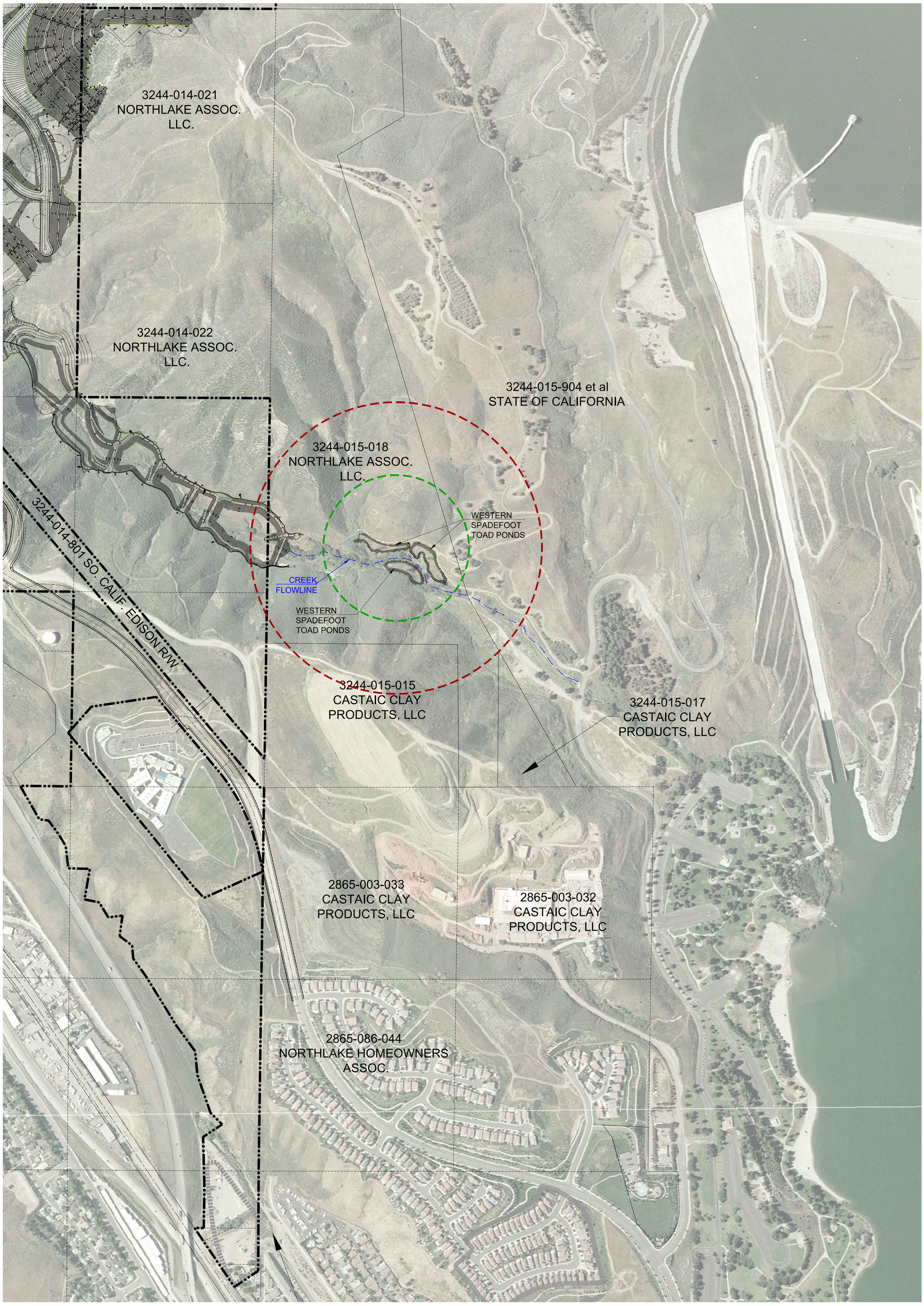
N

SCALE: 1" = 40'

SIKAND
Engineering | Planning | Surveying

15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

X:\Civil\3D\5090-033\Exhibits\EXH - Northlake Exhibit 3.dwg



NORTHLAKE - EXHIBIT 6

(05-26-2021)

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info@sikand.com

N

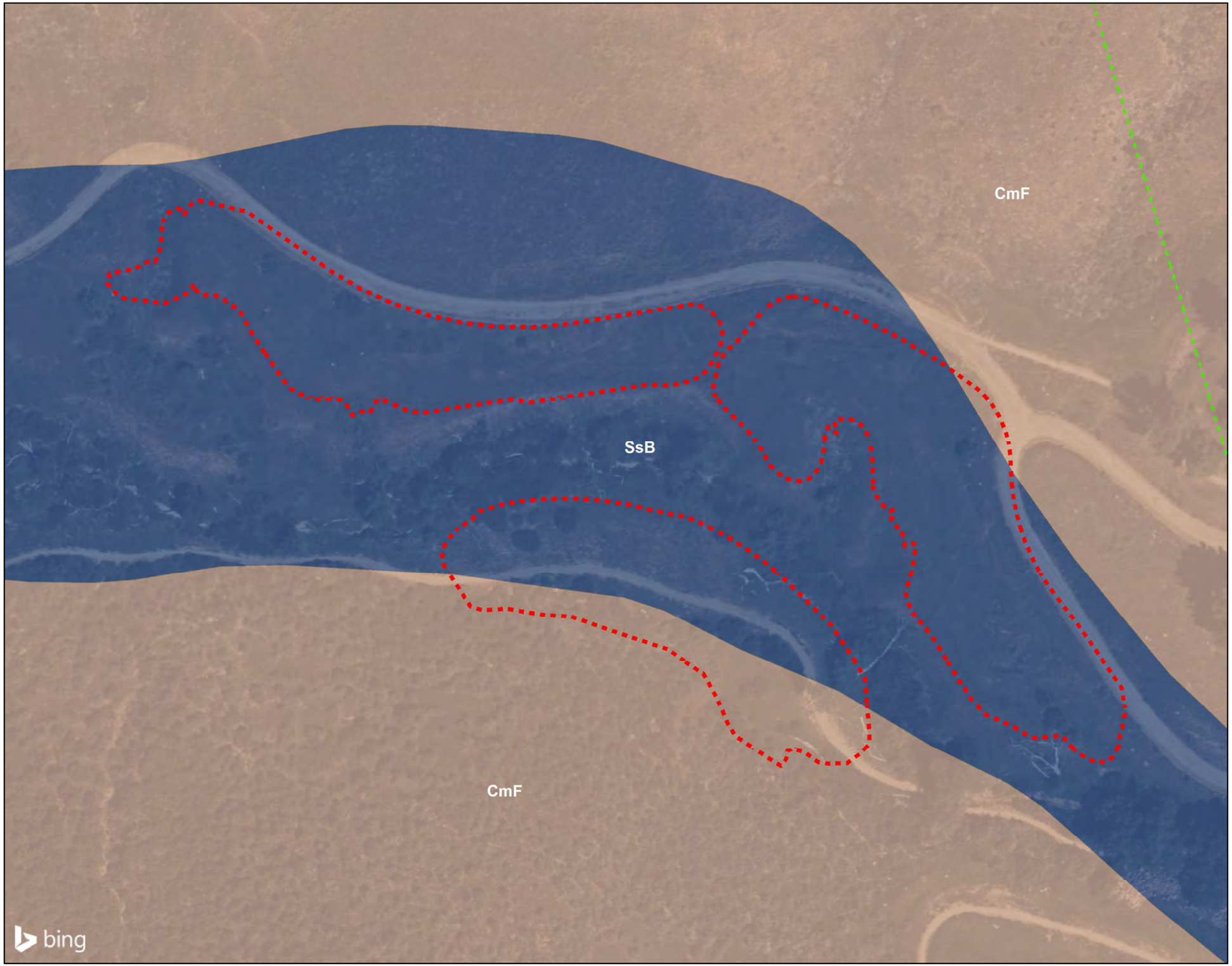
SCALE: 1" = 300'

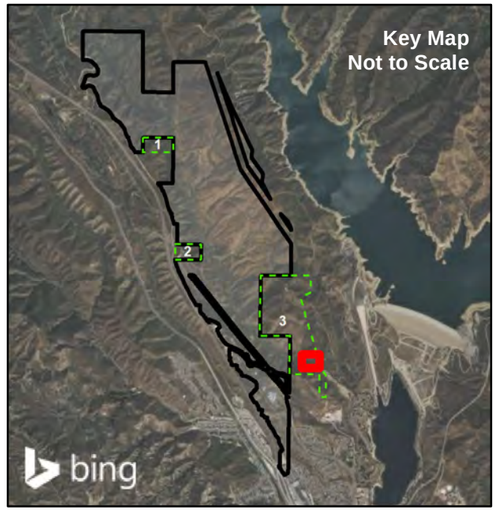
LEGEND:

- - - - - 500' RADIUS

- - - - - 1000' RADIUS

X:\Civil3D\5090-033\Exhibits\EXH - Northlake Exhibit 4.dwg





Project Location

Offsite Area

Basin Limits

CmF — Castaic-Balcom silty clay loams, 30 to 50 percent slopes

SsB — Sorrento loam, 2 to 5 percent slopes

0 25 50 100
Feet

1 inch = 60 feet

N

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: March 9, 2023

NORTHLAKE SPECIFIC PLAN

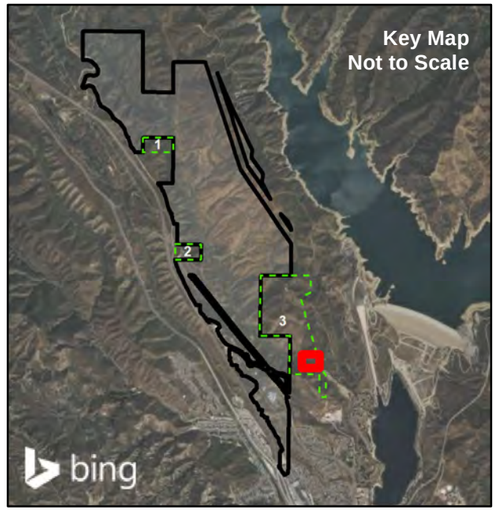
Soils Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 7

X:\1100 AFTER THE REST\1115-06WOOD\1115-06_GIS\ImpactsGIS\1115-06_SoilImpacts_OffsiteArea3Basins.mxd





Project Location

Offsite Area

Basin Limits

Coastal Sage Scrub

Grassland

Riparian

Developed

0 30 60 120

Feet

1 inch = 60 feet

N

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: March 9, 2023

NORTHLAKE SPECIFIC PLAN

Vegetation Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 8

X:\1100 AFTER THE REST\1115-06WOOD\1115-06_GIS\ImpactsGIS\1115-06_VegImpacts_OffsiteArea3Basins.mxd

Key Map
Not to Scale

Pro's Uphill

3

Cutler Canyon Fire Road

Grapevine

Vista Ridge Fire Road

Ridge Route Road

WestRamp Road

Castaic Brick Trail

Castaic Lake

1

2

3

5

bing

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: June 9, 2023

Onsite Project Site

Offsite Project Ownership

Development Footprint

Offsite Easement Limits

Proposed WST Conservation Area (154.70 ac.)

N

0 250 500 1,000
Feet

1 inch = 500 feet

NORTHLAKE SPECIFIC PLAN

WST Conservation Area

GLENN LUKOS ASSOCIATES

Exhibit 9

X:\1100 AFTER THE REST\1115-06WOOD\1115-06_GIS\MitigationGIS\1115-6_ WSTConservationArea.mxd

APPENDIX B-2

SPECIAL-STATUS PLANTS IMPACT ASSESSMENT AND HABITAT MITIGATION AND MONITORING PLAN

DRAFT

NORTHLAKE
CASTAIC, LOS ANGELES COUNTY, CALIFORNIA

SPECIAL-STATUS PLANTS

IMPACT ASSESSMENT

AND

HABITAT MITIGATION AND MONITORING PLAN

July 2022 [Revised October and December 2022, February 2023, and April 2024

Prepared for:

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I. INTRODUCTION/BACKGROUND

The project involves the phased development of up to 3,150 residential units, 9.2 acres of commercial uses, 13.9 acres of industrial uses, 799.5 acres of parks and open space, a 22.9-acre school site and a 1.4-acre pad for a future fire station (Project). Subsequent to the publication of the Final SEIR, the Regional Planning Commission requested that the Applicant include an affordable housing component in the Project. The Applicant made minor revisions to the Project to include an affordable component. Specifically, the Applicant eliminated 108,283 square feet (SF) of industrial use and 13,197 SF of commercial uses and reallocated 323 units from the Phase 2 area of the Project to the Phase 1 area. The County of Los Angeles Planning Commission approved the Northlake Project [Exhibits 1 and 2] on April 18, 2018 and the Los Angeles County Board of Supervisors approved the Project on April 2, 2019.

On January 11, 2021 the Los Angeles Superior Court ruled (Court Ruling) on the Center For Biological Diversity and Endangered Habitats League v. County Of Los Angeles, et al, and Real Parties in Interest, Northlake Associates, et al, Case No. 19STCPO1610, finding that relative to the five rare or special-status plants that the Supplemental Environmental Impact Report (SEIR) was deficient in failing to adequately delineate and define adequate mitigation measures for the relocation of the rare plants. The ruling on the rare plants is as follows.

ISSUE FOUR: THE MITIGATION MEASURES PROVIDED IN THE SEIR TO PROTECT THE RARE PLANTS ARE NOT SUFFICIENT UNDER CEQA:

Five special status plant species have been identified during surveys to exist at various locations on the Project site. These are the round-leaved filaree, the club-haired mariposa lily and the slender mariposa lily (collectively lilies); the paniculate tarplant, and the southwestern spiny rush. AR 1926-29. As special status plant species, a destruction of their habitat must be mitigated to less than significance. Guidelines 15065(a)(l). The loss of these plants through the site development is to be mitigated by the transplantation of all existing individual plants as well as seeds or bulbs that are found. The FSEIR states:

> *A less than significant impact would be achieved through implementation of MM 5.2 -2, MM 5.2-3 and MM 5.2-11... which require a Riparian Restoration Program be developed and approved by USACE [US Army Corps of Engineers], CDFW, and LACDRP prior to issuance of grading permits, ... AR 8564*

MM 5.2-4 specifies procedures for the lilies. Seeds are to be collected and bulbs excavated for transplantation to a mitigation site and established as a self-sustaining population. A Biological Monitor is to prepare a Mitigation Plan for approval of LACDRP and is to oversee its implementation. AR 8568.

MM 5.2-5 specifies procedures for the round-leaved filaree, paniculate tarplant, and southwestern spiny rush. The Project applicant is to prepare procedures to collect and store the plants and seeds, create an alternate site to include soil preparation, irrigation, methods

to control competing plants at the new site and prepare a list of "County-approved success criteria."

The CDFW challenges the adequacy of the mitigation measures, pointing out that the sites for transplantation are not selected, that the procedures to accomplish transplantation are not specified, and that success criteria are yet to be determined. CDFW believes that the rare plants cannot be transplanted on the site as the available patches after development will be fragmented. The CDFW is likewise dubious about transplantation off-site:

> *The Department has concerns when the DSEIR states it will transplant species off-site as this implies other areas will be subject to impact by this action. This additional impact would then need mitigation as this ecosystem is now being altered. AR 7398.*

CDFW was concerned that the mariposa lilies might not survive transplantation, saying it was unaware of any population created by seeding or translocation having been successful "at demonstrating long-term self-sustaining population."

CDFW expressed dissatisfaction with the generality of the mitigation measures, saying:

> *MM7 [now MM 5.2-4 and -5] does not allow the Department to comment on the appropriateness of the location, technique, success criteria, monitoring methods, density, length of time monitoring is required, or the method proposed for long-term protection and funding. AR 7399.*

The deficiencies identified in the CDFW letter demonstrate that the deferred mitigation measures for transplantation of the rare plants do not satisfy the CEQA standards set forth in Guidelines section 15126.4(a)(l)(B).

The applicant relies on the Glenn Lukos Associates (Bomkamp) letter to supply the evidence that deferred mitigation measures for the relocation of the six plant varieties are guidance enough. AR16015-18. Bomkamp's letter advises that there are various locations where the soil conditions are suitable to re-establish the individual plant varieties, but, beyond that, no information is provided to address the deficiencies identified by the CDFW. Further detail is required for the mitigation measures proposed for the rare plants in order to mitigate the destruction of their habitat to a less than significant threshold.

The mitigation measures for successful relocation of the rare plants found at the Project site do not comply with CEQA requirements.

The purpose of this Special-Status Plants Impact Assessment (Impact Assessment) and Habitat Mitigation and Monitoring Plan (HMMP) is to address the Court Ruling. It includes an updated impact assessment and a comprehensive mitigation and monitoring program that will provide for mitigation of significant impacts to less than significant. This Impact Assessment and HMMP relies in part on the previous work by BonTerra Psomas (BonTerra) as set forth in the DSEIR and October 2017 *Special Status Plant Species Restoration Plan: NorthLake Specific Plan, Los Angeles County,*

California[1] and where applicable incorporates specific methods and approaches proposed by BonTerra; while supplementing the BonTerra plan where appropriate to provide for an HMMP that addresses all aspects of the mitigation required to reduce potentially significant impacts to less than significant.

This HMMP also proposes long-term protection of the mitigation sites addressed in this HMMP through establishment of a Conservation Easement (CE) or easements, as appropriate. The CE would be dedicated to a local land conservancy or other appropriate entity that has been approved to hold and manage mitigation lands pursuant to Assembly Bill 1094 (2012). Assembly Bill 1094 amended Government Code sections 65965-65968. Under Government Code section 65967(c), the lead agency must exercise due diligence in reviewing the qualifications of a governmental entity, special district, or nonprofit organization to effectively manage and steward land, water, or natural resources on mitigation lands it approves.

In addition, this HMMP identifies specific sites(s)/area(s) would be protected and depicts these site(s)/area(s) on accompanying exhibits. The plan specifies what resource(s) would occur/be protected in conserved site(s)/area(s). The Santa Monica Mountains Conservancy (SMMC) will serve as landowner, land manager, and endowment holder for the Marple Canyon spiny rush preservation site. The Mountains Recreation and Conservation Authority (MRCA) will serve as the Conservation Easement (CE) Grantee. Likewise, the SMMC is a potential landowner, land manager, and endowment holder for the mitigation areas within NorthLake holdings, with the MRCA holding the CE (the applicant is also exploring other entities that meet the above requirements and as of yet, no decision has been made regarding the long-term management of NorthLake holdings where mitigation would be conducted). The plan provides specific information on how the Lead Agency would enforce the long-term protection and funding of mitigation lands.

The DSEIR identified significant impacts to five special-status plants including round-leaved filaree (*California macrophylla*), paniculate tarplant (*Deinandra paniculata*), southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*) Slender mariposa lily (*Calochortus clavatus* var. *gracilis*), club-haired mariposa lily (*Calochortus clavatus* var. *clavatus*). Mitigation measures (MMs) were set forth in the DSEIR including MM 5.2-4 for the two varieties of Mariposa lily and MM 5.2-5 for the round-leaved filaree, paniculate tarplant, and southwestern spiny rush. Included in the mitigation measures was preparation of a "Special Status Plant Species Restoration Plan," which was provided by the *Status Plant Species Restoration Plan: NorthLake Specific Plan, Los Angeles County, California* (BonTerra Rare Plant Plan) as part of the FSEIR. Thus, based on updated information and the Court Ruling, the HMMP sets forth mitigation measures for rare plants where the current determination is a potential significant impact.

[1] BonTerra Psomas. October 2017. *Special Status Plant Species Restoration Plan: NorthLake Specific Plan, Los Angeles County, California.* Note: BonTerra merged with Psomas and because BonTerra Psomas. Older documents were prepared by BonTerra before the merger and later project documents were under BonTerra Psomas. This report uses "BonTerra" throughout.

The Impact Assessment below considers the following significance threshold from the CEQA Guidelines Appendix G, IV. Biological Resources: Would the Project

> *a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

II. SPECIES CHARACTERISTICS

Five special-status plant species were detected on the site during various surveys over multiple years. The species accounts address the species detected in 1998 and 2001 as well as by BonTerra in 2014. The Impact Assessment includes important updates, specifically with regard to the California Rare Plant Rank (CRPR) for the round-leaved filaree and the addition of the California Natural Diversity Database (CNDDB) Rarity rankings for southwestern spiny rush, paniculate tarplant, slender mariposa lily, and club-haired mariposa lily to provide a more robust analysis relative to the significance of the impacts.

Round-leaved filaree

Round-leaved filaree is an annual or biennial herbaceous species that occurs in clay soils in grasslands, openings in coastal sage scrub, and cismontane woodland (Allen and Roberts 2013). This species is less than six inches in height and generally blooms between mid-March and early May. Round-leaved filaree was listed with a CRPR of 1B.2 (Rare or endangered in California and elsewhere, fairly endangered in California) in October 2017, when BonTerra prepared the BonTerra Rare Plant Plan[2].

A total of 39 individuals of this species was observed in annual grassland in the central portion of the site in silty-clay soils in 2001, as depicted on Exhibit 3a, and was not observed during botanical surveys conducted in 2014 (BonTerra Psomas 2014). Associated plant species reported in 2001 included salt grass (*Distichlis spicata*), foxtail barley (*Hordeum murinum leporinum*), western plantain (*Plantago erecta*), fascicled tarweed (*Deinandra fasciculata*), and California goldfields (*Lasthenia californica*); however, neither the geographic extent or density of the population were reported and are thus unknown. On April 6 and 14, 2022 the location was visited by GLA biologist Tony Bomkamp to determine whether the occurrence was extant, and the species was not detected. On the April 14 site visit, County of Los Angeles Biologist Joe Decruyenaere was present and assisted in the survey. The site conditions appear to have become degraded and may explain why round-leaved filaree was not detected on either visit.

In November 2017, after completion of BonTerra's *Special Status Plant Species Restoration Plan* the California Native Plant Society removed this species from the "Inventory of Rare and Endangered Plants" changing the status from 1B.2 to "Considered but Rejected" (CBR),[3] with the

[2] Ibid.

[3] The California Rare Plant Rank is derived directly from the California Native Plant Society *Inventory of Rare and Endangered Plants.*

note: "**Too common statewide**"; with the additional comment: "counties that contain small, localized populations under severe threat should track *C. macrophylla* as a species of local concern." Thus, this species no longer has special status under the CRPR (or as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (CDFW) or U.S. Fish and Wildlife Service (USFW) as discussed below in the impact analysis. Nevertheless, the plant is considered locally rare by the County of Los Angeles and is addressed in this plan, should the occurrence be confirmed in preconstruction surveys.

Paniculate tarplant

Paniculate tarplant is an annual herbaceous species that is found in grassland, open chaparral and woodland, and disturbed areas, often in sandy or sandy-clay soil (Baldwin et al 2012). This is an upright species that grows up to 30 inches in height and typically blooms between May and November. Paniculate tarplant has a CRPR of 4.2 (Limited distribution in California, fairly endangered in California). Of note is the fact that paniculate tarplant has a CNDDB Rarity Ranking of S4 ("Apparently secure within California")[4] and CalFlora lists 710 records for this species as discussed below in the impact assessment.

One population of paniculate tarplant comprised of several hundred individual plants was observed during 2014 botanical surveys in the northern-central portion of the Project site, in an opening of sage scrub habitat on a northwest-facing slope [Exhibit 3a]. The 2014 report did not provide the geographic extent or density of the population. This occurrence was confirmed during a site visit on April 14, 2022, at which time the geographic extent was mapped using GPS and the density was observed to be variable ranging from approximately one to five plants per square meter, resulting in population estimate of 600. Associated plant species at this location include California sagebrush (*Artemisia californica*), tocalote (*Centaurea melitensis*), red-stemmed filaree (*Erodium cicutarium*), and nodding needlegrass (*Stipa cernua*).

Southwestern spiny rush

Southwestern spiny rush is a perennial rhizomatous herb that occurs in alkaline seeps and moist saline soils. This species grows from 20 to 50 inches in height and typically blooms between June and August (Baldwin et al 2012); however, it is detectable throughout the year. Southwestern spiny rush has a CRPR of 4.2 (Limited distribution in California, fairly endangered in California). Like the paniculate tarplant, Southwestern spiny rush has a CNDDB Rarity Ranking of S4[5] ("Apparently secure in California") and CalFlora lists 406 records for this species. Southwestern spiny rush was observed throughout Grasshopper Canyon, and it was estimated by BonTerra that several hundred individual plants exist in the Project development boundary. BonTerra's mapping showed that the majority of Grasshopper Creek was occupied; however, densities were not reported. Approximately 2,000 individuals of this plant were observed throughout the main drainage in Grasshopper Canyon in 2021 by GLA biologists. The

[4] http://www.rareplants.cnps.org/detail/1892.html
[5] http://www.rareplants.cnps.org/detail/939.html

plants were distributed throughout Grasshopper Creek areas depicted on Exhibit 4c. GLA noted that density varies from occasional individuals to dense thickets of nearly 100-percent cover for some localized patches. In general, the spiny rush was limited to the low flow channel and adjacent terraces. The plants were growing in mule fat scrub and mule fat scrub/spiny rush marsh vegetation. The substrate in these areas is sandy riverwash with cobbles and boulders (BonTerra 2014). The plant species generally associated with the individuals includes mule fat (*Baccharis salicifolia*) and sandbar willow (*Salix exigua*).

Slender mariposa lily and club-haired mariposa lily

Slender mariposa lily and club-haired mariposa lily are perennial herbs in the lily family and *Calochortus* genus, which consists of 50 species and/or subspecies that are native to California. Slender mariposa lily has a CRPR of 1B.2 (Rare or endangered in California and elsewhere, fairly endangered in California) and a CNDDB Rarity Ranking of S2S3 ("Imperiled" and "Vulnerable"), and club-haired mariposa lily has a CRPR of 4.3 (Limited distribution in California, not very threatened in California) and a CNDDB Rarity Ranking of S3. CalFlora lists 95 and 117 occurrences respectively. These plants represent varieties of the same species and are known to hybridize with each other. Due to this known hybridization, these two species are often treated as a single species for purposes of impact assessment and mitigation. For portions of the population BonTerra mapped occupied polygons [Exhibit 3b]; however, did not provide specific counts for each polygon so it is not possible to establish densities. GLA has observed this species on multiple sites in northern Los Angeles County and densities vary from very low (< one/square meter) to multiple/square meter. Density for the proposed establishment areas is addressed below.

III. IMPACT ASSESSMENT

Expected impacts to target species are based on plant surveys conducted by BonTerra in 2014, combined with observations from previous surveys in 2001 and 1998. Because plant populations vary year-to-year, the number of individual plants can only be estimated based on the previous surveys. A final determination of the number of plants, requiring mitigation for project impacts will be made during at least two separate pre-construction botanical surveys (performed during separate years). The purpose of the pre-construction surveys will be to quantify the number of plants subject to mitigation within the Project development boundary and to mark plants to facilitate collection of plant material. The following sections provide a summary of expected impacts to the various target plant species as well as an updated determination of the significance of the impacts.

Pre-Construction Surveys

Pre-construction surveys will be conducted by qualified botanists or biologist during the blooming period for each species or when the species is easily identifiable. For example, the spiny rush is identifiable during all times of the year, while the round-leaved filaree, paniculate tarplant, and mariposa lilies have specific blooming periods when surveys will be performed. Specifically, the round-leaved filaree blooms during March, April, and May. Paniculate tarplant blooms from April

to November with peak flowering in July and August. The slender and club-haired Mariposa lilies bloom March through June. Surveys for the round-leaved filaree, paniculate tarplant, and Mariposa lilies will be conducted during peak blooming periods. In order to maximize detection, early season surveys that coincide with the beginning of the blooming period should be performed to ensure that the plants are in vegetative state or in early flowing period. Survey(s) will be conducted in accordance with accepted botanical survey guidelines (CDFW 2018, CNPS 2001, Nelson 1984, USFWS 2000). As discussed in more detail below, mitigation for impacts will be based on the largest number of plants recorded during pre-construction surveys or surveys conducted for the Biological Technical Report by BonTerra.

In evaluating the significance for the proposed impacts, it is important to note that none of the special-status plants are listed by the Federal Endangered Species Act (FESA) as threatened or endangered or under the State of California Endangered Species Act (CESA) as threatened, endangered, or rare. The special-status designation for the five plant species detected on the Project site are, as noted in the descriptions above, originally based on the California Native Plant Society (CNPS) *Inventory of Rare and Endangered Plants of California*, which has been adopted by the State of California and provides the ranking for the CRPR. The impact analysis prepared by BonTerra for the SEIR was based on the CRPR; however, they did not include the CNDDB Rarity Ranking which ranks plants according to State, National and Global Rarity Rankings as discussed following the discussion of the CNPS/CRPR Ranking of certain plants.

California Native Plant Society

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. The CNPS' Eighth Edition of the *California Native Plant Society's Inventory of Rare and Endangered Plants of California* ("Inventory") separates plants of interest into five ranks. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California. The list serves as the candidate list for listing as threatened and endangered by CDFW. CNPS has developed five categories of rarity that are summarized in Table 1, which in turn form the basis for the CRPR.

Table 1: CNPS Ranks 1, 2, 3, & 4, and Threat Code Extensions

CNPS Rank	Comments
Rank 1A – Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere	Thought to be extinct in California based on a lack of observation or detection for many years.
Rank 1B – Plants Rare, Threatened, or Endangered in California and Elsewhere	Species, which are generally rare throughout their range that are also judged to be vulnerable to other threats such as declining habitat.
Rank 2A – Plants presumed Extirpated in California, But Common Elsewhere	Species that are presumed extinct in California but more common outside of California.

Rank 2B – Plants Rare, Threatened or Endangered in California, But More Common Elsewhere	Species that are rare in California but more common outside of California.
Rank 3 – Plants About Which More Information Is Needed (A Review List)	Species that are thought to be rare or in decline but CNPS lacks the information needed to assign to the appropriate list. In most instances, the extent of surveys for these species is not sufficient to allow CNPS to accurately assess whether these species should be assigned to a specific rank. In addition, many of the Rank 3 species have associated taxonomic problems such that the validity of their current taxonomy is unclear.
Rank 4 – Plants of Limited Distribution (A Watch List)	Species that are currently thought to be limited in distribution or range whose vulnerability or susceptibility to threat is currently low. In some cases, as noted above for Rank 3 species, CNPS lacks survey data to accurately determine status in California. Many species have been placed on Rank 4 in previous editions of the "Inventory" and have been removed as survey data has indicated that the species are more common than previously thought. CNPS recommends that species currently included on this list should be monitored to ensure that future substantial declines are minimized.
Extension	**Comments**
.1 – Seriously endangered in California	Species with over 80% of occurrences threatened and/or have a high degree and immediacy of threat.
.2 – Fairly endangered in California	Species with 20-80% of occurrences threatened.
.3 – Not very endangered in California	Species with <20% of occurrences threatened or with no current threats known.

In considering impacts to List/Rank 4 species, it is important to note that these species often do not trigger a determination of "significant impacts" because as noted in Table 1 above, these "Species that are currently thought to be limited in distribution or range **whose vulnerability or susceptibility to threat is currently low**". Where appropriate, the "Threat Codes" are considered for major impacts; however, the CNPS Inventory includes the following notes regarding the Threat Codes:

Notes:

1. *The above Threat Rank guidelines only represent a starting point in the assessment of threat level. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are also considered in setting the Threat Rank.*
2. *Many of the Threat Ranks have not been reassessed since the time they were first designated after implementation of the Rare Plant Status Review Process, and therefore may not represent the current level of threats associated with a given taxon.*

3. *The Threat Ranks do not designate a change of environmental protections. For instance a CRPR 1B.3 plant has the same environmental protections as a CRPR 1B.1 plant, and it is mandatory that both be fully considered during preparation of environmental documents relating to CEQA.*[6]

As discussed below, three of the plants, southwestern spiny rush (4.2), paniculate tarplant (4.2), and club-haired mariposa lily (4.3), identified on the NorthLake site are List/Rank 4 species and two have a Threat Code of ".2". As noted by CNPS, many of the threat codes have not been reassessed; however, the CNDDB Rarity Rankings provide additional information regarding the rarity and threat of special-status plants as addressed below.

> *The classification scheme that CNHP and The Natural Heritage Network use to track rare species and natural communities is a standardized ranking system that allows the Heritage Network members and cooperators to target the most at risk species and ecosystems for inventory, protection, research, and management. Species and ecosystems are ranked on the Global (G), National (N), and Subnational/State/province (S) levels. The basic ranks used to classify species and ecosystems are:*
>
> *1 = Critically Imperiled (Example: G1 = Globally Ranked Critically Imperiled)*
> *2 = Imperiled (Example: N2 = Nationally Ranked Imperiled)*
> *3 = Vulnerable to Extirpation (Example: S3 = State Ranked Vulnerable to Ext.)*
> *4 = Apparently Secure*
> *5 = Demonstrably Widespread, Abundant, and Secure*[7]

NatureServe, from which the above is derived, defines S4 as follows: "**Apparently Secure** — At a fairly low risk of extinction due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors."[8]

Finally, relative to "State Rankings:"

> *The most widely used NatureServe rank in the United States are the State Ranks, which describe the rarity of a species within each state's boundary. These State Ranks begin with the letter "S". Global, National, and State ranks all use a 1-5 ranking system, summarized below:*
>
> *1 = Critically imperiled because of extreme rarity or because it is somehow especially vulnerable to extinction or extirpation, typically with 5 or fewer occurrences.*[9]

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[6] https://www.cnps.org/rare-plants/cnps-rare-plant-ranks#:~:text=0.2%2DModerately%20threatened%20in%20California,or%20no%20current%20threats%20known)

[7] https://cnhp.colostate.edu/ourdata/help/heritage/

[8] https://help.natureserve.org/biotics/content/record_management/Element_Files/Element_Tracking/ETRACK_Definitions_of_Heritage_Conservation_Status_Ranks.htm

[9] Note that when addressing special-status plants, the term "occurrences" typically represents distinct sub-populations that are separated from other sub-populations across the geographic range. While in some rare instances

2 = Imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction (extirpation), typically with 6-20 occurrences.
3 = Rare, uncommon or threatened, but not immediately imperiled, typically with 21-100 occurrences.
4 = Not rare and apparently secure, but with cause for long-term concern, usually with more than 100 occurrences.
5 = Demonstrably widespread, abundant, and secure.[10]

Nevertheless, while plants with a CNDDB Rarity Ranking of S4 are considered "Apparently Secure" the California Department of Fish and Wildlife (CDFW) requires at a minimum that species from CRPR List 3 and 4 as well as species with an S4 Rarity Ranking be evaluated relative to significance of specific project impacts. In a recent letter, on an unrelated project in the western part of the City of Los Angeles, CDFW addressed treatment of plants from CRPR Lists 1A, 1B and 2:

CEQA provides protection not only for CESA listed and candidate species but for any species including: SSC that can be shown to meet the criteria for State-listing; and plants designated as 1A, 1B and 2 of the California Native Plant Society Inventory of Rare and Endangered Vascular Plants of California, which consist of plants that, in a majority of cases, would qualify for listing (CEQA Guidelines §§ 15380[d] and 15065 [a]).[11]

The letter also notes that impacts to all special-status species that potentially occur on the Runyon Canyon site should be evaluated in the DEIR and that discussion includes one plant, Plummer's mariposa lily[12], listed as 4.3 on the CRPR and S4 in the CNDDB. Thus, CDFW distinguishes between plants from CRPR Lists 1A, 1B, and 2 and those on the "watch list" (List 4). The treatments below, consider all of these factors in the evaluation of the significant impacts for species on List 4 and with a CNDDB ranking of S4.

In addition, with respect to number of occurrences of populations, the Calflora database was used to provide additional information as to the number of occurrences of the species at issue in this report to further evaluate the State Rankings. Calflora's statewide database is based on information gathered from many sources including the Consortium of California Herbaria, iNaturalist, public agencies, non-profits, scientists, and private individuals. Calflora's research primarily concerns the presentation of already-digitized botanical information, including images, location, and collection information.

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the term can apply to single individuals, in most cases it denotes a distinct group of plants that occur together and are separated from other similar groups.

[10] https://inr.oregonstate.edu/orbic/rare-species/ranking-definitions

[11] California Department of Fish and Wildlife. May 3, 2018. Comments on the Notice of Preparation (NOP) for a Draft Environmental Impact Report (DEIR) for the 3003 Runyon Canyon (ENV-2016-4180-EIR) Project, City of Los Angeles, Los Angeles County (SCH# 2018041016).

[12] Plummer's mariposa lily a distinct species of Mariposa lily that was not observed on the Project site during focused surveys and, therefore, not further addressed here. BonTerra Biological Technical Assessment Report, Appendix D to the DSEIR, page 31.

Round-leaved filaree

Round-leaved filaree was observed during 2001 plant surveys, when 39 plants were observed within the Project development boundary. However, this species was not observed during surveys conducted in 2014, indicating that this species may have been extirpated from the Project site. Site visits on April 6 and 14, 2022 to the site location where the species was previously detected in 2001 did not find the population consistent with the finding that the population may have been extirpated. If this species is not detected during pre-construction plant surveys, it will be considered extirpated, and no mitigation will be required.

As noted above, in November 2017, the California Native Plant Society removed this species from the "Inventory of Rare and Endangered Plants" changing the status from 1B.2 to "Considered but Rejected" ("CBR")[13] with the note: "**Too common statewide"**; with the additional comment: "counties that contain small, localized populations under severe threat should track *C. macrophylla* as a species of local concern." This species has over 600 reported occurrences in CalFlora statewide.[14] Thus, this species no longer has special status in California. The round-leaved filaree is not listed on an official, local, or regional plan; nevertheless, there are only a few occurrences in northern Los Angeles County and is considered locally rare.[15] Therefore, impacts to this species, if determined to be present, would be significant under the above significance threshold, Appendix G, Significance Threshold Biology IV(a). Potential impacts to this species, if it is still present on the NorthLake site, are considered significant and mitigation is required if present on the site.

Paniculate tarplant

Paniculate tarplant was observed in 2014 in a single population that consisted of several hundred individual plants, all of which occur in the Project development boundary. The population was detected on April 14, 2022, consistent with the previous observations. As noted, this species is listed as S4 in the CNDDB or "apparently secure within California". Moreover, given (i) the CRPR rank of 4 and the S4 Rarity Ranking, (ii) over 700 reported population occurrences in CalFlora statewide,[16] substantially exceeding the minimum threshold of 100 occurrences for the S4 category, and (iii) that this species is not on any official local or regional plans**;** nevertheless, there are only a few occurrences in northern Los Angeles County and is considered locally rare.[17] Therefore, impacts to this species would be considered significant and would require mitigation with the removal of the Project site population under Appendix G, Significance Threshold Biology IV.(a).

[13] http://www.rareplants.cnps.org/detail/1340.html
[14] https://www.calflora.org/app/taxon?crn=10468
[15] June 08, 2021. Joseph Decruyenaere, Los Angeles County Biologist, Personal Communication regarding status of round-leaved filaree.
[16] https://www.calflora.org/app/taxon?crn=8915
[17] June 08, 2021. Joseph Decruyenaere, Los Angeles County Biologist, Personal Communication regarding status of paniculate tarplant.

Southwestern spiny rush

Southwestern spiny rush was observed throughout Grasshopper Canyon, and it was estimated by BonTerra that several hundred individual plants exist in the Project development boundary. GLA conducted a focused survey and census in 2021 and found approximately 2,000 individuals in Grasshopper Creek distributed throughout Grasshopper Creek, all of which are in the impact limits, as depicted on Exhibit 4c.[18] GLA noted that density varies from occasional individuals to dense thickets of nearly 100-percent cover for localized patches. As noted, this sub-species is listed as S4 in the CNDDB or "apparently secure within California". Moreover, given (i) the CRPR rank of 4 and the S4 Rarity Ranking, (ii) over 400 reported occurrences in CalFlora, statewide[19] substantially exceeding the minimum threshold of 100 occurrences for the S4 category, and (iii) that this species is not on any official local or regional plans**;** nevertheless, there are only a few occurrences in northern Los Angeles County and is considered locally rare.[20] Therefore, impacts to this species would be considered significant with the removal of the Project site population under Appendix G Significance Threshold Biology IV.(a) and would require mitigation as set forth below.

Slender mariposa lily and club-haired mariposa lily

BonTerra reported that approximately 1,709 individuals of slender/club-haired mariposa lily hybrids were observed at 36 locations on the Project site during botanical surveys conducted in 2014; an additional 22 populations contained plants of varying densities, likely representing an additional 1,000 or more individuals. It is estimated that over 3,000 individuals occur on the Project site; however, in the BonTerra Draft Rare Plant Plan, it was clarified that of the approximately 3,000 individuals observed in the Project site, approximately 2,000 individuals are located within the Project development boundary. Given the List 1B status and S2S3 CNDDB Rank for the slender mariposa lily and the S3 Rarity Rank for the club-haired mariposa lily and the CalFlora occurrences (95[21] and 117[22] respectively), impacts to this species would be considered significant before mitigation and with mitigation would be reduced to less-than significant as evaluated below.

Peirson's Morning Glory

Peirson's morning glory was observed throughout the native upland vegetation types, especially in sage scrub-grassland ecotone areas, as well as in disturbed areas along the side of Ridge Route Road. Impacts to this CRPR List 4 taxon, which is still common in northern Los Angeles County (unlike the round-leaved filaree, paniculate tarplant and the southwestern spiny rush) was considered adverse, but less than significant due to the low status of these species and their relative abundance throughout their range and no mitigation was required. However, impacts on this species are expected to be reduced through the implementation of mitigation requirements for

[18] This includes Offsite Areas 1 and 3.
[19] https://www.calflora.org/app/taxon?crn=4433
[20] June 08, 2021. Joseph Decruyenaere, Los Angeles County Biologist, Personal Communication regarding status of southwestern spiny rush.
[21] https://www.calflora.org/app/taxon?crn=1274
[22] https://www.calflora.org/app/taxon?crn=1273

vegetation types and special status plants. These mitigation measures would require preservation or restoration of impacted sage scrub, foothill needlegrass grassland, and California annual grassland/wildflower fields; habitat types in which this species is found. Additionally, restored habitats would include this species as a target for seed mix. These measures combined would lessen any adverse impacts by providing for long-term population sustainment in the region. (SDEIR 5.2-24.) Specifically, Mitigation Measure 5.2-5 in the SEIR included a provision wherein "The harvested seeds of Peirson's morning glory will be included in the seed mixes for the restoration of foothill needlegrass grasslands described in Mitigation Measures 1 and 2." To provide a protocol for such seed collection, this species is included in this Plan.

IV. HABITAT MITIGATION AND MONITORING PLAN (HMMP)

A. Summary of Plan

The following provides a comprehensive detailed program intended to reduce the significant impacts to five special-status plants: round-leaved filaree (CRPR Rank: CBR, Locally Rare), paniculate tarplant (List 4.2, Locally Rare), southwestern spiny rush (List 4.2, Locally Rare), slender mariposa lily (List 1B.2 and S2S3), and the club-haired mariposa lily (List 4.3 and S3), the two mariposa lily species, which as noted by BonTerra, are known to hybridize and, therefore for purposes of this plan are treated together as a single taxon. The mitigation program set forth below incorporates components of the BonTerra Draft Rare Plant Plan and includes additional components based on GLA's experience with various rare plant species including Mariposa lily. Specifically, the components of the Rare Plant HMMP include the following:

- Goals
- Identification of mitigation receptor sites
- Preparation of receptor sites
- Methods for collection of seed for propagation
- Methods for collection of bulbs for translocation
- Methods for installation of bulbs at receptor sites
- Maintenance requirements
- Monitoring methods
- Performance standards
- Contingency measures
- Agency concurrence of completeness

It is important to note that the ecological characteristics, habitat requirements, and sensitivity, are different for the above-referenced species and therefore the associated restoration program for each species is different for the four species (the two subspecies of Mariposa lilies are treated together). The level of detail varies according to the ecological requirements, sensitivity, and the goals for each species. The HMMP components have been tailored for each species and are addressed in Sections IV.B – IV.E, below. It is important to note that for some of the species, not all the above-listed HMMP components are applicable and therefore are not included. For example, only the

Mariposa lilies exhibit bulbs, this character has no application for the other rare plants and is not included.

B. Round-Leaved Filaree

1. Goals

The goal of round-leaved filaree replacement program is to establish a self-sustaining population consisting of the number of individuals detected during pre-construction surveys. As noted, round-leaved filaree was observed during 2001 plant surveys, when 39 plants were observed within the Project development boundary. The 2001 location was mapped as a single point and the geographic extent was not provided. This species was not observed during surveys that were conducted in 2014 or site visits in April 2022, indicating that this species may have been extirpated from the Project Site. If this species is not detected during two years of pre-construction plant surveys, with average or above-average rainfall it will be considered extirpated, and no mitigation will be required. Rainfall is considered average if it is within one quartile (+/- relative to the mean). The average rainfall for northwestern Los Angeles County is 20 inches per year using the Del Valle Weather Station, approximately six miles to the southwest of the Project site. Thus, where seasonal rainfall is at least 15 inches for the season, October 1 and April 15, the rainfall is considered average and suitable for surveys. If the species is detected during pre-construction surveys, the goal of the program would be to replace the existing population, through the methods described below, which includes growing container stock from seed for introduction to a suitable receptor site and through soil salvage. Replacement would be based on the largest number of plants detected during the two years of surveys. While the geographic extent of the population is not known, based on the diminutive size of the plants a population much larger than 39 could be easily accommodated within 0.25 acre.

2. Identification of Receptor Sites

The suitability of receptor sites was determined by the presence of suitable soils, specifically the Castaic-Balcom silty clay loams and Sorrento loams which occurs within various areas of Project open space. Given the small size of the population and the diminutive stature of the plants, the receptor area for this required for this species will cover less than 0.25 acre and can be accommodated at various locations. For purposes of efficiency, areas adjacent to the western spadefoot toad pool creation sites. These areas would be graded for creation of the spadefoot pools (grading is depicted by purple topographic lines on Exhibit 4a); however, following grading the area surrounding the pools would be restored to native habitat and would provide adequate area with suitable soils as depicted on Exhibit 4a. In addition, we have identified a second location of a west-facing slope that consists of the Castaic Balcom silty clay loam and could also be used as receptor site for the round-leaved filaree depicted on Exhibit 4a, should the primary receptor site adjacent to the western spadefoot toad pool sites fail to meet performance standards. As noted, the round-leaved filaree is a diminutive plant, typically less than six inches in diameter. Thus, at a density of one plant per square foot, which would be low density, a site covering approximately 0.25 acre could accommodate 10,890 individuals. Thus, based on counts by BonTerra in 2001, 0.25 acre would be more than sufficient area for the receptor site based on 39 plants being observed

at that time. It should also be noted that the location for round-leaved filaree, based on BonTerra's mapping is a gentle west facing slope, which would be provided by the proposed translocation site adjacent to the spadefoot ponds.

In addition, as noted by BonTerra, "round-leaved filaree receptor site(s)…should consist of (1) grassland areas that are dominated by native grass species of moderate density or (2) openings within sage scrub habitats that have low coverage of shrub species. If a potential receptor site has moderate to dense non-native grass cover, pre-transplantation weed removal combined with ongoing weed control efforts will be necessary to prevent non-native species from displacing round-leaved filaree plants".

3. Preparation of Receptor Sites

The proposed receptor sites are currently vegetated with non-native grasses and forbs including ripgut (*Bromus diandrus*) and summer mustard (*Hirschfeldia incana*). Beginning at least one full year prior to introduction of the container stock and soil blocks (if incorporated as addressed below), a grow-and-kill program will be initiated to reduce the cover by non-native grasses and forbs to levels acceptable for introduction of the round-leaved filaree container stock, which would be less than 20-percent non-native cover by the end of the ten-year monitoring period (see performance standards below for additional discussion of ongoing reduction of non-native cover during the maintenance and monitoring period). Installation of the round-leaved filaree would occur following the second full year of maintenance where the cover of non-native grasses and herbs has been reduced to 30 percent or less. Should non-native cover exceed 30-percent at the end of two years, introduction of the round-leaved filaree would be delayed until year three or when the 30 percent threshold has been achieved.

To increase the likelihood of success and to ensure that the primary translocation site is not adversely affected by weedy competitors, the site would be planted with a mix of native grasses and shrubs typical of native habitat on the site that would provide habitat for the round-leaved filaree. The native plant palette would be planted after one full year of maintenance to suppress weed cover. Table 2 below provides the plant palette for the proposed habitat. The alternative translocation site supports a mix of scrub and non-native grasses and would require weed removal and maintenance should planting occur at this location. The performance standards would apply to both sites. The round-leaved filaree would be translocated following installation of the scrub and grassland palette and as noted above only after non-native weedy cover is at or below 30 percent cover.

TABLE 2
Sample Seed Palette

Botanic Name	Common Name	Lbs/Acre
Acmispon glaber	Deerweed	0.5
Corethrogyne filaginifolia	Common sandaster	4.0

Croton setiger	Turkey-mullein	4.5
Deinandra paniculata	Paniculate tarplant	3.0
Deinandra fasciculata	Clustered tarweed	3.0
Eriogonum fasciculatum	California buckwheat	2.0
Festuca microstachys	Small fescue	2.0
Hordeum brachyantherum	Meadow barley	2.0
Stipa pulchra	Purple needlegrass	2.0
Stipa lepida	Foothill needlegrass	0.5
Total		**23.5**

Monitoring Plan for Grassland and Scrub Revegetation Areas First-Year

First First-Year Monitoring

Success Standard: A minimum of 30-percent coverage by native species;
100-percent of proposed canopy species present;
50-percent of proposed understory present
No greater than 40-percent coverage by non-native species.

Second-Year Monitoring

Success Standard: A minimum of 40-percent coverage by native species;
100-percent of proposed canopy species present
60-percent of proposed understory present
No greater than 30- percent coverage by non-native species.

Third-Year Monitoring

Success Standard: A minimum of 50-percent coverage by native species;
100-percent of proposed canopy species present 60-percent of proposed understory present
No greater than 25- percent coverage by non-native species.

Fourth-Year Monitoring

Success Standard: A minimum of 60-percent coverage by native species;
100-percent of proposed canopy species present
75-percent of proposed understory present
No greater than 20- percent coverage by non-native species.

Fifth-Year Monitoring

Success Standard: A minimum of 70-percent coverage by native species;
100-percent of proposed canopy species present
85-percent of proposed understory present

No greater than 20- percent coverage by non-native species with zero tolerance for species considered highly invasive by Cal-IPC.

Sixth through Tenth-Year Monitoring

Success Standard: A minimum of 80-percent coverage by native species;
100-percent of proposed canopy species present
85-percent of proposed understory present
No greater than 20- percent coverage by non-native species with zero tolerance for species considered highly invasive by Cal-IPC.

4. Methods for Collection of Seed for Propagation

If the round-leaved filaree is detected during pre-construction surveys, seed will be collected during the appropriate timeframe following flowering, at the end of each survey season, which would occur between June and August. Location of plants will be staked and/or flagged and recorded using sub-meter GPS Technology. To ensure that the maximum amount of seed is procured each season, the biological monitor will visit the site every two weeks following the start of the flowering season to collect seed as the fruits ripen. The fruits (mericarp) from each plant would be hand-collected and placed in paper bags for temporary storage in a cool, dry facility. Once collection is complete, the collected material would be transferred to an appropriate seed storage facility that is certified to hold or work with rare plants, for cleaning and storage until ready for reestablishment on the site. Fifty percent of the seed will be preserved for using in contingency sites if needed. If not needed for contingency purposes because the performance standards have been achieved, the contingency seed will be hand-broadcast at the receptor site following successful completion.

During seed collection, soil from the site will also be collected from the area around the existing population for use in the propagation in a native plant propagation facility. The soil will be stored in a cool, dry location until transfer to a facility for propagation.

In conjunction with site preparation, the seed would be transferred to a facility that specializes in native plant propagation (e.g., Tree of Life Nursery) for propagation. The seeds would be germinated in flats with the soil collected from the site and then transferred to "liners" that also contain soil from the area of the population that will be planted as container stock in the receptor site or sites.

In addition to use of container stock, the soil from the impact sites was initially proposed for collection using the soil-block method as described by BonTerra:

> *Collection of blocks of soil is a useful tool for plant translocation as soil in known locations of special status species contains a seed bank for these species as well as any beneficial microorganisms. If a population of round-leaved filaree is identified during pre-construction surveys, soil that contains these plants will be collected and relocated to an appropriate receptor site. Soil will be collected at*

round-leaved filaree populations after seed collection has occurred in approximate two to four square foot blocks to a depth of four to six inches.

This method could be implemented in conjunction with container stock installation and the soil squares would be installed in proximity to the container plants to maximize the potential for replacement of the round-leaved filaree. The number of soil blocks would be determined by the project biologist at the timed of the salvage, based on areal extent and density of the population. Because the site that has been mapped as containing the round-leaved filaree is currently dominated by non-native grasses and forbs, it may be detrimental to move soil blocks due to importation of weeds to the translocation site and based on site conditions observed in spring of 2022 is not recommended due to substantial weed cover (estimated at greater than 75 percent). If this condition remains, it would be determined to be harmful by the Project biologist, and soil block translocation would not occur.

5. Weeding and other Maintenance Requirements

The purpose of this program is to ensure the success of the container stock and soil blocks. Maintenance will occur over the life of the translocation/mitigation project, for a ten-year period. The Project Biologist will monitor all aspects of the round-leaved filaree replacement effort throughout the maintenance period to detect any problems at an early stage. Potential problems could arise from vandalism, competition from weeds and invasive species, and unacceptable levels of disease and predation/herbivory.

These maintenance guidelines are specifically tailored for container stock establishment. The maintenance personnel will be fully informed regarding the habitat establishment program to ensure their understanding of the goals of the effort and the maintenance requirements. A Restoration Contractor with experience and knowledge in native plant habitat restoration will supervise all maintenance personnel.

General Maintenance

The Contractor will perform the following tasks as general maintenance duties:

- Inspection of Receptor Sites
- Weed control
- Trash and debris removal
- Pest control

Inspection of Receptor Sites

After initial planting, the Project Biologist will check the restoration plots bi-monthly during round-leaved filaree growing season which can begin as early as January through July every year.

The Project Biologist shall prepare a written memorandum to the Applicant after each monitoring site visit listing observations, problems, and recommended remedial measures based upon field observations. A copy of this memorandum shall be sent to the Restoration Contractor for implementation. These memorandums shall focus on identified problems including vandalism,

weeding, debris removal, pest control, herbivory etc. The Project Biologist shall be responsible for recommending all remedial measures to be implemented.

Weed Control
Weed control within the receptor sites shall be maintained on a regular basis during the maintenance and monitoring period. Maintenance shall be conducted monthly during the growing season (January-May) of the first year and bi-annually thereafter until the end of the maintenance and monitoring period.

Weed eradication will minimize competition that could prevent the establishment of native species. All maintenance personnel will be trained to distinguish weed species from native vegetation to ensure only weedy species are removed or sprayed with herbicide.

Weeds shall be removed by hand or controlled with an appropriate herbicide as determined by a licensed Pest Control Advisor ("PCA"). The Project Biologist will be consulted and approve any herbicide application in advance. Weed debris shall be removed from the project area as accumulated and disposed of as permitted by law.

All portions of the weed will be removed, including the roots. The Project Biologist shall direct the Restoration Contractor regarding the selection of target weed species, their location, and the timing of weed control operations to ensure that native plants are avoided to the extent possible. Pulled weeds will be placed on a "mantilla" or other type of tarp to prevent the seeds from falling into the surrounding soil.

Trash and Debris Removal
The receptor sites shall be well maintained as needed, to deter vandalism and trash dumping. The Restoration Contractor is responsible for avoiding impacts to plantings during trash removal. The Restoration Contractor shall, during daily routine maintenance, manually remove weeds, litter, trash, and debris from the translocation site and dispose of off-site as permitted by law.

Access Control
The receptor sites will be checked regularly during scheduled maintenance visits for evidence of human disturbance, including off-road vehicle use, illegal dumping, vandalism, pedestrian access, and unauthorized brush clearing.

6. Monitoring

Monitoring Methods
The receptor sites will be monitored for ten years following the completion of container stock and soil clump installation. The monitoring program will consist of the observation and evidence of vegetative growth, observation of emergent and flowering round-leaved filaree along with seed production for flowering plants, photo-documentation, and measurements of annual rainfall.

Qualified habitat restoration specialists, biologists, or horticulturists with appropriate credentials and experience in native habitat restoration shall perform monitoring. Continuity within the personnel

and methodology of monitoring shall be maintained insofar as possible to ensure comparable assessments.

The Project Biologist will conduct monitoring surveys quarterly during non-growing season (September – April). During the growing period, or as soon as vegetative growth is observed, the receptor site will be monitored on a bi-weekly basis through seed production (approximately July) for up to five years to document the growth of the replacement population.

Qualitative surveys, consisting of a general site walkover and habitat characterization, will be completed during each monitoring visit. General observations, such as the growth, flowering and seed production of the round-leaved filaree, as well as pest problems, weed establishment, mortality, and site security, will be noted in each site walkover. The Project Biologist will also note observations on native plant recruitment for the purpose of later discussion in the annual reports. Records will be kept of mortality and other problems such as insect damage, weed infestation, and soil loss.

Surveying Flowering and Seed Production

All flowering and non-flowering individuals observed within the receptor sites will be counted. As noted above, quantitative surveys may require multiple visits per month as the blooming period may be staggered along several months (i.e., vegetative growth or non-blooming individuals may not be detected until that individual has bloomed). Peak blooming periods may fluctuate year to year due to seasonal conditions, therefore multiple visits will aid in a more accurate count of flowering individuals.

Each flowering individual in the created plots will be tallied and recorded on data sheets. The total yearly population will be calculated each year for the annual monitoring results and will be incorporated into the data on emergent plants to capture the total of emergent plants that do no flower and emergent plants that exhibit flowering.

Photo-Documentation

Permanent stations for photo-documentation will be established prior to or during the first annual monitoring event. Photos shall be taken each monitoring period from the same vantage point and in the same direction each year and shall reflect material discussed in the annual monitoring report.

Monitoring Schedule

During the growing period, or as soon as vegetative growth is observed, the receptor site will be monitored on a bi-weekly basis through seed production (approximately July) for ten years.

Annual Monitoring Reports

At the end of each monitoring period an annual report will be prepared for submittal to County of Los Angeles and CDFW. The report will summarize the information collected during the qualitative and quantitative monitoring. Each report will document the monitoring methods and description of the transplant sites, provide copies of field data, photo-documentation, monitoring results, an analysis of success, and recommendations for the project and or remedial measures if necessary.

Since planting may not occur when planned, monitoring shall be tied to the actual implementation date (e.g., the first annual report shall be delivered on January 1st of the year following the first growing season after planting). These reports will describe the success of the relocation and will discuss the efficacy of the various methods employed to propagate this species. These reports will also include the following:

- a list of names, titles, and companies of all persons who prepared the content of the annual report and participated in monitoring activities for that year
- a vicinity map indicating location of the mitigation site
- a mitigation site plan, identifying plot locations, photo station locations, etc. as appropriate.
- copies of all monitoring photographs
- and an analysis of all qualitative and quantitative monitoring data

7. Performance Standards

In developing the performance standards for the round-leaved filaree, it is important to consider the primary goal of the plan as set forth above, which is to establish a self-sustaining population of this plant consisting of the number of individuals/population size determined during pre-construction surveys. With replacement of the exiting population, the impacts would be fully mitigated. This requires consideration of the following factors:

- The number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe the translocated populations over a period of years to accurately determine survival and overall stability of the population. To this end, this plan proposes a ten-year monitoring term to track emergent plants along with flowering individuals which in combination provides the best and easiest indicators to track that the translocation is succeeding.

- Various threats to the plants must be minimized to ensure survival, germination, and ultimate flowering of recruited individuals, with seed set, leading to future germination/successful reproduction.

- Habitat characteristics including an abundance of non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory.

Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the variability in the number of flowering individuals from year-to-year, the performance standards will have been achieved during at least three years during the ten-year monitoring program. Thus, the annual standards provide a guide showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. Thus, if the following standard

is met in at least three years of the ten-year monitoring period then the program is considered successful.

Year One Through Year Ten (Begins with Installation of Round-Leaved Filaree)

- Flowering of a minimum of 100-percent of the total number of flowering plants originating from container stock, seed bank, and/or soil blocks, shall equal or exceed the number of container stock individuals planted (at least three years of the ten-year monitoring period); and
- Habitat subject to translocation must exhibit same or less cover by non-native grasses; and forbs than during the initial planting (20-percent at year five continuing through year ten).

Contingency Plan

In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards:

- If the receptor site is observed to be failing significantly to achieve the performance standard during the ten-year monitoring period, the first step will be to introduce hand watering, especially should significant drought occur. Hand watering would be performed during the spring prior to blooming to enhance growth and lead to flowering. Hand watering would be conducted for two years and if it does not result in achievement of performance standards, would require identification of alternative sites.
- If the receptor site is observed to be failing significantly to achieve the performance standard during the ten-year monitoring period, the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be propagated from the contingency seed supply held at the nursery for the (and maintained for at least ten years). Should the performance standards be achieved, contingency plant materials will be broadcast or installed in the translocation sites, with no additional performance standards for the contingency materials.
- The alternate site will be prepared as outlined for the initial site and modifications incorporated as determined by the project biologist in coordination with CDFW. Once an approach has been determined in coordination with CDFW, the container stock would be propagated from the contingency seed and the plants would be installed at the alternate site and a ten-year program, that included monitoring and maintenance would be initiated as set forth above.

Temporal Loss

If the translocation program fails such that at the end of ten years the site has failed to support round-leaved filaree, there would be a temporal loss that would require additional mitigation to compensate for the temporal loss. The additional mitigation would be performed at a ratio of 1.5:1.

C. Paniculate Tarplant

1. Goals

The goal of paniculate tarplant replacement program is to establish a self-sustaining population of paniculate tarplant based on the largest number of individuals detected during pre-construction surveys or original surveys conducted in support of the previously approved Project, whichever is largest. As noted, paniculate tarplant was observed by BonTerra during 2014 plant surveys, when a single population that consisted of several hundred individual plants was observed in Project development boundary. GLA confirmed the location and approximate number of plants on April 14, 2022 and determined the occupied area to cover about 0.30 acre. Pre-construction surveys would be conducted during two average or above-average rainfall years to determine the number of individuals present, with the goal of replacing the number of individuals detected during the largest of the two years of pre-construction surveys. Rainfall is considered average if it is within one quartile (+/- relative to the mean). The average rainfall for northwestern Los Angeles County is 20 inches per year using the Del Valle Weather Station, approximately six miles to the southwest of the Project site. Thus, where seasonal rainfall is at least 15 inches for the season, October 1 and April 15, the rainfall is considered average and suitable for surveys.

2. Identification of Receptor Sites

The suitability of receptor sites is determined by the presence of suitable soils, specifically the Castaic-Balcom silty clay loams which occurs within various areas of project open space. GLA has extensive experience with the paniculate tarplant on Rancho Mission Viejo in south Orange County where the species is commonly occurring in the tens of thousands in suitable years and occurs across a variety of soil types and within a variety of vegetation alliances including non-native grasslands and disturbed areas. Thus, the selected receptor sites here exhibit high suitability for this opportunistic species. Given the relatively small size of the population (a few hundred individuals), the receptor area for this species will cover 0.50 acre and can be accommodated at various locations. For purposes of efficiency, areas adjacent to the western spadefoot toad pool creation sites would provide adequate area with suitable soils as depicted on Exhibit 4a. Paniculate tarplant is an annual herb that can reach three feet in height with a diameter of up to 18 inches. Densities can be as high as five per square meter.[23] Thus, at a density of one plant per square meter, which would be low density, a site covering approximately 0.30 acre could accommodate approximately 1,200 individuals. Thus, based on counts by BonTerra in 2014 and observations by GLA in April of 2022, 0.30 acre would be more than sufficient area for the receptor site assuming a few hundred individuals, thus the 0.50 acre depicted on Exhibit 4a provides sufficient area.

In addition, as noted for the round-leaved filaree receptor site(s), discussed above, the paniculate tarplant receptor sites will consist of (1) grassland areas that are dominated by native grass species of moderate density or (2) openings within sage scrub habitats that have low coverage of shrub species. If a potential receptor site has moderate to dense non-native grass cover, pre-seeding weed

[23] Bomkamp, Tony. Personal observation of a large regional population in the Orange County Southern Subregion Habitat Conservation Plan Habitat Reserve between 1995 and 2020.

removal combined with ongoing weed control efforts will be implemented. It is important to note that the paniculate tarplant is disturbance adapted and can grow in non-native grasslands and the level of effort of site preparation for the round-leaved filaree discussed above will be more than sufficient for the paniculate tarplant.

3. Preparation of Receptor Sites

The proposed receptor sites are currently vegetated with non-native grasses and forbs including ripgut (*Bromus diandrus*) and summer mustard (*Hirschfeldia incana*). Beginning at least one full year prior to introduction of the paniculate tarplant seed (addressed below), a grow-and-kill program will be initiated to reduce the cover by non-native grasses and forbs to levels acceptable for introduction of the seed, which would be less than 30-percent non-native cover (see performance standards below for additional discussion of ongoing reduction of non-native cover during the maintenance and monitoring period). Installation of the paniculate tarplant would occur following the second full year of maintenance where the cover of non-native grasses and herbs has been reduced to 30 percent or less (ongoing maintenance will ultimately reduce non-native cover to 20 percent). Should non-native cover exceed 30-percent at the end of two years, introduction of the paniculate tarplant would be delayed until year three or when the 30 percent threshold has been achieved.

To increase the likelihood of success and to ensure that the translocation site is not adversely affected by weedy competitors, the site would be planted with a mix of native grasses and shrubs typical of native habitat on the site that would provide habitat for the round-leaved filaree. Table 2 above provides the plant palette for the proposed habitat with the associated performance standards following Table 2 above.

4. Methods for Collection of Seed for Propagation

Where the paniculate tarplant is detected during pre-construction surveys, seed will be collected during the appropriate timeframe following flowering, which would occur between June and August. The overall boundaries of the occupied area will be staked and flagged and recorded using sub-meter GPS Technology. To ensure that the maximum amount of seed is procured, the Biological Monitor will visit the site every two weeks following the start of the flowering season to collect seed as the fruits ripen. The seed from each plant would be hand-collected and placed in paper bags for temporary storage in a cool, dry facility. Once collection is complete, the collected material would be transferred to an appropriate seed storage facility (e.g., California Botanical Garden) for cleaning and storage until ready for hand broadcasting at the receptor site. Fifty-percent of the seed will be preserved for using in contingency sites if needed. If not needed for contingency purposes because the performance standards have been achieved, the contingency seed will be hand-broadcast at the receptor site following successful completion.

While BonTerra proposed collection of soil blocks as part of the paniculate tarplant replacement effort, this is not necessary as this plant can be restored through seed collection hand broadcasting and soil collection will not be implemented. Specifically, the paniculate tarplant is an annual that is highly disturbance adapted and performs well through seeding and thus, the soil block method

is not necessary and may be detrimental due to importation of additional weed seeds in the soil blocks.

5. Weeding and other Maintenance Requirements

The purpose of this program is to ensure the success of the seeded paniculate tarplant over the life of the translocation/mitigation project, for at least a ten-year period. The Project Biologist will monitor all aspects of the paniculate tarplant replacement effort throughout the maintenance period to detect any problems at an early stage. Potential problems could arise from vandalism, competition from weeds and invasive species, and unacceptable levels of disease and predation/herbivory.

These maintenance guidelines are specifically tailored for paniculate tarplant establishment. The maintenance personnel will be fully informed regarding the habitat establishment program to ensure their understanding of the goals of the effort and the maintenance requirements. A Restoration Contractor with experience and knowledge in native plant habitat restoration will supervise all maintenance personnel.

General Maintenance
The Contractor will perform the following tasks as general maintenance duties:

- Inspection of Receptor Sites
- Weed control
- Trash and debris removal
- Pest control

Inspection of Receptor Sites
After initial seeding, the Project Biologist will check the restoration plots bi-monthly during paniculate tarplant growing season which can begin as early as February through July or August every year.

The Project Biologist shall prepare a written memorandum to the Applicant after each monitoring site visit listing observations, problems, and recommended remedial measures based upon field observations. A copy of this memorandum shall be sent to the Restoration Contractor for implementation. These memorandums shall focus on identified problems including vandalism, weeding, debris removal, pest control, herbivory etc. The Project Biologist shall be responsible for recommending all remedial measures to be implemented.

Weed Control
Weed control within the receptor sites shall be maintained on a regular basis during the maintenance and monitoring period. Maintenance shall be conducted monthly during the growing season (January-May) of the first year and bi-annually thereafter until the end of the maintenance and monitoring period.

Weed eradication will minimize competition that could prevent the establishment of native species. All maintenance personnel will be trained to distinguish weed species from native vegetation to ensure only weedy species are removed or sprayed with herbicide.

Weeds shall be removed by hand or controlled with an appropriate herbicide as determined by a licensed PCA. The Project Biologist will be consulted and approve any herbicide application in advance. Weed debris shall be removed from the project area as accumulated and disposed of as permitted by law.

All portions of the weed will be removed, including the roots. The Project Biologist shall direct the Restoration Contractor regarding the selection of target weed species, their location, and the timing of weed control operations to ensure that native plants are avoided to the extent possible. Pulled weeds will be placed on a "mantilla" or other type of tarp to prevent the seeds from falling into the surrounding soil.

Trash and Debris Removal

The receptor sites shall be well maintained as needed, to deter vandalism and dumping of trash. The Restoration Contractor is responsible for avoiding impacts to plantings during trash removal activities. The Restoration Contractor shall, during daily routine maintenance, manually remove weeds, litter, trash, and debris from the translocation site and dispose of off-site as permitted by law.

Access Control

The receptor sites will be checked regularly during scheduled maintenance visits for evidence of human disturbance, including off-road vehicle use, illegal dumping, vandalism, pedestrian access, and unauthorized brush clearing.

6. Monitoring

Monitoring Methods

The receptor sites will be monitored for ten years following the completion of seeding. The monitoring program will consist of the observation and evidence of vegetative growth, observation of emergent and flowering paniculate tarplant along with seed production for flowering plants, photo-documentation, and measurements of annual rainfall.

Qualified habitat restoration specialists, biologists, or horticulturists with appropriate credentials and experience in native habitat restoration shall perform monitoring. Continuity within the personnel and methodology of monitoring shall be maintained insofar as possible to ensure comparable assessments.

The Project Biologist will conduct monitoring surveys quarterly during non-growing season (September – April). During the growing period, or as soon as vegetative growth is observed, the receptor site will be monitored on a bi-weekly basis through seed production (approximately July or August) for ten years to document the growth of the replacement population.
Qualitative surveys, consisting of a general site walkover and habitat characterization, will be

completed during each monitoring visit. General observations, such as the growth, flowering and seed production of the paniculate tarplant, as well as pest problems, weed establishment, mortality, and site security, will be noted in each site walkover. The Project Biologist will also note observations on native plant recruitment for the purpose of later discussion in the annual reports. Records will be kept of mortality and other problems such as insect damage, weed infestation, and soil loss.

Surveying Flowering and Seed Production

All flowering individuals observed within the receptor sites will be counted. As noted above, quantitative surveys may require multiple visits per month as the blooming period may be staggered along several months (i.e., vegetative growth or non-blooming individuals may not be detected until that individual has bloomed). Peak blooming periods may fluctuate year to year due to seasonal conditions, therefore multiple visits will aid in a more accurate count of flowering individuals.

Each flowering individual in the restoration plots will be tallied and recorded on data sheets. The total yearly population will be calculated each year for the annual monitoring results.

Photo-Documentation

Permanent stations for photo-documentation will be established prior to or during the first annual monitoring event. Photos shall be taken each monitoring period from the same vantage point and in the same direction each year and shall reflect material discussed in the annual monitoring report.

Monitoring Schedule

During the growing period, or as soon as vegetative growth is observed, the receptor site will be monitored on a bi-weekly basis through seed production (approximately July and August) for ten years.

Annual Monitoring Reports

At the end of each monitoring period an annual report will be prepared for submittal to County of Los Angeles and CDFW. The report will summarize the information collected during the qualitative and quantitative monitoring. Each report will document the monitoring methods and description of the transplant sites, provide copies of field data, photo-documentation, monitoring results, an analysis of success, and recommendations for the project and or remedial measures if necessary.

Since seeding may not occur when planned, monitoring shall be tied to the actual implementation date (e.g., the first annual report shall be delivered on January 1st of the year following the first growing season after seeding). These reports will describe the success of the relocation and will discuss the efficacy of the various methods employed to propagate this species. These reports will also include the following:

- a list of names, titles, and companies of all persons who prepared the content of the annual report and participated in monitoring activities for that year
- a vicinity map indicating location of the mitigation site
- a mitigation site plan, identifying plot locations, photo station locations, etc. as appropriate.

- copies of all monitoring photographs
- and an analysis of all qualitative and quantitative monitoring data

7. Performance Standards

In developing the performance standards for the paniculate tarplant, it is important to consider the primary goal of the plan as set forth above, which is to establish a self-sustaining population of this plant consisting of the number of individuals/population size determined during pre-construction surveys. This requires consideration of the following factors:

- The number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe the translocated populations over a period of years to accurately determine survival. To this end, this plan proposes a ten-year monitoring term to track flowering individuals which provides the best and easiest indicators to track that the translocation is succeeding.

- Various threats to the plants must be minimized to ensure survival, and ultimate flowering of seeded individuals leading to future germination/successful reproduction.

- Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory.

Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the variability of the number of flowering individuals from year-to-year, the performance standards will be considered to have been achieved if during any of three years of the ten-year monitoring period, the target number is achieved. Thus, the annual standards provide a guide showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period.

Year One Through Year Ten

- Flowering of 100-percent of the total number of flowering plants originating from seed shall equal or exceed the number of container individuals counted during the two-year monitoring period (at least three years of the ten-year monitoring period).
- Habitat subject to translocation must exhibit same or less cover by non-native grasses; and forbs than during the initial planting (30-percent).

Contingency Plan

In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards:

- If the receptor site is observed to be failing significantly to achieve the performance standard during the ten-year monitoring period the first step will be to introduce hand

watering, especially should significant drought occur. Hand watering would be performed during the spring prior to blooming to enhance growth and lead to flowering. Hand watering would be conducted for two years and if it does not result in achievement of performance standards, would require identification of alternative sites.

- If the receptor site is observed to be failing significantly to achieve the performance standard during the ten-year monitoring period, the Biological Monitor will identify an alternate site(s) in which to broadcast seed from the contingency seed supply held at the seed facility (and maintained for at least ten years). Should the performance standards be achieved, contingency seed would be broadcast in the receptor site.
- The alternate site will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with CDFW. Once an approach has been determined in coordination with CDFW, the seed would be broadcast at the contingency seed and seeded at the alternate site and a ten-year program, that includes monitoring and maintenance would be initiated as set forth above.

D. Southwestern Spiny Rush

1. Goals

The goal of spiny rush preservation and replacement program is to provide for a self-sustaining population of spiny rush that contributes to the persistence of this species within northern Los Angeles County. The proposed mitigation, for impacts to approximately 2,000 individuals, will include replacement of spiny rush in combination with preservation of approximately 523 individuals of spiny rush detected during surveys by GLA within Marple Canyon on March 7, 2022. As noted, GLA confirmed the approximate number of plants on the NorthLake site during surveys in 2021 wherein GLA biologists counted approximately 2,000 plants in Grasshopper Creek, including the areas designated as Offsite 1 and Offsite 3 on Exhibit 4a. In addition to preservation of approximately 523 individuals within Marple Canyon, replacement of spiny rush will be implemented within a segment of Grasshopper Creek downstream of the project site within lands under the ownership of NorthLake. Based on densities of spiny rush within the NorthLake project site, the offsite segment of Grasshopper Creek could support approximately 200 individuals providing for a combined total of 723 individuals. It should be noted that preservation of the Marple Canyon population includes long-term management by the Santa Monica Mountains Conservancy that will be responsible for the Marple Canyon preservation area.

Given the status and the total number of occurrences in the CNDDB as noted above: "…this sub-species is listed as S4 in the CNDDB or "apparently secure within California". Moreover, given (i) the CRPR rank of 4 and the S4 Rarity Ranking, (ii) over 400 reported occurrences in CalFlora, statewide[24] substantially exceeding the minimum threshold of 100 occurrences for the S4 category…" the combined preservation and establishment within the downstream segment of Grasshopper Creek as depicted on Exhibit 4b, the population within northern Los Angeles County would remain secure and the impacts would be mitigated to less-than-significant through the combination of establishment and preservation.

[24] https://www.calflora.org/app/taxon?crn=4433

2. Identification of Receptor Sites

The suitability of receptor site was determined by the presence of suitable soils within the subject segment of Grasshopper Creek and suitable hydrology due to the presence of upstream debris basins that will provide for surface and subsurface flows to the proposed establishment site. Specifically, the debris basins will provide for slow release of storm flows that will extend the periods of saturated and/or wet soils in the establishment area. This combined with groundwater recharge due to the basins, which will provide subsurface water to the establishment area, will ensure adequate hydrology for the spiny rush. The proposed establishment site is depicted on Exhibit 4b in the context of the overall site with a close-up of the establishment site with debris basins that will be constructed as part of the development depicted on Exhibit 4c.

The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas.

3. Preparation of Receptor Sites

The proposed receptor site in Grasshopper Creek, which is below the terraces where the western spadefoot toad pools will be located [see Exhibit 4C that shows the separation], is currently sparsely vegetated with occasional patches of mulefat (*Baccharis salicifolia*) and non-native grasses and forbs. Beginning at least one full year prior to introduction of the spiny rush, a non-native removal program will be initiated to reduce the cover by non-native grasses and forbs to levels acceptable for introduction of the spiny rush, which would be less than 30-percent non-native cover. Where spiny rush occurs within Grasshopper Creek and Marple Creek, it occurs in low densities under areas of willow riparian canopy and where canopy is lacking, it often occurs in dense thickets that exhibit near 100-percent cover. To preserve space for the spiny rush within Grasshopper Creek, and thereby maximize numbers, no canopy or other plantings are proposed for the establishment areas other than riparian species, which recruit naturally.

4. Methods for Collection of Seed for Propagation and Cuttings for Planting

As noted, spiny rush is common within Grasshopper Creek, allowing for the collection of abundant seed during the appropriate phenology, which would occur during July and August. To ensure that the sufficient seed is procured, the Biological Monitor will visit the site every two weeks following the start of the flowering season to collect seed as the fruits ripen. The seed from each plant would be hand-collected and placed in paper bags for temporary storage in a cool, dry facility. Once collection is complete, the collected material would be transferred to an appropriate seed storage and propagation facility (e.g., Tree of Life Nursery or other native plant nursery) for cleaning and storage until ready for initiation of growth of container stock. Fifty-percent of the seed will be preserved for growing additional container stock as needed to replaced dead or dying plants or for use in contingency sites if needed. If not needed for additional container stock or contingency purposes because the performance standards have been achieved, the contingency seed will be hand-broadcast at the receptor site or within Marple Canyon following successful completion.

To augment seed and associated container stock, cuttings from the root balls would be obtained. Cuttings would be obtained during the fall by landscape crews experienced in collecting such cuttings. A minimum of 200 cuttings would be collected from plants within the segment of Grasshopper Creek proposed for impacts and collection would occur within two months of impacts. Following collection, the cuttings would be placed in bucket with a few inches of water and the buckets would be moved to the establishment areas for planting. Cuttings would remain in the buckets for 15 to 45 days prior to transplantation and would be installed by the landscape crews.

5. Weeding and other Maintenance Requirements

The purpose of this program is to ensure the success of the established spiny rush over the life of the translocation/mitigation project, for at least a ten-year period. The Project Biologist will monitor all aspects of the spiny rush replacement effort throughout the maintenance period to detect any problems at an early stage. Potential problems could arise from vandalism, competition from weeds and invasive species, and unacceptable levels of disease and predation/herbivory.

These maintenance guidelines are specifically tailored for spiny rush establishment. The maintenance personnel will be fully informed regarding the habitat establishment program to ensure their understanding of the goals of the effort and the maintenance requirements. A Restoration Contractor with experience and knowledge in native plant habitat restoration will supervise all maintenance personnel.

General Maintenance

The Contractor will perform the following tasks as general maintenance duties:

- Inspection of Receptor Sites
- Weed control
- Trash and debris removal
- Pest control

Inspection of Receptor Sites

After initial planting of container stock, the Project Biologist will check the restoration plots bi-monthly during spiny rush growing season which can begin as early as February through July every year.

The Project Biologist shall prepare a written memorandum to the Applicant after each monitoring site visit listing observations, problems, and recommended remedial measures based upon field observations. A copy of this memorandum shall be sent to the Restoration Contractor for implementation. These memoranda shall focus on identified problems including vandalism, weeding, debris removal, pest control, herbivory etc. The Project Biologist shall be responsible for recommending all remedial measures to be implemented.

Weed Control

Weed control within the receptor sites shall be maintained on a regular basis during the maintenance and monitoring period. Maintenance shall be conducted monthly during the growing

season (January-May) of the first year and bi-annually thereafter until the end of the maintenance and monitoring period.

Weed eradication will minimize competition that could prevent the establishment of native species including spiny rush recruits. All maintenance personnel will be trained to distinguish weed species from native vegetation to ensure only weedy species are removed or sprayed with herbicide.

Weeds shall be removed by hand or controlled with an appropriate herbicide as determined by a licensed PCA. The Project Biologist will be consulted and approve any herbicide application in advance. Weed debris shall be removed from the project area as accumulated and disposed of as permitted by law.

All portions of the weed will be removed, including the roots. The Project Biologist shall direct the Restoration Contractor regarding the selection of target weed species, their location, and the timing of weed control operations to ensure that native plants are avoided to the extent possible. Pulled weeds will be placed on a "mantilla" or other type of tarp to prevent the seeds from falling into the surrounding soil.

Trash and Debris Removal
The receptor site shall be well maintained as needed, to deter vandalism and dumping of trash. The Restoration Contractor is responsible for avoiding impacts to plantings during trash removal activities. The Restoration Contractor shall, during daily routine maintenance, manually remove weeds, litter, trash, and debris from the translocation site and dispose of off-site as permitted by law.

Access Control
The receptor site will be checked regularly during scheduled maintenance visits for evidence of human disturbance, including off-road vehicle use, illegal dumping, vandalism, pedestrian access, and unauthorized brush clearing.

6. Monitoring

Monitoring Methods
The receptor site will be monitored for ten years following the completion of planting of container stock. The monitoring program will consist of the observation and evidence of vegetative growth, observation of flowering spiny rush along with seed production for flowering plants, photo-documentation, and measurements of annual rainfall.

Qualified habitat restoration specialists, biologists, or horticulturists with appropriate credentials and experience in native habitat restoration shall perform monitoring. Continuity within the personnel and methodology of monitoring shall be maintained insofar as possible to ensure comparable assessments.

The habitat restoration specialists, biologists, or horticulturists will conduct monitoring surveys quarterly for ten years to document the growth of the replacement population. Qualitative surveys, consisting of a general site walkover and habitat characterization, will be completed during each monitoring visit. General observations, such as mortality or lack of vigor along with the growth, flowering and seed production of the spiny rush, as well as pest problems, weed establishment, and site security, will be noted in each site walkover. The Project Biologist will also note observations on native plant recruitment, including spiny rush, for the purpose of later discussion in the annual reports. Records will be kept of mortality and other problems such as insect damage, weed infestation, and soil loss.

Quantifying Established Plants

All spiny rush individuals observed within the receptor site will be counted. As noted above, quantitative surveys will be conducted once per year. Each individual in the restoration plot will be tallied and recorded on data sheets. The total yearly population will be calculated each year for the annual monitoring results.

Photo-Documentation

Permanent stations for photo-documentation will be established prior to or during the first annual monitoring event. Photos shall be taken each monitoring period from the same vantage point and in the same direction each year and shall reflect material discussed in the annual monitoring report.

Monitoring Schedule

During the growing period, or as soon as vegetative growth is observed, the receptor site will be monitored in a quantitative manner to determine the number of individuals (approximately March through June) each year for ten years.

Annual Monitoring Reports

At the end of each quantitative monitoring period an annual report will be prepared for submittal to County of Los Angeles and CDFW. The report will summarize the information collected during the qualitative and quantitative monitoring. Each report will document the monitoring methods and description of the establishment sites, provide copies of field data, photo-documentation, monitoring results, an analysis of success, and recommendations for the project and or remedial measures if necessary.

The reports will describe the success of the relocation and will discuss the efficacy of the various methods employed to propagate this species. These reports will also include the following:

- a list of names, titles, and companies of all persons who prepared the content of the annual report and participated in monitoring activities for that year
- a vicinity map indicating location of the mitigation site
- a mitigation site plan, identifying plot locations, photo station locations, etc. as appropriate.
- copies of all monitoring photographs
- and an analysis of all qualitative and quantitative monitoring data

7. Performance Standards

In developing the performance standards for the spiny rush, it is important to consider the primary goal of the plan as set forth above, which is to establish a self-sustaining population of approximately 200 plants. This requires consideration of the following factors:

- There will be loss of some of the planted individuals due to unsuitable micro habitat conditions and it will be necessary to replace container plants that do not survive initial plantings. To this end, this plan proposes a ten-year monitoring term to track survival of planted individuals which provides the best and easiest indicator to track that the establishment is succeeding.

- Various threats to the container plants must be minimized to ensure survival, germination of recruits, and ultimate flowering of planted and recruited individuals, with seed set, leading to future germination/successful reproduction.

- Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory.

Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the potential loss of planted individuals from year-to-year, the performance standards will be considered to have been achieved if at the end of the ten-year monitoring period, the target number is achieved. Thus, the annual standards provide a guide showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period.

Year One

- Survival of 80-percent of the 200 established individuals.
- Following quantitative monitoring that will occur between March and June, the number of additional container stock to provide for establishment of 200 plants will be determined with planting to following during fall of the same year.

Year Two

- Survival of 90-percent of the 200 established individuals.
- Following quantitative monitoring that will occur between March and June, the number of additional container stock to provide for establishment of 200 plants will be determined with planting to following during fall of the same year.

Year Three through Ten

- Survival of 100-percent of the 200 established individuals.
- Following quantitative monitoring that will occur between March and June, the number of additional container stock to provide for establishment of 200 plants will be determined with planting to following during fall of the same year.

Contingency Plan

In the event the mitigation program fails to achieve the performance standards discussed above during the ten-year monitoring period, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards:

- If the receptor site is observed to be failing significantly to achieve the performance standard during the ten-year monitoring period the first step will be to introduce watering by means of a water truck, especially should significant drought occur. Watering would be performed throughout the year to promote survival and growth and lead to flowering and reproduction. Watering would be conducted for three years and if it does not result in achievement of performance standards, would require identification of alternative sites.
- If the receptor site is observed to be failing significantly to achieve the performance standard during the ten-year monitoring period, the Biological Monitor will identify an alternate site(s) in which to establish container stock (and maintained for at least ten years). Should the performance standards be achieved, contingency seed would be broadcast in the receptor site.
- The alternate site will be prepared as outlined for the initial site and modifications incorporated as determined by the Project Biologist in coordination with CDFW. Once an approach has been determined in coordination with CDFW, the container stock would be established at the alternate site and a ten-year program, that includes monitoring and maintenance would be initiated as set forth above.

Temporal Loss

If the translocation program fails such that at the end of ten years the site has failed to support spiny rush, there would be a temporal loss that would require additional mitigation to compensate for the temporal loss. The additional mitigation of the 200 plants proposed for establishment would be performed at a ratio of 1.5:1.

E. Slender/Club-Haired Mariposa Lily

As reported by BonTerra, the Project will result in a significant impact on the slender and club-haired Mariposa lily (slender/club-haired mariposa lily), which are treated as a single taxon for purposes of this HMMP:

> *Approximately 1,709 individuals of slender/club-haired mariposa lily hybrids were observed at 36 locations on the project site during botanical surveys conducted in 2014; an additional 22 populations contained plants of varying densities, likely representing an additional 1,000 or more individuals. It is estimated that over 3,000 individuals occur on the project site and approximately 2,000 individuals are located within the project development boundary.*[25]

[25] *Special Status Plant Species Restoration Plan: NorthLake Specific Plan, Los Angeles County, California,* p.4.

In a letter dated June 15, 2017, the CDFW submitted a comment letter that included a discussion of the mitigation measures proposed for the slender/club-haired mariposa lilies.[26] The letter was prepared prior to preparation of the BonTerra Draft Rare Plant Plan, which itself was prepared to address many of the comments from CDFW. Nevertheless, to ensure that all CDFW's concerns are addressed, relevant comments are excerpted below:

> *B) Mariposa Lily Impacts. Impacts to club-haired mariposa lily (Calochortus clavatus var. clavatus) and over 3,000 slender mariposa lily (Calochortus clavatus var. gracilis) are proposed in Mitigation Measure 7 (MM7) that states the mitigation site will be located in dedicated open space in the study area or at an off-site mitigation site, and does not contain critical information including; [sic] numbers or densities, specific locations, techniques, or success criteria. The Department considers the loss of over 3,000 rare lilies regionally significant and MM7 does not demonstrate this population will survive long-term. The Department is not aware of any Mariposa lily seeding or translocation projects that have been successful at demonstrating a long-term self-sustaining population. The Department is aware of several large-scale lily seeding/translocation projects required by Los Angeles County in various CEQA documents; however, the Department has not received any evidence to demonstrate these undertakings are successful at securing a secure, self-sustaining population. A number of these projects involved transplanting bulbs into off-site areas already occupied with slender mariposa lily. The methods used in planting the bulbs ended up damaging the receptor site and caused more take of lily that occurred at this location.*
>
> *The Department recommends avoidance of this significant population of a regionally rare species. If avoidance is not feasible, specific information on how impacts will be mitigated are necessary for the Department to make meaningful comments or recommendations as to the biological soundness of any proposal. As stated above, MM7 does not appear to contain mitigation that the Department considers adequate in providing long-term success or survival of this species. MM7 does not allow the Department to comment on the appropriateness of the location, technique, success criteria, monitoring methods, density, length of time monitoring is required, of the method for long-term protection and funding.*
>
> *The Department does not support the use of irrigation, and any monitoring should begin after any irrigation and weed control has been completed as this is considered the installation or preparation phase. Monitoring for rare plants should occur for a minimum of 10 years to allow trends to be analyzed. No negative trend in rare plant individuals (counted separately as flowering, seed set and non-flowering individuals), and no positive trend in non-native plant cover should occur over the 10 years.*

[26] California Department of Fish and Wildlife. June 15, 2017. "Northlake Specific Plan Project (PROJECT) DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT (DSEIR) SCH#2015031080.

MM7(f) states 60 percent of the seeds and bulbs collected shall be planted the first year, in an undetermined location. The Department does not concur with planting 60 percent of the collected seed/plants in the first year. Small scale, in situ plots with a few individuals should be conducted first to establish the baseline that these plants will naturally grow and set seed in these locations. Preferably, these growth plots should occur several years before grading impacts, to allow suitable planting areas be identified based on successful seed set. This could take multiple growing seasons and require germination studies. MM7(j) specifies undisclosed donor sites for seed collection. The Department strongly discourages mixing different population alleles into new areas as it compromises the integrity of the entire regional population.

First, as noted above, approximately 3000 slender/club-haired mariposa lilies are estimated to occur within the Project site with approximately 2,000 slender/club-haired mariposa lilies estimated to occur within the Project development/grading limits (Project Impact Area). A final count will be made during the two years of surveys prior to construction, and the number subject to the performance standards will be established during these surveys as described in more detail below. Thus, it will be necessary to ensure that the final total of impacted individuals within the Project Impact Area are adequately mitigated, which in turn will require replacement of sufficient numbers of mariposa lilies within areas of suitable habitat to mitigate the impacts. Establishment of a self-sustaining population or sub-populations that can be shown to persist at the receptor sites is the most critical component of the mitigation program because once the target number of plants are established and are reproducing within suitable habitat, the program can be considered a success. Thus, as set forth below, 1:1 or greater replacement is not necessary; nevertheless, there must be sufficient replacement to ensure that the reestablished population(s) are viable and contribute substantially to the regional population.

It is important to recognize CDFW's concerns that previous efforts to reestablish certain species or varieties of Mariposa lily have allegedly not been successful to date and that it will be necessary to ensure that suitable receptor sites are available and utilized, which is addressed below. In addressing CDFW's concerns the following proposals have been eliminated:

- Bulbs will not be translocated to occupied areas within the proposed mitigation sites based on pre-construction surveys with extant populations of slender or club-haired lilies[27]
- Irrigation by means of hand watering will be used in the translocation sites if determined necessary by the project biologist
- Monitoring will be conducted for 10 years
- Any offsite collection sites for seeds and bulbs that extends more than five miles beyond the Project site will be coordinated with CDFW to ensure genetic integrity

[27] GLA conducted surveys of the proposed translocation sites depicted on Exhibit 5 and found very low densities; only a few small patches within the some translocation sites. The presence of the species is important as it confirms overall suitability of the area for translocation including appropriate soils, aspect, and topography. Translocation would only be performed in areas that do not support extant populations.

1. Identification of Suitable Receptor Sites

The BonTerra Draft Rare Plant Plan identified the habitat occupied by the slender/club-haired mariposa lily hybrids, which informs the requirements of the receptor sites:

> *Slender mariposa lily and club-haired mariposa lily receptor site(s) shall consist of areas with rocky soils that naturally allow only low to moderate cover of native shrubs. Such areas consist of openings in sage scrub habitat, ridgelines, rocky slopes, and grassland areas. If a potential receptor site has moderate to dense non-native grass coverage, pre-transplantation weed removal combined with ongoing weed control efforts will be necessary. Potential receptor sites that contain gophers should be avoided as they are known to eat transplanted lily bulbs. If a receptor site is chosen that contains gophers, protective cages that extend above and below ground shall be installed around groups of transplanted lily bulbs.*[28]

BonTerra also addressed opportunities for relocation or establishment of lily populations on the Project site:

> *Because most of the project site will be graded for project development, few on-site opportunities remain for special status plant restoration. Potential on-site receptor locations were assessed based on existing soils, aspect, and vegetation. A large area of native sage scrub habitat occurs in the northwest corner of the project site (Exhibit 4). This area does not contain clay soils…but does contain gaps in shrub coverage that may provide limited opportunities for mariposa lily transplantation. However, a significant constraint on the use of this area for target species establishment is its potential utilization by the federally Threatened coastal California gnatcatcher (Polioptila californica californica) (gnatcatcher). Nesting activity by this bird species has been observed immediately east of this area, and gnatcatchers could potentially occur in the northwest corner of the site; therefore, maintenance tasks would have to be implemented in a manner that did not adversely impact gnatcatchers. Another potential on-site receptor site is in the southeast corner of the site which does contain some clay soils and provides limited potential for establishment of…mariposa lilies. However, this area was burned in 2013 and as vegetation recovers, overall habitat conditions may become too dense for long-term establishment. High- and medium-density populations of mariposa lilies occur in an area located in the southern-central portion of the site which will not be graded. This area may provide opportunities for the enhancement of these existing target plants through the relocation of mariposa lily bulbs, although it would be very difficult to distinguish between relocated bulbs and those which occur there naturally. All areas that are subject to fuel modification activities are not acceptable for the relocation of salvaged plant materials for the target species, due to the ongoing soil disturbance associated with such activities.*

[28] Ibid., p 7.

Subsequently, BonTerra conducted a more detailed feasibility study for onsite parcels, offsite parcels within the NorthLake ownership as well as offsite properties under other ownership and potentially available as set forth in their Memorandum dated August 24, 2018: *Feasibility Analysis of NorthLake Biological Mitigation Requirements* addressed to John Arvin, NorthLake [attached as Appendix A]. In their feasibility analysis BonTerra identified approximately 300 acres onsite and 450 acres of offsite lands under the NorthLake ownership suitable for translocation. BonTerra also identified an additional 13 offsite properties with up to 20,500 acres of potentially suitable habitat for the translocation of impacted lilies. Densities for different species and varieties of Mariposa lily can vary substantially based on site conditions. For the NorthLake site, BonTerra categorized the slender/club-haired Mariposa lily occurrences as low-, medium-, and high-density but did not quantify these terms. To establish the number of acres needed to accommodate approximately 2,000 mariposa lilies, GLA used a large dataset for the intermediate mariposa lily (*Calochortus weedii* var. *intermedius*) (IML) from southern Orange County associated with the Orange County Southern Subregion Habitat Conservation Plan (SSHCP). The IML within a large subarea of the SSHCP exhibited a density of 205 lilies per acre for occupied habitat. Using this as a surrogate for the slender/club-haired Mariposa lily, it will be necessary to obtain approximately 9.7 acres of suitable habitat to ensure replacement of approximately 2,000 impacted lilies. The analysis of the occupied habitat determined a ratio of approximately 10:1 of area to obtain sufficient areas with suitable conditions. Thus, for 2,000 slender/club-haired Mariposa lilies, it will be necessary to obtain approximately 100 acres of area with suitable soils.

- GLA conducted on review of potential sites within the NorthLake ownership and identified an approximately 167-acre parcel immediately to the east of the NorthLake development area that exhibits suitable soils, native coastal sage scrub habitat suitable for translocation of salvaged slender/club-haired Mariposa lilies. As noted above, based on typical densities, approximately 9.7 acres would be necessary for planting of approximately 2,000 lilies. GLA identified a minimum of 30.19 acres, or about three times the area needed. Exhibit 5 depicts the 30.19-acre area that would receive the translocated Mariposa lilies. During the April 14, 2022 site visit, GLA noted a few individuals of slender/club-haired Mariposa lilies within the proposed mitigation area, which confirms the suitability of the area for this taxon. In order to confirm that the proposed mitigation area was not already at capacity, GLA conducted a more detailed survey on May 2, 2022 and counted a total of 43 lilies within the proposed mitigation, which was expanded during the May 2 site visit to ensure that additional suitable areas were available. Exhibit 5 depicts the location of slender/club-haired Mariposa lilies and the additional receptor sites identified. As noted, the potential receptor sites total 30.19 acres. As noted above, bulbs will not be translocated to occupied areas within the proposed mitigation sites based on pre-construction surveys with extant populations of slender or club-haired lilies[29] To ensure that extant populations are not impacted by installation of bulbs or container plants, all slender/club-haired Mariposa lilies detected during two-year pre-construction surveys in the 30.19-acre observed area will be

[29] GLA conducted surveys of the proposed translocation sites depicted on Exhibit 5 and found very low densities consisting of a few small patches within some translocation sites. The presence of the species, even in low densities is important as it confirms overall suitability of the area for translocation including appropriate soils, aspect, and topography. Translocation would only be performed in areas that do not support extant populations.

flagged and a 25-foot buffer around slender/club-haired Mariposa lilies will be established and demarcated to ensure protection during installation.

2. Collection of Seed and Bulbs

To collect seed and bulbs it is necessary to conduct pre-construction surveys in areas of suitable habitat to mark the locations for plants from which seeds can be collected as well as the location of specific plants for salvage of bulbs. BonTerra included a discussion in the BonTerra Draft Rare Plant Plan:

> *Botanical surveys shall be conducted by the Biological Monitor to mark the locations of plant material that is to be salvaged and relocated as part of this mitigation program. These surveys shall be conducted during at least two separate years, when sufficient rainfall has fallen to maximize the opportunity to observed annual plant species. To determine if sufficient rainfall has occurred for plant surveys to proceed, the California Nevada River Forecast Center website (NOAA 2017) shall be consulted to determine if the current water year is within 80 percent of normal rainfall… As needed, the locations (coordinates) of target plants will be recorded with Global Positioning System (GPS) equipment (single plants, or groups of plants) to facilitate the relocation of target plants. Individual…mariposa lily plants will be marked by colored pin flags to identify their location, so that seeds and bulbs can be collected after these species enter dormancy.*

The number of slender/club-haired mariposa lilies flagged within the impact boundaries during the two years of pre-construction surveys will be used to establish a final impact total. Note that because of the variability of the flowering for this species, it is likely that some plants will be encountered in both years while others are only detected during one or the other years. Thus, the total number of lilies will be based on the actual total of plants where those identified during both years are counted as a single individual, as will be those encountered in only one of the years. Thus, after the second survey, it will be possible to establish a more accurate number of plants to be impacted and subject to this mitigation program. Should the count of lilies during the two-year preconstruction surveys be less than the 2,000 estimated by BonTerra within the Project development area, the number of plants impacted would be 2,000, which would be the largest number determined through the various surveys in the Project Impact Area. Finally, because of the large population on the site and the ease of detection when the plants are flowering, it will not be necessary to rely on reference populations. As noted, surveys will start prior to flowering to monitor phenology to ensure that surveys capture all individuals for purposes of an accurate impact determination.

The BonTerra Draft Rare Plant Plan included details regarding seed and bulb collection, which also included "soil blocks" that would be implemented for areas of high density of the mariposa lilies. Seed and bulb collection would be limited to plants within the Project Impact Area. Plants within areas subject to avoidance would not be utilized for seed collection or bulb salvage.

Seed Collection
Seeds from all of the target species shall be collected by a qualified native seed collector, who shall monitor plant populations to determine when seeds have reached maturity for collection. Seed will be subsequently cleaned and stored in an appropriate facility for later application in receptor sites.

Soil Blocks
Collection of blocks of soil is a useful tool for plant translocation as soil in known locations of special status species contains a seed bank for these species as well as any beneficial microorganisms. If a [dense]population of mariposa lily is identified during pre-construction surveys, soil that contains these plants will be collected and relocated to an appropriate receptor site. Soil will be collected…after seed collection has occurred in approximate two to four square foot blocks to a depth of [eight] to [ten] inches.

Bulb Collection
Bulb retrieval will be performed by the Seed Collector during biological dormancy of the lilies (e.g., prior to winter rains) in late fall to maximize the survivorship of transplanted individuals. Using hand tools, the Seed Collector will excavate small blocks of soil surrounding each flagged lily to a depth of 10 to 14 inches. Individual lily bulbs will be collected from the soil blocks and will be transferred to a native plant nursery for storage until the receptor sites have been prepared for transplantation. Lily bulbs will be stored at the native plant nursery for at least one year so that the bulbs can be allowed to germinate and non-target bulbiferous species can be removed from the collected materials.

Suitable soil from Mariposa lily impact areas will also be salvaged and incorporated into the mitigation plantings. Equipment such as a backhoe, excavator, or front loader may be used to excavate soil from areas where bulbs are salvaged and to transport soil to the receptor plots. Alternately, soil may be stockpiled in areas approved by the Project Biologist and transported to the relocation areas using a wheelbarrow or all-terrain vehicle (ATV), as appropriate and as site access allows. The quantity of soil required will be based upon the number and size of receptor plots and will be directed by the Project Biologist.

3. Installation of Bulbs at Receptor Sites

Installation of the bulbs and container stock (container stock is addressed in Subsection (F) below) to the receptor sites is the most critical and difficult component of the program. Each bulb or clump of bulbs will be flagged, and the number of bulbs represented by each flag will be recorded and the flags will provide the exact location for the translocated bulbs. Similarly, any Mariposa lilies planted as container stock would be flagged and recorded in the same manner. This will allow the Project Biologist to follow each translocated bulb or clumps of bulbs. As described below, each bulb or clump of bulbs will be carefully installed to optimize survival and each bulb will protected to eliminate the potential for herbivory. Specifically, during extreme drought, bulbs are more likely to be eaten by small mammals for their water content (e.g., mice, voles, gophers,

rabbits), thus requiring protection by use of gopher wire and cages extending below ground to protect bulbs from burrowing mammals.

Based on soil and subsoil conditions and as determined by the Project Biologist, a layer of up to 18 inches of soil may be translocated from the Mariposa lily impact areas to the receptor site(s). Surrounding soil and biomass will also be collected during bulb salvage. The soil biomass should remain as consolidated as possible during the excavation process.

Depending on a variety of factors including existing vegetation, steepness of slope, and ease of access, as determined by the Project Biologist, a layer of up to 18-inches of translocated soil, salvaged from the same areas from which Mariposa lily bulbs are obtained, will be placed in each relocation plot covering pre-installed gopher wire, chicken wire, or hardware cloth that will line the excavated holes where the soil clumps would be installed. Following installation of the soil clumps, the area would be covered with gopher wire, chicken wire, or hardware cloth that would extend a minimum of 12 inches beyond the perimeter of the soil clump. For individual bulbs, it will be necessary to install cages, within which the salvaged soil and bulbs would be placed. The cages would be approximately six inches in diameter and bulbs should be placed so that there is at least two inches of soil between the bulb(s) and the cage to prevent burrowing mammals from reaching the bulbs. Soil will not be compacted once placed in plots. Salvaged bulbs, within the cages, may then be planted in the plots by hand as follows: Bulbs must be planted at a depth of approximately two to six inches. Bulbs will be oriented with roots down, stem up, in the soil, which is native to the translocation site or translocated to the site during bulb salvage. The less crowded the bulbs are placed, the more likely they will thrive. Salvage and translocation (soil clumps, individual bulbs and container stock) would occur during late summer and fall and before the rainy season during the dormancy period for the bulbs. Thus, salvage and translocation would occur between August 15 and October 15. Each of these steps will be directed by the Project Biologist.

To minimize potential for large-scale failure of the translocated bulbs and container stock, the salvage and translocation will be phased over a three-year period. Because of the scale of the project, grading will be conducted in phases allowing for phased salvage and translocation. To the extent that the grading phases require salvage of a larger number of slender/club-haired Mariposa lilies that set forth in Table 3 below, bulbs will be stored in a facility certified for storage of rare plant seed and bulbs.

Table 3: Schedule of Bulb Salvage and Translocation

Year	Percent of bulbs salvaged	Percent of bulbs translocated
Year 1	40-percent	40-percent
Year 2	40-percent	40-percent
Year 3	20-percent	20-percent
Total	**100-percent**	**100-percent**

As noted above, during periods of drought, hand-watering would be conducted to maximize survivorship of the bulbs within soil clumps, individual bulbs and container stock. Hand-watering would be conducted during the rainy season to mimic natural rainfall conditions. During each

month, beginning November 1, where rainfall for the month is less than 75-percent of normal for the month, supplemental watering would be conducted to bring the amount of moisture to the monthly average. This would be repeated for December, January, February, March and up to April 15.

4. Propagation of Container Stock

A portion of the seeds collected as described above will be used by a native plant nursery to grow slender/club-haired Mariposa lily container stock for introduction to the receptor sites to supplement the plantings and to use as replacement for failed bulbs as described in the Contingency Section below. A total of 500 container plants would be grown and if not needed for contingency purposes would be incorporated in receptor sites to supplement the original planting as determined appropriate by the Project Biologist. Based on GLA's experience with propagated Mariposa lilies, it takes approximately four to five years for the bulbs to reach sufficient size to produce leaves and flowers in suitable years. Thus, container plants should be held in the containers for at least three to four years before installation with subsequent monitoring of five additional years following planting. Thus, the timeline for propagated Mariposa lilies is up to five years for propagation followed by ten years of monitoring. Thus, should container stock be incorporated, it will extend the monitoring period beyond the ten years that will be needed for the salvaged bulbs and the up to five additional years would be only for container stock if utilized as a component of the mitigation program.

5. Weeding and other Maintenance Requirements

The purpose of this program is to ensure the success of the translocated bulbs. Maintenance will occur over the life of the translocation/mitigation project, for at least a ten-year period. The Project Biologist will monitor all aspects of the transplant effort throughout the maintenance period to detect any problems at an early stage. Potential problems could arise from erosion, vandalism, competition from weeds and invasive species, and unacceptable levels of disease and predation/herbivory.

These maintenance guidelines are specifically tailored for native bulb establishment. The maintenance personnel will be fully informed regarding the habitat establishment program to ensure their understanding of the goals of the effort and the maintenance requirements. A Restoration Contractor with experience and knowledge in native plant habitat restoration will supervise all maintenance personnel.

General Maintenance

The Contractor will perform the following tasks as general maintenance duties:

- Inspection of Receptor Sites
- Weed control
- Repair and maintenance of fencing
- Trash and debris removal
- Pest control

Inspection of Receptor Sites
After initial planting, the Project Biologist will check the restoration plots bi-monthly during slender/club-haired Mariposa lily growing season which can begin as early as November through May every year.

The Project Biologist shall prepare a written memorandum to the Applicant after each monitoring site visit listing observations, problems, and recommended remedial measures based upon field observations. A copy of this memorandum shall be sent to the Restoration Contractor for implementation. These memorandums shall focus on identified problems including vandalism, weeding, debris removal, pest control, herbivory etc. The Project Biologist shall be responsible for recommending all remedial measures to be implemented.

Weed Control
Weed control within the receptor sites shall be maintained on a regular basis during the maintenance and monitoring period. Maintenance shall be conducted monthly during the growing season (November-May) of the first year and bi-annually thereafter until the end of the maintenance and monitoring period.
Weed eradication will minimize competition that could prevent the establishment of native species. All maintenance personnel will be trained to distinguish weed species from native vegetation to ensure only weedy species are removed or sprayed with herbicide.

Weeds shall be removed by hand or controlled with an appropriate herbicide as determined by a licensed PCA. The Project Biologist will be consulted and approve any herbicide application in advance. Weed debris shall be removed from the project area as accumulated and disposed of as permitted by law.

All portions of the weed will be removed, including the roots. The Project Biologist shall direct the Restoration Contractor regarding the selection of target weed species, their location, and the timing of weed control operations to ensure that native plants are avoided to the extent possible. Pulled weeds will be placed on a "mantilla" or other type of tarp to prevent the seeds from falling into the surrounding soil.

Trash and Debris Removal
The receptor sites shall be well maintained as needed, to deter vandalism and dumping of trash. The Restoration Contractor is responsible for avoiding impacts to plantings during trash removal activities. The Restoration Contractor shall, during daily routine maintenance, manually remove weeds, litter, trash, and debris from the translocation site and dispose of off-site as permitted by law.

Access Control
The receptor sites will be checked regularly during scheduled maintenance visits for evidence of human disturbance, including off-road vehicle use, illegal dumping, vandalism, pedestrian access, and unauthorized brush clearing.

6. Monitoring

a. Monitoring Methods

The receptor sites will be monitored at least ten years following the completion of bulb receptor. The monitoring program will consist of the observation and evidence of vegetative growth, observation of emergent and flowering slender/club-haired mariposa lily along with seed production for flowering plants, photo-documentation, and measurements of annual rainfall.

Qualified habitat restoration specialists, biologists, or horticulturists with appropriate credentials and experience in native habitat restoration shall perform monitoring. Continuity within the personnel and methodology of monitoring shall be maintained insofar as possible to ensure comparable assessments.

The Project Biologist will conduct monitoring surveys quarterly during the non-growing season (September – April). During the growing period, or as soon as vegetative growth is observed, the receptor site will be monitored on a bi-weekly basis through seed production (approximately July) for up to ten years to document the growth of the transplanted population.

Qualitative surveys, consisting of a general site walkover and habitat characterization, will be completed during each monitoring visit. General observations, such as the growth, flowering and seed production of the slender/club-haired mariposa lily, as well as pest problems, weed establishment, mortality, and site security, will be noted in each site walkover. The Project Biologist will also note observations on wildlife use and native plant recruitment for the purpose of later discussion in the annual reports. Records will be kept of mortality and other problems such as insect damage, weed infestation, and soil loss.

Counts for Mariposa Lilies in Vegetative State
As noted, depending on site conditions, slender/club-haired mariposa lilies will emerge following early season rains; however, not all emergent plants will flower following emergence. Nevertheless, the emergent plants are part of the population and should be counted. Early season surveys will be conducted to capture the emergent plants, which will be flagged to identify location and numbers. The emergent plants will be compared with the flowering plants and both will be counted for determining the number of total plants (while ensuring that emergent plants that also flower are not double counted).

Surveying Flowering and Seed Production
All flowering individuals observed within the receptor sites will be counted. As noted above, quantitative surveys may require multiple visits per month as the blooming period may be staggered along several months (i.e., vegetative growth or non-blooming individuals may not be detected until that individual has bloomed). Peak blooming periods may fluctuate year to year due to seasonal conditions, therefore multiple visits will aid in a more accurate count of flowering individuals.

Each flowering individual in the created plots will be tallied and recorded on data sheets. The total yearly population will be calculated each year for the annual monitoring results and will be incorporated into the data on emergent plants to capture the total of emergent plants that do no flower and emergent plants that exhibit flowering.

Photo-Documentation
Permanent stations for photo-documentation will be established prior to or during the first annual monitoring event. Photos shall be taken each monitoring period from the same vantage point and in the same direction each year and shall reflect material discussed in the annual monitoring report.

b. Monitoring Schedule

The Project Biologist will conduct monitoring surveys quarterly during non-growing season (September–April). During the growing period, or as soon as vegetative growth is observed, the receptor site will be monitored on a bi-weekly basis through seed production (approximately July) at least ten years.

c. Annual Monitoring Reports

At the end of each monitoring period an annual report will be prepared for submittal to County of Los Angeles and CDFW. The report will summarize the information collected during the qualitative and quantitative monitoring. Each report will document the monitoring methods and description of the transplant sites, provide copies of field data, photo-documentation, monitoring results, an analysis of success, and recommendations for the project and or remedial measures if necessary. Since planting may not occur when planned, monitoring shall be tied to the actual implementation date (e.g., the first annual report shall be delivered on January 1st of the year following the first growing season after planting). These reports will describe the success of the relocation and will discuss the efficacy of the various methods employed to propagate this species. These reports will also include the following:

- a list of names, titles, and companies of all persons who prepared the content of the annual report and participated in monitoring activities for that year
- a vicinity map indicating location of the mitigation site
- a mitigation site plan, identifying plot locations, photo station locations, etc. as appropriate.
- copies of all monitoring photographs
- and an analysis of all qualitative and quantitative monitoring data

7. Performance Standards

The BonTerra Draft Rare Plant Plan included the following performance standard for the slender/club-haired mariposa lilies:

Germination and flowering of at least 70 percent of transplanted bulbs bloom during the first year after transplantation, 60 percent the second year, 50 percent the third year, 40 percent the fourth year, and 30-percent the fifth year.

The rationale for the decreasing percentages is because bulbs are expected to be more active immediately following translocation and that flowering activity will decline in subsequent years. This does not represent a decrease in the number of individual lilies in the population; rather it is the observed response to such events as fire and translocation, which appear to stimulate flowering. This will be followed by an increase as the program nears completion as reproduction results in increases in the number of the slender/club-haired Mariposa lily. Nevertheless, to ensure achievable performance standards, while recognizing the variability in natural systems, certain factors need to be considered to ensure success of the mitigation program.

- The first factor that GLA has observed is that within a given population of Mariposa lilies, many plants emerge to capture sunlight and store energy in early spring but do not necessarily flower if environmental conditions are not suitable. Nevertheless, these are viable plants that contribute to the population and it is appropriate to account for them.

- The number of flowering individuals in any given year can vary substantially, based on environmental conditions, such that it is necessary to observe the translocated populations over a period of years to accurately determine survival. To this end, this plan proposes a ten-year monitoring term to track emergent plants along with flowering individuals which in combination provides the best and easiest indicators to track that the translocation is succeeding.

- Various threats to the translocated bulbs must be minimized to ensure survival, germination, and ultimate flowering of recruited individuals, with seed set, leading to future germination/successful reproduction. Thus, as proposed by BonTerra, where it is suspected that herbivory of the bulbs would cause the loss of the translocated bulbs, wire cages or gopher screens will be installed with the bulbs at the outset.

- Habitat characteristics including non-native grasses and herbaceous weeds are important and require monitoring to determine that specific translocation/receptor sites are exhibiting a positive trajectory.

- Finally, as noted above in the discussion of impacts, BonTerra estimated approximately 2,000 individual slender/club-haired mariposa lilies within the development footprint; however, the initial target for replacement of the slender/club-haired mariposa lilies will be based on actual counts obtained during the two years of pre-construction surveys during which counts, based on marked individual plants (both emergent and flowering) will be used to establish the target number. As noted above, the number of slender/club-haired mariposa lilies flagged within the Project Impact Area boundaries during the two years of pre-construction surveys will be used to establish a final impact total. Note that because of the variability of the flowering for this species, it is likely that some plants will be encountered in both years while others are only detected during one or the other years.

Thus, the total number of lilies will be based on the actual total of plants where those identified during both years are counted as a single individual, as will be those encountered in only one of the years. Thus, after the second survey, it will be possible to establish a more accurate number of plants to be impacted and subject to this mitigation program. Should the count of lilies during the two-year preconstruction surveys be less than the 2,000 estimated by BonTerra within the Project Impact Area, the number of plants considered impacted would be 2,000, which would be the largest number determined through the various surveys. Once the final counts are obtained, the performance standard will be established as 100-percent of the plants identified in the two years of pre-construction surveys as the final performance standard. Successful establishment of 100-percent of the impacted population at year 10 will result in a self-sustaining population (and/or sub-populations) for the slender/club-haired Mariposa lily.

Given these considerations, the performance standards set forth below are to be achieved for the program to be considered successful. Because of the variability of flowering individuals from year-to-year, the performance standards will have been achieved if within any of the ten years, the target number is recorded as either emergent plants or flowering plants (these cannot be added to avoid double counting). Thus, the annual standards provide a guide showing that the program is on a positive trajectory. Should the performance standards be achieved early in the program, monitoring will continue for the full ten years to ensure that there is no degradation of the habitat values during the ten-year period. The performance standards below reflect early response by the bulbs, a plateau in middle years, and then increase in the last years as reproduction begins to take effect. To the extent that propagated container stock is used as discussed above, the monitoring of container plants would also extend for ten years from time of planting and as such, could result in a ten-year monitoring effort for translocated bulbs and a subsequent ten-year monitoring period that would begin with installation of the container plants. Finally, because the salvaged plantings will be phased over a three-year period as described above, the monitoring period would be ten years for each phase or a minimum of 13 years beginning from the start of phase 1. As noted in Table 3 above, under the phased translocation, 40-percent of plants would be translocated in year 1, 40-percent in year 2 and 20-percent in year 3.

Year One

- Emergence of leaves for of a minimum of 70-percent of the translocated bulbs
- Flowering of a minimum of 50-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Two

- Emergence of leaves for of a minimum of 60-percent of the translocated bulbs
- Flowering of a minimum of 40-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Three

- Emergence of leaves for of a minimum of 50-percent of the translocated bulbs

- Flowering of a minimum of 30-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Four

- Emergence of leaves for of a minimum of 50-percent of the translocated bulbs
- Flowering of a minimum of 30-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Five

- Emergence of leaves for of a minimum of 60-percent of the translocated bulbs
- Flowering of a minimum of 40-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Six

- Emergence of leaves for of a minimum of 70-percent of the translocated bulbs
- Flowering of a minimum of 50-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Seven

- Emergence of leaves for of a minimum of 70-percent of the translocated bulbs
- Flowering of a minimum of 50-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Eight

- Emergence of leaves for of a minimum of 80-percent of the translocated bulbs
- Flowering of a minimum of 60-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Nine

- Emergence of leaves for of a minimum of 90-percent of the translocated bulbs
- Flowering of a minimum of 70-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Ten

- Emergence of leaves for of a minimum of 100-percent of the translocated bulbs
- Flowering of a minimum of 80-percent of the translocated bulbs

- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Contingency Plan

In the event the mitigation program fails to achieve the performance standards discussed above during the phased ten-year monitoring period, which will result in 13 years of monitoring, the Project Applicant will implement the following remedial measures to attempt to achieve the performance standards:

- If any of the receptor sites are observed to be failing significantly to achieve the performance standard during the ten-year monitoring period, the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be stored at a nursery for the first year of the program (and maintained for at least 10 years).
- If the receptor sites appear on track to meet the performance standards, the remaining plant material may be planted after five years at the receptor sites (if space allows) or additional acceptable receptor sites will be identified. This would allow for five years of monitoring of the container stock.
- Seeds and/or bulbs will continue to be harvested from lilies maintained in the nursery and installed in the receptor sites on an as-needed basis to ensure translocation/receptor sites are progressing toward final performance.
- If the receptor sites fail to achieve the performance standard by the tenth year of the program, the monitoring period may be extended yearly if the Biological Monitor determines that the site is continuing to progress and can ultimately achieve the performance standards. Alternatively, if it is determined that a particular receptor site is not able to meet performance standards then additional receptor sites will be identified to make up the difference. Thus, for example, if a receptor site received 500 bulbs, at the 80-percent success criteria it must have 400 emergent plants or 300 flowering plants to be successful. If the site only exhibits 40-percent emergent plants and 30-percent of flowering Mariposa lilies, then the site would be credited with the success achieved and an additional site where the shortfall could be made up.

V. PROPOSED CLUB-HAIRED/SLENDER LILY MITIGATION MEASURE

MM 5.2-4 Mitigation for the club-haired mariposa lily and the slender mariposa lily shall consist of transplantation of lilies to a mitigation site and establishment of a self-sustaining population as set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan,* dated May 2022 (*Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*).[30] The *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* has been subject to review and approval by LACDRP and CDFW. A designated Project Biologist approved

[30] Glenn Lukos Associates. May 2022. *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*.

by the LACDRP and CDFW and shall oversee its implementation. Seeds will be collected from lilies that are located within the impact boundaries and bulbs will be subsequently excavated and stored for later transplantation to the translocation site depicted on Exhibit 5 of the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan*. The Mitigation Program in the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* sets forth of the following activities necessary fully mitigate the significant impacts to the club-haired mariposa lily and the slender mariposa lily:

- A pre-grading survey shall be conducted for two seasons following emergence of leaves and during the peak flowering period (approximately March through June) by the Biological Monitor. The Biological Monitor shall clearly identify each lily location within the impact area with a pin flag for later collection. The pre-grade survey shall also document the approximate coverage of native and non-native plants at each lily population to be impacted.
- Prior to seed collection, the existing lily locations marked during pre-construction surveys shall be monitored every two weeks by Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities.
- Individual lily bulbs shall be excavated and collected following the seed collection and once the bulbs have entered their winter dormancy period (approximately September 1). The bulbs shall be stored by a qualified nursery or institution with appropriate storage facilities and all non-target bulbiferous species shall be discarded.
- A portion of the collected seeds will be used to grow 500 slender/club-haired mariposa lilies for contingency purposes and stored a native plant nursery until needed as determined by the project biologist.
- Receptor site or sites identified by BonTerra in their *Feasibility Analysis of NorthLake Biological Mitigation Requirements* and refined by GLA for the *Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan* shall be located in dedicated open space or the site will be subject to dedication with a Conservation Easement or Easements (CE(s)). The receptor site or sites have been shown to exhibit similar soils, associated native species, and topographical features to the impact areas.
- Receptor sites on lands currently owned by NorthLake will be managed by SMMC or other approved entities as set forth on page 3, above. Prior to commencing the actions set forth in this plan, the applicant shall submit final agreements to CDFW and the County with the acceptable entities that will hold the CE(s) and provide long-term management.

- Performance criteria have been developed in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan,* dated May 2022 and pre-approved by the LACDRP and CDFW. The performance criteria shall address (1) native and non-native plant coverage requirements (mitigation site conditions should be consistent with lily populations in the impact area) and (2) percentage of lilies that exhibit emergent leaves that that bloom each year as follows (because the salvaged plantings will be phased over a three-year period as described above the monitoring period would be ten years for each phase or a minimum of 13 years beginning from the start of phase 1. As noted in Table 3 above, under the phased translocation, 40-percent of plants would be translocated in year 1, 40-percent in year 2 and 20-percent in year 3):

  Year One
  - Emergence of leaves for of a minimum of 70-percent of the translocated bulbs
  - Flowering of a minimum of 50-percent of the translocated bulbs
  - Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
  - No evidence of herbivory

  Year Two
  - Emergence of leaves for of a minimum of 60-percent of the translocated bulbs
  - Flowering of a minimum of 40-percent of the translocated bulbs
  - Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
  - No evidence of herbivory

  Year Three
  - Emergence of leaves for of a minimum of 50-percent of the translocated bulbs
  - Flowering of a minimum of 30-percent of the translocated bulbs
  - Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
  - No evidence of herbivory

  Year Four
  - Emergence of leaves for of a minimum of 50-percent of the translocated bulbs
  - Flowering of a minimum of 30-percent of the translocated bulbs
  - Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
  - No evidence of herbivory

  Year Five
  - Emergence of leaves for of a minimum of 60-percent of the translocated bulbs

- Flowering of a minimum of 40-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Six

- Emergence of leaves for of a minimum of 70-percent of the translocated bulbs
- Flowering of a minimum of 50-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Seven

- Emergence of leaves for of a minimum of 70-percent of the translocated bulbs
- Flowering of a minimum of 50-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Eight

- Emergence of leaves for of a minimum of 80-percent of the translocated bulbs
- Flowering of a minimum of 60-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Nine

- Emergence of leaves for of a minimum of 90-percent of the translocated bulbs
- Flowering of a minimum of 70-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

Year Ten

- Emergence of leaves for of a minimum of 100-percent of the translocated bulbs
- Flowering of a minimum of 70-percent of the translocated bulbs
- Habitat subject to translocation must exhibit same or less cover by non-native grasses and forbs than during the initial plot identification; and
- No evidence of herbivory

The monitoring shall be conducted for ten years (for each phase) from installation of the translocated bulbs or from installation of container plants. As noted, this could result in two separate and unrelated ten-year monitoring efforts, including one that originates with bulb installation and a subsequent

effort that begins with container stock installation. If the performance standards are not being met during the first year, additional measures may be suggested as determined appropriate by the Biological Monitor as set forth in the Contingency Plan set forth in the *NorthLake Castaic, Los Angeles County, California, Special Status Plant Impact Assessment and Habitat Mitigation and Monitoring Plan,* dated May 2022 as set follows:

- If any of the translocation/receptor sites are observed to be failing significantly to achieve the performance standard during the ten-year monitoring period, the Biological Monitor will identify an alternate site(s) in which to install the contingency plant materials that will be stored at a nursery for the first year of the program.
- If the receptor sites appear on track to meet the performance standards, the remaining plant material may be planted at the receptor sites (if space allows) or additional acceptable receptor sites will be identified.
- Seeds and/or bulbs will continue to be harvested from lilies maintained in the nursery and installed in the receptor sites on an as-needed basis to ensure receptor sites are progressing toward final performance.
- If the receptor sites fail to achieve the performance standard by the tenth year of the program, the monitoring period may be extended if the Biological Monitor determines that the site is continuing to progress and can ultimately achieve the performance standards. Alternatively, if it is determined that a particular receptor site is not able to meet performance standards then additional receptor sites will be identified to make up the difference. Thus, for example, if a receptor site received 500 bulbs, at the 80-percent success criteria it must have 400 emergent plants or 300 flowering plants to be successful. It the site only exhibits 40-percent emergent plants and 30-percent of flowering Mariposa lilies, then the site would be credited with the success achieved and an additional site where the shortfall could be made up.
- Potential seed sources from additional donor sites shall also be identified in case it becomes necessary to collect additional seed for use on the site following performance of remedial measures

F. Peirson's Morning Glory Seed Collection

The BonTerra Biological Technical Report dated December 15, 2015 noted the following regarding Peirson's morning glory:

> *Peirson's morning-glory was observed throughout the Project site. Given the spreading nature of the species and high density, an accurate count could not be made; however, the entire Project site likely supports thousands of individuals. Peirson's morning-glory was observed in both sage scrub and grassland vegetation types. Associated species typically include California sagebrush, purple sage, arroyo lupine, blue dicks, black mustard (Brassica nigra), redstem filaree, and red brome.*

For two years prior to start of impacts to areas occupied by the Peirson's morning glory and to obtain seed for use in project grassland establishment, a biologist or seed collector will conduct surveys on the Project site to identify location or locations of Peirson's morning glory. Once locations are detected, areas will be marked using pin flags and will also be recorded using GPS Technology to allow the biologist or seed collector to revisit the locations. For two years, populations of Peirson's morning glory will be visited every two weeks beginning in April and continuing through June or until all available seed is collected. One half pound per acre will be used in the grassland reestablishment plant palette. Thus, the number of pounds to be collected will be determined by the total number of acres of grassland restoration.

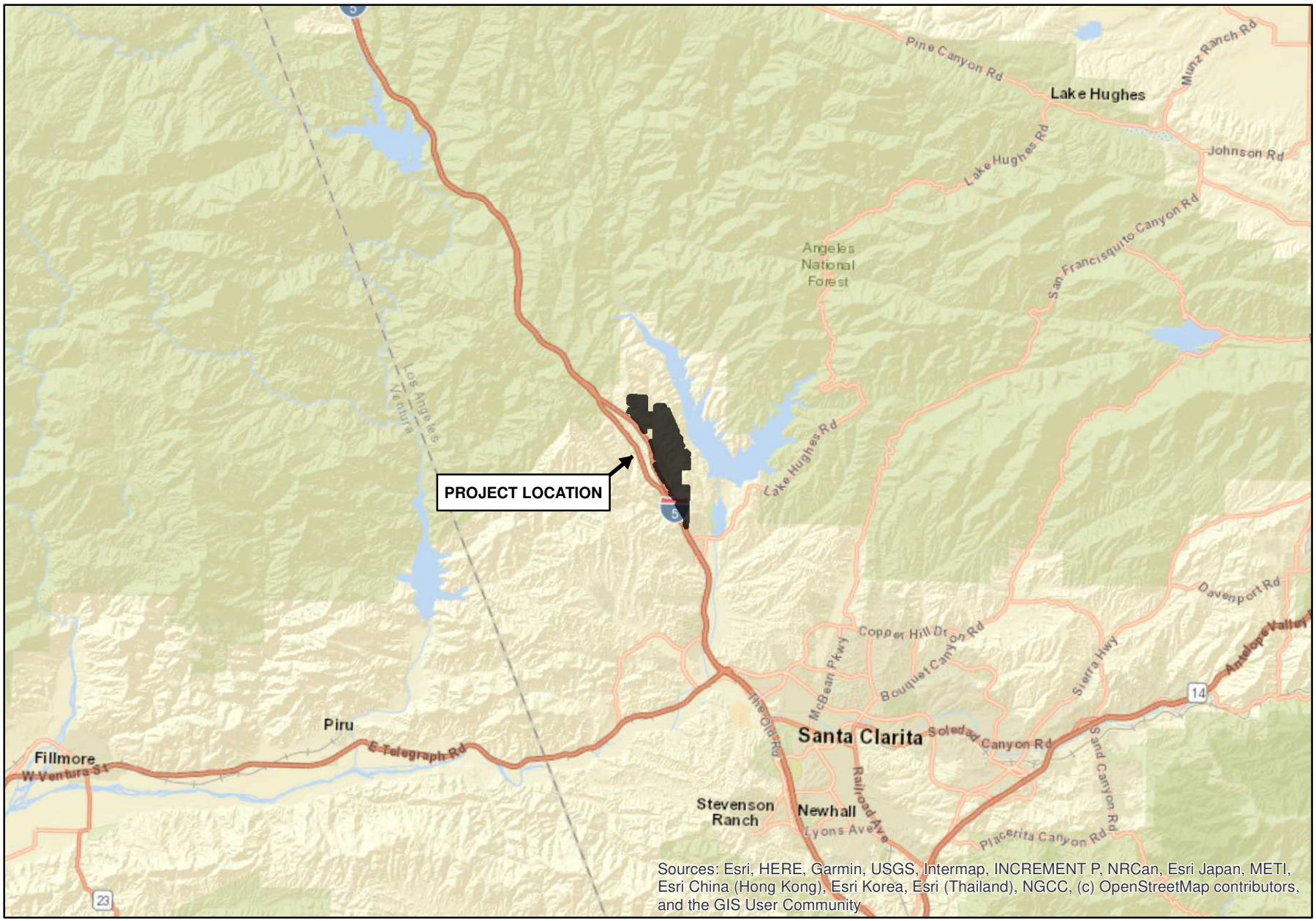
G. Long-Term Conservation

As noted on page 3, the Project will ensure long-term protection of the mitigation sites addressed in this HMMP through establishment of a CE(s), as appropriate. The CE(s) would be dedicated to a local land conservancy or other appropriate entity that has been approved to hold and manage mitigation lands pursuant to Assembly Bill 1094 (2012). Assembly Bill 1094 amended Government Code sections 65965-65968. Under Government Code section 65967(c), the lead agency must exercise due diligence in reviewing the qualifications of a governmental entity, special district, or nonprofit organization to effectively manage and steward land, water, or natural resources on mitigation lands it approves.

In addition, this HMMP identifies specific sites(s)/area(s) where mitigation would occur, which would be protected and depicts these site(s)/area(s) on accompanying exhibits. The SMMC will serve as landowner, land manager, and endowment holder for the Marple Canyon spiny rush preservation site. MRCA will serve as the Conservation Easement (CE) Grantee. Likewise, the SMMC is a potential landowner, land manager, and endowment holder for the mitigation areas within NorthLake holdings with the MRCA holding the CE; however, the applicant is also exploring other entities that meet the above requirements, and to date, no decision has been made regarding the entities that would be responsible for the long-term management of NorthLake holdings where mitigation would be conducted.

Mitigation Measure:

Prior to initiation of ground-disturbance, in anticipation of grading, the Project will provide the County and CDFW proof that a draft C has been submitted to CDFW and that a land manager, conservation easement grantee, and endowment holder for NorthLake lands where mitigation will be conducted, has been selected and such has entered into an agreement or contract to serve as land manager, conservation easement grantee, and endowment holder for NorthLake lands.



Source: ESRI World Street Map

N

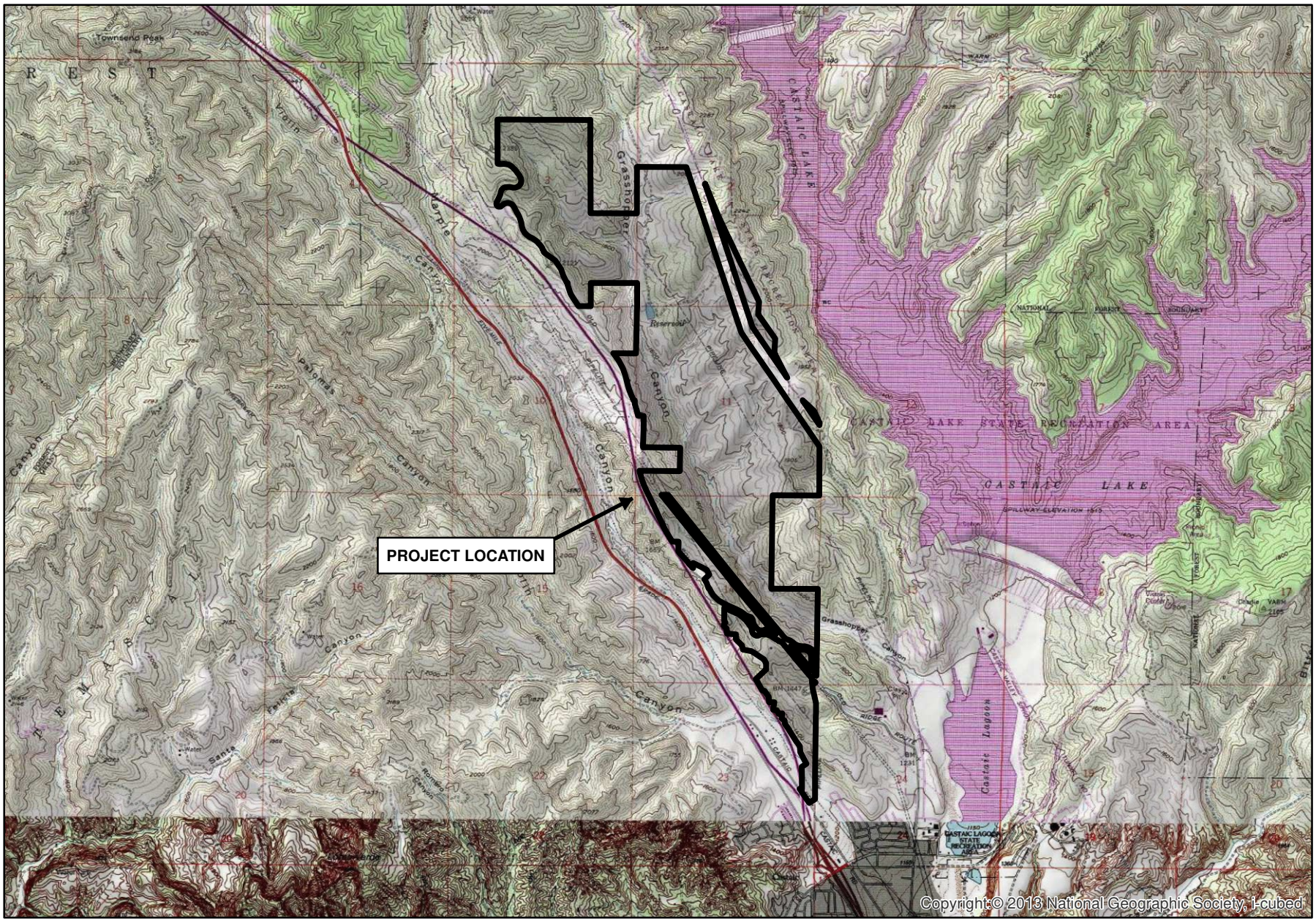
0 2 4 8 Miles

NORTHLAKE SPECIFIC PLAN

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



NORTHLAKE SPECIFIC PLAN

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2

Castaic Lake

1

2

3

5

5

Project Location
Offsite Area
Permanent Impact
Temporary Impact
Proposed Conservation Area
Paniculate Tarplant
Round Leaved Filaree
Southern California Black Walnut

N

0 750 1,500 3,000
Feet

1 inch = 1,500 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: October 17, 2022

NORTHLAKE SPECIFIC PLAN

Round-Leaved Filaree and Paniculate Tarplant Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 3A

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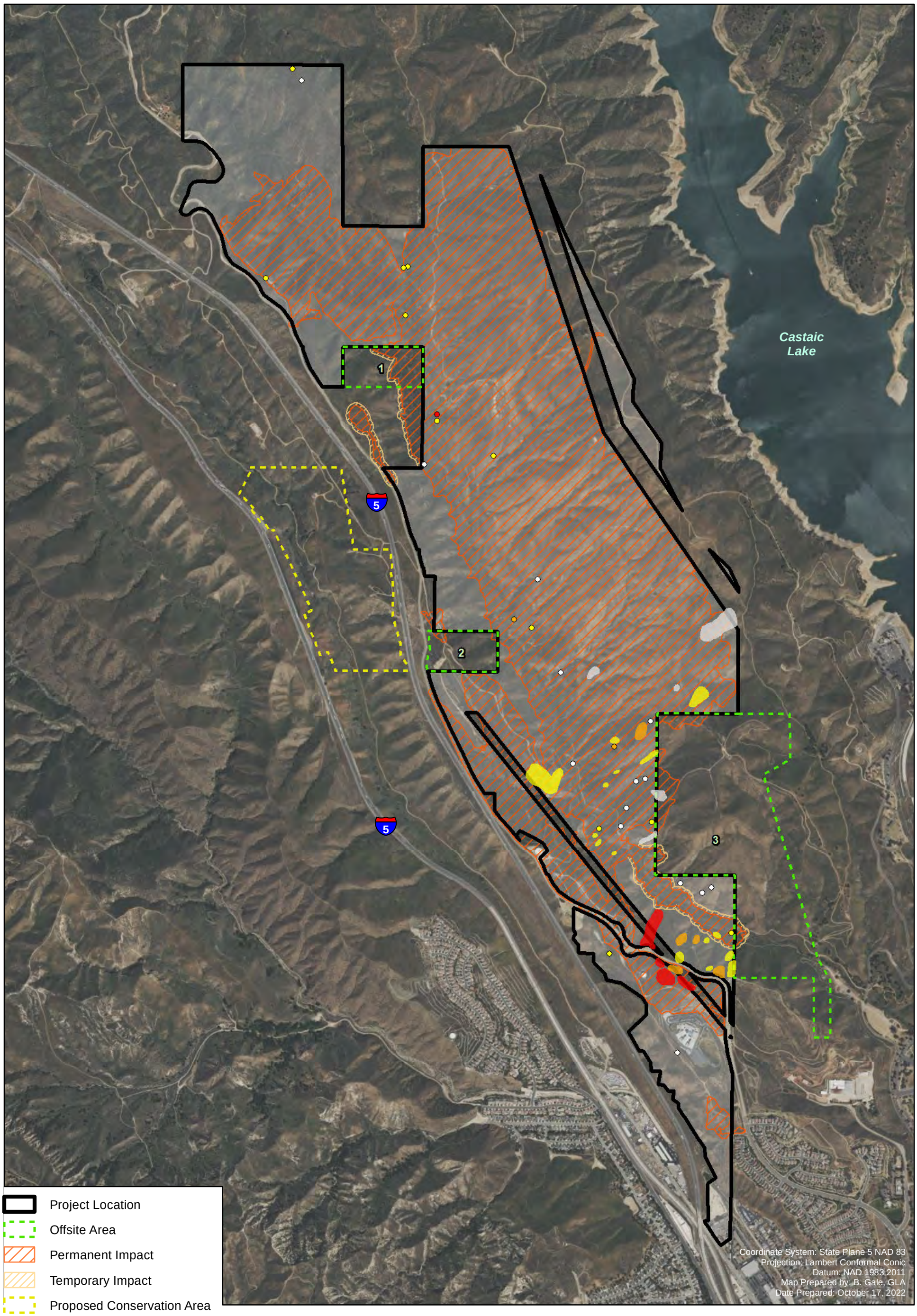

Slender Clubhaired Mariposa Lily Density *

- High
- Medium
- Low
- Unknown

** Source: BonTerra*

N

0 750 1,500 3,000

Feet

1 inch = 1,500 feet

NORTHLAKE SPECIFIC PLAN

Slender Clubhaired Mariposa Lily Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 3B

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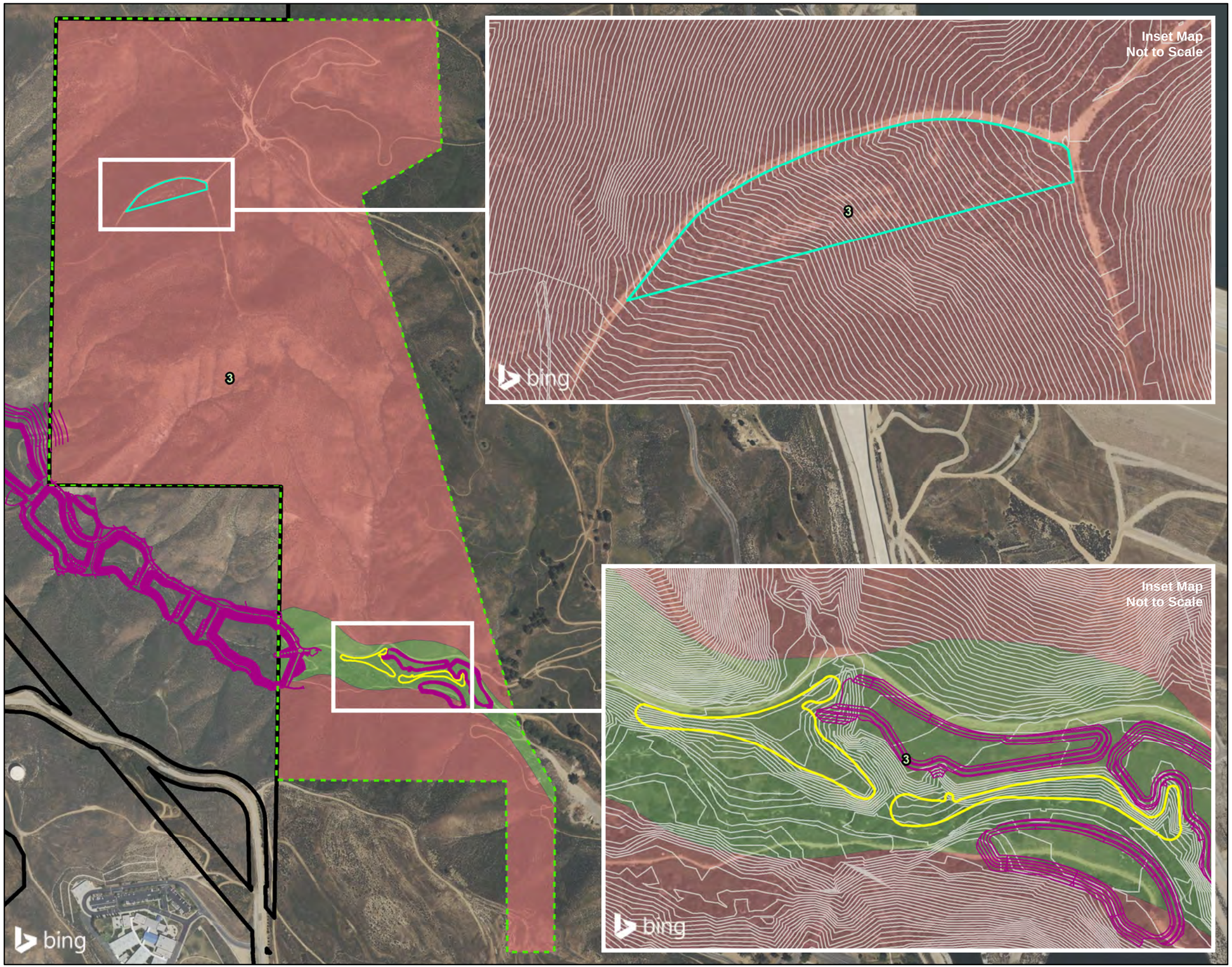
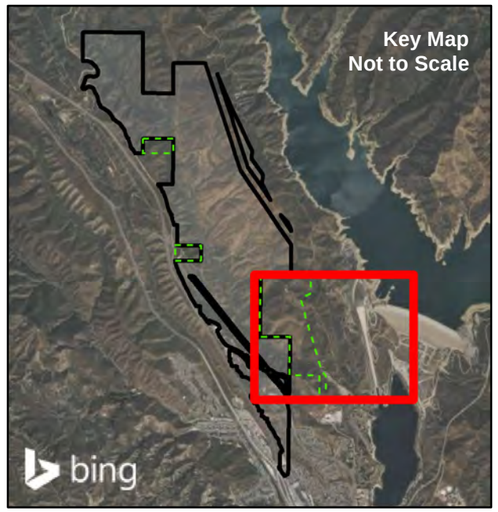




Project Location

Offsite Area #3

Existing Topo

Rough Grading Plan

CmF — Castaic-Balcom silty clay loams, 30 to 50 percent slopes

SsB — Sorrento loam, 2 to 5 percent slopes

Round-Leaved Filaree & Paniculate Tarplant Establishment Sites

Primary Establishment Site

Alternative Establishment Site

0 275 550 1,100
Feet

1 inch = 550 feet

N

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: October 18, 2022

NORTHLAKE SPECIFIC PLAN

Round-Leaved Filaree &
Paniculate Tarplant Establishment Sites

GLENN LUKOS ASSOCIATES

Exhibit 4A

X:\1100 AFTER THE REST\1115-06WOOD\1115-06_GIS\MitigationGIS\1115-6_RLF-PT_Establishment.mxd

Castaic Lake

1

2

3

5

Marple Creek

Grasshopper Creek

bing Inset Map - Not to Scale

Project Location

Offsite Area

Permanent Impact

Temporary Impact

Proposed Conservation Area

Spiny Rush (2000 Counted Individuals)

Spiny Rush Conservation (523 Counted Individuals)

Spiny Rush Establishment

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: October 17, 2022

N

0 750 1,500 3,000

Feet

1 inch = 1,500 feet

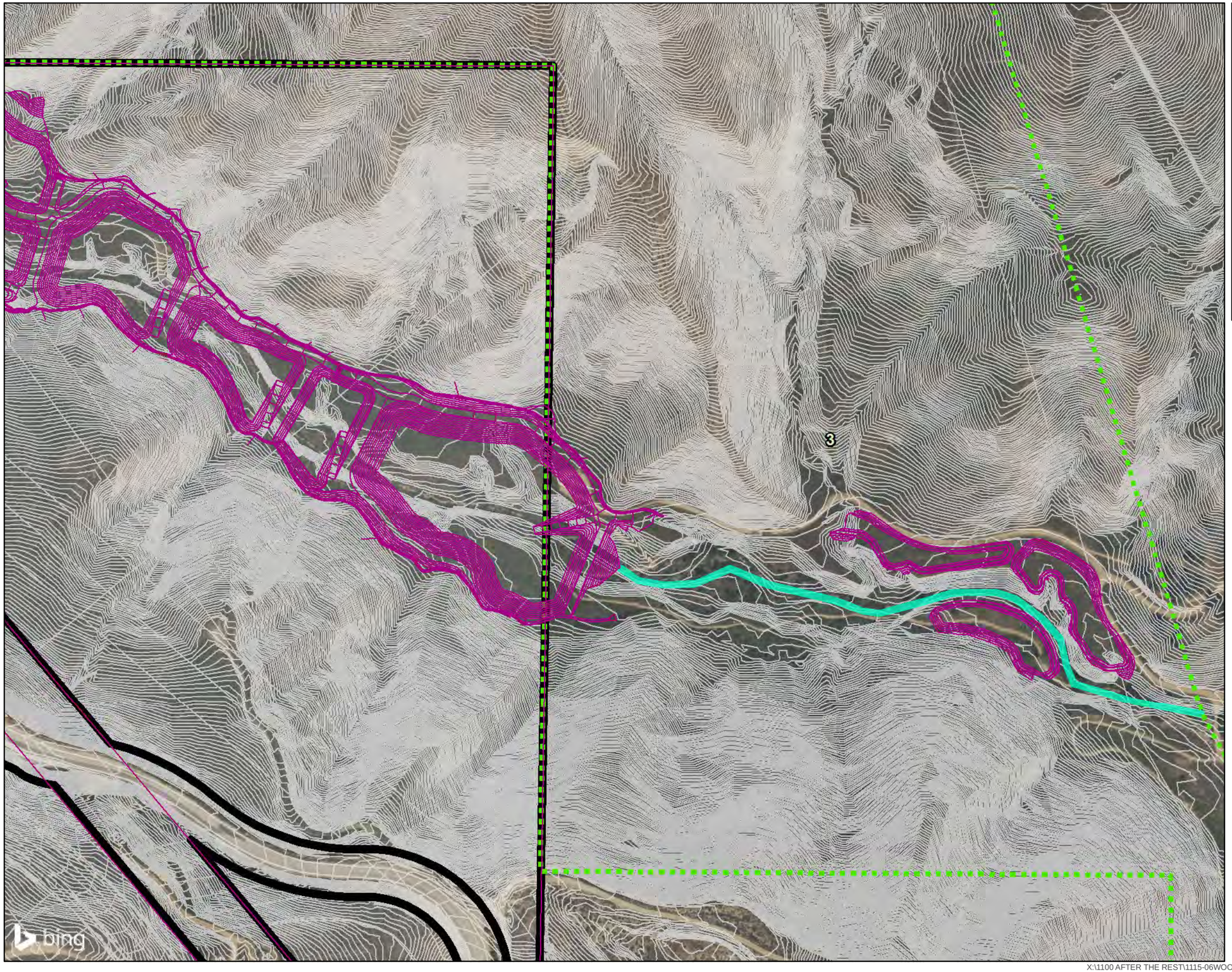
NORTHLAKE SPECIFIC PLAN

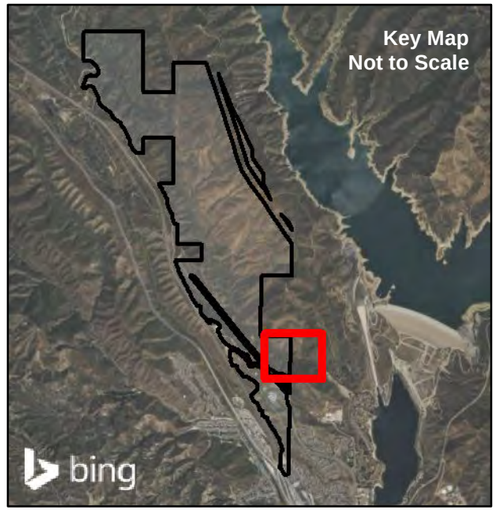
Southwestern Spiny Rush, Impact, Conservation and Establishment Sites

GLENN LUKOS ASSOCIATES

Exhibit 4B

X:\1100 AFTER THE REST\1115-06WOOD\1115-06_GIS\RarePlantsGIS\1115-6_SpinyRush_ImpactsConservationEstablishment.mxd





Project Location

Offsite Area

Existing Topo

Rough Grading Plan

Spiny Rush Establishment

N

0 62.5 125 250

Feet

1 inch = 200 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: October 17, 2022

NORTHLAKE SPECIFIC PLAN

Southwestern Spiny Rush Establishment
Site Close-up with Debris Basins

GLENN LUKOS ASSOCIATES

Exhibit 4C

X:\1100 AFTER THE REST\1115-06WOOD\1115-06_GIS\MitigationGIS\1115-6_SpinyRush_Establishment_wDebris Basins.mxd

Key Map
Not to Scale

Castaic Lake

Pro's Uphill

Cutler Canyon Fire Road

Grapevine

Vista Ridge Fire Road

Ridge Route Road

WestRamp Road

Castaic Brick Trail

Project Location

Offsite Area 3 (180.21 ac.)

Rough Grading Plan

Potential Lily (30.19 ac.)

Existing Slender Clubhaired Mariposa Lily

N

0 250 500 1,000

Feet

1 inch = 500 feet

NORTHLAKE SPECIFIC PLAN

Slender Clubhaired Mariposa Lily Receptor Sites

GLENN LUKOS ASSOCIATES

Exhibit 5

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: October 17, 2022

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APPENDIX C-1

NORTHLAKE SPECIFIC PLAN TRANSPORTATION ANALYSIS FOR CEQA

Stantec

Memo

To:	Damon Mamalakis Armbruster Goldsmith & Delvac LLP	From:	Maria Morris and Daryl Zerfass Stantec
Project/File:	2042648800	Date:	November 19, 2024

Reference: Northlake Specific Plan Transportation Analysis for CEQA

Stantec Consulting Services Inc. (Stantec) performed a transportation analysis for the proposed Northlake Specific Plan Development (Project). The Project is located east of the Interstate 5 (I-5) freeway and north of Lake Hughes Road in unincorporated Los Angeles County. This analysis was prepared in accordance with the California Environmental Quality Act (CEQA) and the Los Angeles County Department of Public Works Transportation Impact Analysis Guidelines for CEQA analysis (July 2020, Version 1.1, updated September 2020; "TIA Guidelines"). The purpose of this study is to identify potential significant impacts related to transportation due to the implementation of the proposed Project (as defined below). This analysis evaluates the Project's impact on vehicle miles traveled (VMT), potential conflicts with current transportation planning programs (plans, ordinances, and policies), increased hazards due to the Project's geometric design features, and emergency access.

The previously approved Northlake Traffic Impact Analysis (TIA)[1] is appended to this memorandum for information purposes only, as the approved TIA evaluated project impacts using the level of service (LOS) metric which is no longer the applicable metric for identifying significant impacts under CEQA. The approved TIA represents a conservative, worst-case analysis of the project's effect on LOS and therefore an update is not required.

Project Description

The Northlake Specific Plan (NLSP) was adopted by the Board of Supervisors on June 1, 1992 and includes the development of 2,337 single family residential units, 1,286 multi-family units (for a total of 3,623 units), 169,884 square feet of commercial uses, 545,589 square feet of light industrial uses, an 18-hole golf course, school, parks and open space. In 2019[2], changes to the land use plan were approved (referred to herein as the previously approved Project) and include the development of 1,143 single family residential units, 1,341 multifamily residential units, 345 age qualified single family residential units,

[1] Stantec, 2016

[2] In 2019 the Project was approved by the Los Angeles County Board of Supervisors. Subsequently, due to a superior court ruling, the County rescinded the Project approvals. The Project applicant is currently proposing to recirculate portions of the NLSP SEIR. At the time the previously approved Project traffic analysis was prepared, LOS was the metric used to evaluate transportation impacts. VMT is now the metric used to evaluate a transportation impact per Senate Bill 743. Los Angeles County has updated their Transportation Impact Analysis Guidelines to utilize the VMT metric.

315 affordable mixed-use housing units and 6 market-rate live-work units[3], for a total of 3,150 residential units. The previously approved Project would also construct highway commercial (e.g., retail near the highway), a middle school (as an option), private and public recreational parks, and a fire station.

Table 1 summarizes the NLSP land uses and the previously approved Project land uses. **Figure 1** shows the previously approved Project site plan.

Table 1 Northlake Specific Plan Project Land Use Summary

Category	NLSP			Previously Approved Project			Difference		
	(AC)	(DU)	(SQ. FT.)	(AC)	(DU)	(SQ. FT.)	(AC)	(DU)	(SQ. FT.)
Residential	600.3	3,623	--	362	3,150	--	-238.3	-794	--
Single Family	504.8	2,337	--	235	1,488	--	-269.8	-593	--
Multi-Family	95.5	1,286	--	107	1,341	--	11.5	-201	--
Affordable Mixed-Use / Live-Work***	0	0	--	20	321*	--	10.8	321	--
General Commercial	9.2	--	100,188		--	38,700**		--	-61,488
Highway Commercial	4	--	69,696	2	--	32,175**	2	--	-37,521
Industrial	50.1	--	545,589	0	--	0	-50.1	--	-545,589
School	23.1	--	--	44	--	--	20.9	--	--
Recreation/Park	167	--	--	167	--	--	0	--	--

* For the purposes of the VMT analysis, the affordable mixed-use housing / market-rate live-work units are treated as multi-family units.

** Square footage per Northlake Design Guidebook

*** 315 affordable mixed-use units and 6 market-rate live-work units.

VMT Analysis Methodology

Signed by the Governor in 2013, SB 743 requires the Governor's Office of Planning and Research (OPR) to identify new metrics for the identification of transportation related impacts within CEQA. Regulatory changes to CEQA guidelines that implement SB 743 were approved on December 28, 2018, establishing VMT as a new metric to replace level of service (LOS) for transportation analysis. Within CEQA, a project's effect on vehicle delay shall not constitute a significant transportation impact (Section 15064.3(a)).

Thresholds for determining a project's significant transportation impact shall be pursuant to section 15064.3 of the CEQA Guidelines. OPR released a Technical Advisory that contains recommendations for assessing

[3] For the purposes of the VMT analysis, the affordable mixed-use housing units and 6 market-rate live-work units are treated as multi-family units to provide a worst-case conservative assessment of Project-generated VMT. Since the County's VMT tool does not estimate VMT per capita for affordable mixed-use housing units or market-rate live-work units, the VMT per capita for multi-family units was used for the affordable mixed-use housing units and the market-rate live-work units.

VMT, thresholds of significance, and mitigation measures. OPR and the California Natural Resources Agency (CNRA) have concluded that VMT is the most appropriate metric to evaluate a project's transportation impacts. On July 1, 2020, statewide implementation occurred.

The Los Angeles County Public Works (LACPW) Department published the TIA Guidelines that provides recommendations for assessing VMT for development in unincorporated Los Angeles County. As such, this VMT analysis has been prepared in accordance with the County's guidelines and guidance from County Public Works staff. The previously Approved Project is evaluated as a land use plan and VMT per service population[4] is the metric used for the VMT impact analysis. An increase in the NLSP VMT on a per capita basis would result in a significant impact. This methodology is used because the NLSP was approved prior to SB 743 adoption and Project modifications are being made after SB 743 adoption.

Project-Level VMT Analysis

The County's VMT Tool uses data from the Southern California Association of Government's Regional Transportation Plan/Sustainable Communities Strategy (SCAG RTP/SCS) travel demand forecasting model and was specifically designed to be used to develop project-specific daily residential VMT per capita and daily employment VMT per employee metrics for residential, office, and industrial land use development projects in the unincorporated areas of the County of Los Angeles[5].

The estimated VMT for the NLSP establishes the baseline for the currently proposed Project to be evaluated against for determining a potential significant CEQA transportation impact. This is due to the approval occurring before SB 743 and modifications happening after SB 743. Unlike a brand new project, the previously approved Project does not need to be evaluated against the County baseline, as determined from the County's VMT Tool.

Table 2 summarizes the Project's VMT, service population, and the VMT per service population estimated for the NLSP and for the previously approved Project (VMT calculations are attached). The VMT estimates presented here are intended to compare the allowed uses of the NLSP and the previously approved Project, using VMT per service population as the basis of comparison. Therefore, the same assumptions to calculate the VMT per service population are applied to both the NLSP and the previously approved Project to provide an equal point of comparison. In regard to the on-site commercial, parks, and school, these uses are assumed to primarily serve the Project residents, therefore the VMT associated with these uses is primarily captured in the residential VMT totals, with any additional visitor VMT being generally equivalent between the NLSP and for the previously approved Project. As shown in **Table 2**, the previously approved Project would generate less VMT and have a VMT per service population rate lower than the NLSP. Due to the VMT reduction, the previously approved Project's impacts would be less and the Project would not result in any new or increased significant transportation impacts.

[4] Service population is the sum of the number of residents and the number of employees.
[5] County of Los Angeles VMT Tool User Guide, Los Angeles County Public Works. December 2020.

Table 2 NLSP and Previously Approved Project VMT Summary

Category	NLSP VMT	Previously Approved Project VMT
Single Family Residential	260,013	165,568
Multi-Family Residential	77,860	100,623
Commercial Retail	8,765	3,670
Light Industrial	13,869	--
Recreation/Park	1,320	2,640
School	2,640	2,640
Project VMT	**364,467**	**275,141**
Service Population	**13,485**	**10,705**
VMT per Service Population	**27.0**	**25.7**
See attached VMT and Service Population Calculation Worksheet.		

The VMT estimates presented above use data from a travel demand model and are based on location and land use types only. The travel demand mode data does not consider the unique features of a specific project. For the previously approved Project, there are a number of features that tend to reduce VMT such as constructing a pedestrian network, integrating affordable housing, constructing bicycle trails, and expanding the transit network. VMT reduction ranges from the California Air Pollution Control Officers Association's (CAPCOA) Handbook for Analyzing Greenhous Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity[6] (GHG Handbook) are noted below.

Pedestrian Network: The previously approved Project would promote a high level of walkability by providing access to recreational destinations. Pedestrian facilities in the neighborhood would include multi-use trails, enhanced parkways, and neighborhood pedestrian trails. Neighborhood trails connect homes to the larger network, bringing all community amenities within pedestrian, bicycle, or equestrian access and reducing the need for automobiles[7]. The GHG Handbook's T-18 Provide Pedestrian Network Improvement measure cites up to a 6.4% potential reduction in VMT, however, the previously approved Project is not taking any quantitative credit for this project feature.

Affordable Housing: The previously approved Project includes affordable mixed-use housing units, which represent approximately 10% of the total number of residential units. The GHG Handbook's T-4 Integrate Affordable and Below Market Rate Housing measure cites up to a 28.6% potential reduction in VMT, however, the previously approved Project is not taking any quantitative credit for this project feature.

[6] Handbook for Analyzing Greenhous Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity, California Air Pollution Control Officers Association, December 2021.
[7] Northlake Design Guidebook, April 2018.

Bicycle Trails: The previously approved Project would construct a Class I Bike Path, Class II Bike Lanes, and Class III Bike Route. Per the Northlake Design Guidebook, a Class I Bike Path is planned along Northlake Boulevard and Ridge Route Road south of Northlake Boulevard. Class II bike lanes are planned for Local Collectors "A" and "B" and Fire Access Road. Class III Bike Route is planned along Ridge Route Road north of Northlake Boulevard. The GHG Handbook's T-19A Construct or Improve Bike Facility measure cites up to a 0.08% potential reduction in VMT, however, the previously approved Project is not taking any quantitative credit for this project feature.

Expand Transit Network: The Project would provide a community shuttle and service ("tram") for the Project residents and guests. The tram would service local destinations within the Project Site as well as regional destinations outside the site. The Northlake Design Guidebook provides a conceptual diagram of a well-connected public transit route within the Project site, providing access to local destinations. The GHG Handbook's T-25 Extend Transit Network Coverage or Hours measure cites up to a 4.6% potential reduction in VMT, however, the previously approved Project is not taking any quantitative credit for this project feature.

Cumulative VMT Impact Analysis

The previously approved Project would have a less than significant VMT impact at the Project-level and would, therefore, also have a less-than-significant cumulative VMT impact[8].

Plan Consistency

The previously approved Project does not conflict with the General Plan, any program plan, ordinance, or policy addressing the circulation system. The previously approved Project does not propose to amend or adjust roadway classifications, roadway network, transit routes, or bicycle network under existing conditions and future conditions as identified in the General Plan.

The previously approved Project would enhance the pedestrian experience by constructing multi-use trails, enhanced parkways, and neighborhood pedestrian trails. Neighborhood trails connect homes to the larger network, bringing all community amenities within pedestrian, bicycle, or equestrian access and reducing the need for automobiles. The previously approved Project would also construct a Class I Bike Path, Class II Bike Lanes, and Class III Bike Route. Per the Northlake Design Guidebook, a Class I Bike Path is planned along Northlake Boulevard and Ridge Route Road south of Northlake Boulevard. Class II bike lanes are planned for Local Collectors "A" and "B" and Fire Access Road. Class III Bike Route is planned along Ridge Route Road north of Northlake Boulevard. Lastly, the Project would expand the transit network by creating a route alignment and bus stop locations within the Project site. Therefore, the Project does not conflict with the General Plan, any program plan, ordinance, or policy addressing the circulation system.

[8] "A project that falls below an efficiency-based threshold that is aligned with long-term goals and relevant plans has no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than significant project impact would imply a less than significant cumulative impact, and vice versa." Technical Advisory on Evaluating Transportation Impacts in CEQA, Governors' Office of Planning and Research, December 2018, page 6.

On-site Access

The previously approved Project would involve construction of a new internal circulation system. According to the Santa Clarita Valley Area Plan 2012 EIR, hazards due to roadway design would be evaluated on a project-by-project basis. The previously approved Project would include implementation of the Access and Circulation Plan that provides circulation and design standards for the layout of arterial highways and local collector streets in support of the Northlake land use plan. Because the Northlake Specific Plan, including the Access and Circulation Plan, was evaluated as part of the Northlake 1992 EIR and approved as part of the Specific Plan, no significant impacts are anticipated. Further, all roadway design would comply with applicable design standards and requirements set forth in the Northlake Specific Plan and would be subject to review and approval by the County of Los Angeles Department of Public Works. Therefore, impacts would be less than significant.

Emergency Access

Development of the Project site will not alter or impede emergency response routes or plans set in place by the County. Access during construction will be addressed in the Project's construction traffic management plan.

Emergency vehicles would access the Project site using Ridge Route Road and use the internal street network. North of the Project site, existing Ridge Route Road can be accessed from Templin Highway. Vehicular circulation within the Project site would be accommodated by public and private roadways, which would be constructed consistent with applicable Los Angeles County Department of Public Works design standards for local roads. According to the California Fire Code (2016), fire apparatus access roads need to be no less than 20 feet wide and shall always be unobstructed, which the internal Project streets will meet. Based on the previously approved Project site plan, the internal streets and intersections, including the Project cul-de-sacs, would accommodate a fire truck.

The Project driveways are designed to comply with turning radius requirements for emergency vehicles and will not cause hazardous driving conditions. The Project's detailed design will be completed in compliance with California Fire Code requirements and not impair emergency vehicle access in the vicinity of the Project during construction and in ongoing operation. Compliance with the California Fire and Building Codes will be mandated through the plan check and approval process. This process will also ensure that adequate access for emergency services is provided, and the County's emergency response plan will be upheld during construction. Therefore, the Project's impact on emergency access would be less than significant.

Construction VMT Analysis

Construction of the proposed project would generate temporary VMT associated with construction activities. It is anticipated that construction of the proposed project would be phased based on market demand.

Construction-related VMT would primarily be associated with mass grading including movement of soils within the Project site, delivery of building materials and construction equipment, removal of construction debris, and construction workers commuting to/from the project site. The amount of construction VMT would vary daily depending on the nature of the activity. In general, phased construction of the proposed uses is not anticipated to result in substantial construction related VMT, except possibly for the initial demolition and clearing stages, which would generate the highest number of heavy truck VMT. All grading materials are anticipated to be balanced on the Project site; therefore, the primary source of construction related VMT would occur during the building phases of the Project. Construction traffic is expected to access the Project site from I-5 at Lake Hughes Road, which leads to Ridge Route Road, and which is the most direct and shortest route from the site to the regional freeway system. Construction workers would primarily be from the southern California region. In some cases, specialized workers will be housed temporarily in the local area for the duration of their work activity. The distance construction workers travel to jobsites is a function of the worker's home location and the jobsite location, which is continually changing due to the short-term nature of construction work. Construction related VMT is variable, short-term, and is substantially lower than the project's operational VMT. As such, construction related VMT would be less than significant.

As described in Mitigation Measure 5.11-3, to minimize traffic impacts during construction, a Construction Traffic Management Plan will be prepared and submitted to the County; this plan will describe safe detours, provide temporary traffic-control measures during construction activities, and identify requirements to be met when one or more travel lanes are obstructed during construction. To reduce traffic congestion, the plan would also include, as necessary, appropriate, and practicable, the following activities: implementing temporary traffic controls (e.g., a flag person) during all phases of construction to maintain smooth traffic flow; implementing signage for detours, if needed; assigning dedicated turn lanes for movement of construction trucks and equipment on and off the site; scheduling construction activities that affect traffic flow on the arterial system to off-peak hours; consolidating truck deliveries; rerouting construction trucks away from congested streets or sensitive receptors; and synchronizing signals to improve traffic flow. Conducting construction activities in compliance with the Traffic Management Plan would reduce potential impacts related to construction traffic to less than significant levels.

Conclusion

The purpose of this study is to identify potential significant impacts related to transportation due to the implementation of the proposed Project. The previously approved Project would generate less VMT and a lower VMT per service population rate than the NLSP. Due to the VMT reduction, the previously approved Project's impacts would be less and the previously approved Project would not result in any new or increased significant transportation impacts.

Reference: Northlake Specific Plan Transportation Analysis for CEQA

The previously approved Project's consistency with existing plans was evaluated and the previously approved Project does not conflict with the General Plan, any program plan, ordinance, or policy addressing the circulation system.

The previously approved Project's roadway design would comply with applicable design standards and requirements set forth in the Northlake Specific Plan and subject to review and approval by the County of Los Angeles Department of Public Works, therefore the Project would not increase hazards or incompatible uses.

Emergency access during construction would be maintained through the previously approved Project's construction management plan and on-site roadways would be designed per Fire Code requirements. Therefore, the previously approved Project would not impact emergency access.

Lastly, construction related VMT is variable, short-term, and is substantially lower than the Project's operational VMT. As such, construction related VMT would be less than significant. A construction Traffic Management Plan will be prepared and submitted to the County. Conducting construction activities in compliance with the Traffic Management Plan would reduce potential impacts related to construction traffic to less than significant levels.

Please reach out to us if you have any questions.

Sincerely,

STANTEC CONSULTING SERVICES INC.

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Attachment: VMT and Service Population Calculation Worksheet
County of Los Angeles VMT Tool Output Sheets
Figure 1 Project Site Plan
Figure 2 Traffic Analysis Zone Map
Appendix: Land Use Table
Northlake Traffic Impact Analysis

VMT AND SERVICE POPULATION CALCULATION WORKSHEET

Northlake Specific Plan and Previously Approved Project

Land Use Summary

Category	NLSP Amount	NLSP Unit	Previously Approved Project Amount	Previously Approved Project Unit
Single Family Residential	2,337	DU	1,488	DU
Multi Family Residential	1,286	DU	1,341	DU
Affordable Mixed-Use / Live-Work	--	--	321	DU
General Commercial	100.188	TSF	38.7	TSF
Highway Commercial	69.696	TSF	32.175	TSF
Industrial	545.589	TSF	--	--
Recreation/Park	166.9	Acre	167	Acre
School	23.1	Acre	44	Acre

DU = dwelling unit; TSF = thousand square feet

VMT Summary

Category	NLSP VMT	Previously Approved Project VMT
Single Family Residential	260,013	165,568
Multi Family Residential	77,860	100,623
Commercial	8,765	3,670
Light Industrial	13,869	--
Recreation/Park	1,320	2,640
School	2,640	2,640
Total	**364,467**	**275,141**

VMT per Service Population Summary

Metric	NLSP Plan	Previously Approved Project
VMT	364,467	275,141
SP	13,485	10,705
VMT per SP	27.0	25.7

SP = Service Population

NLSP Service Population

Category	Amount (TSF, Acre, Students)	Conversion Factor[1]	Population or Employee
Single Family Residential	2,337	3.85	8,997
Multi Family Residential	1,286	2.79	3,588
Light Industrial	545.589	1.306	418
Commercial	169.884	0.511	332
Recreation (Golf Course)/Park	166.9	na	50[2]
School	1,200	na	100[2]
Service Population			13,485
Residential and Commute VMT			364,467
VMT per Service Population			27.03

[1] Los Angeles County General Plan (DEIR Appendix D Buildout Methodology Figure 1E)

[2] Los Angeles County General Plan (DEIR Appendix D Buildout Methodology Figure 1F)

Previously Approved Project Service Population

Category	Amount (TSF, Acre, Students)	Conversion Factor[1]	Population or Employee
Single Family Residential	1,488	3.85	5,729
Multi Family Residential	1,662	2.79	4,637
Commercial	70.875	0.511	139
Sports Park	26	na[2]	50[2]
Recreation/Park	141	na[2]	50[2]
School	1,200	na[2]	100[2]
Service Population			10,705
Residential and Commute VMT			275,141
VMT per Service Population			25.70

[1] Los Angeles County General Plan (DEIR Appendix D Buildout Methodology Figure 1E)

[2] Los Angeles County General Plan (DEIR Appendix D Buildout Methodology Figure 1F)

NLSP VMT Estimates

Category	Amount (DU)	Persons/ HH[1]	Population	VMT per Capita[2]	Residential VMT
Single Family Residential	2,337	3.85	8,997	28.9	260,013
Multi Family Residential	1,286	2.79	3,588	21.7	77,860
Total Residential	3,623	--	12,585	--	337,873

[1] Los Angeles County General Plan (DEIR Appendix D Buildout Methodology Figure 1E)

[2] County of Los Angeles VMT Tool (See Figure 2 for TAZ Map)

Category	Amount (TSF)	TSF/Emp[1]	Employees	VMT per Employee[2]	Commute VMT
Light Industrial	545.589	1.306	418	33.2	13,869

[1] Los Angeles County General Plan (DEIR Appendix D Buildout Methodology Figure 1E)

[2] County of Los Angeles VMT Tool (See Figure 2 for TAZ Map)

Category	Employees	Employee ADT[1]	Average Trip Length[2] (miles)	Commute VMT	Residential and Commute VMT
Commercial	332	664	13.2	8,765	
Recreation (Golf Course)/Park	50	100	13.2	1,320	
School	100	200	13.2	2,640	
Total VMT					364,467

[1] Assumes 2 trips per employee (home to work and work to home)

[2] Since the County of LA VMT Tool does not calculate VMT per employee for Commerical, Recreation, and School uses, the average trip length was derived by using the General Office VMT per Employee for TAZ 20230100 (Project Location) from the County of LA VMT Tool and assumes 2 trips per employee (26.4 VMT per employee / 2 trips per employee = 13.2 miles).

Previously Approved Project VMT Estimates

Category	Amount (DU)	Persons/ HH[1]	Population	VMT per Capita[2]	Residential VMT
Single Family Residential	1,488	3.85	5,729	28.9	165,568
Multi Family Residential	1,662	2.79	4,637	21.7	100,623
Total Residential	3,150	--	10,366	--	266,191

[1] Los Angeles County General Plan (DEIR Appendix D Buildout Methodology Figure 1E)

[2] County of Los Angeles VMT Tool

Category	Amount (TSF)	TSF/Emp	Employees	VMT per Employee	Commute VMT
Light Industrial	--	--	--	--	--

Category	Employees	Employee ADT[1]	Average Trip Length[2] (miles)	Commute VMT	Residential and Commute VMT
Commercial	139	278	13.2	3,670	
Sports Park	50	100	13.2	1,320	
Recreation/Park	50	100	13.2	1,320	
School	100	200	13.2	2,640	
Total VMT					275,141

[1] Assumes 2 trips per employee (home to work and work to home)

[2] The average trip length was derived by using the General Office VMT per Employee for TAZ 20230100 (Project Location) from the County of LA VMT Tool and assumes 2 trips per employee (26.4 VMT per employee / 2 trips per employee = 13.2 miles).

COUNTY OF LOS ANGELES VMT TOOL

version 1.0

Project Information

Project Name	Analysis Year
Northlake Specific Plan (NLSP)	2022

Parcel Number (TAZ# 20230100)

3244012013, 2865003013, 2865003035, 2865003908, 2865036001, 2865036002, 2865036003,

Project Land Use Information

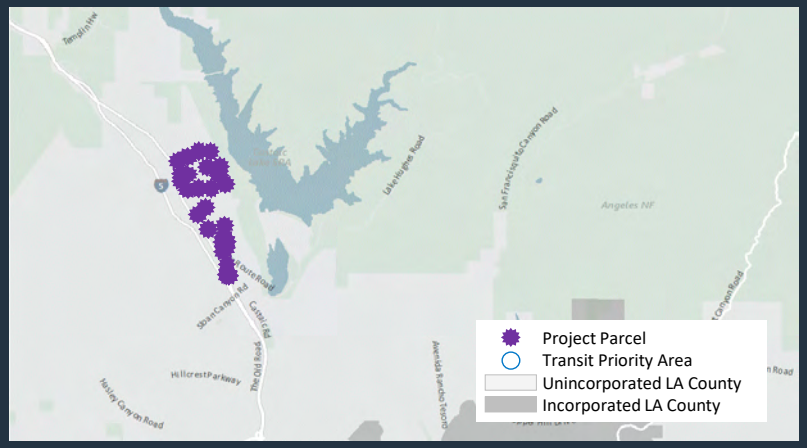
	Values	Unit
Residential - Single-Family Housing	2,337	DU
Residential - Multifamily Housing		DU
Residential - Affordable Housing		DU
Office - General Office		KSF
Office - Medical Office		KSF
Retail - Shopping Center, Restaurant, Services		KSF
Industrial - Warehousing		KSF
Industrial - Light Industrial		KSF
Custom Land Use (ignores all other land use entries)		Daily Trips

Project Daily Trips: 22,061

Screening Criteria for County of Los Angeles

	Value
Is the project screened in a Transit Priority Area?	No
Is the project's residential land uses 100% affordable housing?	N/A
Is the project's local service retail land uses under 50,000 square foot?	N/A
Does the project generate fewer than 110 daily trips? (enter project land use in the section above)	No

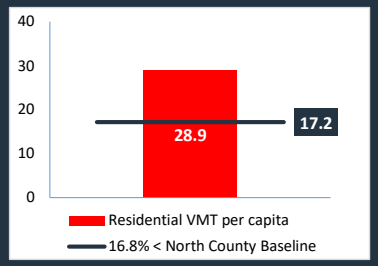
Project Location and VMT Information



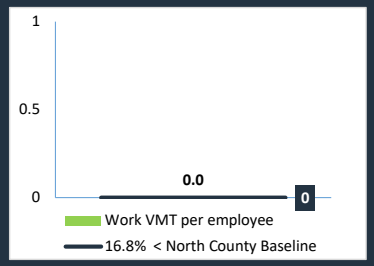
Project Summary Information

North County Residential VMT Baseline (20.7)	16.8%	% Threshold for Screening
North County Work VMT Baseline (15.9)	16.8%	% Threshold for Screening

Residential VMT per capita



Work VMT per employee



The project is not presumed to have a less than significant impact on VMT, therefore a CEQA VMT analysis may be required. Please refer to the Transportation Impact Analysis Guidelines on how to proceed forward.

FEHR & PEERS

COUNTY OF LOS ANGELES VMT TOOL

version 1.0

Project Information

Project Name	Analysis Year
Northlake Specific Plan (NLSP)	2022

Parcel Number (TAZ# 20230100)

3244012013, 2865003013, 2865003035, 2865003908, 2865036001, 2865036002, 2865036003,

Project Land Use Information

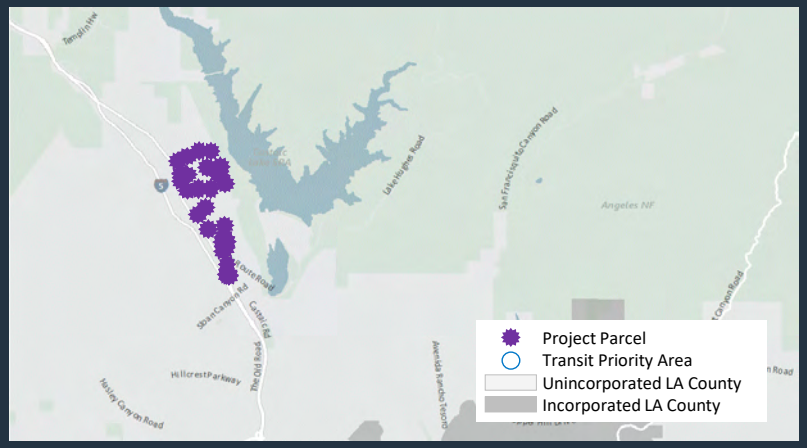
	Values	Unit
Residential - Single-Family Housing		DU
Residential - Multifamily Housing	1,286	DU
Residential - Affordable Housing		DU
Office - General Office		KSF
Office - Medical Office		KSF
Retail - Shopping Center, Restaurant, Services		KSF
Industrial - Warehousing		KSF
Industrial - Light Industrial		KSF
Custom Land Use (ignores all other land use entries)		Daily Trips

Project Daily Trips: 6,996

Screening Criteria for County of Los Angeles

	Value
Is the project screened in a Transit Priority Area?	No
Is the project's residential land uses 100% affordable housing?	N/A
Is the project's local service retail land uses under 50,000 square foot?	N/A
Does the project generate fewer than 110 daily trips? (enter project land use in the section above)	No

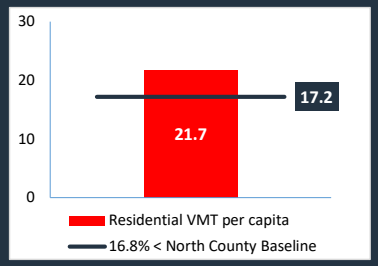
Project Location and VMT Information



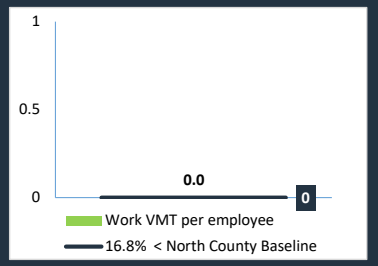
Project Summary Information

North County Residential VMT Baseline (20.7)	16.8%	% Threshold for Screening
North County Work VMT Baseline (15.9)	16.8%	% Threshold for Screening

Residential VMT per capita



Work VMT per employee



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COUNTY OF LOS ANGELES VMT TOOL

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Project Information

Project Name	Analysis Year
Northlake Specific Plan (NLSP)	2022

Parcel Number (TAZ# 20230100)

3244012013, 2865003013, 2865003035, 2865003908, 2865036001, 2865036002, 2865036003,

Project Land Use Information

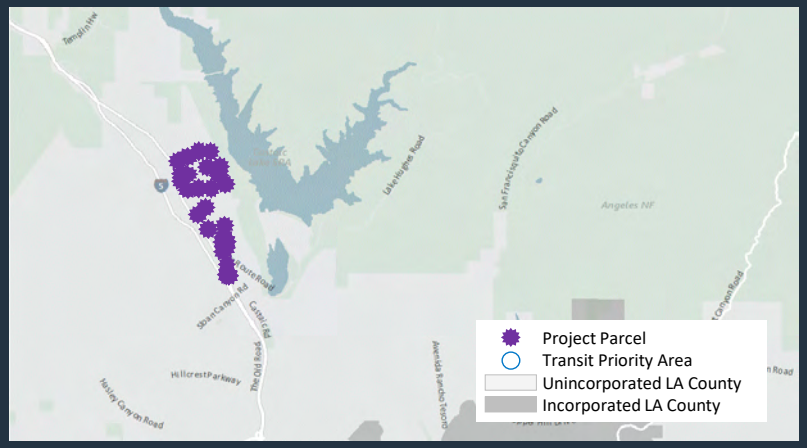
	Values	Unit
Residential - Single-Family Housing		DU
Residential - Multifamily Housing		DU
Residential - Affordable Housing		DU
Office - General Office		KSF
Office - Medical Office		KSF
Retail - Shopping Center, Restaurant, Services		KSF
Industrial - Warehousing		KSF
Industrial - Light Industrial	545.589	KSF
Custom Land Use (ignores all other land use entries)		Daily Trips

Project Daily Trips: 2,706

Screening Criteria for County of Los Angeles

	Value
Is the project screened in a Transit Priority Area?	No
Is the project's residential land uses 100% affordable housing?	N/A
Is the project's local service retail land uses under 50,000 square foot?	N/A
Does the project generate fewer than 110 daily trips? (enter project land use in the section above)	No

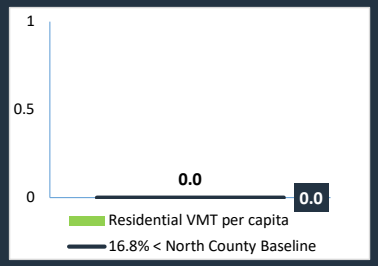
Project Location and VMT Information



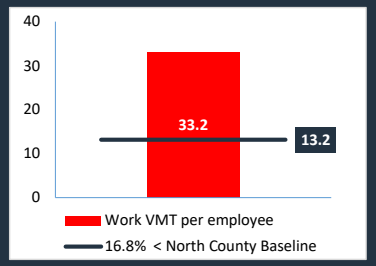
Project Summary Information

North County Residential VMT Baseline (20.7)	16.8%	% Threshold for Screening
North County Work VMT Baseline (15.9)	16.8%	% Threshold for Screening

Residential VMT per capita



Work VMT per employee



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COUNTY OF LOS ANGELES VMT TOOL

version 1.0

Project Information

Project Name	Analysis Year
Northlake Specific Plan (Previously Approved Project)	2022

Parcel Number (TAZ# 20230100)

3244012013, 2865003013, 2865003035, 2865003908, 2865036001, 2865036002, 2865036003,

Project Land Use Information

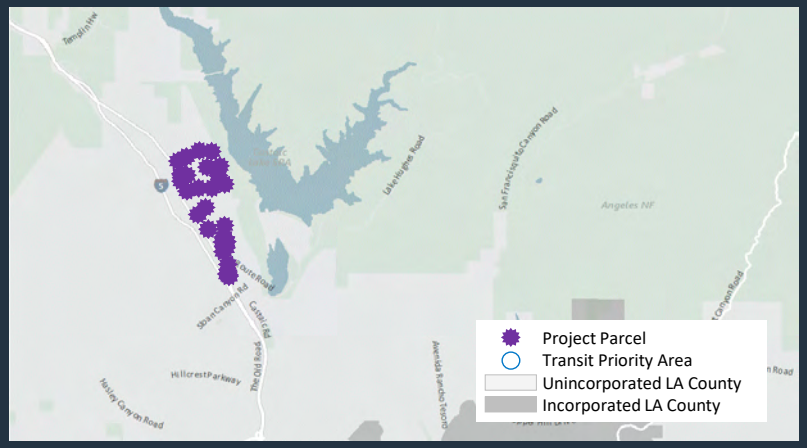
	Values	Unit
Residential - Single-Family Housing	1,488	DU
Residential - Multifamily Housing		DU
Residential - Affordable Housing		DU
Office - General Office		KSF
Office - Medical Office		KSF
Retail - Shopping Center, Restaurant, Services		KSF
Industrial - Warehousing		KSF
Industrial - Light Industrial		KSF
Custom Land Use (ignores all other land use entries)		Daily Trips

Project Daily Trips: 14,047

Screening Criteria for County of Los Angeles

	Value
Is the project screened in a Transit Priority Area?	No
Is the project's residential land uses 100% affordable housing?	N/A
Is the project's local service retail land uses under 50,000 square foot?	N/A
Does the project generate fewer than 110 daily trips? (enter project land use in the section above)	No

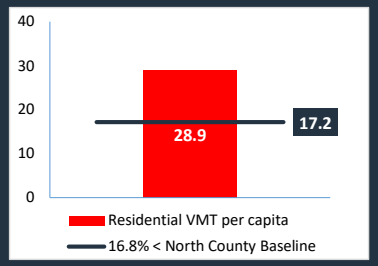
Project Location and VMT Information



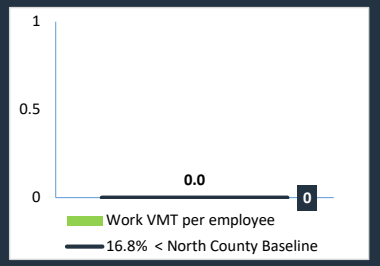
Project Summary Information

North County Residential VMT Baseline (20.7)	16.8%	% Threshold for Screening
North County Work VMT Baseline (15.9)	16.8%	% Threshold for Screening

Residential VMT per capita



Work VMT per employee



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COUNTY OF LOS ANGELES VMT TOOL

version 1.0

Project Information

Project Name	Analysis Year
Northlake Specific Plan (Previously Approved Project)	2022

Parcel Number (TAZ# 20230100)

3244012013, 2865003013, 2865003035, 2865003908, 2865036001, 2865036002, 2865036003,

Project Land Use Information

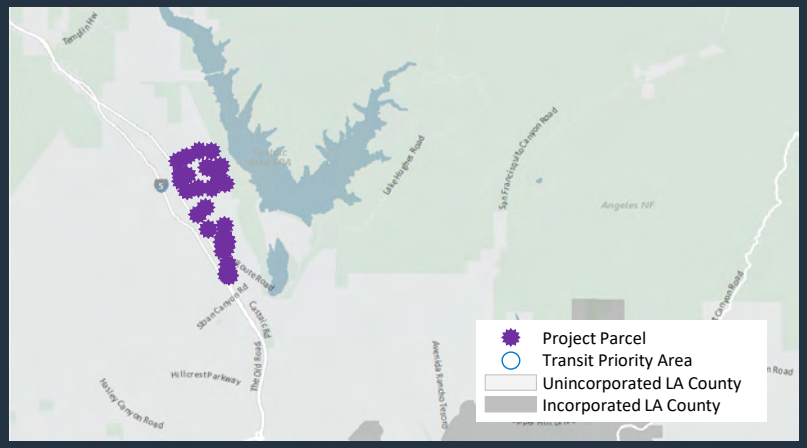
	Values	Unit
Residential - Single-Family Housing		DU
Residential - Multifamily Housing	1,341	DU
Residential - Affordable Housing		DU
Office - General Office		KSF
Office - Medical Office		KSF
Retail - Shopping Center, Restaurant, Services		KSF
Industrial - Warehousing		KSF
Industrial - Light Industrial		KSF
Custom Land Use (ignores all other land use entries)		Daily Trips

Project Daily Trips: 7,295

Screening Criteria for County of Los Angeles

	Value
Is the project screened in a Transit Priority Area?	No
Is the project's residential land uses 100% affordable housing?	N/A
Is the project's local service retail land uses under 50,000 square foot?	N/A
Does the project generate fewer than 110 daily trips? (enter project land use in the section above)	No

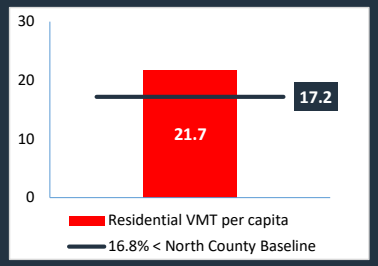
Project Location and VMT Information



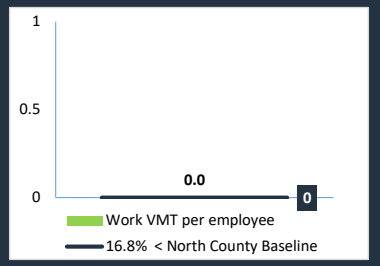
Project Summary Information

North County Residential VMT Baseline (20.7)	16.8%	% Threshold for Screening
North County Work VMT Baseline (15.9)	16.8%	% Threshold for Screening

Residential VMT per capita



Work VMT per employee



The project is not presumed to have a less than significant impact on VMT, therefore a CEQA VMT analysis may be required. Please refer to the Transportation Impact Analysis Guidelines on how to proceed forward.

FEHR & PEERS

COUNTY OF LOS ANGELES VMT TOOL

version 1.0

Project Information

Project Name	Analysis Year
Northlake Specific Plan (Previously Approved Project)	2022

Parcel Number (TAZ# 20230100)

3244012013, 2865003013, 2865003035, 2865003908, 2865036001, 2865036002, 2865036003,

Project Land Use Information

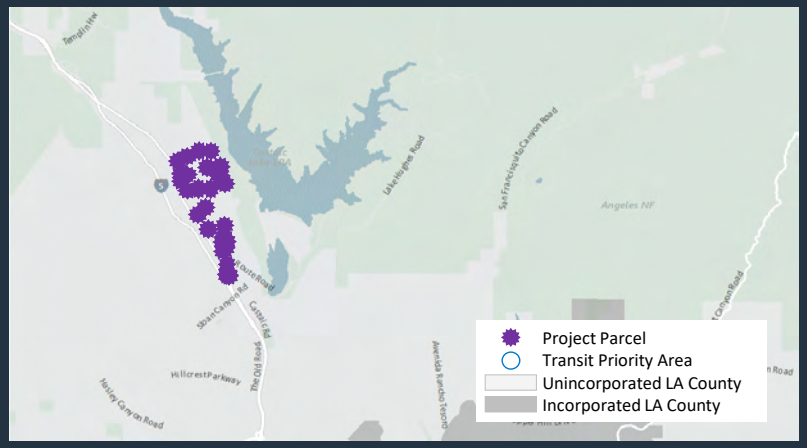
	Values	Unit
Residential - Single-Family Housing	1,488	DU
Residential - Multifamily Housing	1,341	DU
Residential - Affordable Housing	321	DU
Office - General Office		KSF
Office - Medical Office		KSF
Retail - Shopping Center, Restaurant, Services	32.175	KSF
Industrial - Warehousing		KSF
Industrial - Light Industrial		KSF
Custom Land Use (ignores all other land use entries)		Daily Trips

Project Daily Trips: 23,892

Screening Criteria for County of Los Angeles

	Value
Is the project screened in a Transit Priority Area?	No
Is the project's residential land uses 100% affordable housing?	No
Is the project's local service retail land uses under 50,000 square foot?	Yes
Does the project generate fewer than 110 daily trips? (enter project land use in the section above)	No

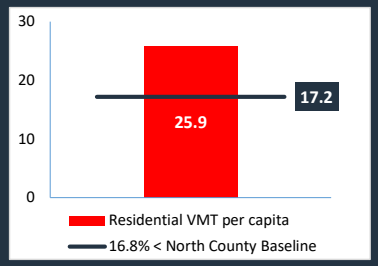
Project Location and VMT Information



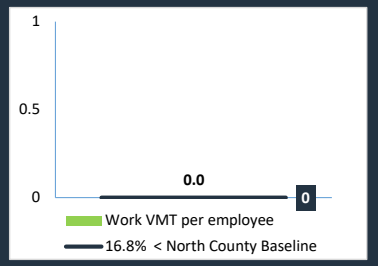
Project Summary Information

North County Residential VMT Baseline (20.7)	16.8%	% Threshold for Screening
North County Work VMT Baseline (15.9)	16.8%	% Threshold for Screening

Residential VMT per capita



Work VMT per employee



The retail portion of this project is presumed to have a less than significant impact on VMT, therefore a CEQA VMT analysis for the retail portion is not required. The project is not presumed to have a less than significant impact on VMT, therefore a CEQA VMT analysis may be required. Please refer to the Transportation Impact Analysis Guidelines on how to proceed forward.

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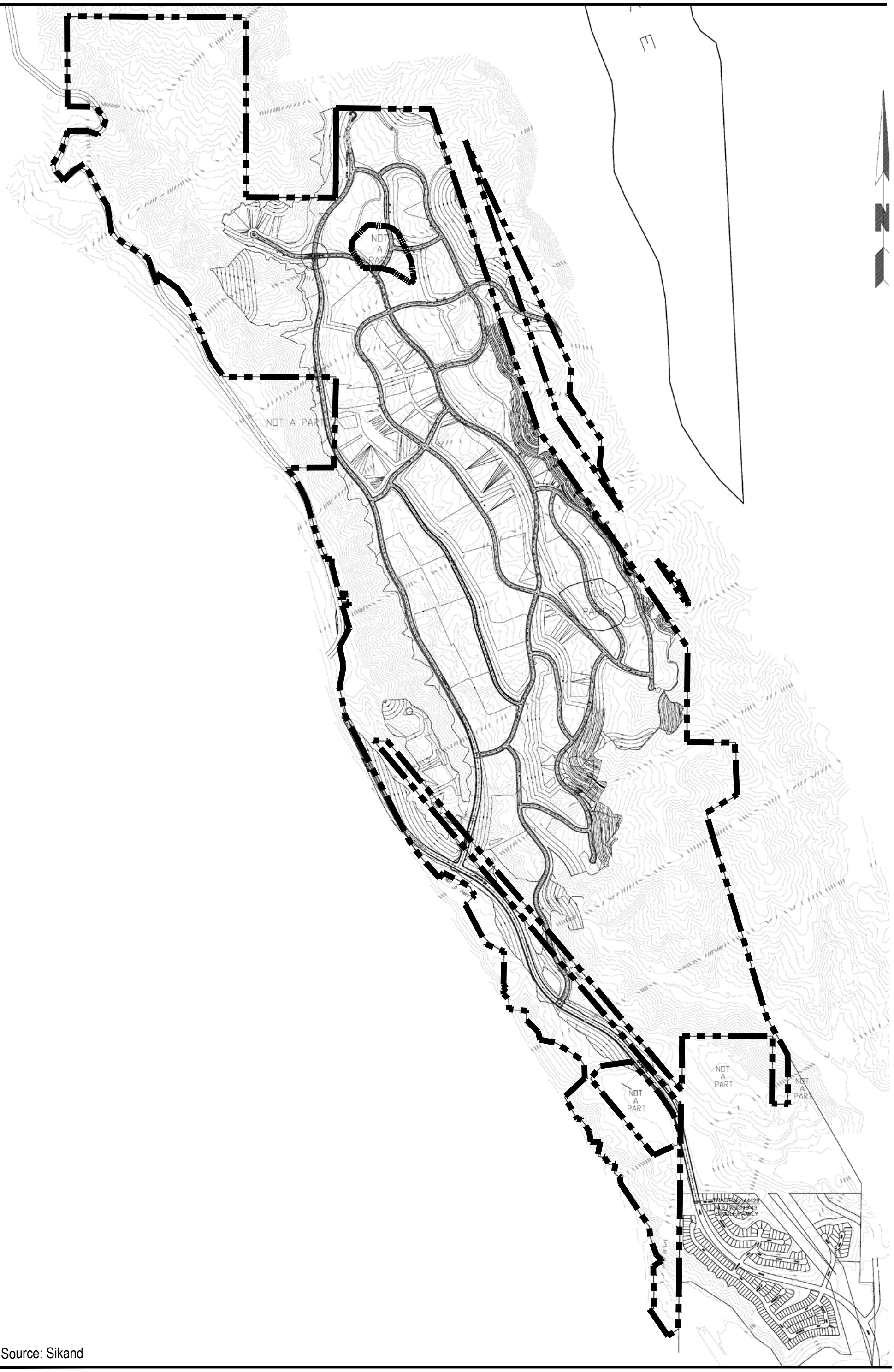

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Figure 1
Previously Approved Project Site Plan

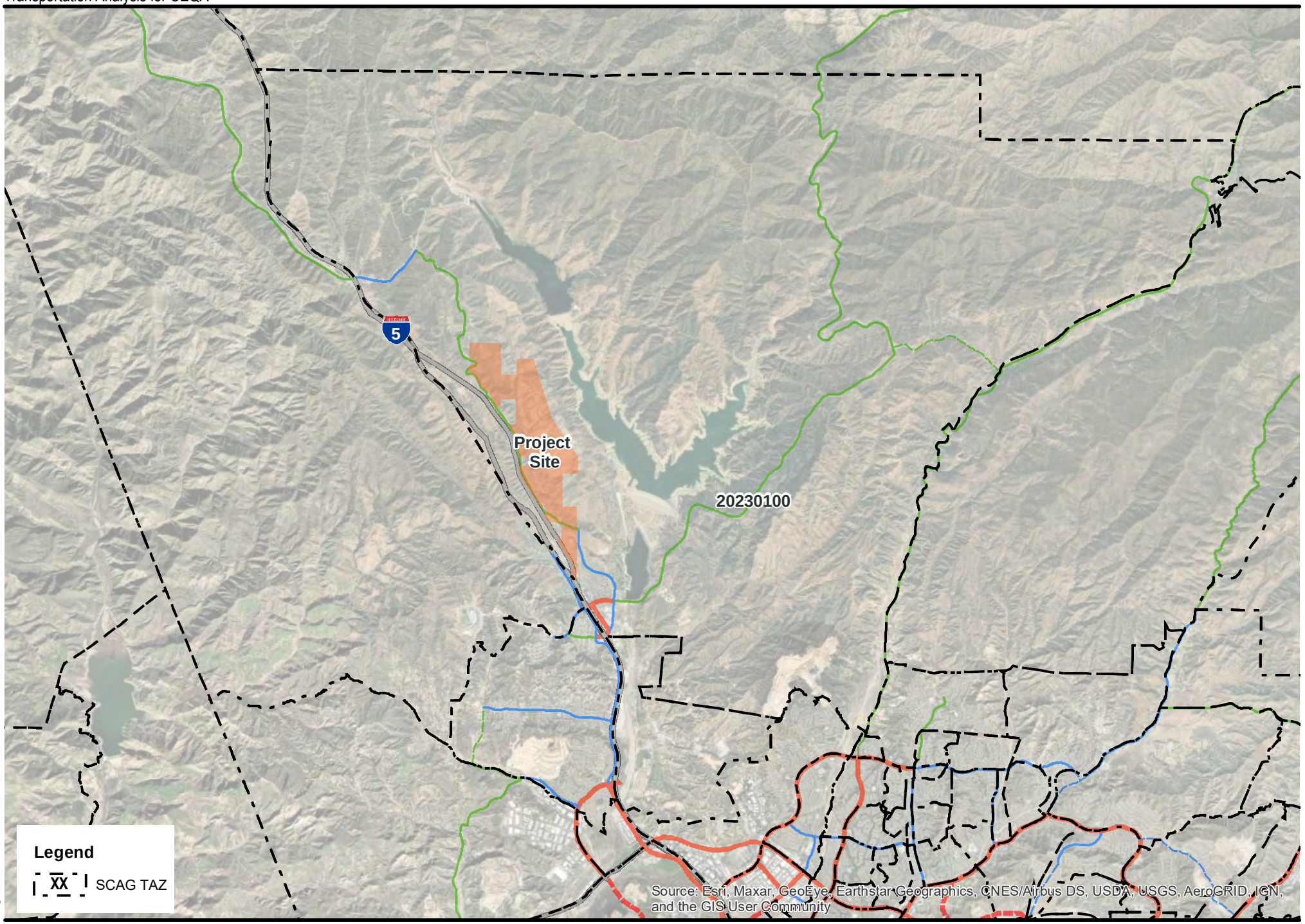

Figure 2

Traffic Analysis Zone (TAZ) Map

Appendix: Land Use Table

		PER APPROVED TM			
		ACREAGES		UNIT COUNT	
Residential		Phase 1	Phase 2	Phase 1	Phase 2
	Single Family	41	145	288	855
	Multi Family	107		1,341	
	Single Family (Age Qualified)	49		345	
Affordable Housing		20		321	
~~Commerical~~ (converted to affordable)					
Commerical Highway		2			
~~Industrial~~ (converted to affordable)					
School		21	23		
Recreation Park					
	Trail	10	2		
	Grasshopper Creek Park	11	6		
	Enhanced Parkway	38	2		
	Ridge Route Park		8		
	Northvalley Paseo		9		
	Northvalley Park		10		
	Sport Park	26			
	Castaic Lagoon Park (WQ Basin)	17			
	Cody Dog Park	1			
	Vista Park		27		
OS - Manufactured Slope		144	161		
OS - Undisturbed		167	161		
Road		84	36		
Public Services					
	Fire Station	1			
Total (ac.)		**739**	**590**	**3,150**	

Northlake Traffic Impact Analysis



Prepared for:
Northlake Associates, LLC

Prepared by:
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38 Technology Drive, Suite 100
Irvine, CA 92618

September 6, 2016

Sign-off Sheet

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Stantec

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APPENDIX E HCM WORKSHEETS E.1

1.0 INTRODUCTION

This report presents the results of a traffic study carried out to evaluate a proposed development (hereby referred to as Northlake) within the Northlake Specific Plan area in unincorporated Los Angeles County. VTTM 73336 represents a portion of the Northlake development. The purpose of the study is to identify potential significant impacts of the project and will serve as a technical resource for the project's Environmental Impact Report (EIR).

1.1 PROPOSED PROJECT

Figure 1-1 illustrates the general location of the project. The project is located in the Castaic community, east of Interstate (I-5) and northeast of the Lake Hughes Road interchange. A Specific Plan was approved in 1991 for a development consisting of nearly 4,000 residential dwelling units. The buildout of the project as currently proposed, consists of 1,414 single family residential units, 1,341 condominium and townhouse units, 345 senior adult residential units with a combined total of 3,100 residential units. The project also includes non-residential uses estimated to consist of approximately 67,100 square feet of neighborhood commercial, a 304,900 square feet industrial park, a junior high school (approximately 1,200 students), 15 acre Sports Park and a 10 acre developed park.

The site is currently undeveloped, except for the existing Northlake Hills Elementary school just north of the intersection of Ridge Route Road and Pine Crest Place.

The project site plan is shown in Figure 1-2. Access to the project site is via an extension of the existing Ridge Route Road.

Based on established trip rates published by the Institute of Transportation Engineers (ITE) and the County of Los Angeles, at buildout the development will result in approximately 32,600 average daily trips (35,500 daily tripends) given the proposed land uses for the project site. Detailed trip generation and trip distribution data is provided in Chapter 3.0, Project Description. The project is expected to be fully built out over a 10 to 15 year period.

1.2 STUDY AREA

This traffic report addresses the local study area in the nearby Castaic community where project generated traffic could potentially cause a significant impact and the I-5 freeway segments near the project site. The local study area and the freeway segments addressed in this report are presented in Figure 1-3. As shown, the local study area extends south to the Ridge Route Road/Parker Road interchange and westerly to Sloan Canyon Road.

The study area was derived by utilizing a traffic model to distribute project trips to the area's roadways (see Section 1.3.1 for additional discussion of the traffic model used for this analysis)

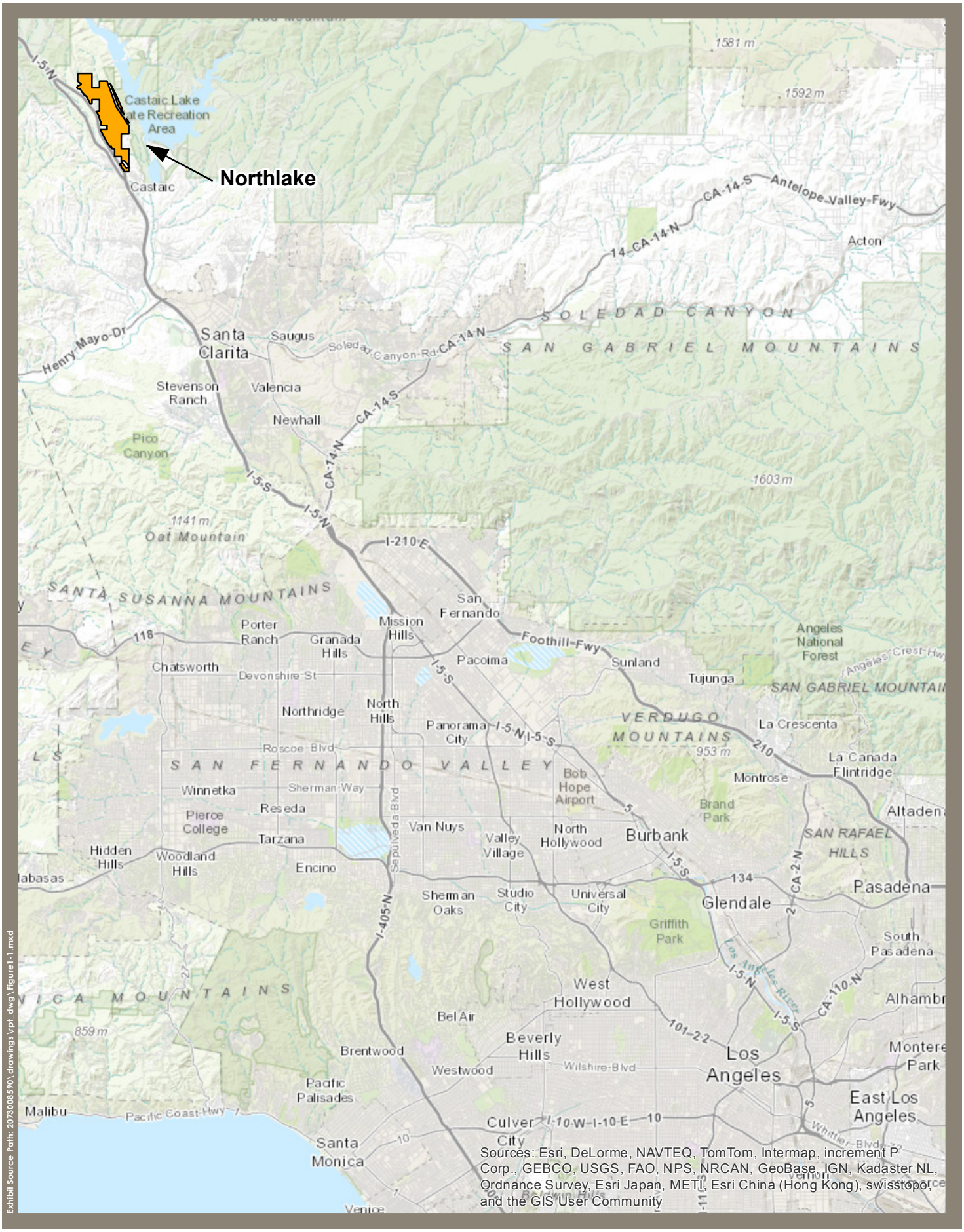

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Figure 1-1

Project Site Location Map

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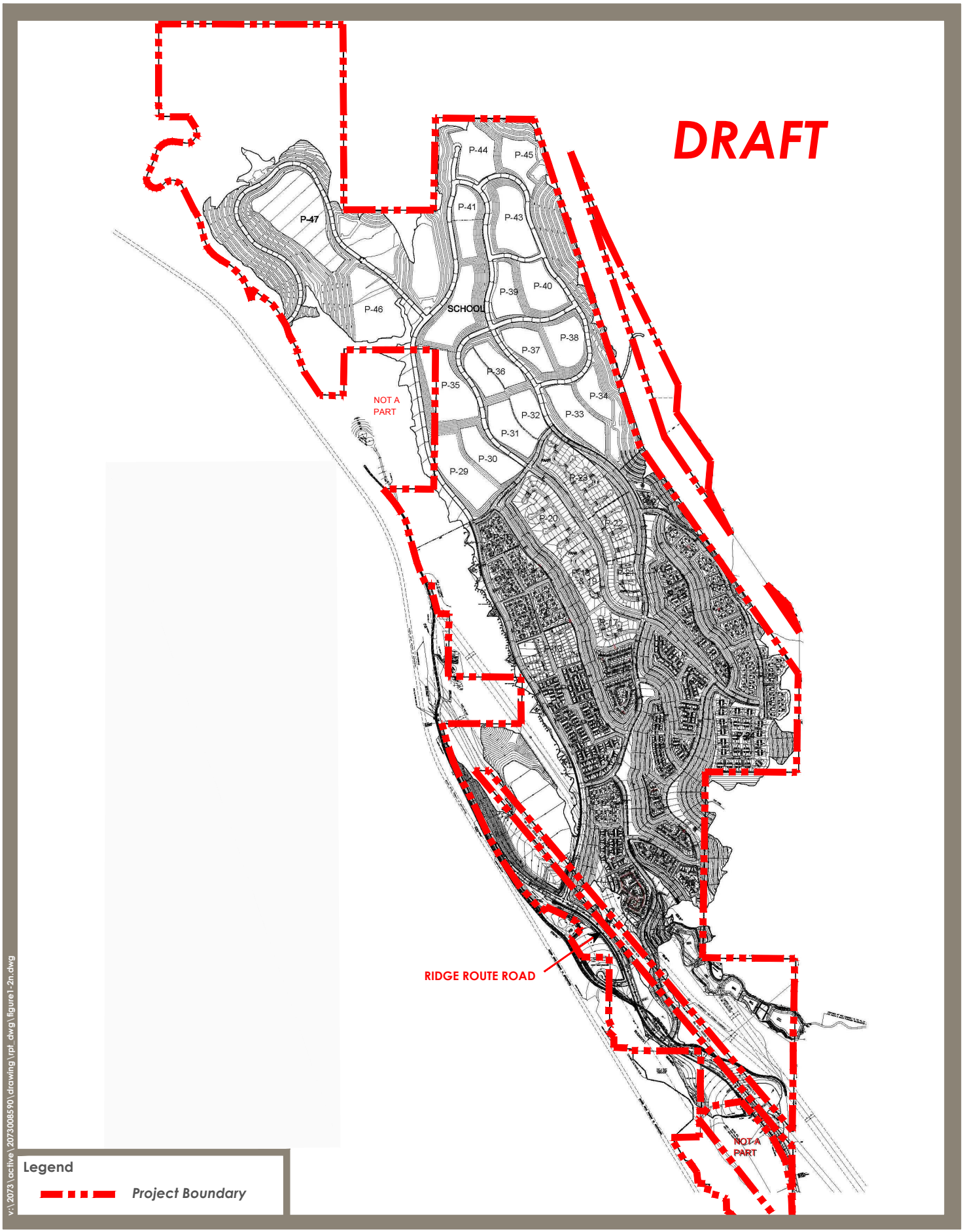

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Figure 1-2
Project Site Plan (Draft)
1.3

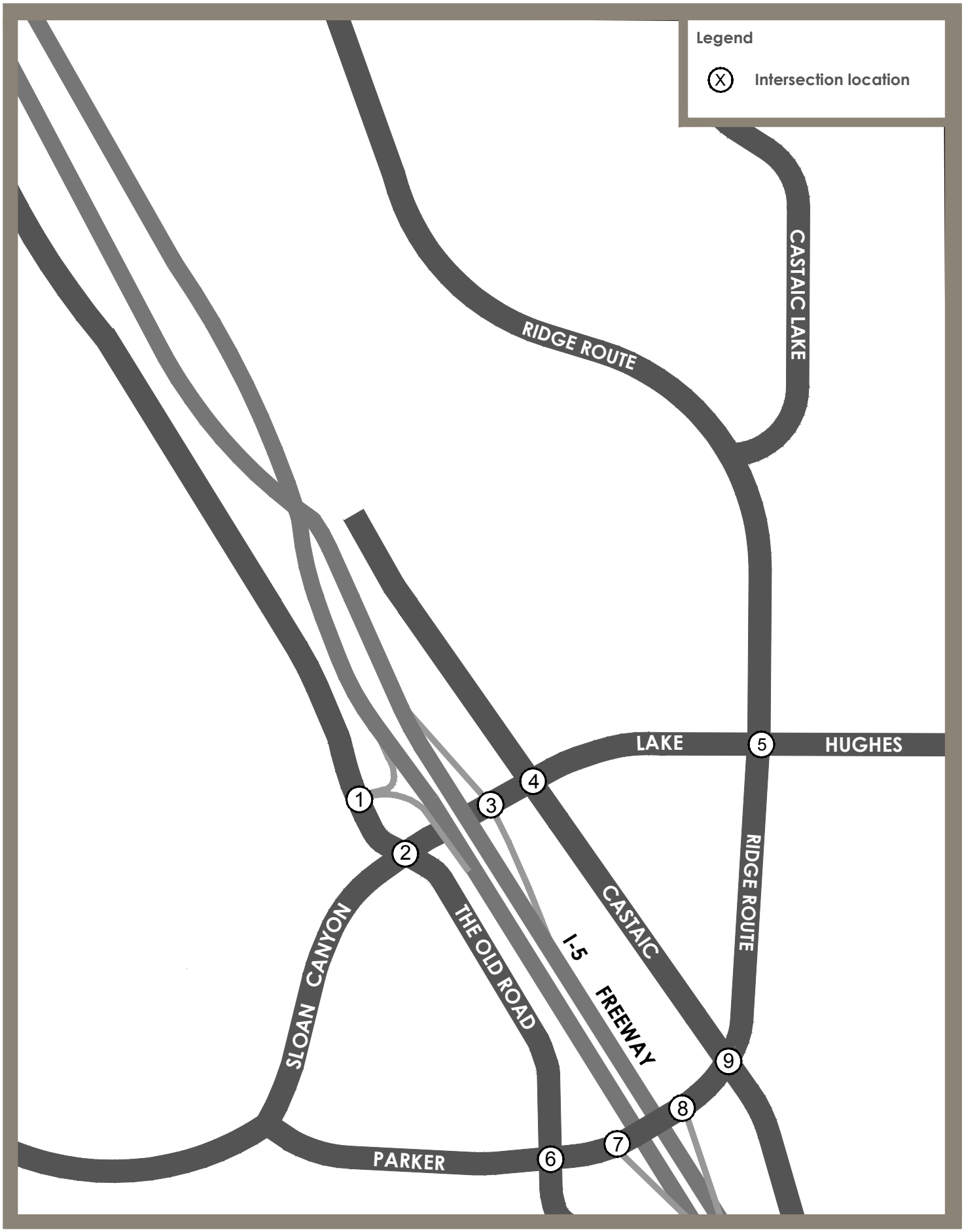

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Figure 1-3

Project Local Study Area - Intersection Location Map

1.4

and each major intersection with a discernible volume of project traffic (i.e., daily traffic volumes > 500 ADT) was included in the study area.

1.3 METHODOLOGY

The traffic analysis evaluates the project utilizing the established guidelines of the Los Angeles County Department of Public Works (See Reference 3 in Section 1.6) and current methodologies as direct by County staff. A special plan–to-ground analysis (i.e., existing plus project analysis) is provided as well as cumulative conditions (i.e., Related Projects) analysis. The project is expected to buildout over a 10 to 15 year period, therefore a horizon year of 2028 is utilized for the cumulative setting. The scenarios analyzed are as follows:

1. Existing Conditions
2. Existing Conditions plus Project
3. 2028 Cumulative Conditions/Related Projects with Project
4. 2028 Cumulative Conditions/Related Projects without Project

1.3.1 Project Impact Analysis

The County's traffic study guidelines specify the analysis of the scenarios shown above. The future forecasts were derived using three primary sources. The first is the Santa Clarita Valley Consolidated Traffic Model (SCVCTM), a model has the capability of forecasting the complex interaction of vehicle trips between existing and future land uses. The second is the Northlake Traffic Model (NTM), a fine-grained site-specific traffic model prepared for this traffic study. The third set of data is from the Los Angeles County Department of Regional GIS-NET-3 database, referred to here as "related projects". All three sources are discussed in detail in Section 2.2.

1.4 PERFORMANCE CRITERIA

In traffic impact studies, impact criteria are based on two primary measures. The first is "capacity," which establishes the vehicle carrying ability of a road segment, and the second is "volume". The volume measures is either a traffic count (in the case of existing volumes) or a traffic forecast for a future point in time. The ratio between the volume and the capacity gives a volume/capacity (V/C) ratio, and based on that V/C ratio, a corresponding level of service (LOS) is defined. Traffic LOS is designated "A" through "F" with LOS "A" representing free flow conditions and LOS "F" representing severe traffic congestion. Traffic flow quality for each LOS is described in Table 1-1 for arterial roadways and intersections and Table 1-2 for freeways, these descriptions being taken from the Highway Capacity Manual (HCM).

Table 1-3 summarizes the V/C ranges listed for arterial roads, intersections and freeway segments and are those used by the County of Los Angeles. The V/C ranges listed for freeway segments are based on the V/C and LOS relationships specified in the 2010 Highway Capacity Manual (see Reference 2 in Section 1.6 and referred to as "HCM 2010" in this report) for basic freeway sections with free-flow speeds of 65 miles per hour, and the V/C methodology is specified by the

County's Congestion Management Program (CMP) for the evaluation of CMP freeway monitoring stations.

The V/C is the methodology used in this analysis for the CEQA determination of impacts since it is the methodology specified by the Los Angeles County CMPs.

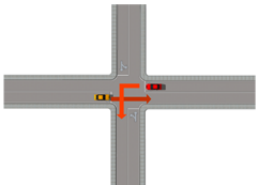
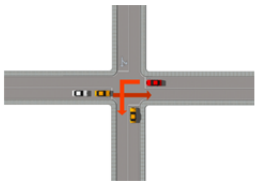
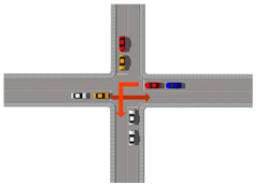
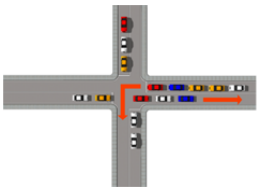
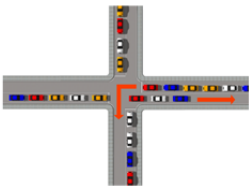
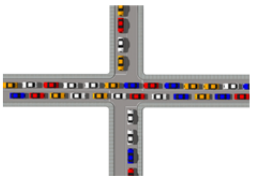
Both the V/C ratio and the LOS are used in identifying significant impacts. Certain LOS values are deemed unacceptable, and increases in the V/C ratio that cause or contribute to the LOS being unacceptable are defined as a significant impact. Note that while the Caltrans guidelines for the preparation of traffic studies (see Reference 4 in Section 1.6) recommend the HCM 2010 method for the evaluation of State highway facilities, those guidelines do not include a threshold of significance criteria for the determination of a significant project impact that is based on the HCM 2010 methodologies. While the Caltrans guidelines do not identify specific impact criteria due to differences between rural and urban areas of the State, as well as differences between the northern, central, and southern regions, the local Caltrans Districts will determine the impact criteria based on the appropriate requirements of that District. As such, the thresholds of significance criteria specified by the local agencies (i.e., Caltrans District 7, County of Los Angeles, and the LA County CMP) are utilized for this analysis.

In establishing V/C based performance criteria, there are certain items that need to be addressed to obtain suitable V/C estimates and relate them to LOS. For instance, while average daily traffic (ADT) is a useful measure to show general levels of traffic on a facility and to provide data for other related aspects such as noise and air quality, highway congestion is largely a peak hour or peak period occurrence and ADT does not reflect peak period conditions very effectively. Because of this, ADT is not used here as the basis for capacity evaluation but instead this evaluation focuses on those parts of the day when such congestion can occur, specifically the AM and PM peak hours.

For the arterial system and freeway system, the peak hour is the accepted time period used for impact evaluation. The analysis of the arterial road system is based on intersection capacity since this is the defining capacity limitation on an arterial highway system. The analysis of the freeway system is based on peak hour volumes by direction.

Levels of service for arterial roadway intersections and for freeway mainline segments are determined based on operating conditions during the AM and PM peak hours. For intersections, the intersection capacity utilization (ICU) methodology is applied, providing a planning level basis for determining V/C and LOS. This methodology sums the V/C ratios for the critical movements of an intersection and is the preferred procedure for intersection analysis by the County of Los Angeles. The ICU methodology is generally compatible with the intersection capacity analysis methodology outlined in the HCM 2010. For freeway segments, the V/C methodology is applied, which also provides a planning level basis for determining capacity utilization and LOS, and which is the methodology specified by the County CMP. The HCM 2010 equates V/C ratios to other performance measures such as speed and density shown in Table 1-4.

Table 1-1 Level of Service Descriptions – Arterial Roadway and Intersections

LOS	Traffic Flow Description	V/C or ICU
A	 Minimal or no vehicle delay.	0.00 – 0.60
B	 Slight delay to vehicles.	0.61 – 0.70
C	 Moderate vehicle delays, traffic flow remains stable.	0.71 – 0.80
D	 More extensive delays at intersections.	0.81 – 0.90
E	 Long queues create lengthy delays.	0.91 – 1.00
F	 Severe delays and congestion.	> 1.00

Sources: HCM 2010, Congestion Management Program of Los Angeles County
V/C = Volume to Capacity ratio
ICU = Intersection Capacity Utilization

Table 1-2 Level of Service Descriptions – Freeways

LOS	Traffic Flow Description		Density (pc/mi/ln)
A		Free-flow conditions. Free-flow speed prevails and vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed.	≤11
B		Reasonably free-flow operations, and free-flow speed on the freeway is maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.	>11 – 18
C		Traffic flow and speeds near the free-flow speed of the freeway. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service quality will be significant. Queues may be expected to form behind any significant blockages.	>18 – 26
D		Speeds begin to decline with increasing flows, with density increasing more quickly. Freedom to maneuver within the traffic stream is seriously limited and drivers experience reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.	>26 – 35
E		Operation at capacity. Operations on the freeway at this level are highly volatile because there are virtually no usable gaps within the traffic stream, leaving little room to maneuver within the traffic stream. Any disruption to the traffic stream can establish a disruption wave that propagates throughout the upstream traffic flow. The physical and psychological comfort afforded to drivers is poor.	>35 – 45
F		Breakdown, or unstable flow. Breakdown occurs when the ratio of demand to capacity exceeds 1.00. Whenever queues due to a breakdown exist, they have the potential to extend upstream for considerable distances.	>45

Source: HCM 2010
pc/mi/ln = passenger cars per mile per lane

Table 1-3 Volume/Capacity Ratio Level of Services Ranges

LOS	Roadway V/C & Intersection ICU Ranges	Freeway Segment V/C Ranges[1]
A	0.00 – 0.60	0.00 – 0.30
B	0.61 – 0.70	0.31 – 0.50
C	0.71 – 0.80	0.51 – 0.71
D	0.81 – 0.90	0.72 – 0.89
E	0.91 – 1.00	0.90 – 1.00
F	Above 1.00	Above 1.00

Sources: Congestion Management Program of Los Angeles County
HCM 2010

[1]Values based on a free flow speed of 65 mph.

Table 1-4 LOS Criteria for Basic Freeway Segments

	LOS				
Criteria	**A**	**B**	**C**	**D**	**E**
Maximum density (pc/mi/ln)	11	18	26	35	45
Minimum speed (mi/h)	65.0	65.0	64.6	59.7	52.2
Maximum V/C	0.30	0.50	0.71	0.89	1.00
Maximum service flow rate (pc/h/ln)	710	1,170	1,680	2,090	2,350

Notes:

The exact mathematical relationship between density and V/C has not always been maintained at LOS boundaries because of the use of rounded values. Density is the primary determinant of LOS. The speed criterion is the speed at maximum density for a given LOS.

Values based on a free flow speed of 65 mph.

Source: HCM 2010

The ICU calculation methodology and associated impact criteria for the study area arterial system are summarized in Table 1-5. The County utilizes a variable scale of ICU impact amounts that are based on the pre-project LOS.

The County CMP specifies that LOS E is the acceptable threshold for arterial intersections. Therefore, the CMP analysis presented in Section 4.3 utilizes LOS E as the acceptable threshold for CMP purposes.

The freeway V/C calculation methodology and associated impact criteria for the study area freeway system are summarized in Table 1-6. The County CMP specifies that LOS E or existing LOS, whichever is worse, represents the performance standard for freeway segments, and Caltrans goal is to maintain no worse than LOS E in urban areas.

1.5 DEFINITIONS

Certain terms used throughout this report are defined below to clarify their intended meaning:

ADT	Average Daily Traffic. Generally used to measure the total two-directional traffic volumes passing a given point on a roadway.
CMP	Congestion Management Program. A state mandated program administered by the Los Angeles County Metropolitan Transportation Authority (MTA) that provides a mechanism for coordinating land use and development decisions.
ICU	Intersection Capacity Utilization. A measure of the volume to capacity ratio for an intersection. Typically used to determine the peak hour level of service for a given set of intersection volumes.
LOS	Level of Service. A scale used to evaluate circulation system performance based on intersection ICU values or volume/capacity ratios of arterial segments.
Peak Hour	This refers to the hour during the AM peak period (typically 7 AM - 9 AM) or the PM peak period (typically 3 PM - 6 PM) in which the greatest number of vehicle trips are generated by a given land use or are traveling on a given roadway.
Tripend	A trip generation measure which represents the beginning or endpoint of a trip.
V/C	Volume to Capacity Ratio. This is typically used to describe the percentage of capacity utilized by existing or projected traffic on a segment of an arterial or intersection.
VPH	Vehicles per Hour. Used for roadway volumes (counts or forecasts) and trip generation estimates. Measures the number of vehicles in a one-hour period, typically the AM and PM peak hour.

Table 1-5 Arterial Intersection Performance Criteria

V/C Calculation Methodology

Level of service to be based on peak hour intersection capacity utilization (ICU) values calculated using the following assumptions:

Saturation Flow Rates:

County Methodology:	1,600 vehicles/hour/lane for through lanes, right-turn lanes, and single left-turn lanes 2,880 vehicles/hour/lane for dual left-turn lanes (total of both lanes)
Clearance Interval:	0.10

Significant Impact Thresholds[1]

An intersection is considered to be significantly impacted if the project increases the ICU by an amount equal to or greater than the amounts set forth below:

County Thresholds:	Pre-Project ICU	Project Increment
	0.71 - 0.80 (LOS C)[2]	greater than or equal to 0.04
	0.81 - 0.90 (LOS D)	greater than or equal to 0.02
	0.91 or more (LOS E & F)	greater than or equal to 0.01

[1]Note: For intersections under joint jurisdiction of the County and Caltrans or Caltrans, the analysis utilizes the corresponding threshold of the lead agency (County) or local agency.

[2]Note: The County guidelines do not address situations where pre-project conditions are less than 0.71. In that situation, County staff has interpreted the guidelines to mean that an increase resulting in a with-project condition of 0.75 or more is considered significant. The interpretation is based on the following scenario, which is addressed by the guidelines: 0.71 (pre-project) + 0.04 (project increment) = 0.75 and is a significant impact.

Abbreviations:
V/C – Volume/Capacity Ratio
LOS – Level of Service
ICU – Intersection Capacity Utilization

Table 1-6 Freeway Mainline Performance Criteria

V/C Calculation Methodology

Level of service to be based on peak hour V/C values calculated using the following assumptions for a planning level analysis:

Saturation/Service Flow Rates:

Mainline Mixed-flow/General Purpose Lane:	2,000 vehicles/hour/lane
High Occupancy Vehicle (HOV) or High Occupancy Toll (HOT Lane:	1,600[1] vehicles/hour/lane

Saturation flow rates derived from Caltrans PeMS data and through discussions with Caltrans staff.

[1] For buffered or contiguous HOV facilities, LOS C occurs at approximately 1,650 vph, or less if there is significant bus volume or if there are physical constraints (source: High Occupancy Vehicle Guidelines for Planning, Design and Operations, Caltrans, 2003, Chapter 2, page 4). However, for the purpose of planning studies, Caltrans District 7 has specified a capacity of 1,600 vph based on the desire to maintain an operating condition for the HOV lanes that is better than for general purpose lanes. As such, a V/C ratio of 1.00 in the HOV lane represents a better operating condition than a V/C ratio of 1.00 in the general purpose lanes.

Impact Threshold

A freeway mainline segment is considered to be significantly impacted if each of the following conditions are met:

The segment is forecast to operate deficiently (i.e., worse than LOS E (urban areas) or existing LOS, whichever is worse).

Compared to the V/C in the no-project alternative, the V/C in the with-project alternative increases by greater than or equal to .02 (the impact threshold specified in the CMP).

Abbreviations:

V/C – Volume/Capacity Ratio
PeMS – Performance Monitoring System
LOS – Level of Service
CMP – Congestion Management Program

1.6 REFERENCES

1. "Trip Generation 9th Edition," Institute of Transportation Engineers, 2012.
2. "Highway Capacity Manual 2010," Transportation Research Board, National Research Council, 2010.
3. "Traffic Impact Analysis Report Guidelines," County of Los Angeles Department of Public Works, January 1997.
4. "Guide for the Preparation of Traffic Impact Studies," Caltrans, December 2002.
5. "I-5 HOV/Truck Lanes Project SR-14 to Parker Road Final Environmental Impact Report/Environmental Assessment with Finding of No Significant Impact" (SCH No. 2007051028), State of California Department of Transportation, September 2009.
6. "I-5 HOT Lane Project Supplemental EIR/Environmental Reevaluation" (SCH No. 2007051028), State of California Department of Transportation, May 2013.
7. "Guidelines for CMP Transportation Impact Analysis," from the 2010 Congestion Management Program for Los Angeles County, Los Angeles County Metropolitan Transportation Authority, 2010.
8. "SCAG Regional Travel Demand Model and 2008 Model Validation," Southern California Association of Governments, June 2012.
9. "Caltrans 2013 Traffic Volumes on California State Highways," State of California Transportation Agency Department of Transportation, 2014.
10. "Subdivision Activity Unincorporated Areas Only," Los Angeles County GIS Data Portal, Accessed February 2015.
11. "Public Subdivision Activity," Los Angeles County Department of Regional Planning GIS-NET3, Accessed February 2015.
12. "Brea Sports Park Traffic Study," Austin-Foust Associates, Inc. August 2002.
13. "Westside Bridge and Major Thoroughfare Construction Fee District Report," Los Angeles County Department of Public Works, February 2011.
14. "City of San Diego Municipal Code Land Development Code Trip Generation Manual," City of San Diego, May 2003.

2.0 TRANSPORTATION SETTING

This chapter describes the transportation setting for the project. Existing conditions are first summarized, followed by the future background setting against which project impacts are evaluated.

2.1 EXISTING CONDITIONS

The following section describes the transportation system serving the local study area. It includes a description of the local study area roadway system, existing traffic volumes and the results of an intersection capacity utilization (ICU) level of service (LOS) analysis, thereby providing a point of reference for describing anticipated future traffic conditions.

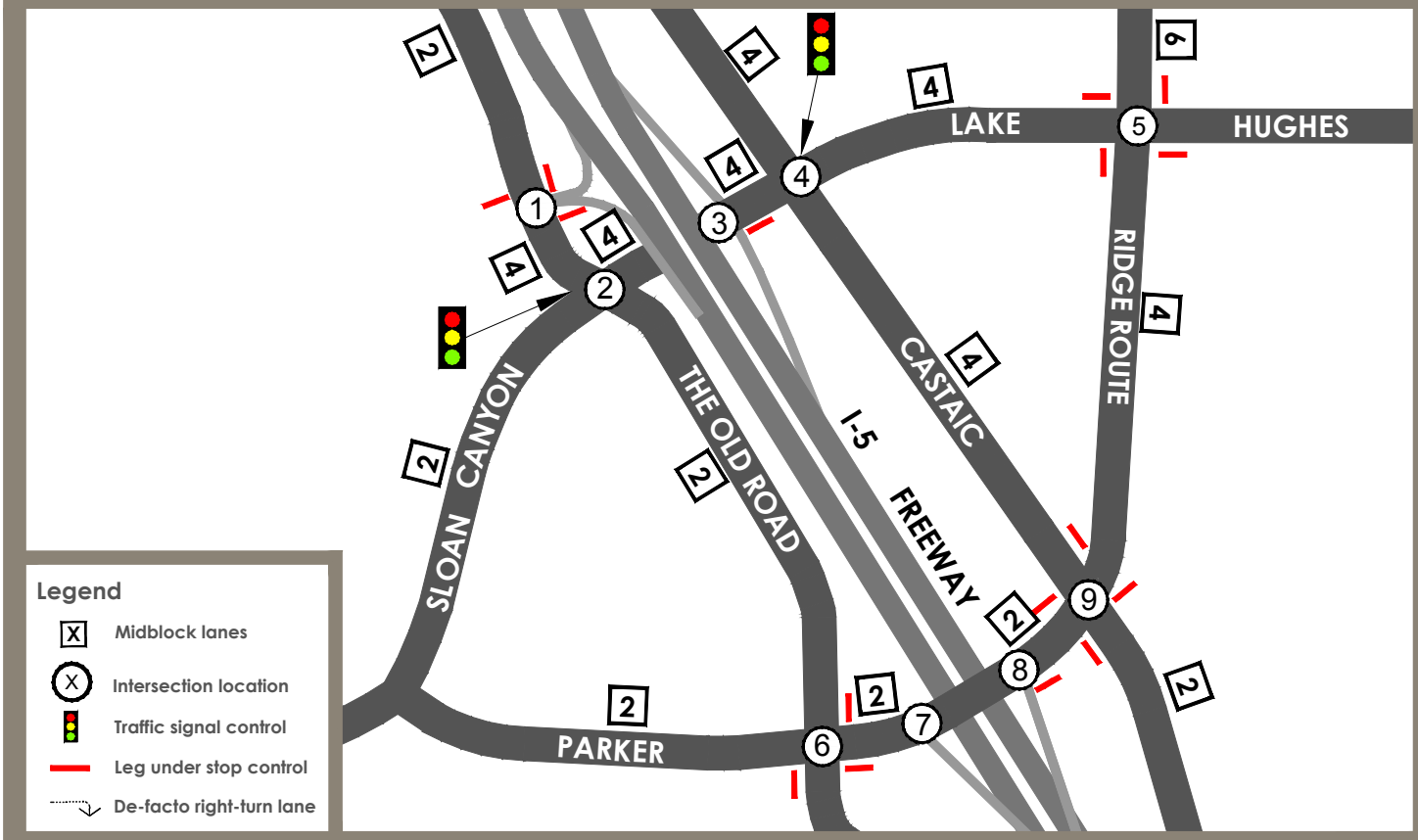
2.1.1 Existing Local Roadway System

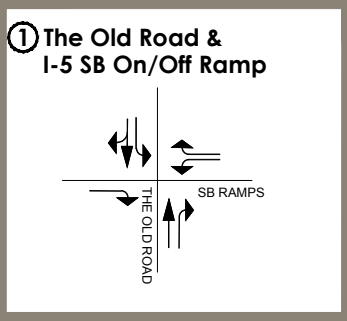
The existing local roadway system in the nearby Castaic community is illustrated in Figure 2-1 in the form of mid-block lanes, intersection lane configurations and intersection control types for the intersections being studied.

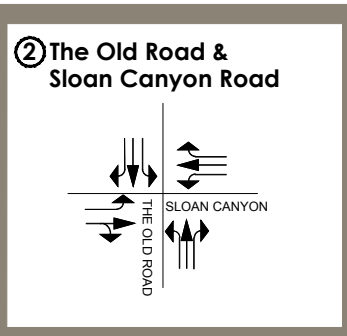
Immediately south of the project site, Ridge Route Road has been constructed with a 64 foot roadway width within 80 feet of right-of-way to just north of Castaic Lake Drive. From just north of Castaic Lake Drive to just south of the park entrance, Ridge Route Road has been constructed with a 94 foot roadway width within 110 feet of right-of-way. From just south of the park entrance to Lake Hughes Road, Ridge Route Road has been constructed with an 84 foot roadway within 100 feet of right-of-way, with a raised median ranging from 4 feet to 14 feet in width. South of Lake Hughes Road, Ridge Route Road consists of two lanes in each direction, with parking, within a 64 foot roadway width.

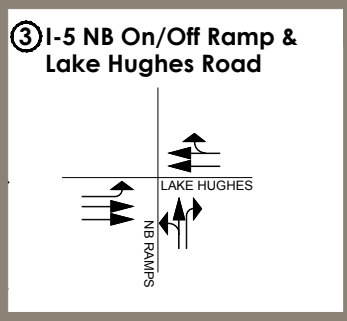
Lake Hughes Road is a major highway currently configured with two lanes in each direction between Ridge Route Road and the I-5 freeway. West of Ridge Route Road, Lake Hughes Road has been constructed with a 90 foot roadway width.

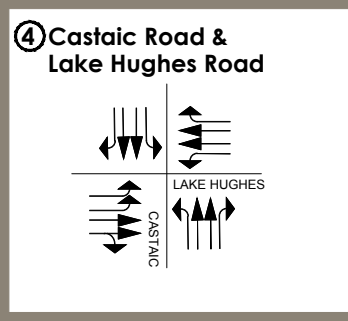
The I-5 freeway provides regional access to the Los Angeles area to the south and to Kern County to the north. It currently consists of four lanes in each direction. In the Castaic area, interchanges exist at Lake Hughes Road and at Parker Road/Ridge Route Road. At the Lake Hughes Road interchange, direct ramps exist for the northbound direction, and hook ramps to and from The Old Road for the southbound direction. At the Parker Road/Ridge Route interchange, ramps exist for movement to and from the south only.

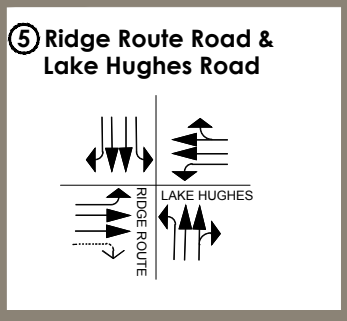


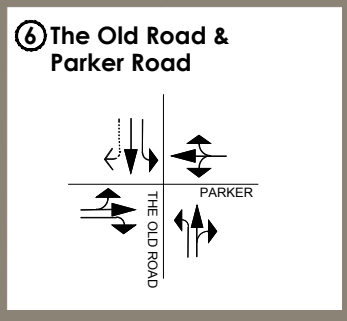


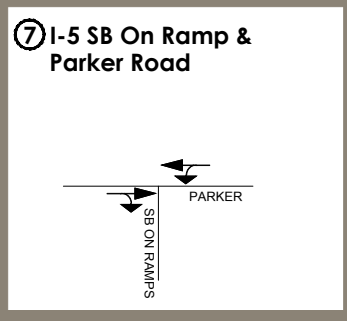


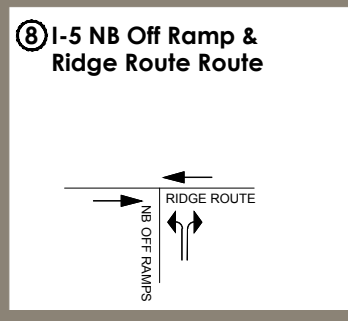












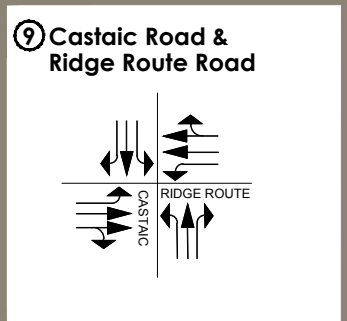


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Figure 2-1

Existing Intersection Lane Configuration, Stop Control and Midblock Lanes

2.2

2.1.2 Existing Traffic Volumes and Levels of Service

An illustration of existing average daily traffic (ADT) volumes is provided in Figure 2-2. Peak hour turning movement volumes for each intersection can be found in Figure 2-3 and Figure 2-4 for the AM peak hour and PM peak hour, respectively. The traffic counts were collected in January of 2015 (count data is provided in Appendix C).

As discussed in the section on performance criteria in Section 1.4, LOS is a concept developed to quantify the degree of comfort afforded to drivers as they travel on a given roadway. The degree of comfort includes such elements as travel time, number of stops, total amount of stopped delay, etc. As defined in the HCM 2010, six grades are used to denote the various LOS. The six are denoted "A" through "F" and a discussion on these was given in Section 1.4.

The results of the ICU and LOS analysis for the intersections near the project site are shown in Table 2-1 (detailed LOS calculation worksheets are provided in Appendix A). As noted in Figure 2-1, most intersections in the study area are not currently controlled by a traffic signal. For those locations, the ICU provides an indication of the level of service based on traffic signal control and provides a benchmark for comparison of future condition with the project.

Table 2-1 ICU and LOS Summary – Existing Conditions

Intersection	Jurisdiction	Signal Control	AM Peak Hour		PM Peak Hour		Count Date
			ICU	LOS	ICU	LOS	
1. The Old Road & I-5 SB Ramps	County/ Caltrans	Stop	0.41	A	0.39	A	1/27/2015
2. The Old Road & Sloan/Lake Hughes	County	Signal	0.34	A	0.36	A	1/22/2015
3. 1-5 NB Ramps & Lake Hughes	County/ Caltrans	Stop (South Leg)	0.31	A	0.41	A	1/27/2015
4. Castaic & Lake Hughes	County	Signal	0.31	A	0.37	A	1/27/2015
5. Ridge Route and Lake Hughes	County	Stop	0.31	A	0.19	A	1/27/2015
6. The Old Road & Parker	County	Stop	0.45	A	0.42	A	1/28/2015
7. I-5 SB On Ramp & Parker	County/ Caltrans	None	0.60	A	0.52	A	1/22/2015
8. I-5 NB Off Ramp & Ridge Route	County/ Caltrans	Stop (South Leg)	0.46	A	0.55	A	1/22/2015
9. Castaic & Ridge Route	County	Stop	0.33	A	0.41	A	1/22/2015
See Table 1-1 for level of service descriptions.							

As can be seen in Table 2-1, all intersections currently operate better than LOS D.

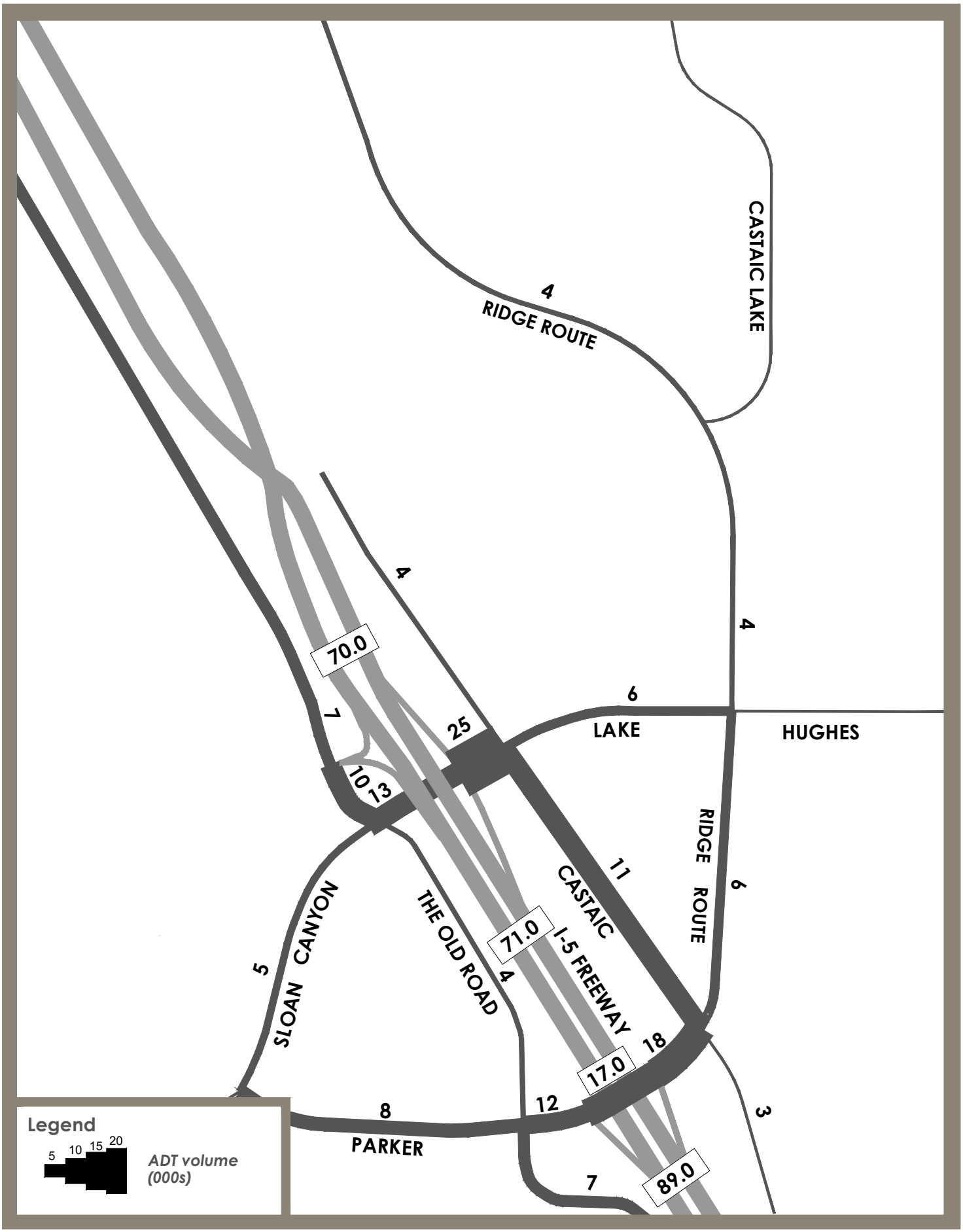

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Figure 2-2

Existing Average Daily Traffic

2.4

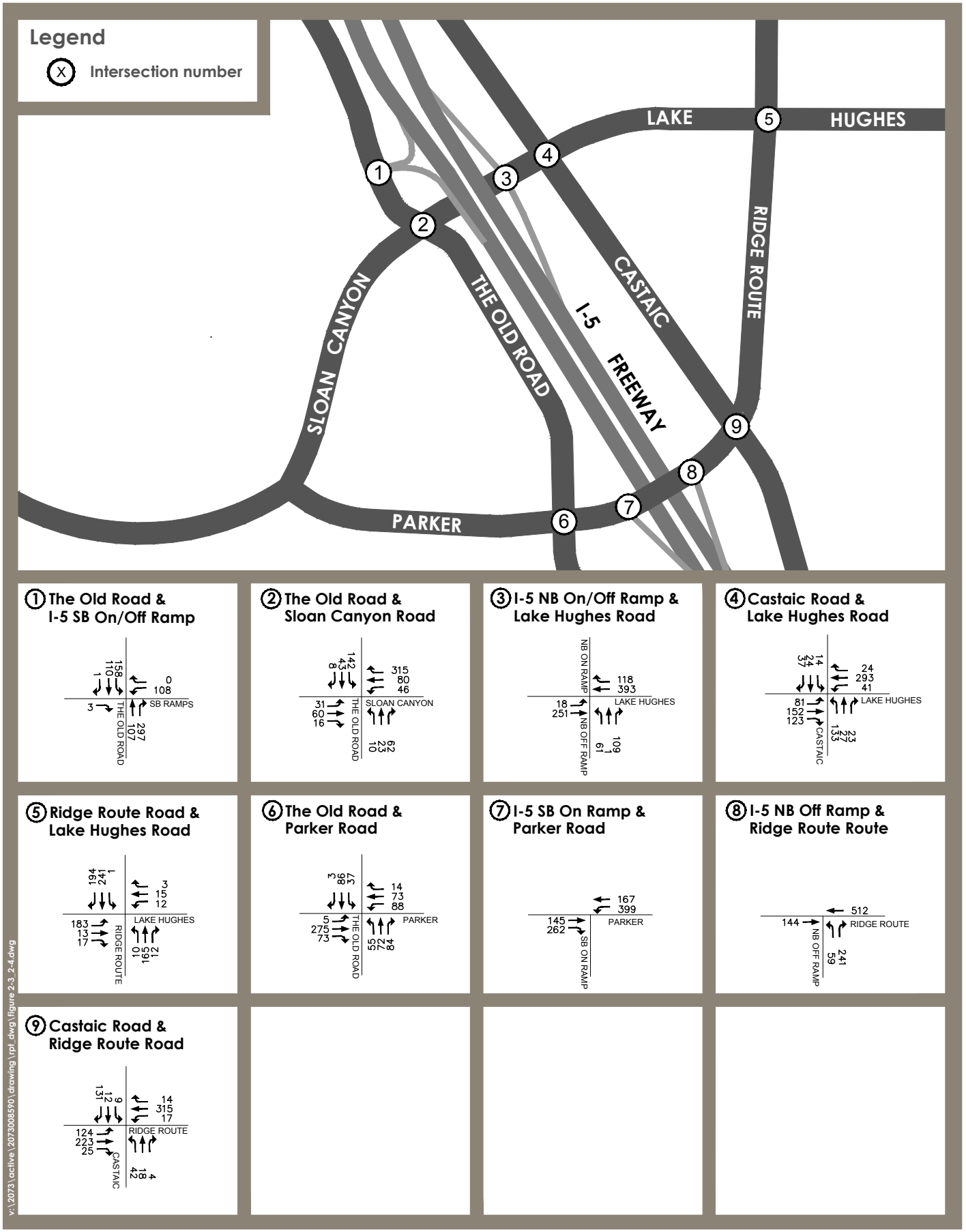

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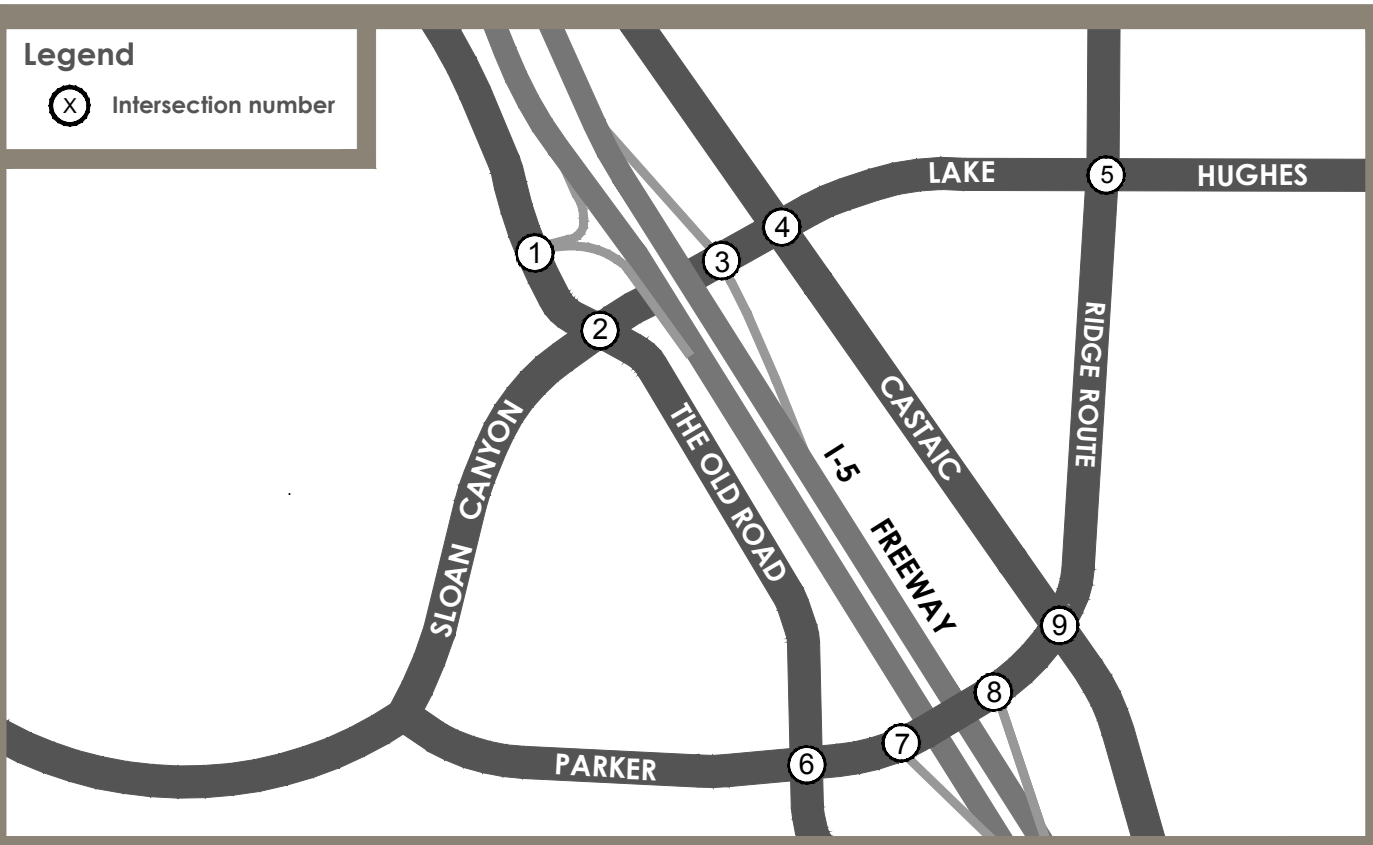
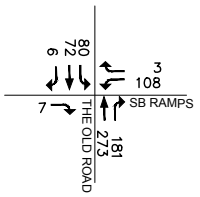
Figure 2-3

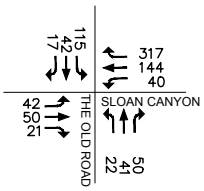
Existing Intersection Turning Lane Movement Volumes
AM Peak Hour
2.5



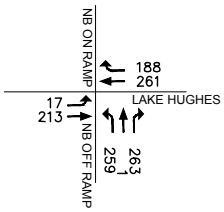
1 The Old Road & I-5 SB On/Off Ramp



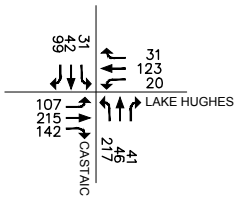
2 The Old Road & Sloan Canyon Road



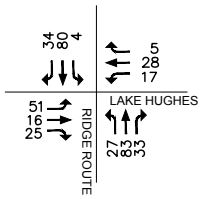
3 I-5 NB On/Off Ramp & Lake Hughes Road



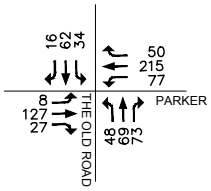
4 Castaic Road & Lake Hughes Road



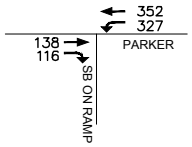
5 Ridge Route Road & Lake Hughes Road



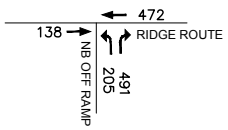
6 The Old Road & Parker Road



7 I-5 SB On Ramp & Parker Road



8 I-5 NB Off Ramp & Ridge Route Route



9 Castaic Road & Ridge Route Road

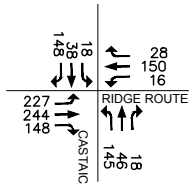


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Figure 2-4

Existing Intersection Turning Lane Movement Volumes
PM Peak Hour

2.6

2.1.3 Existing Freeway Traffic Volumes and Levels of Service

The I-5 freeway provides the regional travel in the project area. Freeway traffic volumes for existing (2013) conditions as reported by Caltrans are provided in Table 2-2 for average annual daily traffic (AADT).

Table 2-2 Freeway AADT Volumes – Existing Conditions

No.	Segment	2013 AADT
1	I-5 Between Templin Hwy & Lake Hughes	70,000
2	I-5 Between Lake Hughes & Parker	71,000
3	I-5 Between Parker & Hasley Canyon	89,000
4	I-5 Between Hasley Canyon & SR-126	109,000
5	I-5 Between Calgrove & SR-14	193,000
AADT – Annual Average Daily Traffic		

Peak hour volumes were obtained from the Caltrans Performance Measurement System (PeMS) at select representative locations over the period of one month for 2013 weekday conditions. These peak hour volumes represent the mean (average) weekday volume plus one standard deviation for the weekdays for the month of October, 2013. Peak hour data for several key segments on the I-5 was used to calculative representation K (peak hour volume factor) and D (directional factor) values in the AM and PM peak periods for each segment in order to calculate peak hour volumes by direction. The calculated K and D factors were then applied to 2013 AADT volumes to determine the peak hour volumes.

Table 2-3 Freeway Peak Hour K & D Factors (Sample Locations)

	AM Period			PM Period		
Location	**K**	**D**	**KD**	**K**	**D**	**KD**
I-5 at Templin Highway	3.80%	50.87% (NB)	1.93%	6.57%	51.34% (NB)	3.37%
I-5 at Magic Mountain Parkway	4.61%	55.25% (SB)	2.54%	6.12%	56.34% (SB)	3.45%
Source: PeMS – October 2013 weekday volumes (mean plus one standard deviation)						

Table 2-4 presents the freeway peak hour volumes and corresponding V/C ratios for the study area. As can be seen, no freeway segments are operating over capacity under existing conditions.

Table 2-4 Freeway Peak Hour Volumes and V/C Summary – Existing Conditions

No.	Segment	Lanes	Cap	2013 AM Peak Hour		2013 PM Peak Hour	
				Vol	V/C	Vol	V/C
Northbound							
1	I-5 Between Templin Hwy & Lake Hughes	4M	8,000	1,351	0.169	2,359	0.295
2	I-5 Between Lake Hughes & Parker	4M	8,000	1,463	0.183	1,896	0.237
3	I-5 Between Parker & Hasley Canyon	4M	8,000	1,833	0.229	2,376	0.297
4	I-5 Between Hasley Canyon & SR-126	4M +1A	9,000	2,245	0.249	2,910	0.323
5	I-5 Between Calgrove & SR-14	4M + 1T[C]	9,200	3,976	0.432	5,153	0.560
Southbound							
1	I-5 Between Templin Hwy and Lake Hughes	4M	8,000	1,309	0.164	2,240	0.280
2	I-5 Between Lake Hughes & Parker	4M	8,000	1,803	0.225	2,450	0.306
3	I-5 Between Parker & Hasley Canyon	4M	8,000	2,261	0.283	3,071	0.384
4	I-5 Between Hasley Canyon & SR-126	4M	8,000	2,769	0.346	3,761	0.470
5	I-5 Between Calgrove & SR-14	4M + 2T[C]	10,400	4,902	0.471	6,659	0.640

M = Mixed Flow Lane
Cap = Capacity
Vol = Volumes
See Table 1-6 for lane capacities.

2.1.4 Public Transportation

City of Santa Clarita Transit (SCT) is the primary bus service operator in the Castaic community. SCT provides two fixed route transit lines within close proximity to the project site; Routes 1 and 636.

SCT Route 1 provides service between Castaic and Val Verde to the McBean Regional Transit Center with 11 stops near the project site. Route 1 also stops through the Valencia Commerce Center and Valencia Industrial Center. Route 636 is a supplemental school day service route between West Ranch High School and the Castaic area with 13 stops within the project site.

Future bus transit routes are anticipated to be introduced in the project area in order to provide services for the new Castaic Middle School.

2.1.5 Active Transportation

The County of Los Angeles has a Bicycle Master Plan (BMP). At this time, the BMP does not address facilities in the Castaic community. Consultations with County have indicated that the

existing portion of Ridge Route Road south of Lake Hughes Road has been designated as a proposed Class II facility.

2.2 FUTURE CONDITIONS

The following section describes the long-range buildout conditions. It includes a description of the planned roadway system in the vicinity of the project site and a summary of the anticipated increases in land use.

2.2.1 Future Local Roadway System

Figure 2-5 illustrates the Los Angeles County Highway Master Plan for the Castaic community. On the Highway Master Plan, Ridge Route Road is classified as a secondary highway from Castaic Road to approximately 1.40 miles north of the Lake Hughes Road intersection where Ridge Route Road transitions to a limited secondary highway. Development of the project includes reconstruction of Ridge Route Road from north of Pine Crest Place to Northlake Boulevard to current standards and to the established IEC alignment within the project site. Ridge Route Road north of Northlake Boulevard would remain as a two-lane roadway. Ridge Route Road is classified as a major highway from Castaic Road to The Old Road where it becomes Parker Road, which is classified as a limited secondary highway.

Lake Hughes Road is classified as a major highway from The Old Road to east of Ridge Route Road. Castaic Road from Lake Hughes Road to Ridge Route Road is classified as a major highway. The Old Road is classified as a secondary highway. Most of the roadways are built out.

Also, a complete network of roadways will be constructed within the project site to serve the needs of the project generated traffic.

As part of the project, the extension of Ridge Route Road to Northlake Boulevard would be built to full County standards, which would include the construction of sidewalks on both sides of the roadway, as well as a Class I bike lane/multi-use trail along Ridge Route Road that would continue onto Northlake Boulevard and terminate at E Street. Within the project site, a complete network of streets with sidewalks, multi-use (10 feet) trails and neighborhood pedestrian (6 feet) trails would be constructed and would facilitate movement between the various areas of the site.

2.2.2 Future Land Use

Future forecasts were derived using three primary sources. The first is the Santa Clarita Valley Consolidated Traffic Model (SCVCTM), a model has the capability of forecasting the complex interaction of vehicle trips between existing and future land uses. The SCVCTM has the ability to provide traffic volume forecasts for a long-range setting, which represents buildout conditions, as well as Interim Year forecasts that are based on a defined list of planned, approved, and pending projects (i.e., "related projects"). An Interim Year version of SCVCTM was used to derive

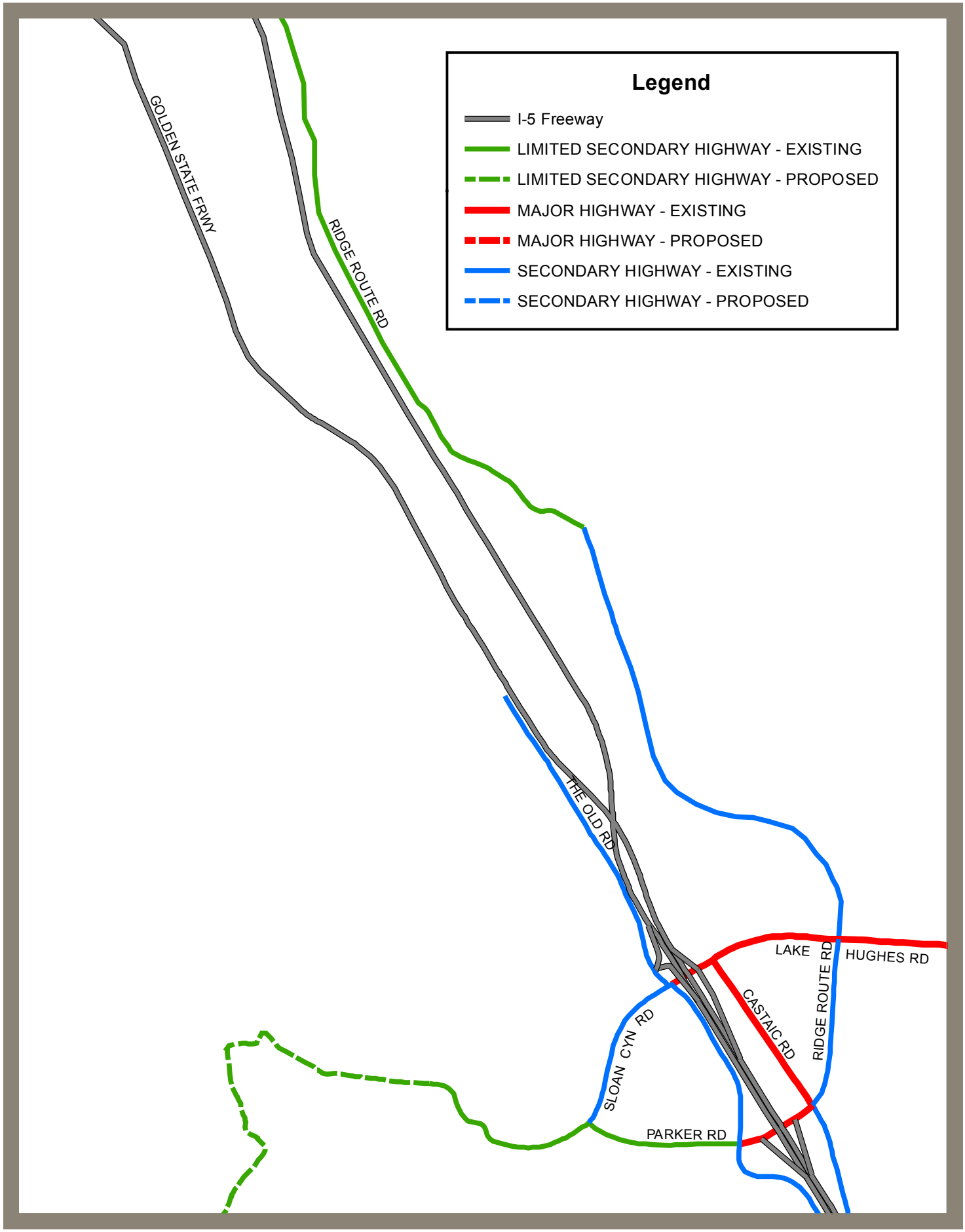

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Figure 2-5

Master Plan of Arterial Highways

2.10

2028 cumulative conditions forecasts. The SCVCTM was developed jointly by the County of Los Angeles Department of Public Works and the City of Santa Clarita

The second source of forecast data is the Northlake Traffic Model (NTM) prepared as part of this traffic study. The NTM is based on traffic modeling techniques used for fine-grained site-specific traffic forecasting. The arterial and freeway access network in the NTM defines the on-site circulation system used in the on-site impact analysis. The traffic forecasts results give traffic volumes on individual links and intersections.

The third set of data used in this report is from the Los Angeles County Department of Regional Planning GIS-NET3 database. The online database tool was used to access information regarding subdivision activity around the project site. A list was compiled, referred to in this report as the "related project" list. Table 2-5 defines a list of planned, approved, pending and inactive projects in and around the Castaic community (Figure 2-6 shows the general location of the projects). The list was incorporated into the interim year of the SCVCTM discussed above.

2.2.3 Future Traffic Volumes

As part of this study effort, the SCVCTM was updated to reflect the specific characteristics of the proposed project. An interim year version of the SCVCTM was used to derive 2028 cumulative conditions. Related projects discussed in the previous section were included in the model's land use database, along with additional growth derived by interpolating between existing and General Plan buildout conditions. 2028 model runs were prepared for conditions with and without the project. These traffic forecasts are presented in the subsequent chapters.

The SCVCTM forecasts the complex interaction of vehicle trips between existing and future land uses. As such, the future condition forecasts reflect the changes in existing travel patterns that occur due to changes in land use (e.g., the introduction of new development). The SCVCTM employs a process in which modeled future volumes are compared to modeled existing condition volumes, and the net change from existing to future is then applied to the actual observed traffic count in a post-processing procedure. Post-processing is applied to each of the intersection's 12 possible turning movements while controlling to the net change at each of the intersection's four legs (both entering and departure volumes). In that regard, the traffic forecasts presented here utilize existing traffic conditions as the foundation and build upon that foundation with the forecast change in volume (both increases and decreases) as derived by the model. As a result of changing traffic patterns, there are instances where specific turning movement volumes may decrease in the future relative to existing volumes.

Similar to the modeled changes between existing and future conditions, the SCVCTM is also used to derive the traffic volume differences between no project and with project conditions. A change in traffic patterns occurs with the introduction of the project's land uses; and the larger the project the more pronounced the changes will be. The effect of new land uses results in modified travel patterns that, in some instances, cause a reduction to specific turning movement volumes under conditions with the project.

Table 2-5 Defined Related Projects Included in the Cumulative Database

No.	Name	Description	Units	Commercial/ Industrial (sf)	Acres	Status
2	TR 42537	West of I-5 in Castaic. Site access via Romero Canyon Road.	95	0	553	Approved
3	Tract 46443	West of the I-5 in Castaic. Site access via Mandolin Canyon Road and Romero Canyon Road.	95	0	160	Recorded
4	TR 47807	West of I-5 in Castaic. Site is located west of Sloan Canyon Road	77	0	197	Approved
5	PM069961	West of I-5 in Castaic. Site access via Gilmour Street.	4	0	81	Pending
6	PM067785	West of I-5 in Castaic. No residences proposed – land division only.	0	0	80	Pending
7	Laro Properties L.P. (TR 52729)	West of I-5 in Castaic. Sloan Canyon Road, north of Hillcrest Parkway, west of Meadowgrass Drive.	33	0	80	Pending
8	TR067278	West of I-5 in Castaic. Site access via Sloan Canyon Road.	23	0	90	Pending
9	PM071059	West of I-5 in Castaic. Site access via Sloan Canyon Road.	3	0	8	Pending
10	PM25852	West of I-5 in Castaic. Site located at Cherry Drive and Church St north of Park Road. Access via Park Road and Cherry Drive.	4	0	1	Approved
11	Mobe Development Corp. TR060611	West of I-5 in Castaic. Site located west of The Old Road near the intersection of The Old Road and Ferguson Drive. Multi-family residences.	18	0	2	Recorded
12	TR060674	West of I-5 in Castaic. Site located west of The Old Drive at the intersection of Church Street and The Old Road.	21	0	2	Recorded
13	Lake View Estates TR53933	West of I-5 in Castaic, approx.. 1/5- mile south of Parker Road. Access to the site via The Old Road. Includes residential lots (10.62 acres), 3 commercial industrial lots (8.16 acres), and 4 open space lots (28.47 acres) and park (0.54 acre).	70	90TSF	47	Pending

(Continued)

Table 2-5 Defined Related Projects Included in the Cumulative Database (Continued)

No.	Name	Description	Units	Commercial/ Industrial (sf)	Acres	Status
14	TR46798	West of I-5 in Castaic, south of Parker Road with access via The Old Road.	55	0	22	Approved
15	TR46798	West of I-5 in Castaic, south of Parker Road with access via The Old Road.	0	0	16	Recorded
16	PM191949-2	West of I-5 in Castaic, access to the site via Hillcrest and Sloan Canyon.	4	0	20	Approved
17	PM062852	West of I-5 in Castaic, access to the site via Hillcrest and Romero Canyon Rd.	2	0	10	Pending
18	PM060646	West of I-5 in Castaic, access to the site via Hasley Canyon Road.	4	0	13	Approved
19	PM069664	West of I-5 in Castaic, access to the site via Hasley Canyon Road.	2	0	10	Pending
20	PM070839	West of I-5 in Castaic, located at the westerly terminus of Hillcrest at Sloan Canyon Rd.	4	0	12	Pending
21	PM064825	East of the I-5 in Castaic, north of Lake Hughes Road and east of Castaic Road. Site access via Castaic Road.	0	95.6TSF	9	Recorded
22	TR060024	East of the I-5 in Castaic, just south of Lake Hughes Road. Site access via Lake Hughes Road.	84	0	8	Recorded
23	Tapia Canyon (TR 53822)	East of the I-5 in Castaic, Tapia Canyon Road, west of Tesoro Residential Development. Access to the site currently via Parker Road exit from I-5.	405	0	1430	Pending
24	Tesoro del Valle (TR 51644)	West side of San Francisquito Creek, north of Copperhill Drive. Project includes residential, commercial (6.2-acres), Parks (61.8-acres), an elementary school, recreation center (13.96-acres) and open space. Designed to be built in 4 phases. Phase A is currently built-out. Areas B & C to be built, north of Avenida Rancho Tesoro.	714	40TSF	1262	Recorded
26	Golden Valley Ranch (TR 52535)	West of the I-5 in Castaic at the intersection of Royal Road and Green Hill Drive.	199	0	260	Inactive

(Continued)

Table 2-5 Defined Related Projects Included in the Cumulative Database (Continued)

No.	Name	Description	Units	Commercial/ Industrial (sf)	Acres	Status
27	TR48637	West of I-5 in Castaic. Site access via Sloan Canyon Road.	18	0	30	Inactive
28	TR50070	West of I-5 in Castaic. Site access via Sloan Canyon Road and Vaca Street.	18	0	5	Inactive
29	TR50220	West of I-5 in Castaic. Site access via Hasley Canyon Road and Gilmour Street.	21	0	120	Inactive
30	PM24179	West of I-5 in Castaic. Site access via Hasley Canyon Road and Gilmour Street.	2	0	5	Inactive
31	PM26549	West of I-5 in Castaic. Site is located at 30711 Romero Canyon Road.	3	0	18	Inactive
32	TR067617	West of I-5 in Castaic. Site is located at the northerly terminus of Park Vista Drive 200 feet north of the intersection with Hillcrest Parkway. Detached condominiums with two public facilities on 38-acres.	13	0	0	Inactive
33	TR48465	West of I-5 in Castaic. Site located at the intersection Hasley Canyon Road and Burlwood Drive.	5	0	10	Inactive
34	PM19776	West of the I-5 in Castaic. Site access via Romero Canyon Road.	15	0	22	Inactive
36	TR072680	West of I-5 in Castaic. Site location at Sloan Canyon Road at Canyon Hill Road. Site access via Sloan Canyon Road. Residential units and one public facility lot (	40	0	90	Pending
37	PM20202 (not shown on map)	East of I-5 in Castaic. North of Northlake project site.	3	0	28	Inactive
38	Auto Impound Yard	32170 N. Castaic Road.	0	28.2 GSF	NA	Proposed
39	Castaic High School (currently under construction)	West of I-5 in Castaic. Site located north of Romero Canyon Road/Hasley Canyon Road. Approximately 2,600 students.	0	0	198	Approved
40	Elementary School	West of I-5 in Castaic near Sloan Canyon Road. Approximately 900 students.	0	0	NA	Pending

See Figure 2-6 for location map.
Sources: Los Angeles County GIS Data Portal – Subdivision Activity
Los Angeles County Department of Regional Planning GIS-NET3 Public Subdivision Activity

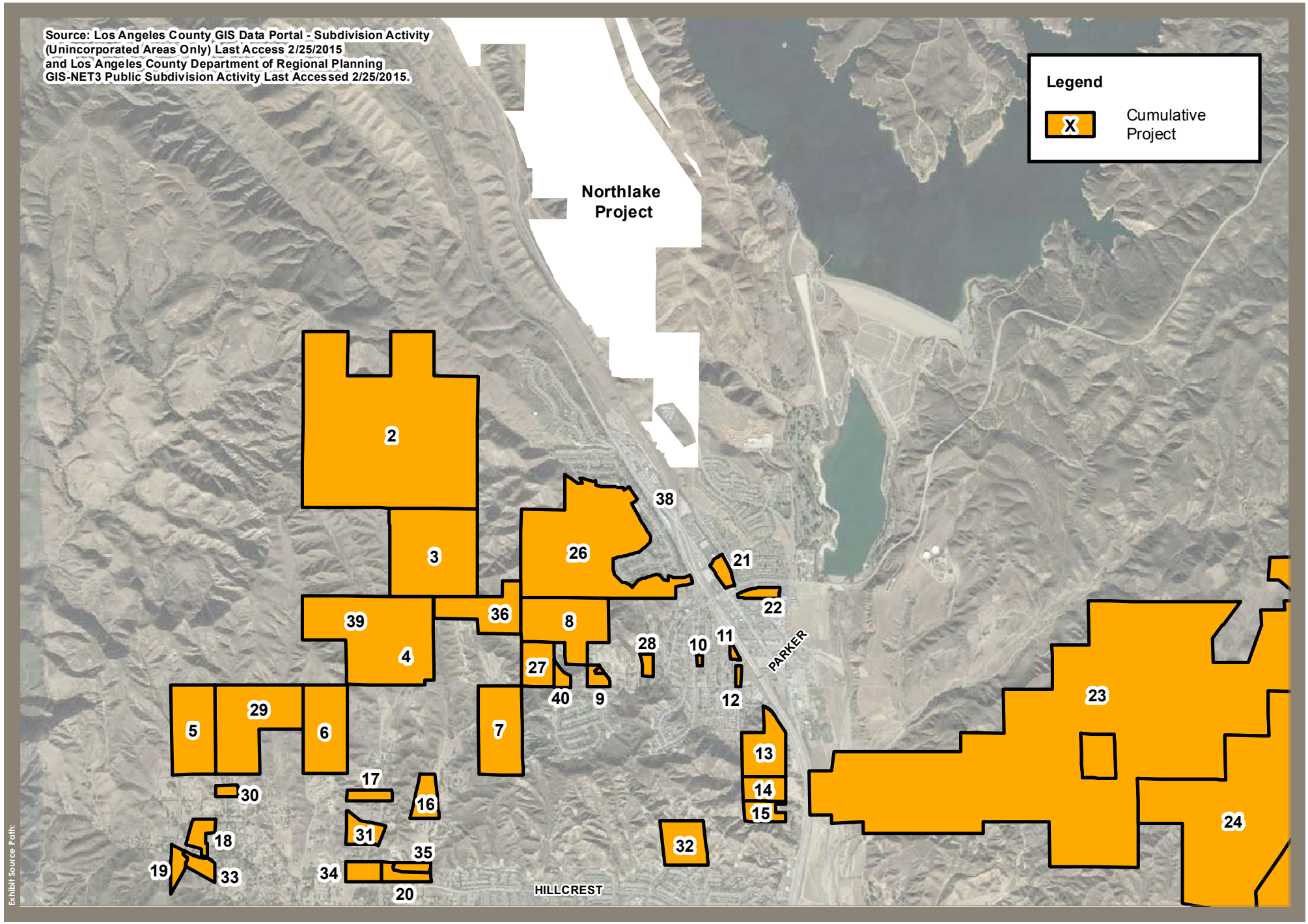

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Figure 2-6

Related Projects Location Map

2.15

2.2.4 Future Freeway Volumes

Freeway volumes for future year cumulative conditions were derived from two sources; the Supplemental EIR/ER for the HOT lanes prepared by Caltrans (See Reference 6 in Section 1.6) and the Southern California Association of Government's (SCAG) Regional Transportation Model (RTM).

The Supplemental EIR/ER for the HOT lanes study is for an improvement project that replaces the planned HOV lanes with HOT lanes. I-5 traffic volumes from this study were considered and average annual growth rates were derived from those volumes. The Supplemental EIR/ER addressed segments on the I-5 within the Santa Clarita Valley and it presents traffic forecasts for the year 2035.

The second source for deriving future freeway volumes is the SCAG RTM (See Reference 8 in Section 1.6). SCAG is the primary agency responsible for the development and maintenance of the regional travel demand forecasting models for the SCAG region that includes six counties – Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial. Traffic model data, such as an average annual growth rate for the freeway section on the I-5 north of Lake Hughes Road (this segment was not addressed in the Caltrans HOT lanes study) was as obtained from SCAG. The growth rate was then applied to 2013 existing conditions traffic volumes previously discussed in Section 2.1.3.

Table 2-6 summarizes the average annual growth rates assumed in this analysis for 2028 Cumulative Conditions.

Table 2-6 Average Annual Growth Rates for the I-5

Segment	Description	Average Annual Growth Rate 2028	Source:
I-5			
1	Between Templin Hwy & Lake Hughes	3.06%	SCAG
2	Between Lake Hughes & Parker	4.44%	HOT Lane SEIR
3	Between Parker & Hasley Canyon	3.54%	HOT Lane SEIR
4	I-5 Between Hasley Canyon & SR-126	2.45%	HOT Lane SEIR
5	I-5 Between Calgrove & SR-14	1.22%	HOT Lane SEIR

3.0 PROJECT DESCRIPTION

This section describes the project in terms of its transportation characteristics. Trip generation is summarized and the distribution of project trips on the adjoining roadway network is presented.

3.1 PROJECT OVERVIEW

The Northlake Specific Plan was approved in 1992 for a development consisting of approximately 4,000 residential dwelling units. The project as currently proposed consists of approximately 1,414 single family detached dwelling units, 1,341 condominium dwelling units and 345 senior adult attached housing (total of 3,100 dwelling units). In addition to residential dwelling units, the project also includes non-residential uses estimated to consist of approximately 67,100 square feet of neighborhood commercial, approximately 304,900 square feet industrial park, a middle school (approximately 1,200 students), a 15-acre sports park, a 10-acre developed park and a fire station. VTTM 73336 represents a portion of the Northlake Project. The project site plan was presented in Section 1.1 (see Figure 1-2).

The project site would be accessed via an extension of the existing Ridge Route Road. Since the project area is currently vacant, a complete network of roadways will be constructed within the site to serve the needs of the project generated traffic.

Intersection lane geometry for the project site has been developed based on peak hour turning movement forecasts presented in the subsequent sections, and is illustrated in Figure 3-1.

3.2 PROJECT TRIP GENERATION

The project consists of a variety of land uses as described in the preceding section. For the purpose of the traffic study, these land uses have been categorized based on the land use categories used by the Santa Clarita Valley Consolidated Traffic Model (SCVCTM), the County of Los Angeles Department of Public Works Traffic Impact Analysis Guidelines (see Reference 3 in Section 1.6), and industry standards such as the Institute of Transportation Engineers (ITE) Trip Generation Manual (see Reference 1 in Section 1.6). The specific trip rates used for this analysis are listed in Table 3-1. Note that for the Sports Park land use category, a comparison was made between the Brea Sports Park Traffic Study (see Reference 12 in Section 1.6) and the City of San Diego Trip Generation Manual (see Reference 14 in Section 1.6), Developed Park land use category. It was determined that using the trip rate from the Brea Sports Park Traffic Study would be more conservative than using the trip rate from City of San Diego Trip Generation Manual.

Detailed trip generation estimates based on the trip generation rates referenced above are provided in Table 3-2. As shown, the project is estimated to generate approximately 35,500 average daily tripends, with approximately 2,900 tripends during the AM peak hour, and approximately 3,500 tripends during the PM peak hour.

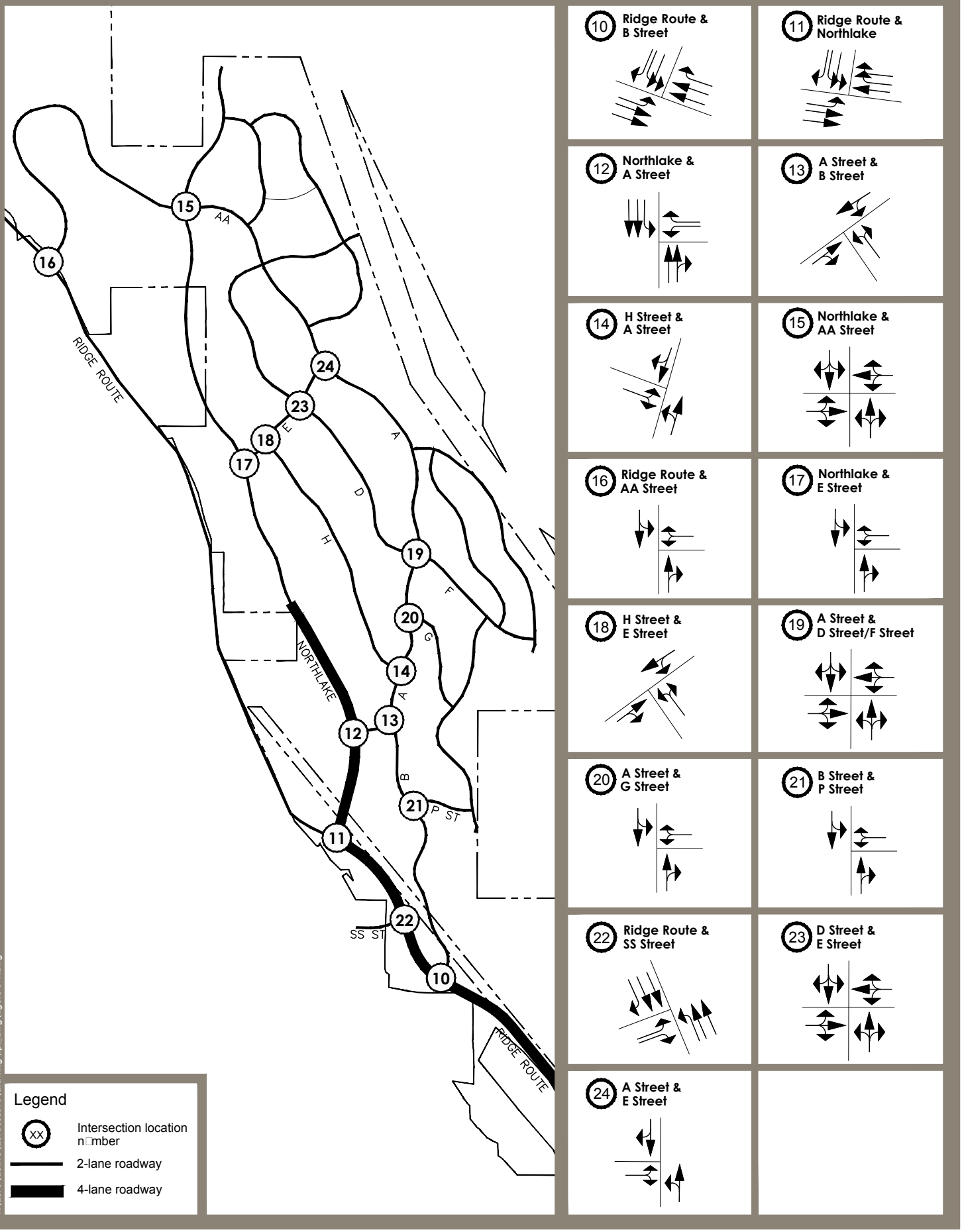

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Figure 3-1

On-Site Circulation System and Intersection Lane Configurations

3.2

The residential units of the project are forecast to generate approximately 25,400 ADT with approximately 1,850 tripends in the AM peak hour (1,480 outbound) and approximately 2,480 tripends in the PM peak hour (1,570 inbound). The non-residential uses (i.e., neighborhood commercial and industrial) are forecast to generate approximately 8,200 ADT with approximately 370 tripends in the AM peak hour (280 inbound) and 830 tripends in the PM peak hour (500 outbound).

The middle school site will serve students from the Northlake development and from outside the Specific Plan area. The middle school (approximately 1,200 students) is projected to generate approximately 1,940 ADT with approximately 650 tripends in the AM peak hour and approximately 190 tripends in the PM peak hour.

The location of the project and the on-site commercial and institutional uses (i.e., retail, existing Northlake Elementary School and proposed middle school) encourages a degree of local trip making. Table 3-3 shows the estimated ADT and peak hour trips separated by land use and both internal and external trip components.

Overall, around 19 percent of the daily trips generated (as measured by tripends) are estimated to be internal and 81 percent are external trips. The net volume of trips generated by the project is derived by combining the amount of internal trips (two on-site project tripends) with the amount of external trips (one on-site project tripend). As shown in Table 3-4, the project generates a net total of 33,241 trips when taking into account the project's 19 percent internal capture rate.

The internal capture rate was derived by first determining the amount of school traffic that would be captured by the residential uses on-site. A nominal amount of internal capture was assumed during the AM peak hour for the commercial and industrial uses. After deducting these on-site trips from residential uses, the remainder represents the net volume of external (off-site) trips. The same was done for the PM peak hour, but with opposite directionality. This approach produced a conservative estimate of external trips for the model to distribute to the off-site study area.

3.3 PROJECT TRIP DISTRIBUTION

The project is anticipated to buildout in over a period of 10 to 15 years. Traffic patterns for the project in relation the surrounding region were estimated for a year 2028 time frame to understand the relationship between the project and the surrounding region in this long-range buildout context. The distribution of project-generated trips was derived by the SCVCTM.

The SCVCTM is a computerized travel demand model that utilizes a sophisticated trip distribution function to derive the distribution of vehicle trips, and which has previously been calibrated to the existing conditions of the Santa Clarita Valley. Production and attraction trip data is generated by the model based on five separate trip purposes, and trip distribution patterns are then derived by the model. As a final step, the model assigns these trips to the roadway network based on the derived distribution patterns.

Table 3-1 Trip Generation Rates

Category	ITE Code	Units	AM Peak Hour			PM Peak Hour			Average Daily Tripends	Source
			In	Out	Total	In	Out	Total		
1. Single-Family Detached Housing	210	DU	0.19	0.56	0.75	0.63	0.37	1.00	9.52	ITE 9th Edition
2. Condominium/Townhouse	NA	DU	0.06	0.48	0.54	0.47	0.26	0.73	8.00	LAC TIA Guidelines 1997
3. Senior Adult Housing – Attached	252	DU	0.07	0.13	0.20	0.14	0.11	0.25	3.44	ITE 9th Edition
4. Jr High School	522	STU	0.30	0.24	0.54	0.08	0.08	0.16	1.62	ITE 9th Edition
5. Industrial Park	130	TSF	0.67	0.15	0.82	0.18	0.67	0.85	6.83	ITE 9th Edition
6. Shopping Center	820	TSF	1.11	0.72	1.83	3.27	3.53	6.80	78.09	ITE 9th Edition Shopping Center Fitted Curve Equation for 67 TSF.
7. Sports Park	NA	Acre	0.01	0.00	0.01	3.40	4.10	7.50	53.80	Sports Park Case Study[1]
8. Developed Park	NA	Acre	0.00	0.00	0.00	0.03	0.04	0.07	2.60	SCVCTM

DU = Dwelling Unit
TSF = Thousand Square Feet
STU = Student
LAC = Los Angeles County
SCVCTM = Santa Clarita Valley Consolidated Traffic Model
ITE = Institute of Transportation Engineers
[1] – Brea Sports Park Traffic Study, Austin-Foust Associates, Inc. August 29, 2002.

Table 3-2 Land Use and Trip Generation Summary – Northlake

Category	Amount	Units	AM Peak Hour			PM Peak Hour			Average Daily Tripends
			In	Out	Total	In	Out	Total	
1. Single-Family Detached Housing	1,414	DU	269	791	1,060	890	524	1,414	13,462
2. Condominium/Townhouse	1,341	DU	81	643	724	631	348	979	10,728
3. Senior Adult Housing – Attached	345	DU	24	45	69	45	42	87	1,187
4. Jr High School	1,200	STU	360	288	648	96	96	192	1,944
5. Industrial Park	304.9	TSF	204	46	250	55	204	259	2,083
6. Shopping Center	67.1	TSF	75	46	121	219	237	456	5,240
7. Sports Park	15	Acre	0	0	0	51	62	113	807
8. Developed Park	10	Acre	0	0	0	0	0	0	26
Total	-	-	**1,013**	**1,859**	**2,872**	**1,987**	**1,513**	**3,500**	**35,477**

Note: See Table 3-3 for net volume of external trips.

Table 3-3 Internal and External Trip Volumes and Percentages

Description		AM Peak Hour IB	AM Peak Hour OB	PM Peak Hour IB	PM Peak Hour OB	ADT
1. Project Residential		374	1,479	1,566	914	25,403
	ext.%	86%	79%	82%	79%	80%
	int. %	14%	21%	18%	21%	20%
	ext. vol	322	1,168	1,284	722	20,322
	int. vol	52	311	282	192	5,081
2. Project Non-Residential		279	92	325	503	8,130
	ext.%	90%	98%	66%	75%	80%
	int. %	10%	2%	34%	25%	20%
	ext. vol	251	90	214	377	6,504
	int. vol	28	2	111	126	1,626
3. Project Jr High School		360	288	96	96	1,944
	ext.%	70%	95%	95%	70%	80%
	int. %	30%	5%	5%	30%	20%
	ext. vol	252	274	91	67	1,555
	int. vol	108	14	5	29	389
Project Subtotal		**1,013**	**1,859**	**1,987**	**1,513**	**35,477**
4. Existing Elementary School[1]		188	150	53	60	968
	ext.%	5%	75%	93%	5%	40%
	int. %	95%	25%	7%	95%	60%
	ext. vol	9	112	49	3	387
	int. vol	179	38	4	57	581
External		834	1,644	1,638	1,169	28,768
Internal [2]		367	366	402	404	7,677
External %		82%	88%	82%	77%	81%
Internal %		18%	12%	18%	23%	19%

IB – Inbound
OB – Outbound
ADT – Average Daily Traffic
ext – external
int - internal

[1] - The elementary school peak hour and ADT trips shown in this table are in addition to the trips currently being made by existing residents.
[2] – Includes trips to/from the elementary school.

Table 3-4 Project Trip Summary

Total Tripends	External Trips[1]	Internal Trips[2]	Total Trips
35,477	28,768	3,839	32,607
[1]One tripend on-site [2]Two tripends on-site			

Illustrations of the project's trip distribution patterns are provided in Figure 3-2. 19 percent of the project's trip generation remains internal to the project site and the remaining 81 percent are distributed along Ridge Route Road south of the project site. Of those, 3 percent are generated by the adjacent neighborhood (north of the Lake Hughes Road intersection) and the remaining 78 percent are distributed to the Castaic area roadway system. 47 percent are distributed to Lake Hughes Road west of Ridge Route Road, and 31 percent remain on Ridge Route Road south of Lake Hughes Road.

3.4 PROJECT TRAFFIC FORECASTS

The following section presents project only traffic data, first for the on-site roadway system, followed by the local roadway system and then the freeway system. As noted in the previous section, the SCVCTM was used to calculate the distribution of trips to and from the project site. For on-site intersections, the site-specific Northlake Traffic Model was used to forecast future traffic volumes within the project.

3.4.1 On-Site Roadway System

Forecast ADT volumes based on the project for buildout within the project site are illustrated in Figure 3-3. Forecast peak hour turning movement volumes for buildout conditions are illustrated in Figure 3-4 and Figure 3-5 for the AM peak hour and PM peak hour, respectively.

The peak hour traffic volumes referenced above were utilized to derive the intersection lane configurations for the on-site intersections referenced in Figure 3-1. Intersection capacity analysis based on these lanes and the forecast peak hour volumes is summarized in Table 3-5. As shown, each of the on-site project intersections is anticipated to operate at LOS D or better for buildout conditions, with the majority of intersections operating at no worse than LOS B. Detailed LOS calculation worksheets for each intersection are provided in Appendix B.

The Northlake Specific Plan, approved in 1991, showed a need to either widen Ridge Route Road to a 6-lane Major Arterial, or build a secondary access. Due to the decreased dwelling unit total, in comparison to the Specific Plan, the findings of this analysis show that neither the widening of Ridge Route Road to a 6-lane Major Arterial, or build a secondary access is needed.

A traffic signal warrant analysis for on-site intersections is provided in Section 5.1.

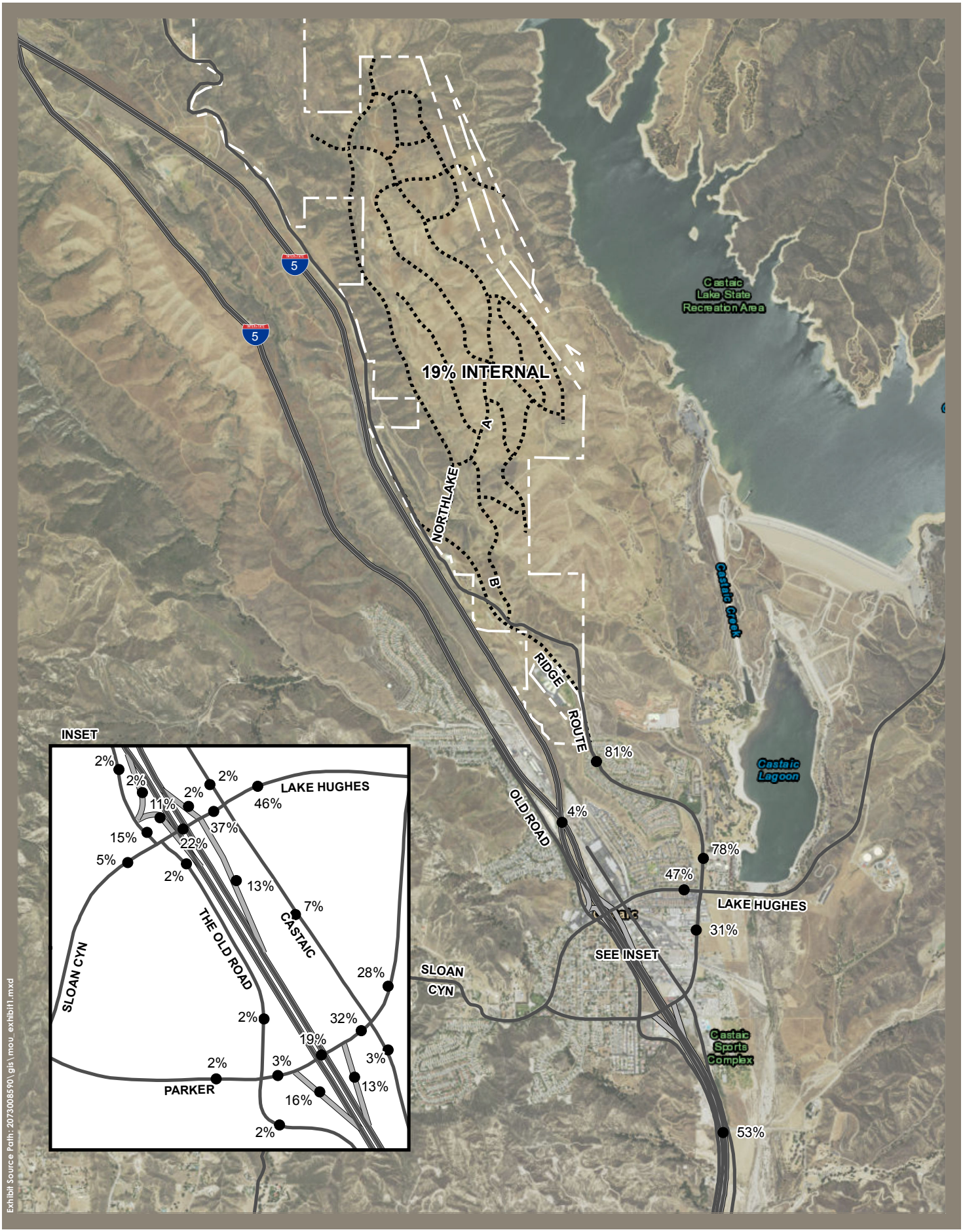

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Figure 3-2

Project Trip Distribution Percentages

3.7

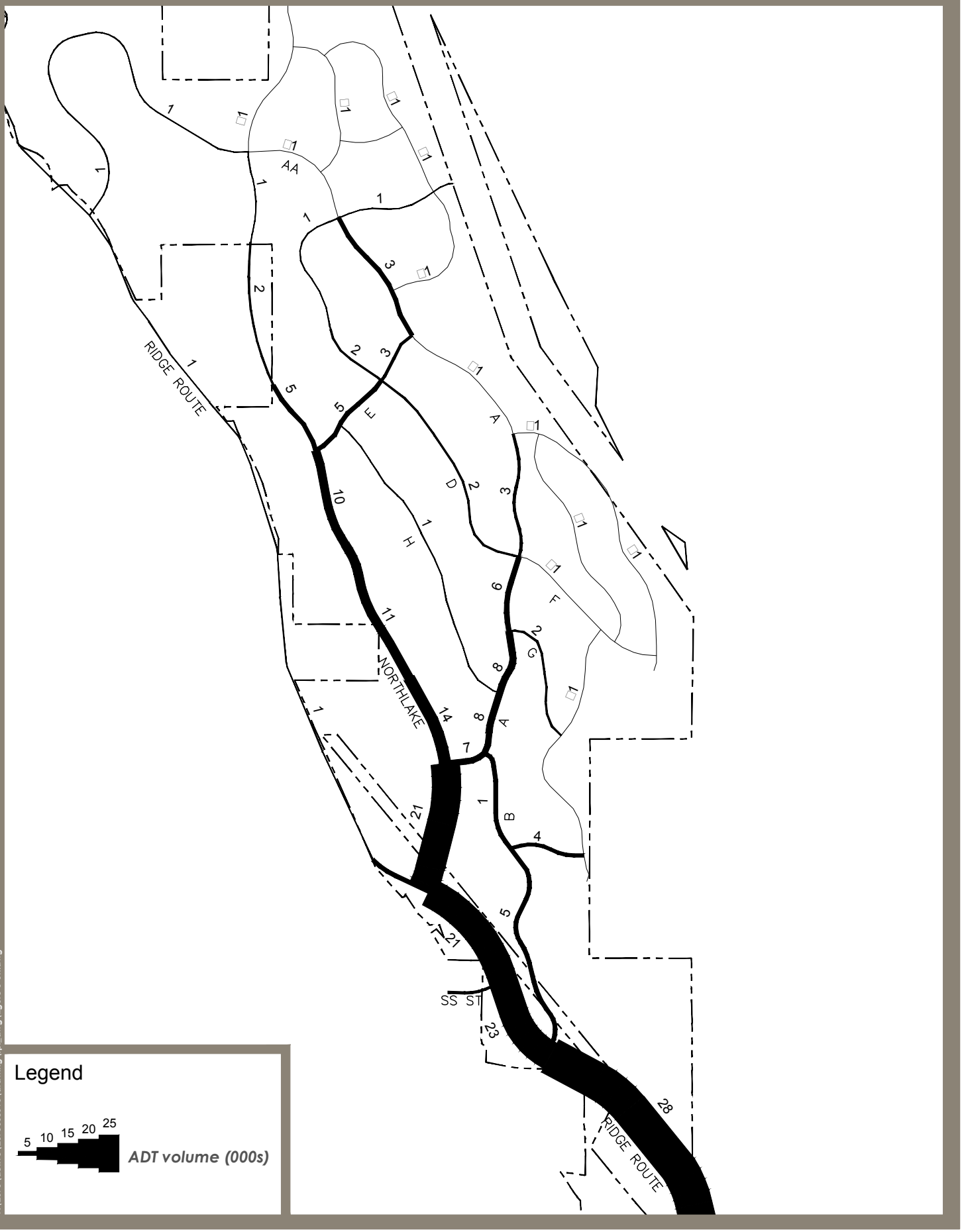

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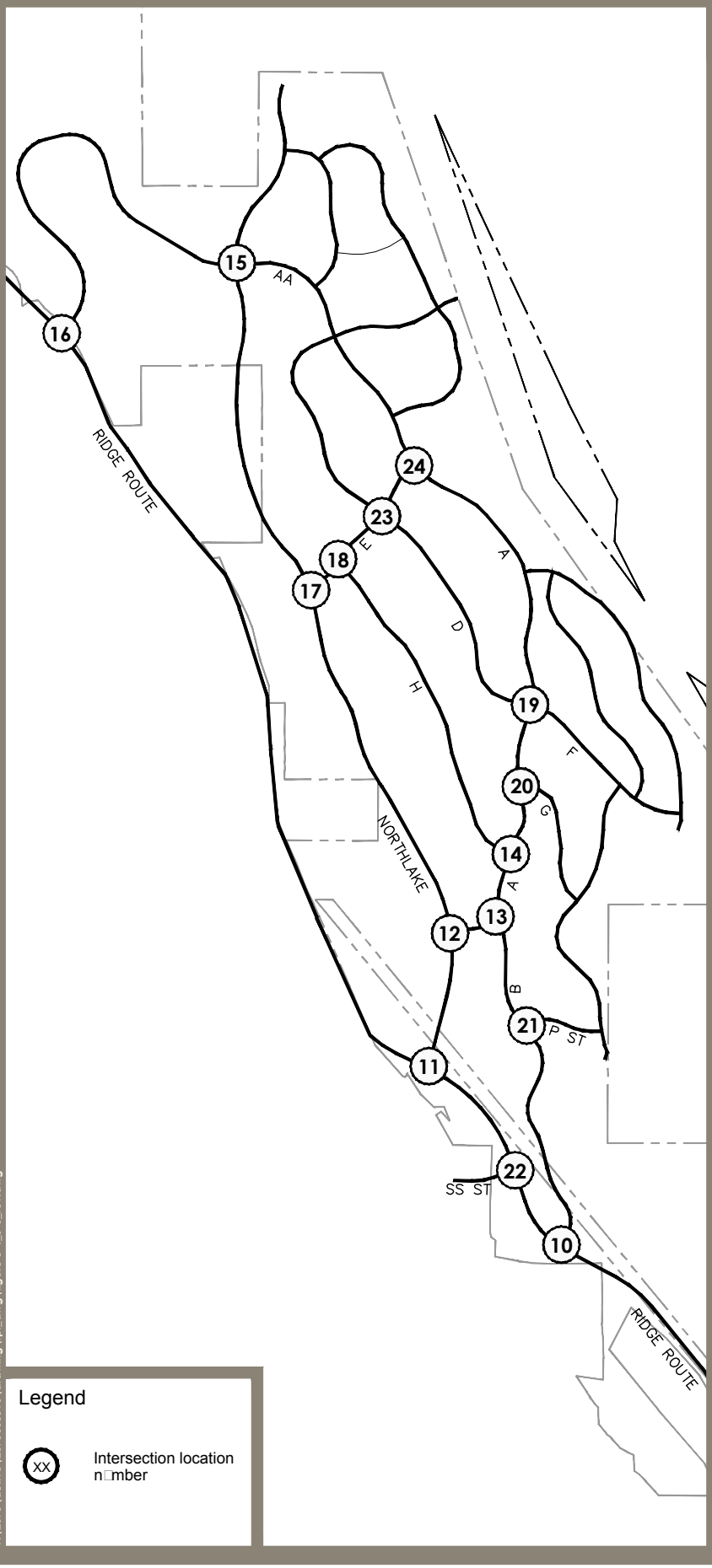
Figure 3-3
On-Site ADT Volumes (000s)
3.8



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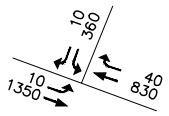

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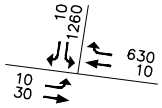

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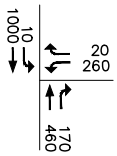

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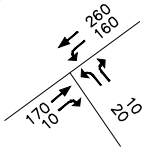

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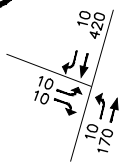

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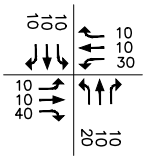

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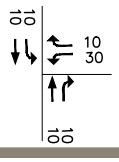

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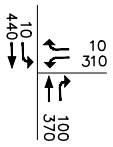

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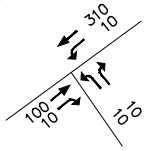

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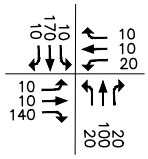

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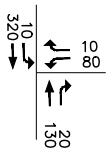

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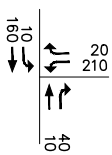

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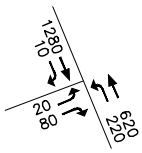

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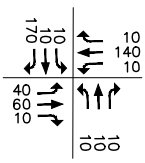

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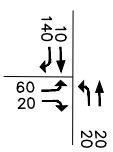

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Figure 3-4

On-Site Intersection Turning Volumes - AM Peak Hour

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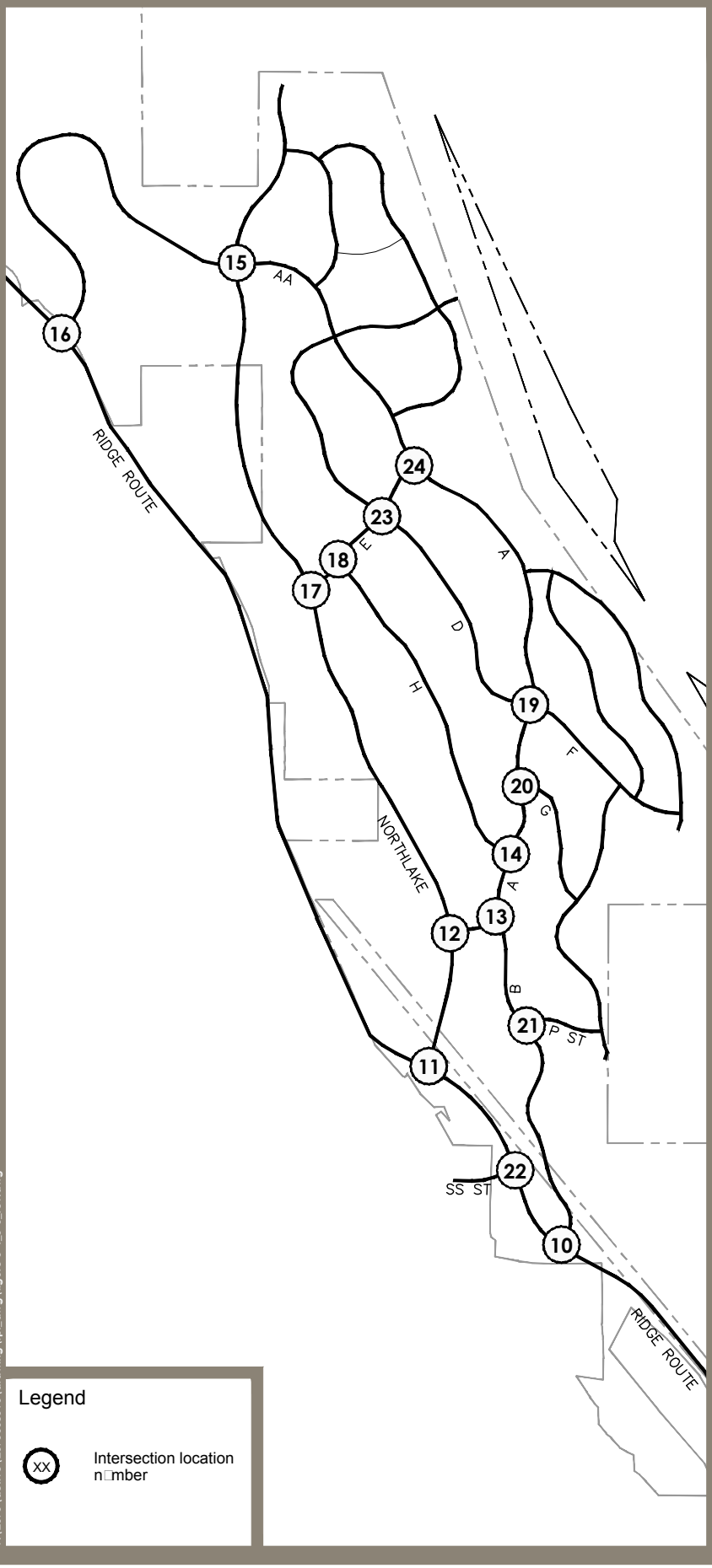

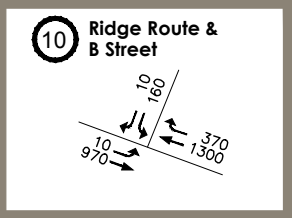

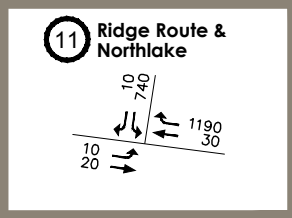

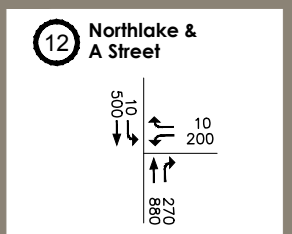

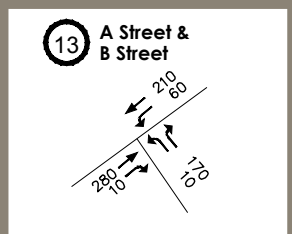

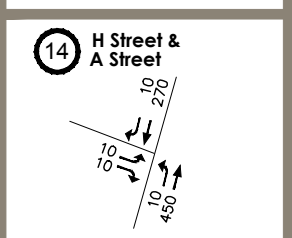

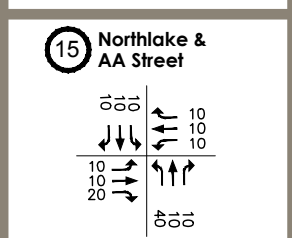

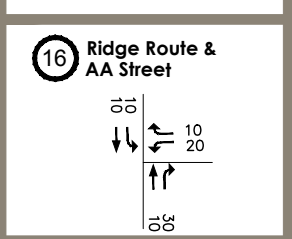

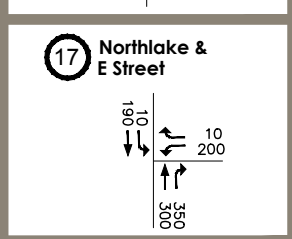

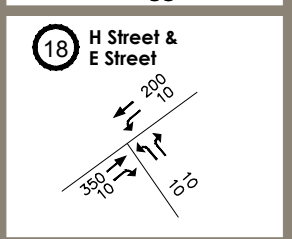

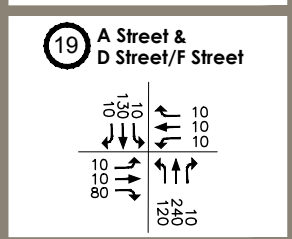

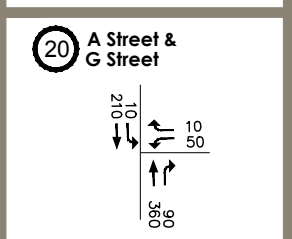

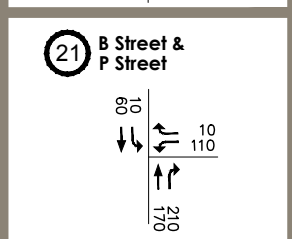

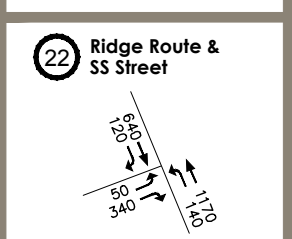

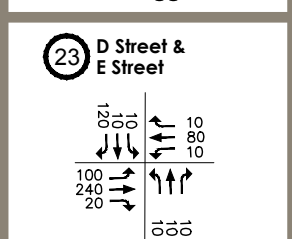

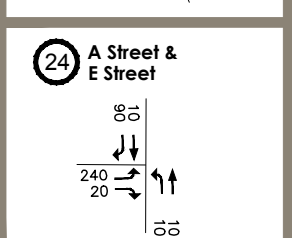

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Figure 3-5

On-Site Intersection Turning Volumes - PM Peak Hour

3.10

Table 3-5 ICU and LOS Summary - Buildout Conditions (On-Site)

Location	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
10. Ridge Route & B Street	0.65	B	0.58	A
11. Ridge Route & Northlake	0.56	A	0.39	A
12. Northlake & A Street	0.57	A	0.60	A
13. B Street & A Street	0.38	A	0.43	A
14. H Street & A street	0.39	A	0.40	A
15. Northlake & AA Street	0.20	A	0.19	A
16. Ridge Route & AA Street	0.15	A	0.16	A
17. Northlake & E Street	0.60	A	0.65	B
18. H Street & E Street	0.31	A	0.35	A
19. D Street & A Street	0.34	A	0.41	A
20. G Street & A Street	0.37	A	0.43	A
21. B Street & P Street	0.35	A	0.43	A
22. Ridge Route & SS Street	0.65	B	0.55	A
23. D Street & E Street	0.35	A	0.44	A
24. A Street & E Street	0.25	A	0.33	A

See Table 1-1 for level of service descriptions.
See Figure 3-1 for intersection locations

3.4.2 Off-Site Local Roadway System & Freeway System

Project generated ADT volumes are provided in Figure 3-6 for the local roadway system and freeway system. This distribution of project trips corresponds to the project's buildout horizon year of 2028 (see previously discussed Figure 3-2 for distribution percentages).

The corresponding project generated peak hour turning movement volumes are provided in Figure 3-7 and Figure 3-8 for the AM peak hour and PM peak hour, respectively.

3.5 ON-SITE BICYCLE FACILITIES

The project would include a network of bicycle facilities, trails and sidewalks to accommodate pedestrians and encourage non-motorized active transportation.

Bicycle facilities would be made available along Ridge Route Road, Northlake Boulevard, A Street and B Street. A Class 1 bike lane is proposed along the west side of Ridge Route Road from Northlake Hills Elementary School to the Ridge Route Road and Northlake Boulevard intersection, where it would continue along Northlake Boulevard. Class II bike lanes are proposed along B Street and A Street. The proposed bicycle facilities are illustrated in Figure 3-9.

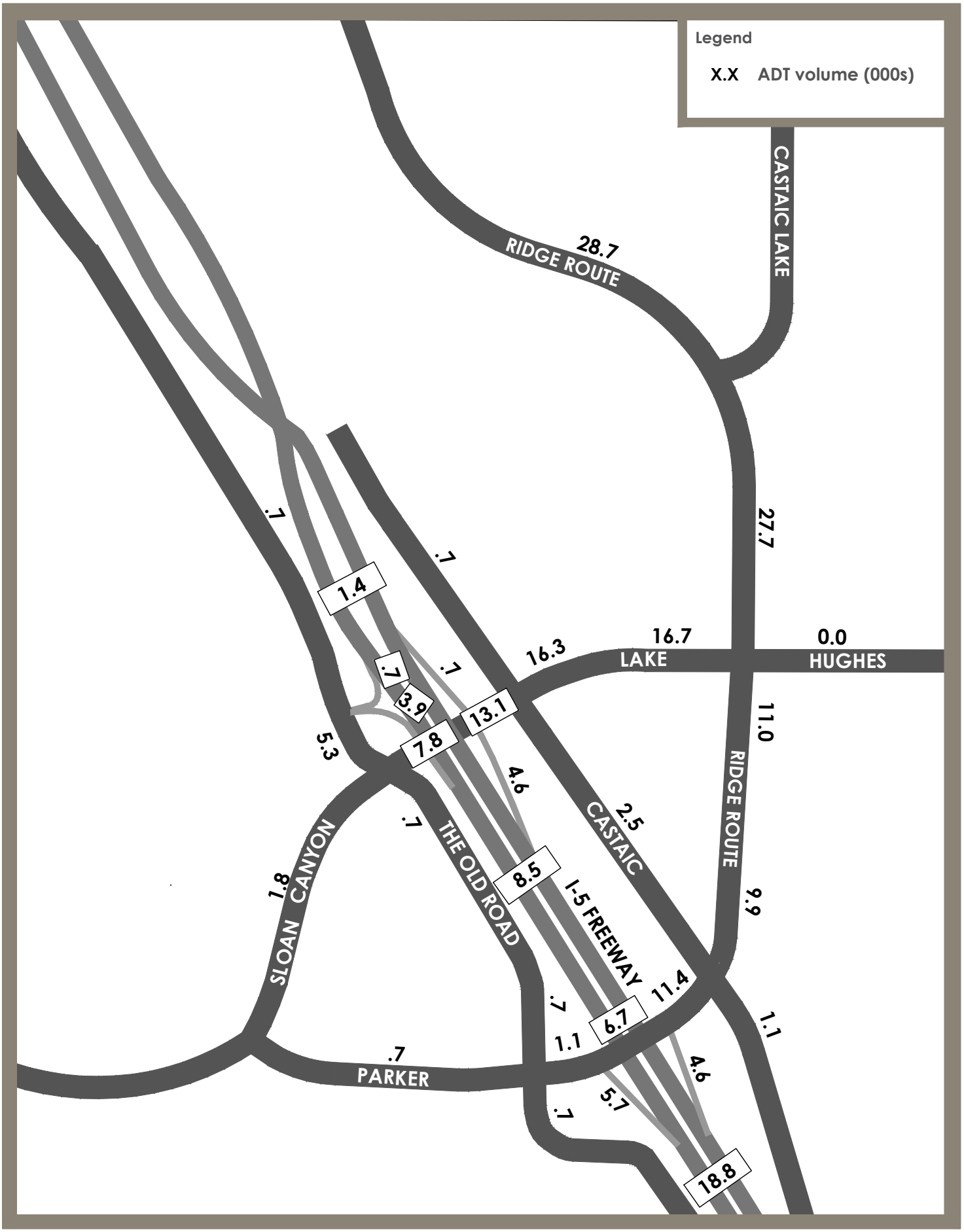

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Figure 3-6

ADT Volumes (000) - Project Only

3.13

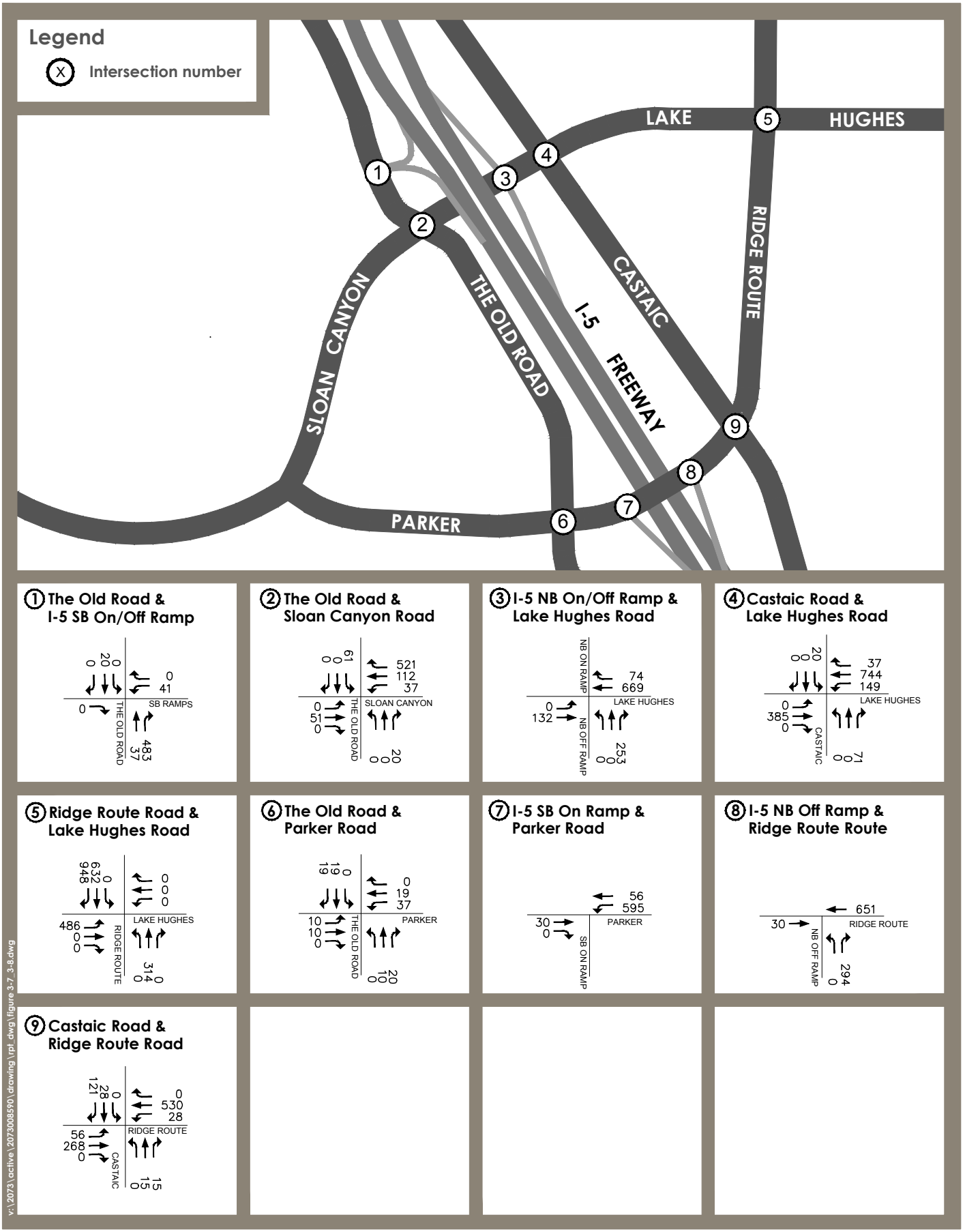

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Figure 3-7

Intersection Turning Lane Movement Volumes
AM Peak Hour - Project Only

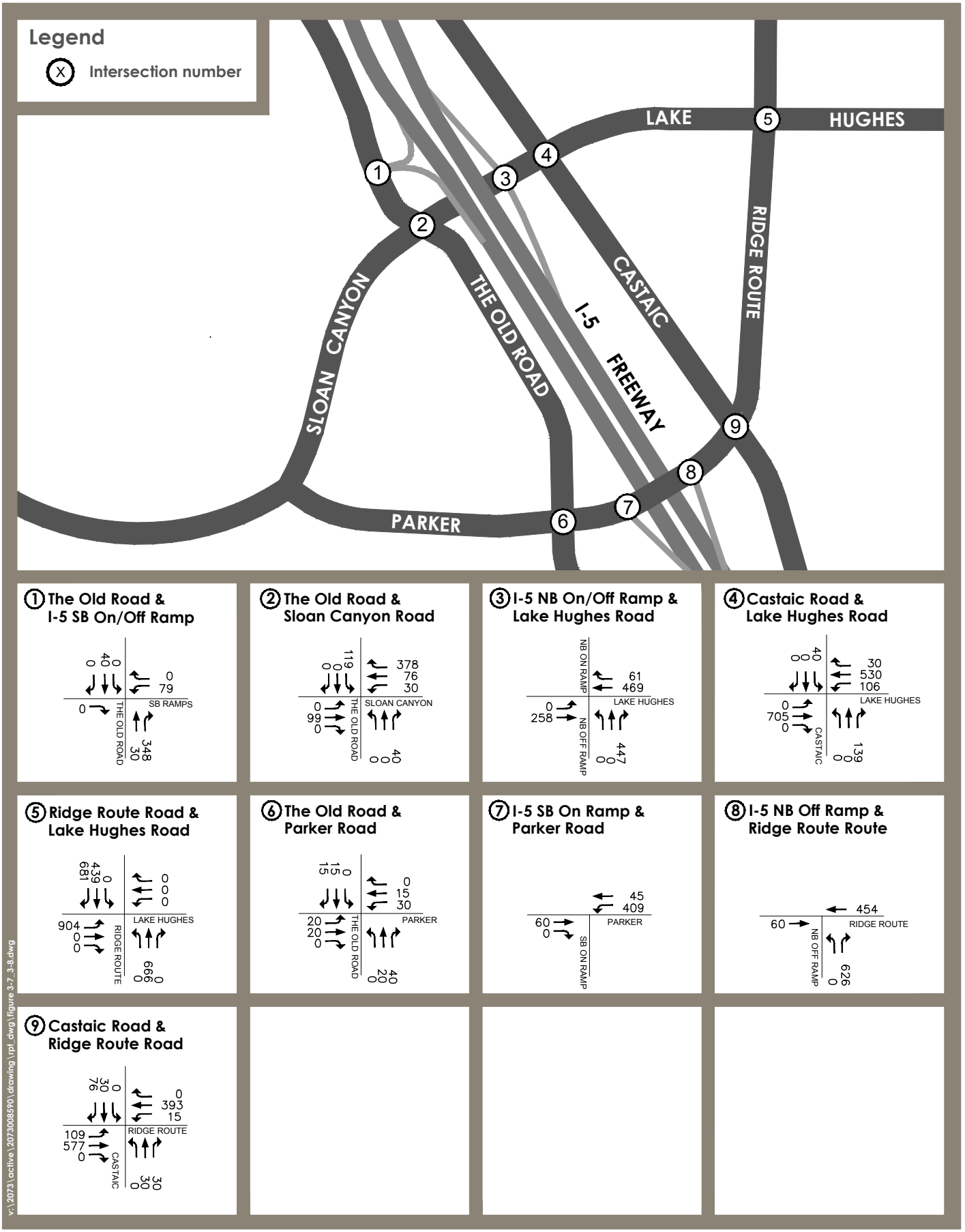

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Figure 3-8

Intersection Turning Lane Movement Volumes
PM Peak Hour - Project Only

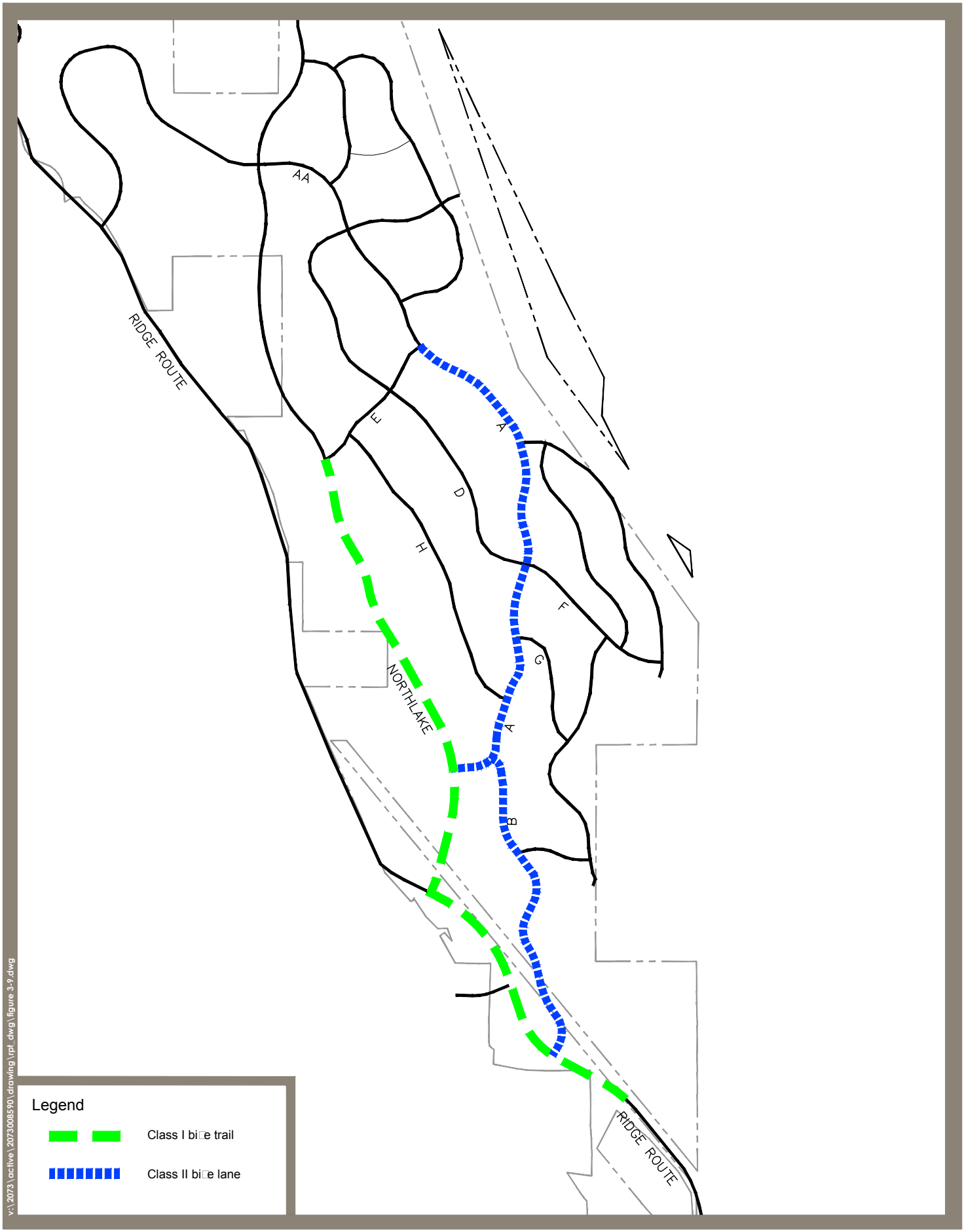

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Figure 3-9

Proposed On-Site Bicycle Facilities

4.0 IMPACT ANALYSIS

This chapter addresses the traffic impacts of the proposed project on the surrounding circulation system. Future conditions with project traffic and with traffic from cumulative projects are described in the following sections. Project impacts and cumulative impacts are identified using the criteria outlined in Chapter 1.0.

4.1 EXISTING PLUS PROJECT ANALYSIS

The existing plus project scenario depicts the addition of project generated traffic to existing traffic conditions. ADT forecasts for existing plus project conditions are shown in Figure 4-1. In all cases, the existing roadway system has been used for this analysis as a baseline to determine project impacts.

4.1.1 Existing plus Project Impact Analysis – Local Roadway System

The peak hour intersection data can be found in Figure 4-2 and Figure 4-3 for the AM peak hour and PM peak hour, respectively. Table 4-1 gives the corresponding ICU values and LOS results, which provides a comparison between the existing and with project conditions.

Table 4-1 Existing plus Project ICU and LOS Summary

	Existing				Existing plus Project				Difference	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
4.9Location	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**	**AM**	**PM**
1. The Old Road & I-5 SB Ramps	0.41	A	0.39	A	0.71	C	0.51	A	0.30	0.12
2. The Old Road & Sloan/Lake Hughes	0.34	A	0.36	A	0.65	B	0.59	B	0.31	0.23
3. 1-5 NB Ramps & Lake Hughes	0.31	A	0.41	A	0.54	A	0.73	C	0.23	0.32
4. Castaic & Lake Hughes	0.31	A	0.37	A	0.54	A	0.66	B	0.23	0.29
5. Ridge Route and Lake Hughes	0.31	A	0.19	A	0.94	E	0.95	E	**0.63**	**0.76**
6. The Old Road & Parker	0.45	A	0.42	A	0.51	A	0.51	A	0.06	0.09
7. I-5 SB On Ramp & Parker	0.60	A	0.52	A	0.99	E	0.81	D	**0.39**	**0.29**
8. I-5 NB Off Ramp & Ridge Route	0.46	A	0.55	A	0.87	D	1.03	F	**0.41**	**0.48**
9. Castaic & Ridge Route	0.33	A	0.41	A	0.59	A	0.62	B	0.26	0.21
Bold denotes a significant impact.										

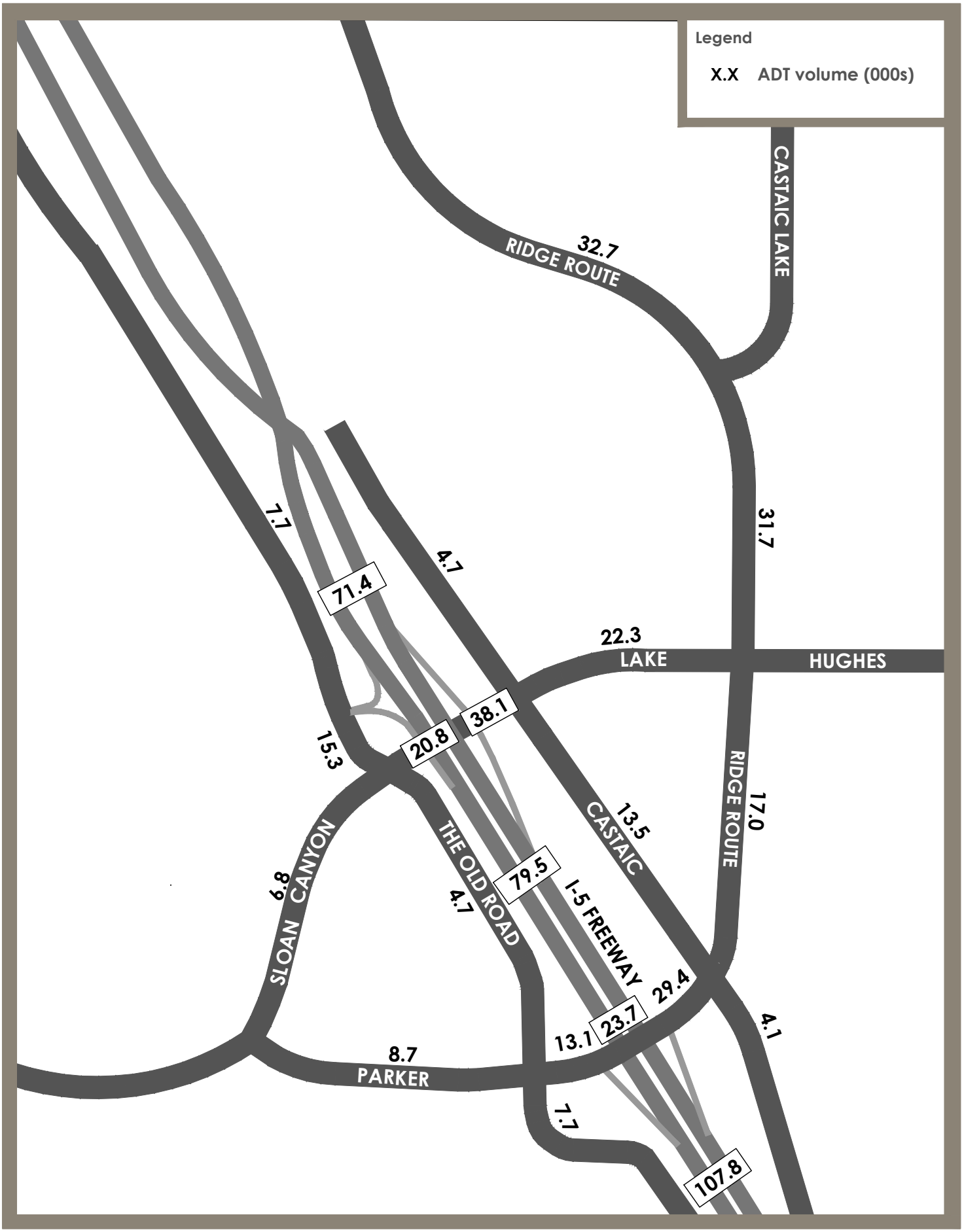

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Figure 4-1

ADT Volumes (000) - Existing plus Project

4.2

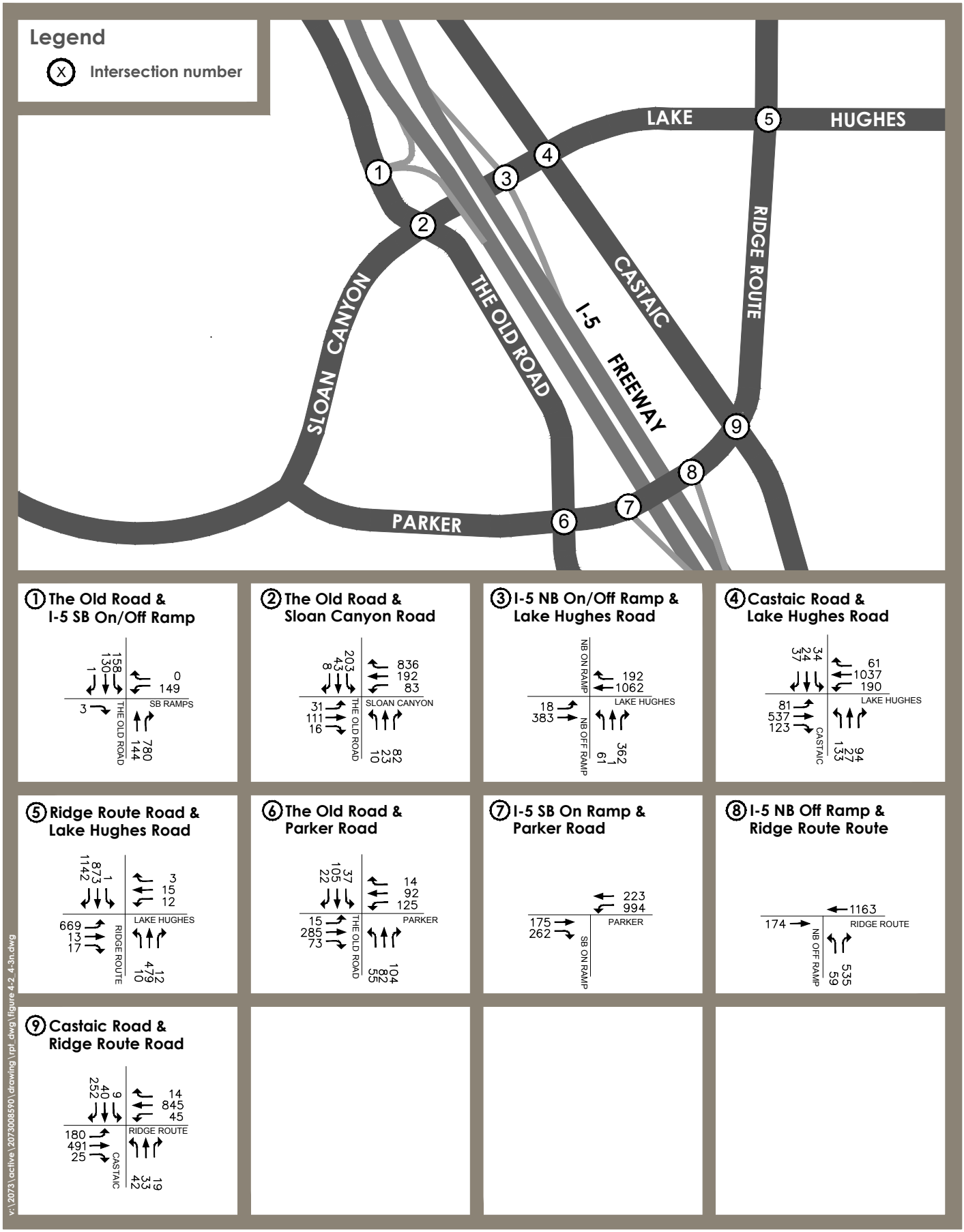

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Figure 4-2

Intersection Turning Lane Movement Volumes
AM Peak Hour - Existing Plus Project
4.3

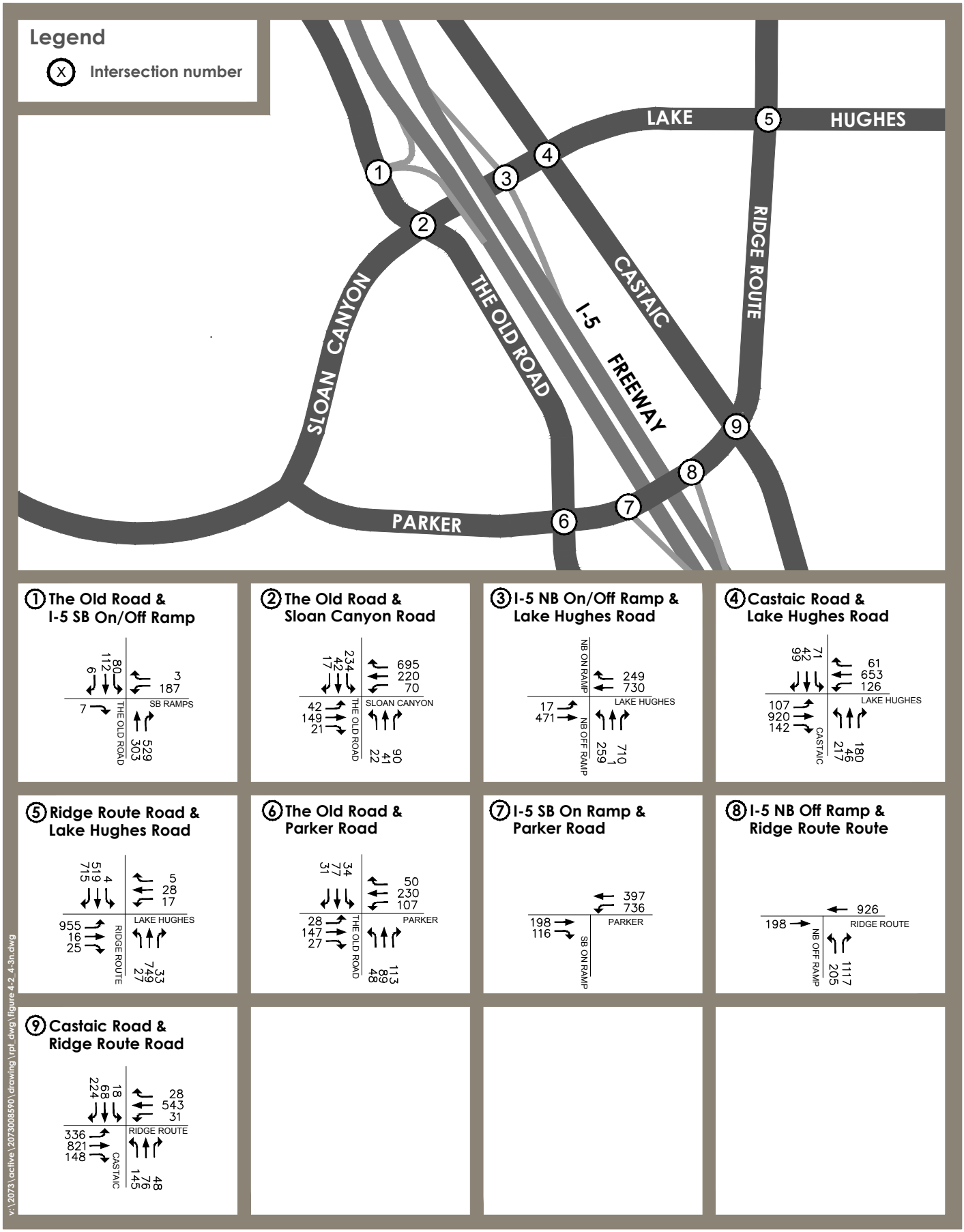

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Figure 4-3

Intersection Turning Lane Movement Volumes
PM Peak Hour - Existing Plus Project
4.4

Table 4-1 shows that under existing plus project conditions, three intersections are shown to be significantly impacted by the project in either the AM or PM peak hour:

5. Ridge Route Road & Lake Hughes Road (County)
7. I-5 SB On Ramp & Parker Road (County/Caltrans)
8. I-5 NB Off Ramp & Ridge Route Road (County/Caltrans)

4.1.2 Existing plus Project Mitigation – Local Roadway System

The results of the ICU and LOS analysis show that 3 intersections are significantly impacted by the proposed project under existing plus project conditions. Table 4-2 summarizes the potential improvements that mitigate the impacts at these locations and Table 4-3 summarizes the resulting ICUs and LOS with this mitigation.

Table 4-2 Existing plus Project Mitigation Measures for Project Impacts

Location	Jurisdiction	Mitigation
5. Ridge Route and Lake Hughes	County	Install traffic signal and include a southbound right-turn overlap phase. Restripe eastbound approach to include two left-turn lanes, one through lane and one right-turn lane. In the northbound direction, add one right-turn lane. In the westbound direction, add a dedicated right-turn lane.
7. I-5 SB On Ramp & Parker	County/ Caltrans	Reconstruct bridge to 4 lanes. Install Traffic Signal. At intersection add one eastbound right-turn lane and two westbound left-turn lanes.
8. I-5 NB Off Ramp & Ridge Route	County/ Caltrans	Reconstruct bridge to 4 lanes. Install Traffic Signal. At intersection add a second northbound right-turn lane and add a second westbound through lane.

Table 4-3 Existing plus Project ICU and LOS Summary – With Mitigation

	Existing				Existing plus Project with Mitigation				Difference	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
Location	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
5. Ridge Route and Lake Hughes	0.31	A	0.19	A	0.82	D	0.67	B	0.51	0.48
7. I-5 SB On Ramp & Parker	0.60	A	0.52	A	0.61	A	0.48	A	0.01	(0.04)
8. I-5 NB Off Ramp & Ridge Route	0.46	A	0.55	A	0.50	A	0.61	B	0.04	0.06

With the improvements described above, the Ridge Route at Lake Hughes intersection would be mitigated to a desirable LOS D, consistent with the threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane, however was determined to not be geometrically feasible. Another improvement that was considered to achieve the LOS C threshold was to convert an existing southbound through lane to a shared through/right turn lane. However, the lane conversion would not be desirable when considering the crosswalks and pedestrians.

Mitigation measures for existing plus project conditions would require that the Parker Road interchange be reconstructed in order to accommodate the volume of traffic with the project. The ultimate buildout of the bridge is anticipated to have six lanes, four in the westbound direction and two in the eastbound direction. The ultimate configuration is not needed to mitigate the impacts under existing plus project conditions. Therefore, a phased improvement to the bridge consisting of 4-lanes, three lanes in the westbound direction and one lane in the eastbound direction, would be adequate to mitigate the project's impacts.

4.2 CUMULATIVE CONDITIONS ANALYSIS

Year 2028 cumulative conditions (i.e., with approved, planned, and pending projects reasonably anticipated to be in place within this horizon) have been derived as previously discussed in Section 2.2.3. The 2028 horizon year includes the future roadway system described in Section 2.2.1.

4.2.1 Cumulative Conditions – Local Roadway System

Year 2028 cumulative conditions ADT volumes with the project are provided in Figure 4-4. The corresponding cumulative conditions with project peak hour turning movement volumes are provided in Figure 4-5 and Figure 4-6 for the AM peak hour and PM peak hour, respectively.

4.2.2 Cumulative Conditions Impact Analysis – Local Roadway System

Peak hour ICU values and LOS that correspond with the cumulative conditions with project referenced above can be found in Table 4-4 which provides a comparison between the with project conditions and existing conditions. The criteria used to identify significant impacts are discussed in Section 1.4.

Table 4-4 ICU Summary – Existing and Cumulative Conditions (With Project)

Location	Existing				Cumulative with Project				Increase	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
1. The Old Road & I-5 SB Ramps	0.41	A	0.39	A	0.78	C	0.62	B	**0.37**	0.23
2. The Old Road & Sloan/Lake Hughes	0.34	A	0.36	A	0.73	C	0.73	C	0.39	0.37
3. 1-5 NB Ramps & Lake Hughes	0.31	A	0.41	A	0.66	B	0.77	C	0.35	**0.36**
4. Castaic & Lake Hughes	0.31	A	0.37	A	0.53	A	0.53	A	0.22	0.16
5. Ridge Route and Lake Hughes	0.31	A	0.19	A	0.92	E	1.03	F	**0.61**	**0.84**
6. The Old Road & Parker	0.45	A	0.42	A	0.55	A	0.71	C	0.10	0.29
7. I-5 SB On Ramp & Parker	0.60	A	0.52	A	1.10	F	1.16	F	**0.50**	**0.64**
8. I-5 NB Off Ramp & Ridge Route	0.46	A	0.55	A	1.09	F	1.44	F	**0.63**	**0.89**
9. Castaic & Ridge Route	0.33	A	0.41	A	0.69	B	0.84	D	0.36	**0.43**

Bold – denotes significant impact (See Table 1-5 for impact criteria)

The table indicates that under cumulative conditions with the project, the following intersections are forecast to be significantly impacted by the project:

1. The Old Road & I-5 SB Ramps (County/Caltrans)
3. I-5 NB Ramps & Lake Hughes Road (County/Caltrans)
5. Ridge Route Road & Lake Hughes Road (County)
7. I-5 SB On Ramp & Parker Road (County/Caltrans)
8. I-5 SB Off Ramps & Ridge Route Road (County/Caltrans)
9. Castaic Road & Ridge Route Road (County)

4.2.3 Cumulative Conditions Mitigation – Local Roadway System

Roadway improvements have been identified to mitigate the project impacts identified in the previous section. Table 4-5 lists the identified mitigation measures to address project impacts in the cumulative conditions with project setting.

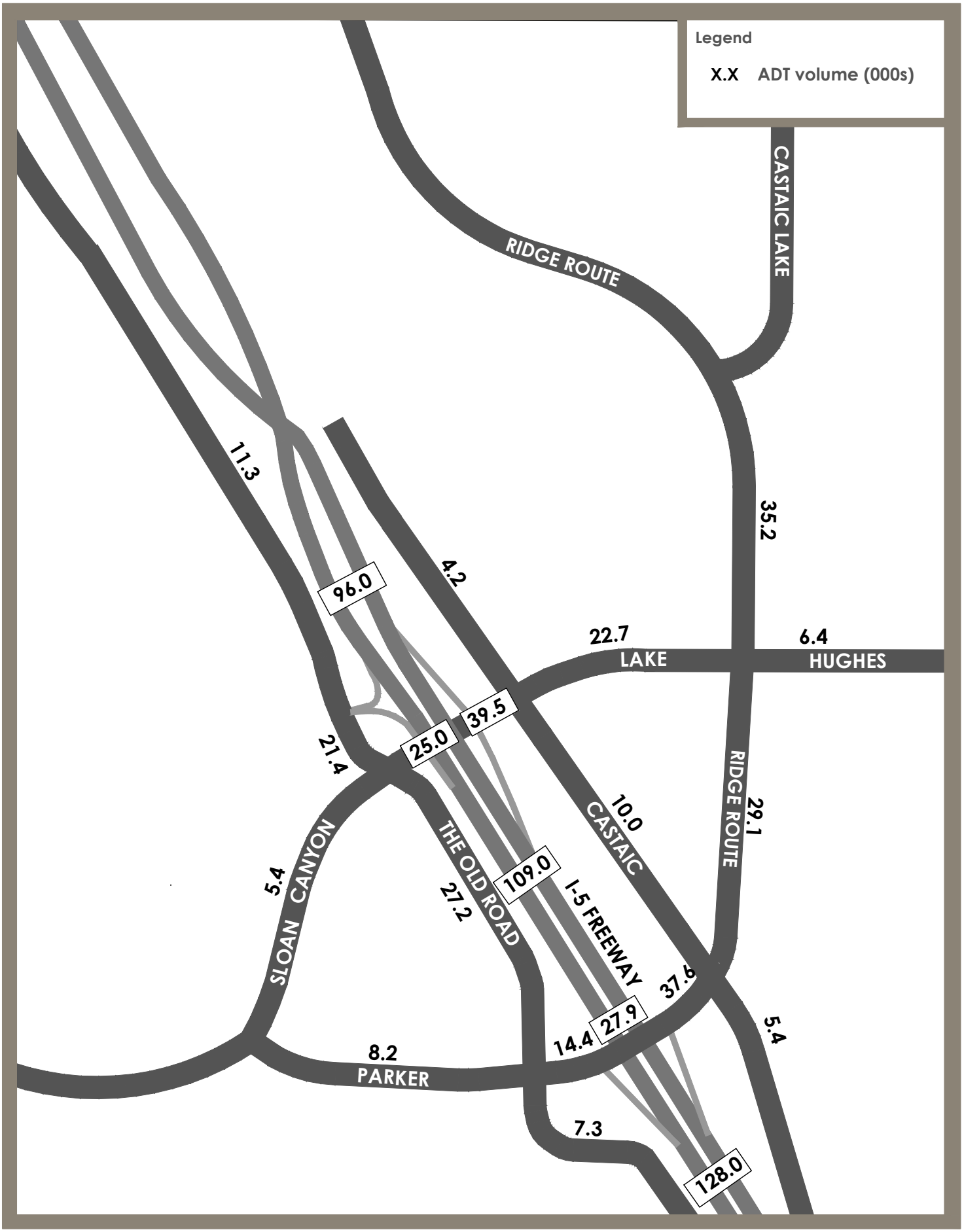

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Figure 4-4

ADT Volumes (000) - 2028 Cumulative Conditions With Project

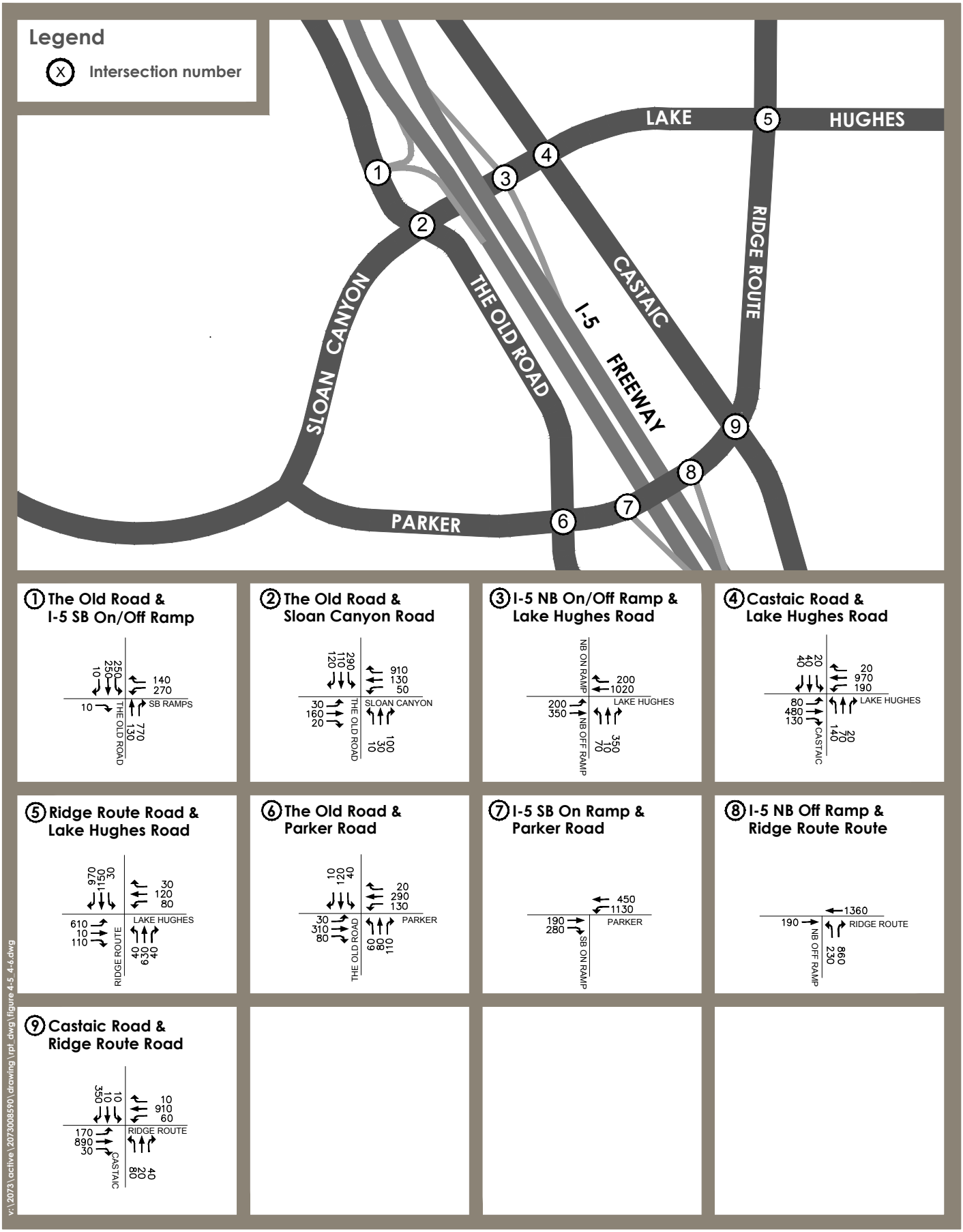

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Figure 4-5

Intersection Turning Lane Movement Volumes
AM Peak Hour - 2028 Cumulative Conditions - With Project
4.9

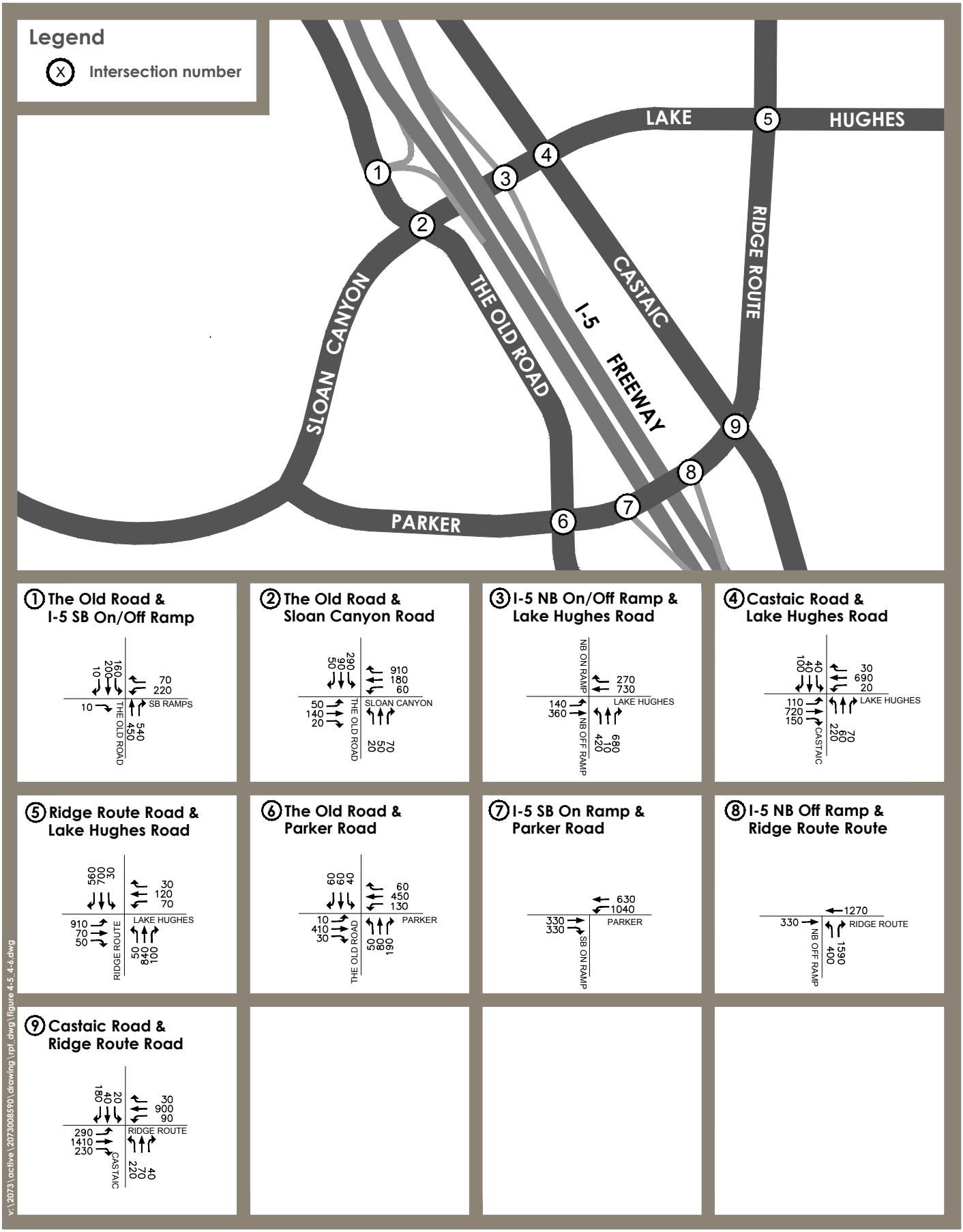

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Figure 4-6

Intersection Turning Lane Movement Volumes
PM Peak Hour - 2028 Cumulative Conditions - With Project

Table 4-5 Off-Site Mitigation Measures for Project Impacts – Cumulative Conditions (With Project)

Location	Juris-diction	Mitigation
1. The Old Road & I-5 SB Ramps	County/ Caltrans	Install traffic signal with a northbound right-turn overlap phasing.
3. 1-5 NB Ramps & Lake Hughes	County/ Caltrans	Install traffic signal. Widen off ramp to add one left-turn lane and restripe center lane to a shared left/through/right turn lane.
5. Ridge Route and Lake Hughes	County	Install traffic signal and include southbound right-turn overlap phasing. Restripe eastbound approach to include two left-turn lanes, one through lane and one right-turn lane. In the northbound direction, add one right-turn lane. In the westbound direction, add a dedicated right-turn lane.
7. I-5 SB On Ramp & Parker	County/ Caltrans	Reconstruct bridge to 4 lanes. Install traffic signal. At intersection add one eastbound right-turn lane and two westbound left-turn lanes.
8. I-5 NB Off Ramp & Ridge Route	County/ Caltrans	Reconstruct bridge to 4 lanes. Install traffic signal. At intersection add a second northbound right-turn lane and add a second and third westbound through lane.
9. Castaic & Ridge Route	County	Install traffic signal. Restripe northbound approach to include two left-turn lanes, one through lane and one right-turn lane. In the eastbound direction, stripe a right-turn lane. Signal modification to include southbound right-turn overlap phasing.

The identified impacts are cumulative impacts and, therefore, the project is responsible for its fair-share of the costs of the identified mitigation measures. Participation in the Castaic Bridge and Major Thoroughfare District will satisfy the project's fair share obligations. Each of the identified improvements would fully mitigate the project's significant impact, as shown in Table 4-6, with the exception of the Ridge Route at Lake Hughes intersection. With the improvements described above, the Ridge Route at Lake Hughes intersection would be mitigated to a desirable LOS C (0.78), better than the LOS D threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C (0.74) threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane, however was determined to not be geometrically feasible.

Table 4-6 ICU Summary – Existing and Cumulative Conditions (With Project) Mitigation

Location	Existing				Cumulative with Project plus Mitigation				Increase	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
1. The Old Road & I-5 SB Ramps	0.41	A	0.39	A	0.74	C	0.62	B	0.33	0.23
3. 1-5 NB Ramps & Lake Hughes	0.31	A	0.41	A	0.63	B	0.66	B	0.32	0.25
5. Ridge Route and Lake Hughes	0.31	A	0.19	A	0.78	C	0.74	C	0.47	0.55
7. I-5 SB On Ramp & Parker	0.60	A	0.52	A	0.67 (16.7 sec)[1]	B (B)[1]	0.67 (21.1 sec)[1]	B (C)[1]	0.07	0.15
8. I-5 NB Off Ramp & Ridge Route	0.46	A	0.55	A	0.53 (10.1 sec)[1]	A (B)[1]	0.82 (26.1 sec)[1]	D (C)[1]	0.07	0.27[2]
9. Castaic & Ridge Route	0.33	A	0.41	A	0.64	B	0.71	C	0.31	0.30

Bold – denotes significant impact (See Table 1-5 for criteria)
[1] – Values in parentheses indicate average delay (seconds/vehicle) and LOS based 85on HCM delay methodology
[2] – Not a significant impact under Caltrans methodology due to LOS C conditions based on HCM delay calculation (See Appendix E for HCM worksheets).

Table 4-7 provides a comparison between Existing plus Project with mitigation conditions and Cumulative with Project with mitigation conditions. Table 4-7 lists locations where project specific mitigations are required.

Table 4-7 ICU Summary – Existing Plus Project Mitigation and Cumulative Condition (With Project) Mitigation

Location	Existing + Project + Mitigation				Cumulative + Project + Mitigation				Increase	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
5. Ridge Route and Lake Hughes	0.82	D	0.67	B	0.78	C	0.74	C	-0.04	0.07
7. I-5 SB On Ramp & Parker	0.61	B	0.48	A	0.67 (16.7 sec)[1]	B (B)[1]	0.67 (21.1 sec)[1]	B (C)[1]	0.06	0.19
8. I-5 NB Off Ramp & Ridge Route	0.50	A	0.61	B	0.53 (10.1 sec)[1]	A (B)[1]	0.82 (26.1 sec)[1]	D (C)[1]	0.03	0.21[2]

[1] – Values in parentheses indicate average delay (seconds/vehicle) and LOS based on HCM delay methodology
[2] – Not a significant impact under Caltrans methodology due to LOS C conditions based on HCM delay calculation (See Appendix E for HCM worksheets).

As can be seen in the previously referenced Table 4-6 and Table 4-7, the I-5 NB Ramp Off Ramp at Ridge Route Road intersection would operate at a LOS D under cumulative conditions with the project and mitigation using the ICU methodology, but would operate at a low LOS C using the HCM methodology. The acceptable LOS for a Caltrans intersection is LOS D, therefore the intersection would be fully mitigated.

The Ridge Route at Lake Hughes intersection would be mitigated to a desirable LOS C (0.78), better than the LOS D threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C (0.74) threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane, however was determined to not be geometrically feasible.

4.2.4 Cumulative Conditions (No Project) Impact Analysis – Local Roadway System

To derive cumulative conditions no project ADT volumes, the SCVCTM was run with no land uses in the project traffic zone (except for related projects that fall inside the zone). In this process, trips from non-project zones that would otherwise interact with the project are redistributed to other zones (both internal and cordon zones).

ADT volumes for the local Castaic community for the cumulative condition no project scenario is provided in Figure 4-7. The corresponding no project peak hour turning movement volumes are provided in Figure 4-8 and Figure 4-9 for the AM peak hour and PM peak hour, respectively. Peak hour ICU values and LOS that correspond with the cumulative conditions traffic forecasts referenced above can be found in Table 4-8 which provides a comparison between no project condition and with project conditions.

Table 4-8 ICU Summary – Cumulative Conditions No Project and With Project

	Cumulative No Project				Cumulative with Project				Increase	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
Location	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
1. The Old Road & I-5 SB Ramps	0.50	A	0.58	A	0.78	C	0.62	B	**0.28**	0.04
2. The Old Road & Sloan/Lake Hughes	0.43	A	0.52	A	0.73	C	0.73	C	0.30	0.21
3. 1-5 NB Ramps & Lake Hughes	0.49	A	0.65	B	0.66	B	0.77	C	0.17	**0.12**
4. Castaic & Lake Hughes	0.36	A	0.40	A	0.53	A	0.53	A	0.17	0.13
5. Ridge Route and Lake Hughes	0.40	A	0.25	A	0.92	E	1.03	F	**0.52**	**0.78**
6. The Old Road & Parker	0.52	A	0.68	B	0.55	A	0.71	C	0.03	0.03
7. I-5 SB On Ramp & Parker	0.76	C	0.90	D	1.10	F	1.16	F	**0.34**	**0.26**
8. I-5 NB Off Ramp & Ridge Route	0.73	C	1.00	E	1.09	F	1.44	F	**0.36**	**0.44**
9. Castaic & Ridge Route	0.46	A	0.62	B	0.69	B	0.84	D	0.23	**0.22**

The table indicates that under cumulative conditions, the following intersections are forecast to be significantly impacted by the project:

1. The Old Road & I-5 SB Ramps (County/Caltrans)
3. I-5 NB Ramps & Lake Hughes Road (County/Caltrans)
5. Ridge Route Road & Lake Hughes Road (County)
7. I-5 SB On Ramp & Parker Road (County/Caltrans)
8. I-5 SB Off Ramps & Ridge Route Road (County/Caltrans)
9. Castaic Road & Ridge Route Road (County)

Mitigation that addresses the above impacts is presented in the next section.

4.2.5 Cumulative Conditions (No Project) Mitigation – Local Roadway System

Roadway improvements have been identified to mitigate the project impacts identified in the previous section. Table 4-9 lists the identified mitigation measures to address project impacts in the cumulative conditions setting.

Table 4-9 Off-Site Mitigation Measures for Project Impacts – Cumulative Conditions (No Project and With Project)

Location	Jurisdiction	Mitigation
1. The Old Road & I-5 SB Ramps	County/ Caltrans	Install traffic signal with a northbound right-turn overlap phasing.
3. 1-5 NB Ramps & Lake Hughes	County/ Caltrans	Install traffic signal. Widen off ramp to add one left-turn lane and restripe center lane to a shared left/through/right turn lane.
5. Ridge Route and Lake Hughes	County	Install traffic signal and include southbound right-turn overlap phasing. Restripe eastbound approach to include two left-turn lanes, one through lane and one right-turn lane. In the northbound direction, add one right-turn lane. In the westbound direction, add a dedicated right-turn lane.
7. I-5 SB On Ramp & Parker	County/ Caltrans	Reconstruct Bridge to 4-lanes. Install traffic signal. Eastbound lane configuration includes one through lane and one dedicated right turn lane. In the westbound direction, two left-turn lanes and one through lane.
8. I-5 NB Off Ramp & Ridge Route	County/ Caltrans	Reconstruct Bridge to 4-lanes. Install traffic signal. Modify intersection to include the following: one northbound left turn lane, two northbound right turn lanes, one eastbound through lane and three westbound through lanes.
9. Castaic & Ridge Route	County	Install traffic signal. Restripe northbound approach to include two left-turn lanes, one through lane and one right-turn lane. In the eastbound direction, stripe a right-turn lane. Signal modification to include southbound right-turn overlap phasing.

The identified impacts are cumulative impacts and, therefore, the project is responsible for its fair-share of the costs of the identified mitigation measures. Participation in the Castaic Bridge and Major Thoroughfare District will satisfy the project's fair share obligations. Each of the

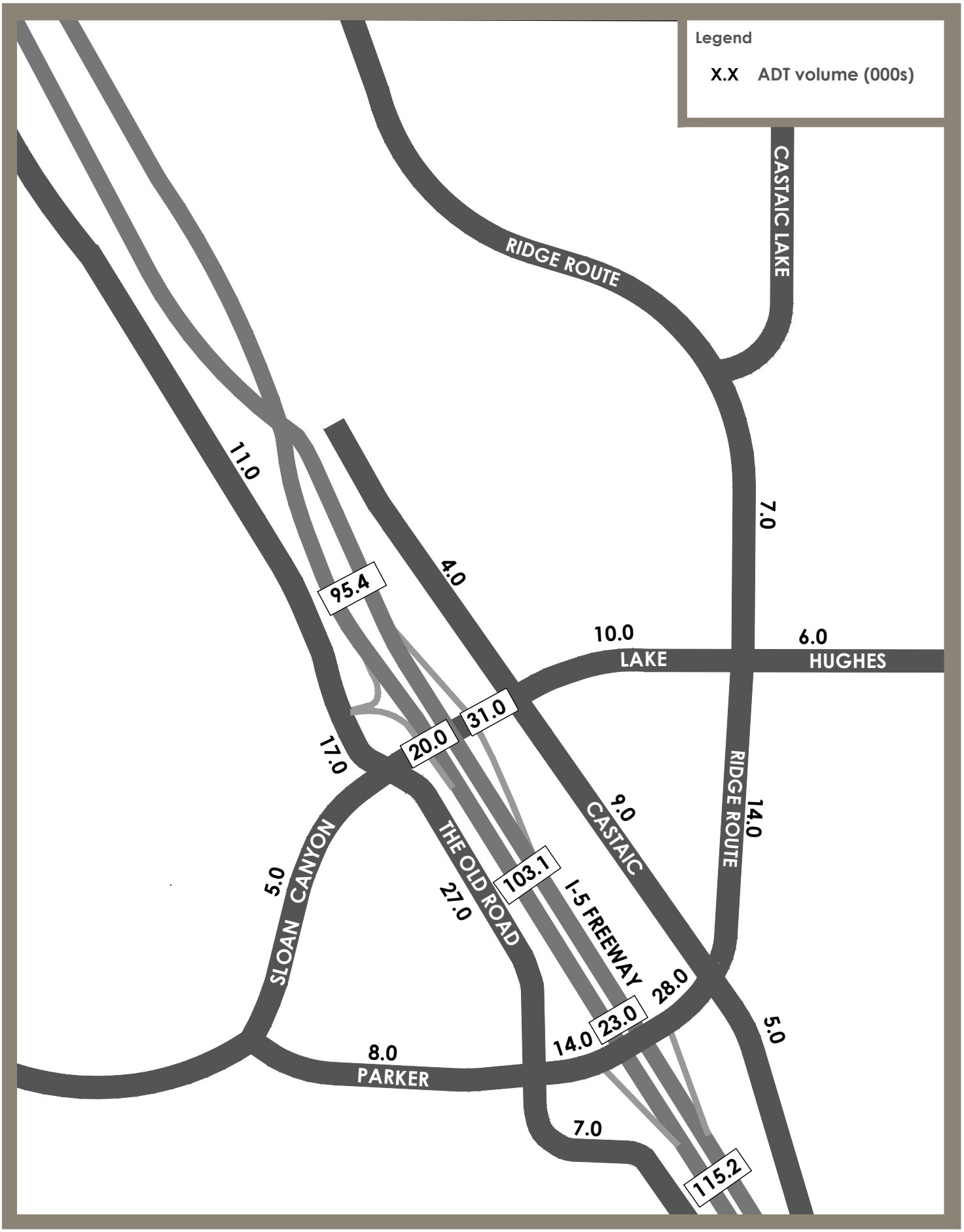

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Figure 4-7

ADT Volumes (000) - 2028 Cumulative Conditions No Project

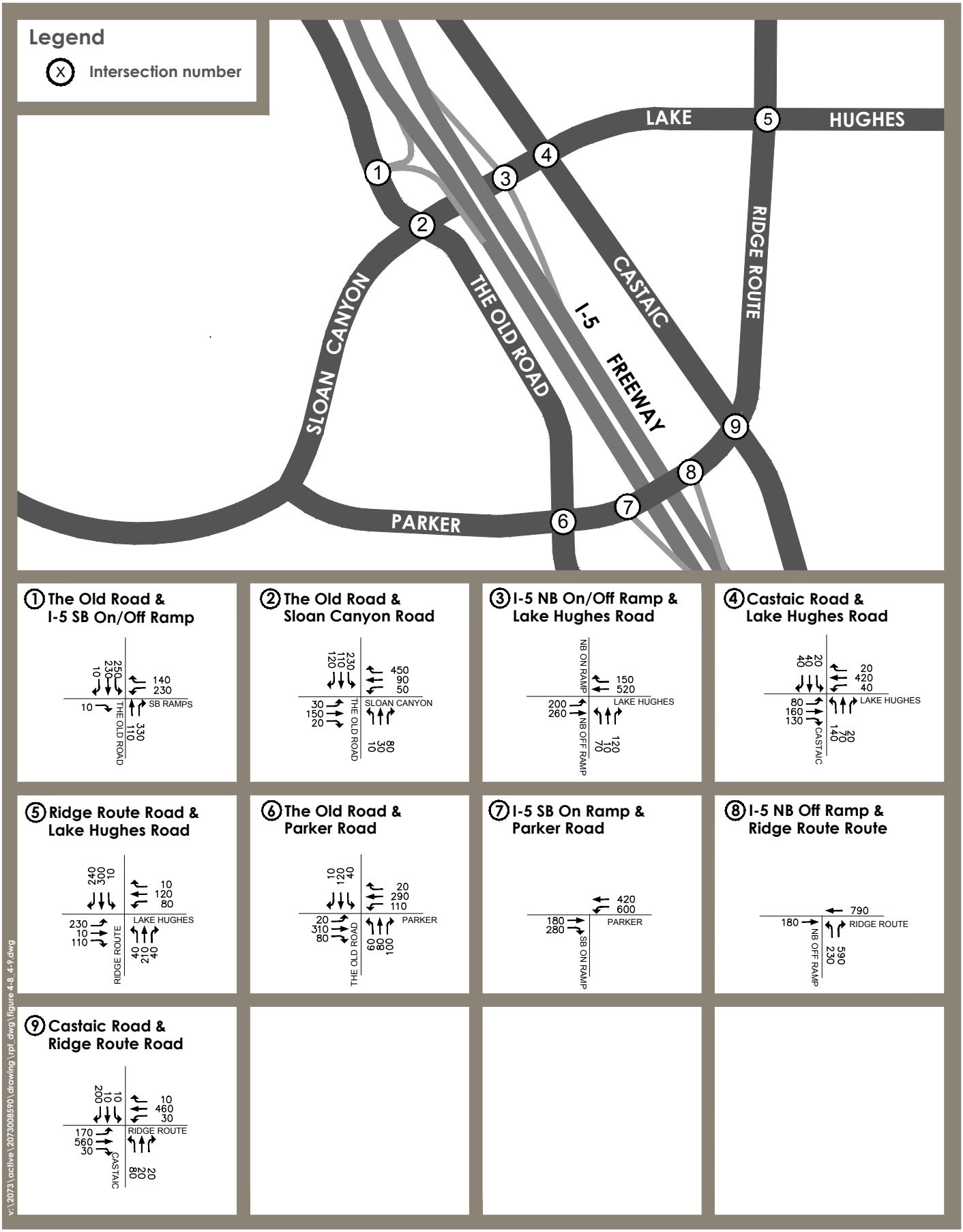

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Figure 4-8

Intersection Turning Lane Movement Volumes
AM Peak Hour - 2028 Cumulative Conditions - No Project

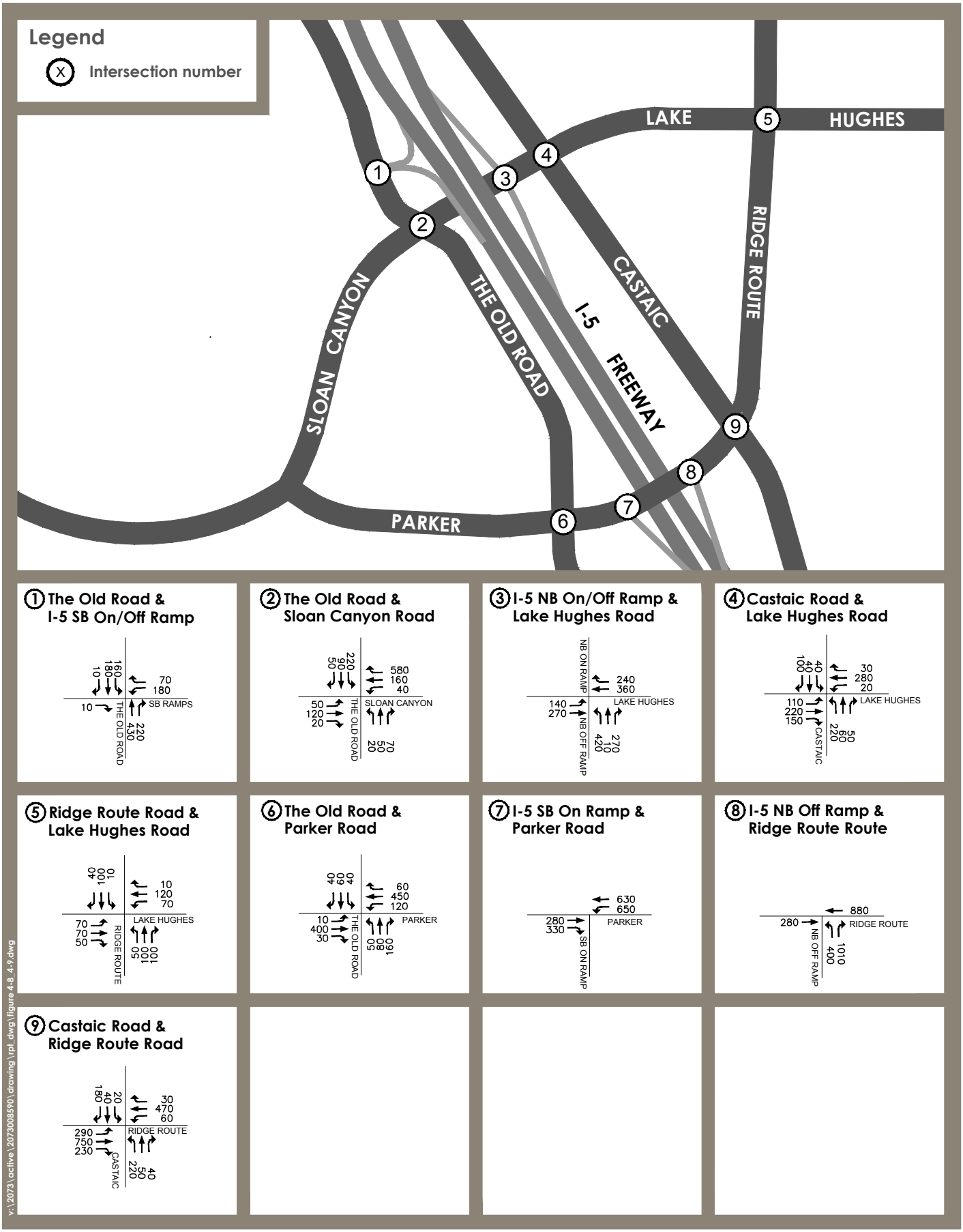

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Figure 4-9

Intersection Turning Lane Movement Volumes
PM Peak Hour - 2028 Cumulative Conditions - No Project

identified improvements would fully mitigate the project's significant impact, as shown in Table 4-10, with the exception of the Ridge Route at Lake Hughes intersection. With the improvements described above, the Ridge Route at Lake Hughes intersection would be mitigated to a desirable LOS C (0.78), better than the LOS D threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C (0.74) threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane, however was determined to not be geometrically feasible.

Table 4-10 ICU Summary – Cumulative Conditions Mitigation (No Project and With Project)

Location	Cumulative No Project				Cumulative with Project plus Mitigation				Increase	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
1. The Old Road & I-5 SB Ramps	0.50	A	0.58	A	0.74	C	0.62	B	0.24	0.04
3. I-5 NB Ramps & Lake Hughes	0.49	A	0.65	B	0.63	B	0.66	B	0.14	0.01
5. Ridge Route and Lake Hughes	0.40	A	0.25	A	0.78	C	0.74	C	0.38	0.49
7. I-5 SB On Ramp & Parker	0.76	C	0.90	D	0.67	B	0.67	B	(0.09)	(0.23)
8. I-5 NB Ramp & Ridge Route	0.73	C	1.00	E	0.53	A	0.82	D	(0.20)	(0.18)
9. Castaic & Ridge Route	0.46	A	0.62	B	0.64	B	0.71	C	0.18	0.09

4.3 FREEWAY IMPACT ANALYSIS

The following section discusses an impact analysis conducted for the I-5 freeway that provides the regional travel to and from the project area

4.3.1 Existing plus Project Impact Analysis – Freeway System

Project generated traffic was added onto the existing freeway system. Existing AADT freeway volumes with the project trips are shown in Table 4-11.

Table 4-11 Freeway AADT Summary – Existing Plus Project

No.	Segment	Without Project	With Project
1	I-5 Between Templin Hwy & Lake Hughes	70,000	71,000
2	I-5 Between Lake Hughes & Parker	71,000	80,000
3	I-5 Between Parker & Hasley Canyon	89,000	108,000
4	I-5 Between Hasley Canyon & SR-126	109,000	124,000
5	I-5 Between Calgrove & SR-14	193,000	197,000
AADT – Annual Average Daily Traffic			

The AM and PM peak hour freeway volumes for existing plus project conditions are shown in Table 4-13. As can be seen in Table 4-13, the project increment exceeds the 0.02 CMP threshold at the following freeways segments:

- I-5 NB Between Lake Hughes Road & Parker Road (AM & PM)
- I-5 NB Between Parker Road & Hasley Canyon (AM & PM)
- I-5 SB Between Lake Hughes Road & Parker Road (AM & PM)
- I-5 SB Between Parker Road & Hasley Canyon (AM & PM)

However, although the project increment exceeds the 0.02 threshold at the above referenced freeway segments, the other criteria for the project to cause a significant impact is for the freeway segment to operate deficiently (i.e., worse than LOS E). All segments with the project operate at LOS C or better (V/C less than or equal to 0.71). Hence, the project does not cause a significant impact.

4.3.2 Cumulative Conditions Impact Analysis – Freeway System

As previously discussed in Section 2.2.4., future freeway forecasts were derived from multiple sources. Year 2028 cumulative conditions AADT volumes with and without the project are shown in Table 4-12.

Table 4-12 Freeway AADT Summary – 2028 Cumulative Conditions

No.	Segment	Without Project	With Project
1	I-5 Between Templin Hwy & Lake Hughes	95,000	96,000
2	I-5 Between Lake Hughes & Parker Road	103,000	109,000
3	I-5 Between Parker Road & Hasley Canyon	115,000	128,000
4	I-5 Between Hasley Canyon & SR-126	143,000	153,000
5	I-5 Between Calgrove & SR-14	224,000	226,000
AADT – Annual Average Daily Traffic			

Freeway lanes and capacities are shown in Table 4-14, along with directional peak hour volumes and the resulting V/C ratios and project increments.

As can be seen in Table 4-14 while segments on the I-5 freeway from the Lake Hughes interchange to south of Parker Road interchange contain a project increment exceeding 0.02, the freeway segments operate better than an LOS E (V/C less than or equal to 1.00). Therefore, these segments are not considered to be significantly impacted by the project.

Table 4-13 Freeway Peak Hour Volumes and V/C Summary– Existing Plus Project

No.	Segment	Lanes	Cap.	Existing				Existing Plus Project				Project Increment	
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
				Vol.	V/C	Vol.	V/C	Vol.	V/C	Vol.	V/C	AM	PM
Northbound													
1	I-5 Between Templin Hwy & Lake Hughes	4M	8,000	1,351	0.169	2,359	0.295	1,425	0.178	2,420	0.303	0.009	0.008
2	I-5 Between Lake Hughes & Parker	4M	8,000	1,463	0.183	1,896	0.237	1,716	0.214	2,343	0.293	0.031	0.056
3	I-5 Between Parker & Hasley Canyon	4M	8,000	1,833	0.229	2,376	0.297	2,380	0.298	3,449	0.431	0.069	0.134
4	I-5 Between Hasley Canyon & SR-126	4M +1A	9,000	2,245	0.249	2,910	0.323	2,671	0.297	3,746	0.416	0.048	0.093
5	I-5 Between Calgrove & SR-14	4M + 1T[C]	9,200	3,976	0.432	5,153	0.560	4,076	0.443	5,350	0.582	0.011	0.022
Southbound													
1	I-5 Between Templin Hwy & Lake Hughes	4M	8,000	1,309	0.164	2,240	0.280	1,350	0.169	2,319	0.290	0.005	0.010
2	I-5 Between Lake Hughes & Parker	4M	8,000	1,803	0.225	2,450	0.306	2,286	0.286	2,798	0.350	0.061	0.044
3	I-5 Between Parker & Hasley Canyon	4M	8,000	2,261	0.283	3,071	0.384	3,339	0.417	3,828	0.478	0.134	0.094
4	I-5 Between Hasley Canyon & SR-126	4M	8,000	2,769	0.346	3,761	0.470	3,609	0.451	4,351	0.544	0.105	0.074
5	I-5 Between Calgrove & SR-14	4M + 2T[C]	10,400	4,902	0.471	6,659	0.640	5,100	0.490	6,798	0.654	0.019	0.014

M = Mixed Flow Lane
A = Auxiliary Lane
T = Truck Lane
T[C] = Truck Lane (Climbing)
Cap = Capacity
Vol = Volume

See Table 1-6 for lane capacities and significant impact thresholds of significance.

Table 4-14 Freeway Peak Hour Volumes and V/C Summary– 2028 Cumulative Conditions with and without Project

No.	Segment	Lanes	Cap.	Without Project				With Project				Project Increment	
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
				Vol.	V/C	Vol.	V/C	Vol.	V/C	Vol.	V/C	AM	PM
Northbound													
1	I-5 Between Templin Hwy & Lake Hughes	4M	8,000	3,543	0.443	5,403	0.675	3,593	0.449	5,433	0.679	0.006	0.004
2	I-5 Between Lake Hughes & Parker	4M	8,000	3,948	0.493	5,995	0.749	4,178	0.522	6,405	0.801	0.029	0.051
3	I-5 Between Parker & Hasley Canyon	4M + 1H	9,600	4,313	0.449	6,273	0.653	4,813	0.501	7,263	0.757	0.052	0.103
4	I-5 Between Hasley Canyon & SR-126	4M + 1H + 1A	10,600	4,845	0.457	6,796	0.641	5,235	0.494	7,568	0.714	0.037	0.073
5	I-5 Between Calgrove & SR-14	4M + 1H + 1T(C)	10,800	7,791	0.721	9,396	0.870	7,883	0.730	9,578	0.887	0.009	0.017
Southbound													
1	I-5 Between Templin Hwy & Lake Hughes	4M	8,000	5,569	0.696	3,389	0.424	5,609	0.701	3,429	0.429	0.005	0.005
2	I-5 Between Lake Hughes & Parker	4M	8,000	6,087	0.761	3,712	0.464	6,527	0.816	4,032	0.504	0.055	0.040
3	I-5 Between Parker & Hasley Canyon	4M + 1H	9,600	6,467	0.674	3,951	0.412	7,437	0.775	4,661	0.486	0.101	0.074
4	I-5 Between Hasley Canyon & SR-126	4M + 1H	9,600	7,125	0.742	4,459	0.465	7,881	0.821	5,012	0.522	0.079	0.058
5	I-5 Between Calgrove & SR-14	4M + 1H + 2T[C]	12,000	9,976	0.831	7,678	0.640	10,154	0.846	7,808	0.651	0.015	0.011

M = Mixed Flow Lane
H = HOV or HOT Lane
A = Auxiliary Lane
T = Truck Lane
T[C] = Truck Lane (Climbing)

See Table 1-6 for lane capacities and significant impact thresholds of significance.

4.4 CONGESTION MANAGEMENT PROGRAM ANALYSIS

The Los Angeles County Congestion Management Program (CMP) requires that a proposed development address two major subject areas with respect to traffic impacts. These are the project's impacts on the CMP highway system and the project's impacts on the local and regional transit systems.

4.4.1 CMP Highway System

According to the CMP guidelines, the geographical area to be examined in a CMP traffic impact analysis (TIA) consists of the CMP monitoring locations that meet the following criteria:

- CMP intersections where the proposed project will add 50 or more trips during either the AM or PM weekday peak hours (determined based on adjacent street traffic).
- Mainline freeway locations where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.

There are no CMP intersections located within the Castaic community, with the nearest two locations being Chiquito Canyon Road/SR-126 (8.5 miles south), Valencia Boulevard/Magic Mountain Parkway (9 miles south) and Railroad Avenue/Lyons Avenue (12 miles south).

The number of trips to and from the proposed Project is forecast to include more than 50 peak hour trips at the Chiquito Canyon Road/SR-126 intersection (70 peak hour trips). The Valencia Boulevard/Magic Mountain Parkway intersection and the Railroad Avenue and Lyons Avenue intersection have less than 50 peak hour trips. Therefore, a CMP analysis of Chiquito Canyon Road/SR-126 intersection is required since the peak hour volume of the project trips exceeds 50.

The intersection LOS methodology specified by the CMP is identical to the methodology utilized by the County of Los Angeles Department of Public Works and this traffic study for County intersections. Table 4-15 summarizes the results of the intersection LOS analysis for the CMP intersection. As shown, the intersection would operate at an unacceptable LOS F before the addition of project traffic. The table shows that the project would not result in a significant impact the intersection and therefore would not require mitigation measures. While the project does not require mitigation measures at this intersection, the "Westside Bridge and Major Thoroughfare Construction Fee District Report" include improvements of the Chiquito Canyon and SR-126 intersection that would improve the intersection LOS from an LOS F to a LOS C in the AM peak hour and LOS D in the PM peak hour.

Table 4-15 ICU Summary - CMP Methodology

Location	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
110. Chiquito Canyon & SR-126				
- Existing Conditions	0.35	A	0.39	A
- Cumulative Conditions (2028) without Project	1.78	F	1.70	F
- Cumulative Conditions (2028) with Project	1.78	F	1.70	F
- Cumulative Conditions with Phased Plan Improvements[1]	0.78	C	0.82	D
[1] – "Westside Bridge and Major Thoroughfare Construction Fee District Report," Los Angeles County Department of Public Works, February 2011.				

With respect to the mainline freeway, the CMP monitoring locations nearest to the project site are the following:

- I-5 north of SR-126
- I-5 north of SR-14

As shown in Table 4-16, the proposed project is forecast to add 150 or more peak hour trips to both of these monitoring locations. At the segment of I-5 north of the SR-126 the project contributes a maximum of 772 vehicles per hour in the northbound direction and a maximum of 756 vehicles per hour in the southbound direction. At the I-5 segment north of SR-14, the project contributes a maximum of 182 vehicles per hour in the northbound direction and a maximum of 178 vehicles per hour in the southbound direction. The next two closest CMP freeway monitoring locations do not meet the CMP analysis criteria since the maximum number of project trips at those locations is less than 150 vehicles per hour during the peak hour. Freeway segment V/C at these CMP freeway segments are shown in the previously referenced Table 2-10 in Section 4.2.4.

Table 4-16 Freeway Volume Summary – CMP Monitoring Locations

Segment	Peak Hour Project Volumes			
	Northbound		Southbound	
	AM	PM	AM	PM
I-5 between Hasley Cyn & SR-126	**390**	**772**	**756**	**553**
I-5 between Calgrove & SR-14	92	**182**	**178**	130
Bold – exceeds CMP impact analysis criteria of 150 veh/hour				

4.4.2 Local and Regional Transit Systems

Another component of the CMP transportation impact analysis is a review of transit impacts; public transit in the Santa Clarita Valley includes both bus and commuter rail service. The CMP review is to include evidence that transit operators received the Notice of Preparation, identification of existing transit services near the project, estimation of the number of project trips assigned to transit, information on facilities and/or programs that will encourage public transit use, and an analysis of project impacts on transit service.

With respect to the Notice of Preparation, the project's environmental documentation will include evidence that the applicable transit operators (i.e., City of Santa Clarita Transit, Metro, and Metrolink) received the Notice of Preparation. Section 2.1.3 provides a summary of the existing transit services in the vicinity of the Project Site.

As to the estimated number of project transit trips, buildout of the project is forecast to generate approximately 35,477 ADT. To estimate the number of project trips that would use public transit, the number of project vehicle trips is multiplied by an occupancy factor (1.4), which is provided in the CMP, to determine total person trips. The number of person trips is then multiplied by the applicable MTA factor (3.5%), which is also provided in the CMP, to determine the number of transit trips generated by the project (presuming that SCT extends the existing transit routes into the site). Based on this calculation, the project would generate approximately 1,700 daily transit trips, as shown in Table 4-17.

Table 4-17 Transit Trip Summary

	Time Period		
	Daily	**AM Peak Hour**	**PM Peak Hour**
Vehicle Trips	35,477	2,870	3,500
Person Trips[1]	49,668	4,018	4,900
Factor to Transit Trips	3.5%	3.5%	3.5%
Total Transit Trips	1,738	141	172
[1]Person Trips = Vehicle Trips x 1.4 Sources: Congestion Management Program for Los Angeles County, 2002, 2004, and 2010.			

With respect to the project's impacts on transit service, while the County does not have LOS standards applicable to future development such as the proposed project, the demand for transit service that would result from the project (approximately 140 to 170 peak hour trips as shown in the previously referenced (Table 4-17), has the potential to impact transit services.

The project would facilitate the use of public transit by providing areas designated for bus stops in accordance with County standards and transit provider requirements. It is anticipated that, over time, the local bus service will expand as additional development occurs within the valley. Meanwhile, the current transit arrangement is anticipated to continue to serve local residents of the area, connecting residential areas with employment and commercial centers.

With respect to commuter rail, Metrolink, governed by the Southern California Regional Rail Authority (SCRAA), provides commuter rail service between the Antelope Valley and Downtown Los Angeles, and also links Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties with transfer service between the bus and rail systems. The Metrolink station closest to the project site is located along Soledad Canyon Road east of Bouquet Canyon Road in the City of Santa Clarita. A second Metrolink station is located along Railroad Avenue just south of Lyons Canyon Road. Long-range plans include a potential Metrolink extension along the SR-126 corridor

4.5 PHASING ANALYSIS

This section presents the findings of a phasing analysis conducted for the project. The project is anticipated to be constructed in phases; the first phase includes VTTM 73336 and the second phase would be full buildout.

For purposes of the phasing analysis, various amounts of project development were tested. One scenario analyzed the following amounts of project development:

- 325 Single Family Residential Units
- 1,300 Multi-Family Residential Units
- 400 Multi-Family Residential Units

Note that the amount of project development listed above would accommodate VTTM 73336 as currently proposed. The following table summarizes the LOS based on the aforementioned amount of development:

Table 4-18 ICU and LOS Summary – Existing plus Project Phase I

	Existing				Existing plus Phase 1				Difference	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
Location	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
1. The Old Road & I-5 SB Ramps	0.41	A	0.39	A	0.64	B	0.42	A	0.23	0.03
2. The Old Rd & Sloan/Lake Hughes	0.34	A	0.36	A	0.57	A	0.45	A	0.23	0.09
3. 1-5 NB Ramps & Lake Hughes	0.31	A	0.41	A	0.47	A	0.62	B	0.16	0.21
4. Castaic & Lake Hughes	0.31	A	0.37	A	0.47	A	0.55	A	0.16	0.18
5. Ridge Route and Lake Hughes	0.32	A	0.19	A	0.66	B	0.62	B	0.34	0.43
6. The Old Road & Parker	0.45	A	0.42	A	0.47	A	0.47	A	0.03	0.05
7. I-5 SB On Ramp & Parker	0.60	A	0.52	A	0.72	C	0.64	B	0.12	0.12
8. I-5 NB Off Ramp & Ridge Route	0.46	A	0.55	A	0.59	A	0.72	C	0.13	0.17
9. Castaic & Ridge Route	0.33	A	0.41	A	0.42	A	0.50	A	0.09	0.09

As shown in the above table, with this first phase of development, most intersections within the study area continue to operate at LOS B or better. The locations closest to being impacted are the on and off-ramp intersections at Ridge Route/Parker Road, which are forecast to operate at LOS C with a peak hour ICU of 0.72, but would not be significantly impacted by the first phase of development based on the County's significant impact criteria.

5.0 TRAFFIC SIGNAL WARRANT ANALYSIS

The following sections presents the results of traffic signal warrant analyses conducted for intersections within the project site (referred to here as on-site) as well as intersections in the local study area (referred to here as off-site).

5.1 ON-SITE TRAFFIC SIGNAL WARRANT ANALYSIS

A traffic signal warrant analysis was conducted for on-site intersections.

Traffic signal warrants are based on peak hour volumes as adopted by the Federal Highway Administration and Caltrans. For purposes of this analysis, on-site intersections along Ridge Route Road would have a speed limit greater than 40 mph. Therefore, the signal warrant analysis for intersections along Ridge Route Road would be based on the plotted data contained in the graph shown in Figure 5-1, which are for intersections where the posted speed on the major street is greater than 40 mph. Additionally, the southerly portion of Northlake Boulevard from Ridge Route Road to south of "E" Street would have a speed limit greater than 40 mph and therefore would also use the plotted data contained in the graph shown in Figure 5-1.

The remaining on-site roadways (not addressed above) would have speeds lower than 40 mph; therefore, the signal warrant analysis for the remaining on-site intersections is based on the plotted data contained in the graph shown in Figure 5-2, which are for intersections where the posted speed on the major street is lower than 40 mph.

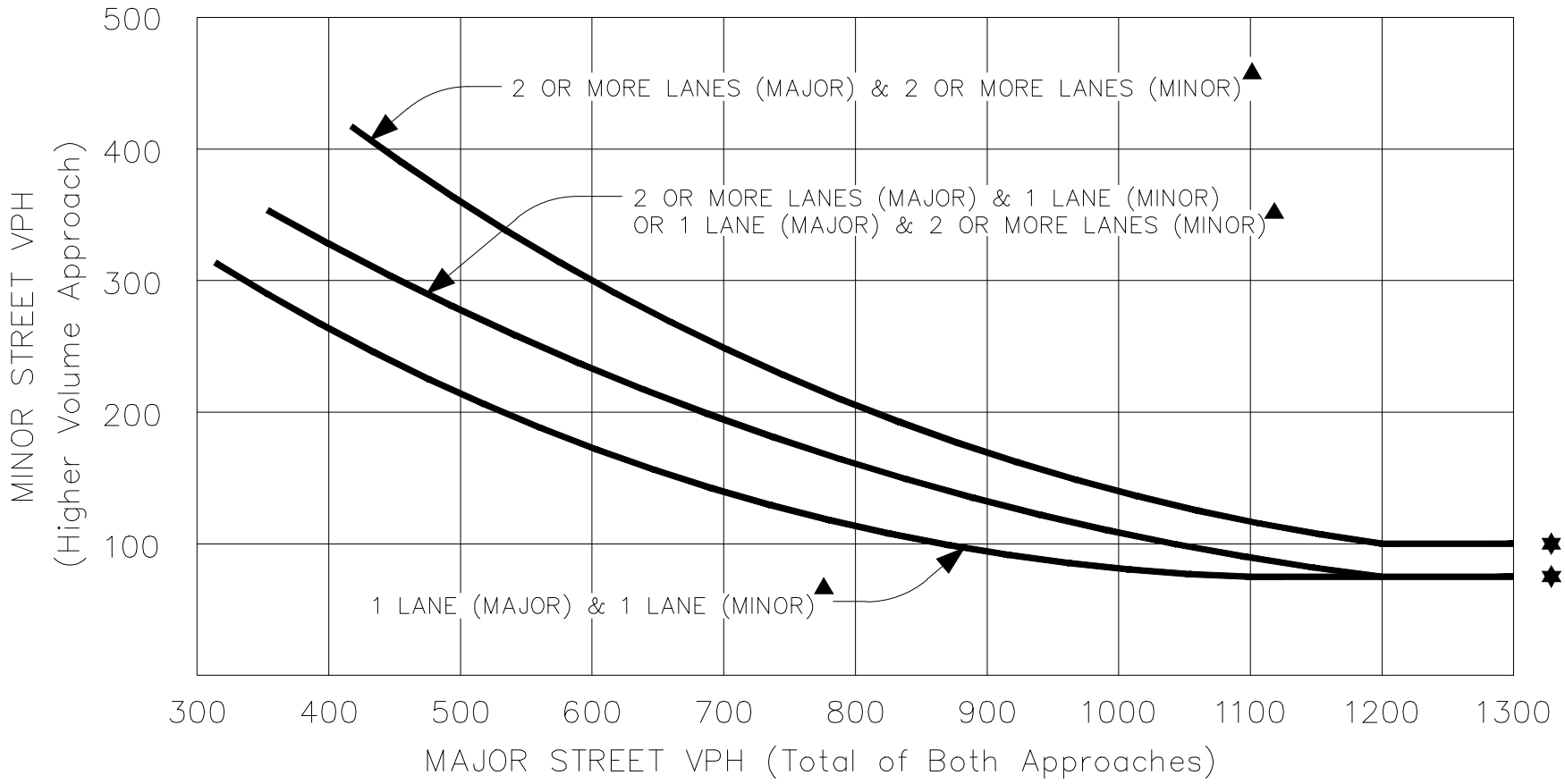
The results of the traffic signal warrant analysis for the on-site intersections are shown in Table 5-1.

As shown in Table 5-1 the following intersections warrant signalization:

10. Ridge Route Road at B Street
11. Ridge Route Road at Northlake Boulevard
12. Northlake Boulevard at A Street
17. Northlake Boulevard at E Street
22. Ridge Route at SS Street

5.2 OFF-SITE TRAFFIC SIGNAL WARRANT ANALYSIS

A traffic signal warrant analysis was conducted for intersections within the local study area for Existing Conditions plus Phase I of the Project and for 2028 Cumulative Conditions that includes full buildout of the Project.



○ AM peak hour Major Street Volume, Minor Street Volume

● PM peak hour Major Street Volume, Minor Street Volume

▲ Note: These curves are recommended for use in community less than 10,000 population or above 40 MPH on Major Street.

★ Note: 100 VPH applies as the lower threshold volume for a minor–street approach with two or more lanes, and 75 VPH applies as the lower threshold volume for a minor–street approach with one lane.

Source: MUTCD – Figure 4C–4

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Figure 5-1

Peak Hour Volume Signal Warrant - Higher Speeds

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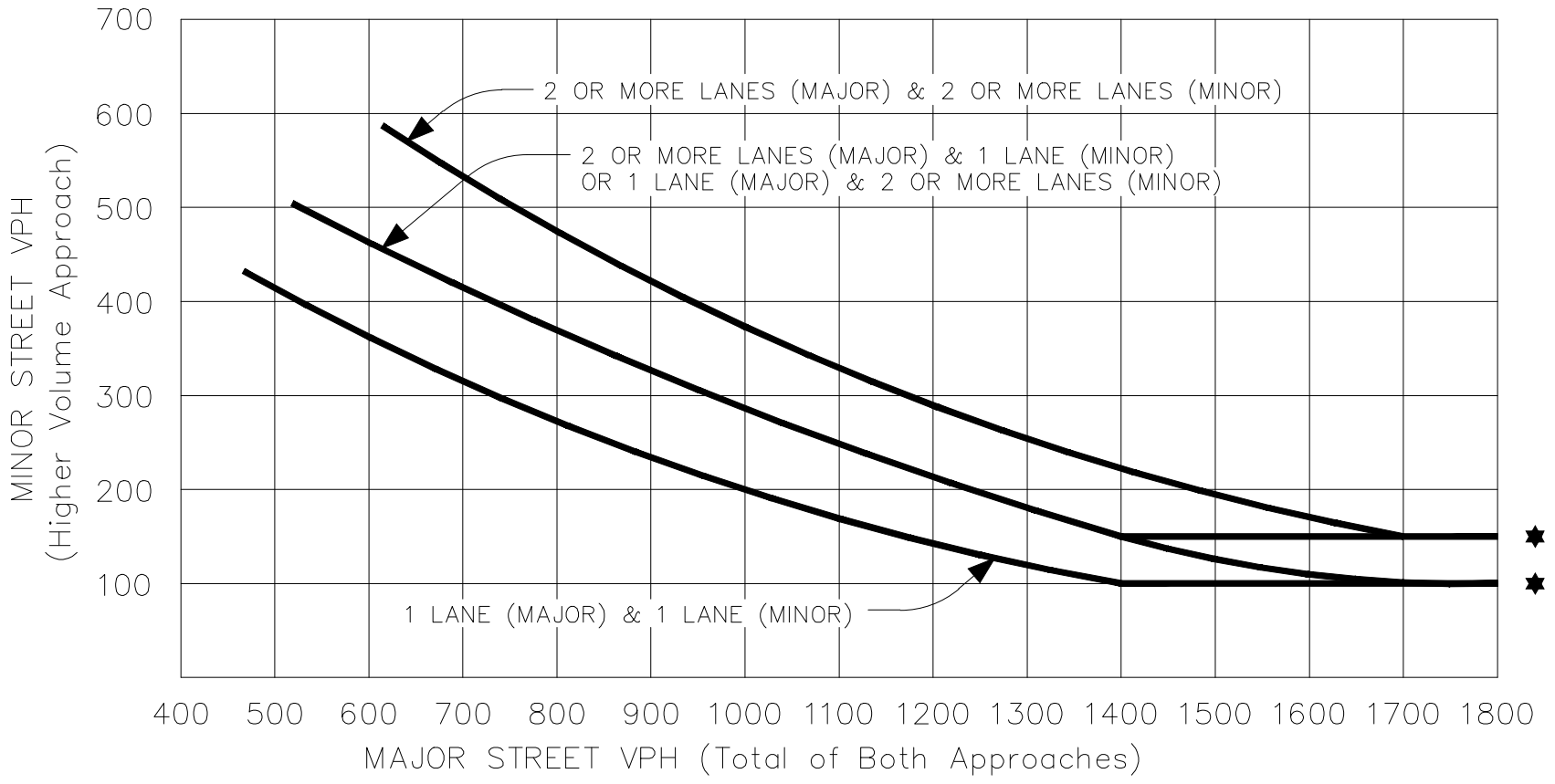

★ Note: 150 VPH applies as the lower threshold volume for a minor–street approach with two or more lanes, and 100 VPH applies as the lower threshold volume for a minor–street approach with one lane.

Source: MUTCD – Figure 4C–3

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Figure 5-2

Peak Hour Volume Signal Warrant - Lower Speeds

5.3

Table 5-1 Signal Warrant Summary – On-Site

Intersection	Criteria	Direction	AM Peak Hour	PM Peak Hour
10. Ridge Route & B Street	Higher speed			
Major Approach	(Figure 5-1)	SB	1,360	980
		NB	870	1,670
		Total	2,230	2,650
Minor Approach		WB	370	170
		EB	0	0
		Total	370	170
Satisfies Warrant			Yes	Yes
11. Ridge Route & Northlake	Higher speed			
Major Approach	(Figure 5-1)	WB	1,270	750
		EB	0	0
		Total	1,270	750
Minor Approach		SB	40	30
		NB	640	1,220
		Total	680	1,250
Satisfies Warrant			Yes	Yes
12. Northlake & A Street	Higher Speed			
Major Approach	(Figure 5-1)	SB	1,020	520
		NB	640	1,180
		Total	1,660	1,700
Minor Approach		WB	290	220
		EB	30	70
		Total	320	290
Satisfies Warrant			Yes	Yes
13. A Street & B Street	Lower speed			
Major Approach	(Figure 5-2)	WB	420	270
		EB	180	290
		Total	600	560
Minor Approach		SB	0	0
		NB	30	180
		Total	30	180
Satisfies Warrant			No	No
14. H Street & A Street	Lower speed			
Major Approach	(Figure 5-2)	WB	430	280
		EB	180	460
		Total	610	740
Minor Approach		SB	20	20
		NB	0	0
		Total	20	20
Satisfies Warrant			No	No
15. Northlake & AA Street	Lower speed			
Major Approach	(Figure 5-2)	WB	50	30
		EB	60	40
		Total	110	70
Minor Approach		SB	30	30
		NB	40	60
		Total	70	90
Satisfies Warrant			No	No

Table 5-1 Signal Warrant Summary – On-Site (Continued)

Intersection	Criteria	Direction	AM Peak Hour	PM Peak Hour
17. Northlake & E St	Higher speed			
Major Approach	(Figure 5-1)	SB	450	200
		NB	470	650
		Total	920	850
Minor Approach		WB	320	210
		EB	0	0
		Total	320	210
Satisfies Warrant			Yes	Yes
18. H St & E St	Lower speed			
Major Approach	(Figure 5-2)	WB	320	210
		EB	110	360
		Total	430	570
Minor Approach		SB	0	0
		NB	20	20
		Total	20	20
Satisfies Warrant			No	No
19. D St & A St	Lower speed			
Major Approach	(Figure 5-2)	SB	190	150
		NB	140	370
		Total	330	520
Minor Approach		WB	40	30
		EB	160	100
		Total	200	130
Satisfies Warrant			No	No
20. G St & A St	Lower speed			
Major Approach	(Figure 5-2)	SB	330	220
		NB	150	450
		Total	480	670
Minor Approach		WB	90	60
		EB	0	0
		Total	90	60
Satisfies Warrant			No	No
21. B St & P St	Lower speed			
Major Approach	(Figure 5-2)	SB	170	70
		NB	50	380
		Total	220	450
Minor Approach		WB	230	120
		EB	0	0
		Total	230	120
Satisfies Warrant			No	No
22. Ridge Route & SS St	Higher speed			
Major Approach	(Figure 5-1)	SB	1,290	760
		NB	840	1,310
		Total	2,130	2,070
Minor Approach		WB	0	0
		EB	100	390
		Total	100	390
Satisfies Warrant			Yes	Yes

Table 5-1 Signal Warrant Summary – On-Site (Continued)

Intersection	Criteria	Direction	AM Peak Hour	PM Peak Hour
23. D St & E St	Lower speed			
Major Approach	(Figure 5-2)	WB	160	100
		EB	110	360
		Total	270	460
Minor Approach		SB	190	140
		NB	30	30
		Total	220	170
Satisfies Warrant			No	No
24. A St & E St	Lower speed			
Major Approach	(Figure 5-2)	WB	0	0
		EB	80	260
		Total	80	260
Minor Approach		SB	150	100
		NB	40	20
		Total	190	120
Satisfies Warrant			No	No

For purposes of this traffic signal warrant analysis, Table 5-2 lists the speed limits assumed. The results of the traffic signal warrant analysis for 2028 Cumulative Conditions are summarized in Table 5-3 and the traffic signal warrant analysis for Existing plus Phase I of the Project are summarized in Table 5-4.

Per the request of the County, three additional off-site intersections were included in the signal warrant analysis; Ridge Route at Shadow Lake intersection, Ridge Route at Elk Ridge intersection, and Ridge Route at Castaic Lake intersection (labeled intersection 10 – 12 in Table 5-3, respectively).

Table 5-2 Speed Limits – Local Study Area

Roadway Description	Speed (mph)
Ridge Route Road north of Lake Hughes Road	40
Ridge Route Road south of Lake Hughes Road to I-5 Freeway	35
Lake Hughes Road	35
Castaic Road	35
Sloan Canyon Road	40
The Old Road north of I-5 SB Ramps	55
The Old Road from I-5 SB Ramps to Parker Road	45
Parker Road	40
Based on current posted speed limits	

Based on the results of the signal warrant analysis, 9 intersections would warrant a signal for 2028 Cumulative Conditions and 5 intersections would warrant a signal for Existing plus Phase I of the Project (see Table 5-5 for list of intersections). The traffic signals should be installed only when warranted by actual traffic counts.

Table 5-3 2028 Cumulative Conditions With Project Signal Warrant Summary – Off-Site

Intersection	Criteria	Direction	AM Peak Hour	PM Peak Hour
1. The Old Road & I-5 SB Ramps	Higher speed			
Major Approach	(Figure 5-1)	SB	510	370
		NB	900	990
		Total	1,410	1,360
Minor Approach		WB	410	290
		EB	10	10
		Total	420	300
Satisfies Warrant			Yes	Yes
3. I-5 NB Ramps & Lake Hughes	Lower speed			
Major Approach	(Figure 5-2)	WB	1,220	1,000
		EB	550	500
		Total	1,770	1,500
Minor Approach		SB	0	0
		NB	430	1,110
		Total	430	1,110
Satisfies Warrant			Yes	Yes
5. Ridge Route & Lake Hughes	Lower speed			
Major Approach	(Figure 5-2)	SB	2,150	1,300
		NB	710	990
		Total	2,860	2,290
Minor Approach		WB	230	220
		EB	730	1,030
		Total	960	1,250
Satisfies Warrant			Yes	Yes
6. The Old Road & Parker	Higher speed			
Major Approach	(Figure 5-1)	WB	440	640
		EB	420	450
		Total	860	1,090
Minor Approach		SB	170	160
		NB	250	320
		Total	420	480
Satisfies Warrant			Yes	Yes
7. I-5 SB Ramps & Parker	Lower speed			
Major Approach	(Figure 5-2)	WBL	1,130	1,040
Minor Approach		EBT	190	330
Satisfies Warrant		Total	Yes	Yes
8. I-5 NB Ramps & Ridge Route	Lower speed			
Major Approach	(Figure 5-2)	SB	0	0
		NB	1,090	1,990
		Total	1,090	1,990
Minor Approach		WB	1,360	1,270
		EB	190	330
		Total	1,550	1,600
Satisfies Warrant			Yes	Yes

(Continued)

Table 5-3 2028 Cumulative Conditions With Project Signal Warrant Summary – Off-Site (Continued)

Intersection	Criteria	Direction	AM Peak Hour	PM Peak Hour
9. Castaic & Ridge Route	Lower speed			
Major Approach	(Figure 5-2)	WB	1,130	1,020
		EB	1,090	1,930
		Total	2,220	2,950
Minor Approach		SB	220	240
		NB	140	330
		Total	360	570
Satisfies Warrant			Yes	Yes
10. Ridge Route & Shadow Lake	Lower speed			
Major Approach	(Figure 5-2)	SB	1,990	1,190
		NB	1,220	1,720
		Total	3,210	2,910
Minor Approach		WB	70	50
		EB	100	50
		Total	170	100
Satisfies Warrant			Yes	No
11. Ridge Route & Elk Ridge	Lower speed			
Major Approach	(Figure 5-2)	SB	2,050	1,230
		NB	1,240	1,770
		Total	3,290	3,000
Minor Approach		WB	50	30
		EB	110	60
		Total	160	90
Satisfies Warrant			Yes	No
12. Ridge Route & Castaic Lake	Lower speed			
Major Approach	(Figure 5-2)	SB	2,130	1,260
		NB	1,260	1,780
		Total	3,390	3,040
Minor Approach		WB	30	40
		EB	0	0
		Total	30	40
Satisfies Warrant			No	No

Table 5-4 Existing Plus Phase I Signal Warrant Summary – Off-Site

Intersection	Criteria	Direction	AM Peak Hour	PM Peak Hour
1. The Old Road & I-5 SB Ramps	Higher speed			
Major Approach	(Figure 5-1)	SB	272	179
		NB	792	605
		Total	1,064	784
Minor Approach		WB	114	153
		EB	3	7
		Total	117	160
Satisfies Warrant			Yes	No
3. I-5 NB Ramps & Lake Hughes	Lower speed			
Major Approach	(Figure 5-2)	WB	1,012	663
		EB	288	367
		Total	1,300	1,030
Minor Approach		SB	0	0
		NB	218	865
		Total	218	865
Satisfies Warrant			No	Yes
5. Ridge Route & Lake Hughes	Lower speed			
Major Approach	(Figure 5-2)	SB	1,239	568
		NB	220	379
		Total	1,459	947
Minor Approach		WB	30	50
		EB	294	676
		Total	324	726
Satisfies Warrant			Yes	Yes
6. The Old Road & Parker	Higher speed			
Major Approach	(Figure 5-1)	WB	206	360
		EB	355	184
		Total	561	544
Minor Approach		SB	146	124
		NB	215	222
		Total	361	346
Satisfies Warrant			Yes	Yes
7. I-5 SB Ramps & Parker	Lower speed			
Major Approach	(Figure 5-2)	WBL	578	494
Minor Approach		EBT	149	170
Satisfies Warrant		Total	No	No
8. I-5 NB Ramps & Ridge Route	Lower speed			
Major Approach	(Figure 5-2)	SB	0	0
		NB	330	911
		Total	330	911
Minor Approach		WB	721	657
		EB	148	170
		Total	869	827
Satisfies Warrant			No	Yes

(Continued)

Table 5-4 Existing Plus Phase I Signal Warrant Summary – Off-Site (Continued)

Intersection	Criteria	Direction	AM Peak Hour	PM Peak Hour
9. Castaic & Ridge Route	Lower speed			
Major Approach	(Figure 5-2)	WB	514	356
		EB	406	865
		Total	920	1,221
Minor Approach		SB	224	245
		NB	68	241
		Total	292	486
Satisfies Warrant			No	No
10. Ridge Route & Shadow Lake	Lower speed			
Major Approach	(Figure 5-2)	SB	1,167	474
		NB	462	910
		Total	1,629	1,384
Minor Approach		WB	41	26
		EB	56	22
		Total	97	48
Satisfies Warrant			No	No
11. Ridge Route & Elk Ridge	Lower speed			
Major Approach	(Figure 5-2)	SB	1,192	527
		NB	478	949
		Total	1,670	1,476
Minor Approach		WB	17	5
		EB	76	33
		Total	93	38
Satisfies Warrant			No	No
12. Ridge Route & Castaic Lake	Lower speed			
Major Approach	(Figure 5-2)	SB	1,273	540
		NB	497	975
		Total	1,770	1,515
Minor Approach		WB	12	17
		EB	0	0
		Total	12	17
Satisfies Warrant			No	No

Table 5-5 Signal Warrant Analysis Summary

Location	Jurisdiction	Existing Plus Phase I[1]	2028 Cumulative Conditions With Full Buildout[1]
Off-Site			
1. The Old Road & I-5 SB Ramps	Caltrans/County	Yes (AM)	Yes (AM/PM)
3. I-5 NB Ramps & Lake Hughes	Caltrans/County	Yes (PM)	Yes (AM/PM)
5. Ridge Route & Lake Hughes	County	Yes (AM/PM)	Yes (AM/PM)
6. The Old Road & Parker	County	Yes (AM/PM)	Yes (AM/PM)
7. I-5 SB Ramps & Parker	Caltrans/County	No	Yes (AM/PM)
8. I-5 NB Ramps & Ridge Route	Caltrans/County	Yes (PM)	Yes (AM/PM)
9. Castaic & Ridge Route	County	No	Yes (AM/PM)
10. Ridge Route & Shadow Lake	County	No	Yes (AM)
11. Ridge Route & Elk Ridge	County	No	Yes (AM)
12. Ridge Route & Castaic Lake	County	No	No
On-Site			
10. Ridge Route & B Street	County	No	Yes (AM/PM)
11. Ridge Route & Northlake	County	Yes	Yes (AM/PM)
12. Northlake at A Street	County	No	Yes (AM/PM)
17. Northlake at E Street	County	No	Yes (AM/PM)
22. Ridge Route at SS Street	County	No	Yes (AM/PM)

[1] Traffic signals should be installed when warranted based on actual traffic counts.

Appendix A ICU WORKSHEET OFF SITE

Peak hour intersection volume/capacity ratios are calculated by means of intersection capacity utilization (ICU) values. ICU calculations were performed for the intersections shown in Figure A-1.

The procedure is based on the critical movement methodology, and shows the amount of capacity utilized by each critical move. A "de-facto" right-turn lane is used in the ICU calculation for cases where a curb lane is wide enough to separately serve both through and right-turn traffic (typically with a width of 19 feet from curb to outside of through-lane with parking prohibited during peak periods). Such lanes are treated the same as striped right-turn lanes during the ICU calculations, but they are denoted on the ICU calculation worksheets using the letter "d" in place of a numerical entry for right-turn lanes.

The methodology also incorporates a check for right-turn capacity utilization. Both right-turn-on-green (RTOG) and right-turn-on-red (RTOR) capacity availability are calculated and checked against the total right-turn capacity need. If insufficient capacity is available, then an adjustment is made to the total capacity utilization value. The following example shows how this adjustment is made.

Example of Right-turn Capacity Utilization For Northbound Right

1. Right-Turn-On-Green (RTOG)

If NBT is critical move, then:
RTOG = V/C (NBT)
Otherwise,
RTOG = V/C (NBL) + V/C (SBT) - V/C (SBL)

2. Right-Turn-On-Red (RTOR)

If WBL is critical move, then:
RTOR = V/C (WBL)
Otherwise,
RTOR = V/C (EBL) + V/C (WBT) - V/C (EBT)

3. Right-Turn Overlap Adjustment

If the northbound right is assumed to overlap with the adjacent westbound left, adjustments to the RTOG and RTOR values are made as follows:

RTOG = RTOG + V/C (WBL)
RTOR = RTOR - V/C (WBL)

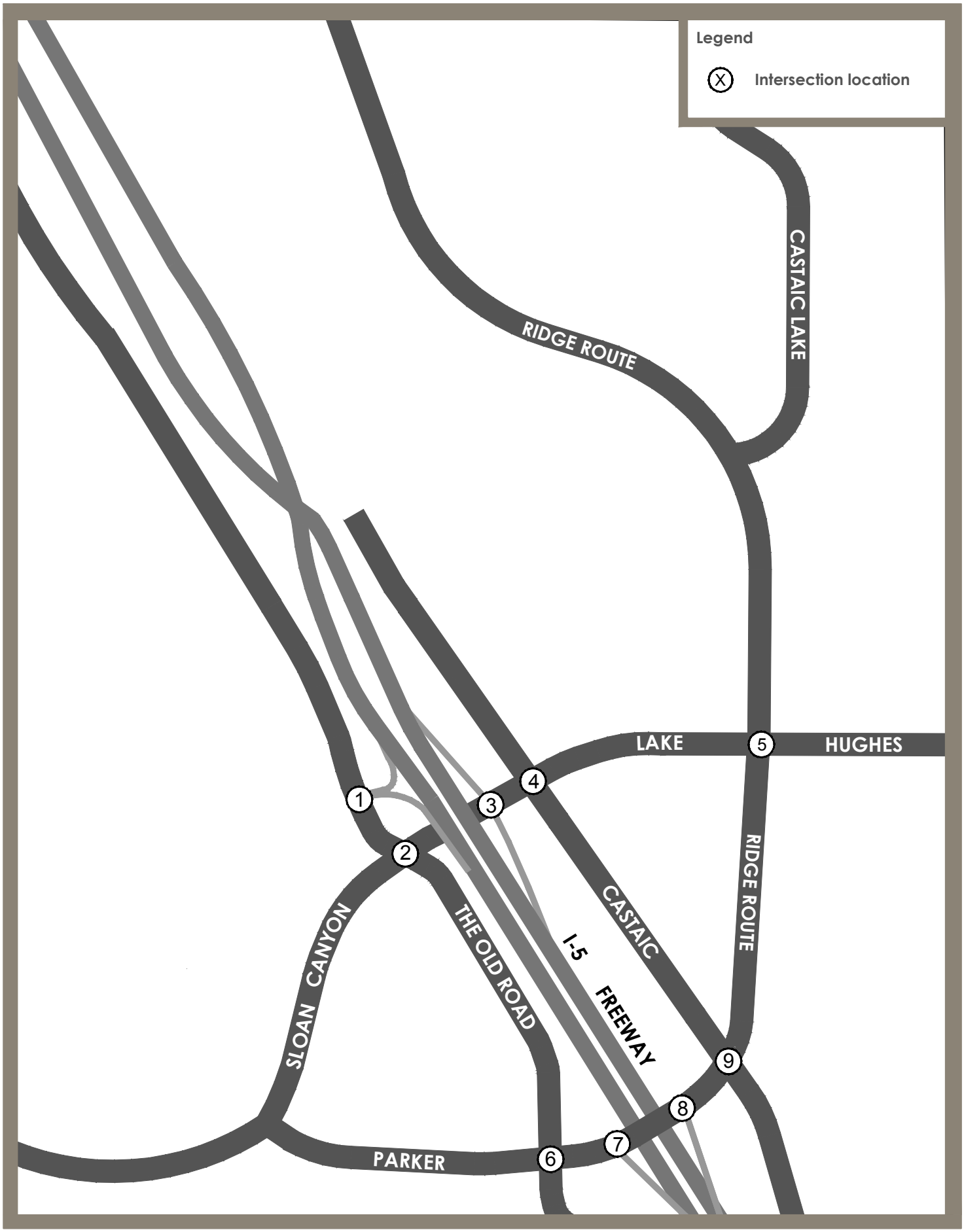

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Figure A-1

Project Local Study Area - Intersection Location Map

A.2

4. Total Right-Turn Capacity (RTC) Availability For NBR

RTC = RTOG + factor x RTOR
Where factor = RTOR saturation flow factor (typically 75%)

5. Right-turn Adjustment for ICU Calculation

Right-turn adjustment is then as follows: Additional ICU = V/C (NBR) - RTC

A zero or negative value indicates that adequate capacity is available and no adjustment is necessary. A positive value indicates that the available RTOR and RTOG capacity does not adequately accommodate the right-turn V/C, therefore the right-turn is essentially considered to be a critical movement. In such cases, the right-turn adjustment is noted on the ICU worksheet and it is included in the total capacity utilization value. When it is determined that a right-turn adjustment is required for more than one right-turn movement, the word "multi" is printed on the worksheet instead of an actual right-turn movement reference, and the right-turn adjustments are cumulatively added to the total capacity utilization value. In such cases, further operational evaluation is typically carried out to determine if under actual operational conditions, the critical right-turns would operate simultaneously, and therefore a right-turn adjustment credit should be applied.

Shared Lane V/C Methodology

For intersection approaches where shared usage of a lane is permitted by more than one turn movement (e.g., left/through, through/right, left/through/right), the individual turn volumes are evaluated to determine whether dedication of the shared lane is warranted to any one given turn movement. The following example demonstrates how this evaluation is carried out:

Example of Shared Lane Utilization for Shared Left/Through Lane

1. Average Lane Volume (ALV)

$$ALV = \frac{\text{Left-Turn Volume + Through Volume}}{\text{Total Left + Through Approach Lanes (including shared lane)}}.$$

2. ALV for Each Approach

$$ALV\ (Left) = \frac{\text{Left-Turn Volume}}{\text{Left Approach Lanes (including shared lane)}}.$$

$$ALV\ (Through) = \frac{\text{Through Volume}}{\text{Through Approach Lanes (including shared lane)}}.$$

3. Lane Dedication is Warranted

If ALV (Left) is greater than ALV then full dedication of the shared lane to the left-turn approach is warranted. Left-turn and through V/C ratios for this case are calculated as follows:

$$\text{V/C (Left)} = \frac{\text{Left-Turn Volume}}{\text{Left Approach Capacity (including shared lane)}}$$

$$\text{V/C (Through)} = \frac{\text{Through Volume}}{\text{Through Approach Capacity (excluding shared lane)}}$$

Similarly, if ALV (Through) is greater than ALV then full dedication to the through approach is warranted, and left-turn and through V/C ratios are calculated as follows:

$$\text{V/C (Left)} = \frac{\text{Left-Turn Volume}}{\text{Left Approach Capacity (excluding shared lane)}}$$

$$\text{V/C (Through)} = \frac{\text{Through Volume}}{\text{Through Approach Capacity (including shared lane)}}$$

4. Lane Dedication is Not Warranted

If ALV (Left) and ALV (Through) are both less than ALV, the left/through lane is assumed to be truly shared and each left, left/through or through approach lane carries an evenly distributed volume of traffic equal to ALV. A combined left/through V/C ratio is calculated as follows:

$$\text{V/C (Left/Through)} = \frac{\text{Left-Turn Volume + Through Volume}}{\text{Total Left + Through Approach Capacity (including shared lane)}}$$

This V/C (Left/Through) ratio is assigned as the V/C (Through) ratio for the critical movement analysis and ICU summary listing.

If split phasing has not been designated for this approach, the relative proportion of V/C (Through) that is attributed to the left-turn volume is estimated as follows:

If approach has more than one left-turn (including shared lane), then:

$$\text{V/C (Left)} = \text{V/C (Through)}$$

If approach has only one left-turn lane (shared lane), then:

$$\text{V/C (Left)} = \frac{\text{Left-Turn Volume}}{\text{Single Approach Lane Capacity}}$$

If this left-turn movement is determined to be a critical movement, the V/C (Left) value is posted in brackets on the ICU summary printout.

These same steps are carried out for shared through/right lanes. If full dedication of a shared through/right lane to the right-turn movement is warranted, the right-turn V/C value calculated in step three is checked against the RTOR and RTOG capacity availability if the option to include right-turns in the V/C ratio calculations is selected. If the V/C value that is determined using the shared lane methodology described here is reduced due to RTOR and RTOG capacity availability, the V/C value for the through/right lanes is posted in brackets.

When an approach contains more than one shared lane (e.g., left/through and through/right), steps one and two listed above are carried out for the three turn movements combined. Step four is carried out if dedication is not warranted for either of the shared lanes. If dedication of one of the shared lanes is warranted to one movement or another, step three is carried out for the two movements involved, and then steps one through four are repeated for the two movements involved in the other shared lane.

1. Old Road & I-5 SB On/Off Ramps

Existing (2015)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	107	.07*	273	.17*
NBR	1	1600	297	.19	181	.11
SBL	1	1600	158	.10*	80	.05*
SBT	1	1600	110	.07	72	.05
SBR	0	0	1		6	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	1	1600	3	.00	7	.00
WBL	1	1600	108	.07*	108	.07*
WBT	0	0	0		0	
WBR	1	1600	0	.00	3	.00
Right Turn Adjustment			NBR	.07*		
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.41**		**.39**

Existing plus Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	144	.09*	303	.19*
NBR	1	1600	780	.49	529	.33
SBL	1	1600	158	.10*	80	.05*
SBT	1	1600	130	.08	112	.07
SBR	0	0	1		6	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	1	1600	3	.00	7	.00
WBL	1	1600	149	.09*	187	.12*
WBT	0	0	0		0	
WBR	1	1600	0	.00	3	.00
Right Turn Adjustment			NBR	.33*	NBR	.05*
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.71**		**.51**

Existing plus Project Phase 1

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	128	.08*	285	.18*
NBR	1	1600	664	.42	320	.20
SBL	1	1600	158	.10*	80	.05*
SBT	1	1600	113	.07	93	.06
SBR	0	0	1		6	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	1	1600	3	.00	7	.00
WBL	1	1600	114	.07*	150	.09*
WBT	0	0	0		0	
WBR	1	1600	0	.00	3	.00
Right Turn Adjustment			NBR	.29*		
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.64**		**.42**

1. Sloan/Old Road & I-5 SB Ramps

2028 No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	110	.07*	430	.27*
NBR	1	1600	330	.21	220	.14
SBL	1	1600	250	.16*	160	.10*
SBT	1	1600	230	.15	180	.12
SBR	0	0	10		10	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	1	1600	10	.01	10	.01
WBL	1	1600	230	.14*	180	.11*
WBT	0	0	0		0	
WBR	1	1600	140	.09	70	.04
Right Turn Adjustment			NBR	.03*		
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.50**		**.58**

2028 With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	130	.08*	450	.28*
NBR	1	1600	770	.48	540	.34
SBL	1	1600	250	.16*	160	.10*
SBT	1	1600	250	.16	200	.13
SBR	0	0	10		10	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	1	1600	10	.01	10	.01
WBL	1	1600	270	.17*	220	.14*
WBT	0	0	0		0	
WBR	1	1600	140	.09	70	.04
Right Turn Adjustment			NBR	.27*		
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.78**		**.62**

2028 With Project + Mitigation

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	130	.08*	450	.28*
NBR	1	1600	770	.48	540	.34
SBL	1	1600	250	.16*	160	.10*
SBT	1	1600	250	.16	200	.13
SBR	0	0	10		10	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	1	1600	10	.01	10	.01
WBL	1	1600	270	.17*	220	.14*
WBT	0	0	0		0	
WBR	1	1600	140	.09	70	.04
Right Turn Adjustment			NBR	.23*		
Clearance Interval				.10*		.10*
Note: Assumes Right-Turn Overlap for NBR						
TOTAL CAPACITY UTILIZATION				**.74**		**.62**

2. Old Road & Sloan/Lake Hughes

Existing (2015)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	10	.01	22	.01
NBT	1	1600	23	.01*	41	.03*
NBR	1	1600	62	.04	50	.03
SBL	1	1600	142	.09*	115	.07*
SBT	1	1600	43	.03	42	.03
SBR	1	1600	8	.01	17	.01
EBL	1	1600	31	.02	42	.03*
EBT	1	1600	60	.05*	50	.04
EBR	0	0	16		21	
WBL	1	1600	46	.03*	40	.03
WBT	1	1600	80	.05	144	.09*
WBR	1	1600	315	.20	317	.20
Right Turn Adjustment			Multi	.06*	WBR	.04*
Clearance Interval				.10*		.10*

Note: Assumes Right-Turn Overlap for WBR

TOTAL CAPACITY UTILIZATION **.34** **.36**

Existing plus Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	10	.01	22	.01
NBT	1	1600	23	.01*	41	.03*
NBR	1	1600	82	.05	90	.06
SBL	1	1600	203	.13*	234	.15*
SBT	1	1600	43	.03	42	.03
SBR	1	1600	8	.01	17	.01
EBL	1	1600	31	.02*	42	.03*
EBT	1	1600	111	.08	149	.11
EBR	0	0	16		21	
WBL	1	1600	83	.05	70	.04
WBT	1	1600	192	.12*	220	.14*
WBR	1	1600	836	.52	695	.43
Right Turn Adjustment			WBR	.27*	WBR	.14*
Clearance Interval				.10*		.10*

Note: Assumes Right-Turn Overlap for WBR

TOTAL CAPACITY UTILIZATION **.65** **.59**

Existing plus Project Phase 1

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	10	.01	22	.01
NBT	1	1600	23	.01*	41	.03*
NBR	1	1600	65	.04	71	.04
SBL	1	1600	151	.09*	178	.11*
SBT	1	1600	43	.03	42	.03
SBR	1	1600	8	.01	17	.01
EBL	1	1600	31	.02*	42	.03*
EBT	1	1600	67	.05	103	.08
EBR	0	0	16		21	
WBL	1	1600	67	.04	52	.03
WBT	1	1600	131	.08*	173	.11*
WBR	1	1600	703	.44	467	.29
Right Turn Adjustment			WBR	.27*	WBR	.07*
Clearance Interval				.10*		.10*

Note: Assumes Right-Turn Overlap for WBR

TOTAL CAPACITY UTILIZATION **.57** **.45**

2. Old Road & Sloan/Lake Hughes

2028 No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	10	.01	20	.01
NBT	1	1600	30	.02*	50	.03*
NBR	1	1600	80	.05	70	.04
SBL	1	1600	230	.14*	220	.14*
SBT	1	1600	110	.07	90	.06
SBR	1	1600	120	.08	50	.03
EBL	1	1600	30	.02	50	.03*
EBT	1	1600	150	.11*	120	.09
EBR	0	0	20		20	
WBL	1	1600	50	.03*	40	.03
WBT	1	1600	90	.06	160	.10*
WBR	1	1600	450	.28	580	.36
Right Turn Adjustment		Multi	.03*	WBR	.12*	
Clearance Interval			.10*		.10*	

Note: Assumes Right-Turn Overlap for WBR

TOTAL CAPACITY UTILIZATION **.43** **.52**

2028 With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	10	.01	20	.01
NBT	1	1600	30	.02*	50	.03*
NBR	1	1600	100	.06	70	.04
SBL	1	1600	290	.18*	290	.18*
SBT	1	1600	110	.07	90	.06
SBR	1	1600	120	.08	50	.03
EBL	1	1600	30	.02	50	.03
EBT	1	1600	160	.11*	140	.10*
EBR	0	0	20		20	
WBL	1	1600	50	.03*	60	.04*
WBT	1	1600	130	.08	180	.11
WBR	1	1600	910	.57	910	.57
Right Turn Adjustment		Multi	.29*	WBR	.28*	
Clearance Interval			.10*		.10*	

Note: Assumes Right-Turn Overlap for WBR

TOTAL CAPACITY UTILIZATION **.73** **.73**

3. I-5 NB On/Off Ramps & Lake Hughes

Existing (2015)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	61	{.04}*	259	{.16}*
NBT	1	1600	1	.04	1	.16
NBR	1	1600	109	.07	263	.16
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	1	1600	18	.01*	17	.01*
EBT	2	3200	251	.08	213	.07
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3200	393	.16*	261	.14*
WBR	0	0	118		188	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.31** **.41**

Existing plus Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	61	{.04}*	259	{.16}*
NBT	1	1600	1	.04	1	.16
NBR	1	1600	362	.23	710	.44
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	1	1600	18	.01*	17	.01*
EBT	2	3200	383	.12	471	.15
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3200	1062	.39*	730	.31*
WBR	0	0	192		249	
Right Turn Adjustment					NBR	.15*
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.54** **.73**

Existing plus Project Phase 1

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	61	{.04}*	259	{.16}*
NBT	1	1600	1	.04	1	.16
NBR	1	1600	156	.10	605	.38
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	1	1600	18	.01*	17	.01*
EBT	2	3200	270	.08	350	.11
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3200	853	.32*	452	.21*
WBR	0	0	159		211	
Right Turn Adjustment					NBR	.14*
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.47** **.62**

3. I-5 NB Ramps & Lake Hughes

2028 No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	70		420	
NBT	1	1600	10	.05*	10	.27*
NBR	1	1600	120	.08	270	.17
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	1	1600	200	.13*	140	.09*
EBT	2	3200	260	.08	270	.08
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3200	520	.21*	360	.19*
WBR	0	0	150		240	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.49** **.65**

2028 With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	70		420	
NBT	1	1600	10	.05*	10	.27*
NBR	1	1600	350	.22	680	.43
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	1	1600	200	.13*	140	.09*
EBT	2	3200	350	.11	360	.11
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3200	1020	.38*	730	.31*
WBR	0	0	200		270	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.66** **.77**

2028 With Project + Mitigation

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1.5		70	.02*	420	{.16}*
NBT	0	4800	10		10	{.16}
NBR	1.5		350		680	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	1	1600	200	.13*	140	.09*
EBT	2	3200	350	.11	360	.11
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3200	1020	.38*	730	.31*
WBR	0	0	200		270	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.63** **.66**

4. Castaic & Lake Hughes

Existing (2015)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	133	.08*	217	.14*
NBT	2	3200	27	.01	46	.01
NBR	1	1600	23	.01	41	.03
SBL	1	1600	14	.01	31	.02
SBT	2	3200	24	.01*	42	.01*
SBR	1	1600	37	.02	99	.06
EBL	2	2880	81	.03*	107	.04
EBT	2	3200	152	.09	215	.11*
EBR	0	0	123		142	
WBL	1	1600	41	.03	20	.01*
WBT	2	3200	293	.09*	123	.04
WBR	1	1600	24	.02	31	.02
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.31**		**.37**

Existing plus Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	133	.08*	217	.14*
NBT	2	3200	27	.01	46	.01
NBR	1	1600	94	.06	180	.11
SBL	1	1600	34	.02	71	.04
SBT	2	3200	24	.01*	42	.01*
SBR	1	1600	37	.02	99	.06
EBL	2	2880	81	.03*	107	.04
EBT	2	3200	537	.21	920	.33*
EBR	0	0	123		142	
WBL	1	1600	190	.12	126	.08*
WBT	2	3200	1037	.32*	653	.20
WBR	1	1600	61	.04	61	.04
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.54**		**.66**

Existing plus Project Phase 1

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	133	.08*	217	.14*
NBT	2	3200	27	.01	46	.01
NBR	1	1600	33	.02	115	.07
SBL	1	1600	17	.01	52	.03
SBT	2	3200	24	.01*	42	.01*
SBR	1	1600	37	.02	99	.06
EBL	2	2880	81	.03*	107	.04
EBT	2	3200	218	.11	694	.26*
EBR	0	0	123		142	
WBL	1	1600	113	.07	60	.04*
WBT	2	3200	794	.25*	337	.11
WBR	1	1600	45	.03	43	.03
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.47**		**.55**

4. Castaic & Lake Hughes

2028 No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	140	.09*	220	.14*
NBT	2	3200	70	.02	60	.02
NBR	1	1600	20	.01	50	.03
SBL	1	1600	20	.01	40	.03
SBT	2	3200	40	.01*	40	.01*
SBR	1	1600	40	.03	100	.06
EBL	2	2880	80	.03*	110	.04*
EBT	2	3200	160	.09	220	.12
EBR	0	0	130		150	
WBL	1	1600	40	.03	20	.01
WBT	2	3200	420	.13*	280	.09*
WBR	1	1600	20	.01	30	.02
Right Turn Adjustment					SBR	.02*
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.36**		**.40**

2028 With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	140	.09*	220	.14*
NBT	2	3200	70	.02	60	.02
NBR	1	1600	20	.01	70	.04
SBL	1	1600	20	.01	40	.03
SBT	2	3200	40	.01*	40	.01*
SBR	1	1600	40	.03	100	.06
EBL	2	2880	80	.03*	110	.04
EBT	2	3200	480	.19	720	.27*
EBR	0	0	130		150	
WBL	1	1600	190	.12	20	.01*
WBT	2	3200	970	.30*	690	.22
WBR	1	1600	20	.01	30	.02
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.53**		**.53**

5. Ridge Route & Lake Hughes

Existing (2015)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	10	.01*	27	.02*
NBT	2	3200	165	.06	83	.04
NBR	0	0	12		33	
SBL	1	1600	1	.00	4	.00
SBT	2	3200	241	.08*	80	.03*
SBR	1	1600	194	.12	34	.02
EBL	1	1600	183	.11*	51	.03*
EBT	2	3200	13	.00	16	.01
EBR	d	1600	17	.01	25	.02
WBL	1	1600	12	.01	17	.01
WBT	2	3200	15	.01*	28	.01*
WBR	0	0	3		5	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.31** **.19**

Existing plus Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	10	.01*	27	.02
NBT	2	3200	479	.15	749	.24*
NBR	0	0	12		33	
SBL	1	1600	1	.00	4	.00
SBT	2	3200	873	.27*	519	.16
SBR	1	1600	1142	.71	715	.45
EBL	1	1600	669	.42*	955	.60*
EBT	2	3200	13	.00	16	.01
EBR	d	1600	17	.01	25	.02
WBL	1	1600	12	.01	17	.01
WBT	2	3200	15	.01*	28	.01*
WBR	0	0	3		5	
Right Turn Adjustment			SBR	.13*		
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.94** **.95**

Existing plus Project with Mitigation

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	10	.01*	27	.02
NBT	2	3200	479	.15	749	.23*
NBR	1	1600	12	.01	33	.02
SBL	1	1600	1	.00	4	.00
SBT	2	3200	873	.27*	519	.16
SBR	1	1600	1142	.71	715	.45
EBL	2	2880	669	.23*	955	.33*
EBT	1	1600	13	.01	16	.01
EBR	1	1600	17	.01	25	.02
WBL	1	1600	12	.01	17	.01
WBT	2	3200	15	.00*	28	.01*
WBR	1	1600	3	.00	5	.00
Right Turn Adjustment			SBR	.21*		
Clearance Interval				.10*		.10*

Note: Assumes Right-Turn Overlap for SBR

TOTAL CAPACITY UTILIZATION **.82** **.67**

Existing plus Project Phase 1

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	10	.01*	27	.02
NBT	2	3200	198	.07	319	.11*
NBR	0	0	12		33	
SBL	1	1600	1	.00	4	.00
SBT	2	3200	440	.14*	259	.08
SBR	1	1600	798	.50	305	.19
EBL	1	1600	264	.17*	635	.40*
EBT	2	3200	13	.00	16	.01
EBR	d	1600	17	.01	25	.02
WBL	1	1600	12	.01	17	.01
WBT	2	3200	15	.01*	28	.01*
WBR	0	0	3		5	
Right Turn Adjustment			SBR	.23*		
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.66** **.62**

5. Ridge Route & Lake Hughes

2028 No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	40	.03*	50	.03
NBT	2	3200	210	.08	100	.06*
NBR	0	0	40		100	
SBL	1	1600	10	.01	10	.01*
SBT	2	3200	300	.09*	100	.03
SBR	1	1600	240	.15	40	.03
EBL	1	1600	230	.14*	70	.04*
EBT	2	3200	10	.00	70	.02
EBR	d	1600	110	.07	50	.03
WBL	1	1600	80	.05	70	.04
WBT	2	3200	120	.04*	120	.04*
WBR	0	0	10		10	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.40**		**.25**

2028 With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	40	.03*	50	.03
NBT	2	3200	630	.21	840	.29*
NBR	0	0	40		100	
SBL	1	1600	30	.02	30	.02*
SBT	2	3200	1150	.36*	700	.22
SBR	1	1600	970	.61	560	.35
EBL	1	1600	610	.38*	910	.57*
EBT	2	3200	10	.00	70	.02
EBR	d	1600	110	.07	50	.03
WBL	1	1600	80	.05	70	.04
WBT	2	3200	120	.05*	120	.05*
WBR	0	0	30		30	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.92**		**1.03**

2028 With Project + Mitigation

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	40	.03*	50	.03
NBT	2	3200	630	.20	840	.26*
NBR	1	1600	40	.03	100	.06
SBL	1	1600	30	.02	30	.02*
SBT	2	3200	1150	.36*	700	.22
SBR	1	1600	970	.61	560	.35
EBL	2	2880	610	.21*	910	.32*
EBT	1	1600	10	.01	70	.04
EBR	1	1600	110	.07	50	.03
WBL	1	1600	80	.05	70	.04
WBT	2	3200	120	.04*	120	.04*
WBR	1	1600	30	.02	30	.02
Right Turn Adjustment			SBR	.04*		
Clearance Interval				.10*		.10*
Note: Assumes Right-Turn Overlap for SBR						
TOTAL CAPACITY UTILIZATION				**.78**		**.74**

6. Old Road & Parker

Existing (2015)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	55	.03	48	.03
NBT	1	1600	72	.10*	69	.09*
NBR	0	0	84		73	
SBL	1	1600	37	.02*	34	.02*
SBT	1	1600	86	.05	62	.04
SBR	d	1600	3	.00	16	.01
EBL	0	0	5		8	
EBT	1	1600	275	.18*	127	.08
EBR	1	1600	73	.05	27	.02
WBL	0	0	88	{.05}*	77	
WBT	1	1600	73	.11	215	.21*
WBR	0	0	14		50	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.45**		**.42**

Existing plus Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	55	.03	48	.03
NBT	1	1600	82	.12*	89	.13*
NBR	0	0	104		113	
SBL	1	1600	37	.02*	34	.02*
SBT	1	1600	105	.07	77	.05
SBR	d	1600	22	.01	31	.02
EBL	0	0	15		28	{.02}*
EBT	1	1600	285	.19*	147	.11
EBR	1	1600	73	.05	27	.02
WBL	0	0	125	{.08}*	107	
WBT	1	1600	92	.14	230	.24*
WBR	0	0	14		50	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.51**		**.51**

Existing plus Project Phase 1

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	55	.03	48	.03
NBT	1	1600	73	.10*	80	.11*
NBR	0	0	87		94	
SBL	1	1600	37	.02*	34	.02*
SBT	1	1600	96	.06	68	.04
SBR	d	1600	13	.01	22	.01
EBL	0	0	6		19	{.01}*
EBT	1	1600	276	.18*	138	.10
EBR	1	1600	73	.05	27	.02
WBL	0	0	109	{.07}*	89	
WBT	1	1600	83	.13	221	.23*
WBR	0	0	14		50	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.47**		**.47**

6. Old Road & Parker

2028 No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	60	.04	50	.03
NBT	1	1600	80	.11*	80	.15*
NBR	0	0	100		160	
SBL	1	1600	40	.03*	40	.03*
SBT	1	1600	120	.08	60	.04
SBR	d	1600	10	.01	40	.03
EBL	0	0	20		10	{.01}*
EBT	1	1600	310	.21*	400	.26
EBR	1	1600	80	.05	30	.02
WBL	0	0	110	{.07}*	120	
WBT	1	1600	290	.26	450	.39*
WBR	0	0	20		60	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.52**		**.68**

2028 With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	60	.04	50	.03
NBT	1	1600	80	.12*	80	.17*
NBR	0	0	110		190	
SBL	1	1600	40	.03*	40	.03*
SBT	1	1600	120	.08	60	.04
SBR	d	1600	10	.01	60	.04
EBL	0	0	30	{.02}*	10	{.01}*
EBT	1	1600	310	.21	410	.26
EBR	1	1600	80	.05	30	.02
WBL	0	0	130		130	
WBT	1	1600	290	.28*	450	.40*
WBR	0	0	20		60	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.55**		**.71**

7. I-5 SB On Ramp & Parker

Existing (2015)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	145	.25*	138	.16
EBR	0	0	262		116	
WBL	0	0	399	{.25}*	327	
WBT	1	1600	167	.35	352	.42*
WBR	0	0	0		0	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.60** **.52**

Existing plus Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	175	.27*	198	.20
EBR	0	0	262		116	
WBL	0	0	994	{.62}*	736	
WBT	1	1600	223	.76	397	.71*
WBR	0	0	0		0	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.99** **.81**

Existing plus Project with Mitigation

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	175	.11*	198	.12*
EBR	1	1600	262	.16	116	.07
WBL	2	2880	994	.35*	736	.26*
WBT	1	1600	223	.14	397	.25
WBR	0	0	0		0	
Right Turn Adjustment			EBR	.05*		
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.61** **.48**

Existing plus Project Phase 1

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	149	.26*	170	.18
EBR	0	0	262		116	
WBL	0	0	578	{.36}*	494	
WBT	1	1600	198	.49	369	.54*
WBR	0	0	0		0	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.72** **.64**

7. I-5 SB Ramp & Parker

2028 No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	180	.29*	280	.38
EBR	0	0	280		330	
WBL	0	0	600	{.37}*	650	
WBT	1	1600	420	.64	630	.80*
WBR	0	0	0		0	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.76** **.90**

2028 With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	190	.29*	330	.41*
EBR	0	0	280		330	
WBL	0	0	1130	{.71}*	1040	{.65}*
WBT	1	1600	450	.99	630	1.04
WBR	0	0	0		0	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **1.10** **1.16**

2028 With Project + Mitigation

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	190	.12*	330	.21*
EBR	1	1600	280	.18	330	.21
WBL	2	2880	1130	.39*	1040	.36*
WBT	1	1600	450	.28	630	.39
WBR	0	0	0		0	
Right Turn Adjustment			EBR	.06*		
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.67** **.67**

8. I-5 NB Ramps & Ridge Route

Existing (2015)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	59	.04*	205	.13*
NBT	0	0	0		0	
NBR	1	1600	241	.15	491	.31
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	144	.09	138	.09
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1600	512	.32*	472	.29*
WBR	0	0	0		0	
Right Turn Adjustment					NBR	.03*
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.46**		**.55**

Existing plus Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	59	.04*	205	.13*
NBT	0	0	0		0	
NBR	1	1600	535	.33	1117	.70
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	174	.11	198	.12
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1600	1163	.73*	926	.58*
WBR	0	0	0		0	
Right Turn Adjustment					NBR	.22*
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.87**		**1.03**

Existing plus Project with Mitigation

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	59	.04*	205	.13*
NBT	0	0	0		0	
NBR	2	3200	535	.17	1117	.35
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	174	.11	198	.12
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3200	1163	.36*	926	.29*
WBR	0	0	0		0	
Right Turn Adjustment					NBR	.09*
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.50**		**.61**

Existing plus Project Phase 1

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	59	.04*	205	.13*
NBT	0	0	0		0	
NBR	1	1600	271	.17	706	.44
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	148	.09	170	.11
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1600	721	.45*	657	.41*
WBR	0	0	0		0	
Right Turn Adjustment					NBR	.08*
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.59**		**.72**

8. I-5 NB Ramp & Ridge Route

2028 No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	230	.14*	400	.25*
NBT	0	0	0		0	
NBR	1	1600	590	.37	1010	.63
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	180	.11	280	.18
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1600	790	.49*	880	.55*
WBR	0	0	0		0	
Right Turn Adjustment					NBR	.10*
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.73**		**1.00**

2028 With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	230	.14*	400	.25*
NBT	0	0	0		0	
NBR	1	1600	860	.54	1590	.99
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	190	.12	330	.21
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1600	1360	.85*	1270	.79*
WBR	0	0	0		0	
Right Turn Adjustment					NBR	.30*
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**1.09**		**1.44**

2028 With Project + Mitigation

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	230	.14*	400	.25*
NBT	0	0	0		0	
NBR	2	3200	860	.27	1590	.50
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	190	.12	330	.21
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	3	4800	1360	.28*	1270	.26*
WBR	0	0	0		0	
Right Turn Adjustment			NBR	.01*	NBR	.21*
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.53**		**.82**

9. Castaic & Ridge Route

Existing (2015)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	42	.03*	145	.09*
NBT	1	1600	18	.01	46	.03
NBR	1	1600	4	.00	18	.01
SBL	1	1600	9	.01	18	.01
SBT	1	1600	12	.01*	38	.02*
SBR	1	1600	131	.08	148	.09
EBL	1	1600	124	.08*	227	.14*
EBT	2	3200	223	.08	244	.12
EBR	0	0	25		148	
WBL	1	1600	17	.01	16	.01
WBT	2	3200	315	.10*	150	.06*
WBR	0	0	14		28	
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.33**		**.41**

Existing plus Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	42	.03*	145	.09*
NBT	1	1600	33	.02	76	.05
NBR	1	1600	19	.01	48	.03
SBL	1	1600	9	.01	18	.01
SBT	1	1600	40	.03*	68	.04*
SBR	1	1600	252	.16	224	.14
EBL	1	1600	180	.11*	336	.21*
EBT	2	3200	491	.16	821	.30
EBR	0	0	25		148	
WBL	1	1600	45	.03	31	.02
WBT	2	3200	845	.27*	543	.18*
WBR	0	0	14		28	
Right Turn Adjustment			SBR	.05*		
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.59**		**.62**

Existing plus Project Phase 1

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	42	.03*	145	.09*
NBT	1	1600	20	.01	62	.04
NBR	1	1600	6	.00	34	.02
SBL	1	1600	9	.01	18	.01
SBT	1	1600	27	.02*	47	.03*
SBR	1	1600	188	.12	180	.11
EBL	1	1600	132	.08*	285	.18*
EBT	2	3200	249	.09	432	.18
EBR	0	0	25		148	
WBL	1	1600	32	.02	25	.02
WBT	2	3200	468	.15*	303	.10*
WBR	0	0	14		28	
Right Turn Adjustment			SBR	.04*		
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.42**		**.50**

9. Castaic & Ridge Route

2028 No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	80	.05*	220	.14*
NBT	1	1600	20	.01	50	.03
NBR	1	1600	20	.01	40	.03
SBL	1	1600	10	.01	20	.01
SBT	1	1600	10	.01*	40	.03*
SBR	1	1600	200	.13	180	.11
EBL	1	1600	170	.11*	290	.18
EBT	2	3200	560	.18	750	.31*
EBR	0	0	30		230	
WBL	1	1600	30	.02	60	.04*
WBT	2	3200	460	.15*	470	.16
WBR	0	0	10		30	
Right Turn Adjustment			SBR	.04*		
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.46**		**.62**

2028 With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	80	.05*	220	.14*
NBT	1	1600	20	.01	70	.04
NBR	1	1600	40	.03	40	.03
SBL	1	1600	10	.01	20	.01
SBT	1	1600	10	.01*	40	.03*
SBR	1	1600	350	.22	180	.11
EBL	1	1600	170	.11*	290	.18
EBT	2	3200	890	.29	1410	.51*
EBR	0	0	30		230	
WBL	1	1600	60	.04	90	.06*
WBT	2	3200	910	.29*	900	.29
WBR	0	0	10		30	
Right Turn Adjustment			SBR	.13*		
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.69**		**.84**

2028 With Project + Mitigation

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	2880	80	.03*	220	.08*
NBT	1	1600	20	.01	70	.04
NBR	1	1600	40	.03	40	.03
SBL	1	1600	10	.01	20	.01
SBT	1	1600	10	.01*	40	.03*
SBR	1	1600	350	.22	180	.11
EBL	1	1600	170	.11*	290	.18
EBT	2	3200	890	.28	1410	.44*
EBR	1	1600	30	.02	230	.14
WBL	1	1600	60	.04	90	.06*
WBT	2	3200	910	.29*	900	.29
WBR	0	0	10		30	
Right Turn Adjustment			SBR	.10*		
Clearance Interval				.10*		.10*
Note: Assumes Right-Turn Overlap for SBR						
TOTAL CAPACITY UTILIZATION				**.64**		**.71**

Appendix B ICU WORKSHEET ON SITE

10. Ridge Route & B st

On-Site (Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3200	830	.26	1300	.41*
NBR	1	1600	40	.03	370	.23
SBL	1	1600	10	.01	10	.01*
SBT	2	3200	1350	.42*	970	.30
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	2880	360	.13*	160	.06*
WBT	0	0	0		0	
WBR	1	1600	10	.01	10	.01
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.65** **.58**

11. Ridge Route & Northlake

On-Site (Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	10	.01*	30	.02*
NBR	2(f)		630		1190	
SBL	1	1600	10	.01*	10	.01*
SBT	2	3200	30	.01	20	.01
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	2880	1260	.44*	740	.26*
WBT	0	0	0		0	
WBR	1	1600	10	.01	10	.01
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.56** **.39**

12. Northlake & A St

On-Site (Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3200	460	.20	880	.36*
NBR	0	0	170		270	
SBL	1	1600	10	.01	10	.01*
SBT	2	3200	1000	.31*	500	.16
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1600	260	.16*	200	.13*
WBT	0	0	0		0	
WBR	1	1600	20	.01	10	.01
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.57** **.60**

13. B st & A St

On-Site (Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	20		10	
NBT	1	1600	0	.02*	0	.11*
NBR	0	0	10		170	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	170	.11	280	.18*
EBR	0	0	10		10	
WBL	0	0	160		60	{.04}*
WBT	1	1600	260	.26*	210	.17
WBR	0	0	0		0	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.38** **.43**

14. H St & A St

On-Site (Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	10		10	
SBT	1	1600	0	.01*	0	.01*
SBR	0	0	10		10	
EBL	0	0	10	{.01}*	10	
EBT	1	1600	170	.11	450	.29*
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1600	420	.27*	270	.18
WBR	0	0	10		10	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.39**		**.40**

15. Northlake & AA St

On-Site (Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	20		40	
NBT	1	1600	10	.03*	10	.04*
NBR	0	0	10		10	
SBL	0	0	10	{.01}*	10	{.01}*
SBT	1	1600	10	.02	10	.02
SBR	0	0	10		10	
EBL	0	0	10		10	
EBT	1	1600	10	.04*	10	.03*
EBR	0	0	40		20	
WBL	0	0	30	{.02}*	10	{.01}*
WBT	1	1600	10	.03	10	.02
WBR	0	0	10		10	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.20**		**.19**

16. Ridge Route & AA St

On-Site (Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	10	.01*	10	.03*
NBR	0	0	10		30	
SBL	0	0	10	{.01}*	10	{.01}*
SBT	1	1600	10	.01	10	.01
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	0	0	30		20	
WBT	1	1600	0	.03*	0	.02*
WBR	0	0	10		10	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.15**		**.16**

17. Northlake & E St

On-Site (Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	370	.29*	300	.41*
NBR	0	0	100		350	
SBL	0	0	10	{.01}*	10	{.01}*
SBT	1	1600	440	.28	190	.13
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	0	0	310		200	
WBT	1	1600	0	.20*	0	.13*
WBR	0	0	10		10	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.60**		**.65**

18. H St & E St

On-Site (Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	10	{.01}*	10	{.01}*
NBT	1	1600	0	.01	0	.01
NBR	0	0	10		10	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1600	100	.07	350	.23*
EBR	0	0	10		10	
WBL	0	0	10		10	{.01}*
WBT	1	1600	310	.20*	200	.13
WBR	0	0	0		0	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.31**		**.35**

19. A St & D St

On-Site (Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	20	{.01}*	120	
NBT	1	1600	100	.09	240	.23*
NBR	0	0	20		10	
SBL	0	0	10		10	{.01}*
SBT	1	1600	170	.12*	130	.09
SBR	0	0	10		10	
EBL	0	0	10		10	
EBT	1	1600	10	.10*	10	.06*
EBR	0	0	140		80	
WBL	0	0	20	{.01}*	10	{.01}*
WBT	1	1600	10	.03	10	.02
WBR	0	0	10		10	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.34**		**.41**

20. A St & G St

On-Site (Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	130	.09	360	.28*
NBR	0	0	20		90	
SBL	0	0	10		10	{.01}*
SBT	1	1600	320	.21*	210	.14
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	0	0	80		50	
WBT	1	1600	0	.06*	0	.04*
WBR	0	0	10		10	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.37**		**.43**

21. B St & P St

On-Site (Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1600	10	.03	170	.24*
NBR	0	0	40		210	
SBL	0	0	10		10	{.01}*
SBT	1	1600	160	.11*	60	.04
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	0	0	210		110	
WBT	1	1600	0	.14*	0	.08*
WBR	0	0	20		10	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.35**		**.43**

22. Ridge Route & SS St

On-Site (Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1600	220	.14*	140	.09
NBT	2	3200	620	.19	1170	.37*
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3200	1280	.40*	640	.20
SBR	1	1600	10	.01	120	.08
EBL	1	1600	20	.01*	50	.03*
EBT	0	0	0		0	
EBR	1	1600	80	.05	340	.21
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment					EBR	.05*
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.65** **.55**

23. D St & E St

On-Site (Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	10	{.01}*	10	{.01}*
NBT	1	1600	10	.02	10	.02
NBR	0	0	10		10	
SBL	0	0	10		10	
SBT	1	1600	10	.12*	10	.09*
SBR	0	0	170		120	
EBL	0	0	40	{.02}*	100	
EBT	1	1600	60	.07	240	.23*
EBR	0	0	10		20	
WBL	0	0	10		10	{.01}*
WBT	1	1600	140	.10*	80	.06
WBR	0	0	10		10	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.35** **.44**

24. A St & E St

On-Site (Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	20	{.01}*	10	{.01}*
NBT	1	1600	20	.03	10	.01
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	1	1600	10	.09*	10	.06*
SBR	0	0	140		90	
EBL	0	0	60		240	
EBT	1	1600	0	.05*	0	.16*
EBR	0	0	20		20	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.10*		.10*

TOTAL CAPACITY UTILIZATION **.25** **.33**

Appendix C TRAFFIC COUNT WORKSHEETS

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S- Direction: THE OLD ROAD
E-W Direction: I-5 SB RAMPS

File Name : h1501003
Site Code : 00000000
Start Date : 1/27/2015
Page No : 1

Groups Printed- Turning Movements

	THE OLD ROAD Southbound			I-5 SB RAMPS Westbound			THE OLD ROAD Northbound			DRIVEWAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00	0	26	42	3	0	23	53	18	0	0	0	0	165
07:15	0	18	44	0	0	28	74	11	0	0	0	0	175
07:30	0	31	52	0	0	25	73	22	0	1	0	0	204
07:45	1	37	35	0	0	27	84	38	0	2	0	0	224
Total	1	112	173	3	0	103	284	89	0	3	0	0	768
08:00	0	24	27	0	0	28	66	36	0	0	0	0	181
08:15	2	13	40	0	0	22	49	30	0	0	0	0	156
08:30	0	23	31	0	0	29	42	19	0	1	0	0	145
08:45	0	9	23	0	0	21	41	19	0	0	0	0	113
Total	2	69	121	0	0	100	198	104	0	1	0	0	595
16:00	0	13	9	1	0	38	40	43	0	0	0	0	144
16:15	1	5	11	0	0	32	34	61	0	1	1	0	146
16:30	1	19	20	0	0	23	39	60	0	0	0	0	162
16:45	2	21	24	0	0	30	46	71	0	0	0	0	194
Total	4	58	64	1	0	123	159	235	0	1	1	0	646
17:00	0	11	20	1	0	19	46	78	0	1	0	0	176
17:15	3	23	10	1	0	28	45	60	0	3	0	0	173
17:30	1	17	26	1	0	31	44	64	0	3	0	0	187
17:45	0	19	19	0	0	26	33	72	0	2	0	0	171
Total	4	70	75	3	0	104	168	274	0	9	0	0	707
Grand Total	11	309	433	7	0	430	809	702	0	14	1	0	2716
Apprch %	1.5	41	57.5	1.6	0	98.4	53.5	46.5	0	93.3	6.7	0	
Total %	0.4	11.4	15.9	0.3	0	15.8	29.8	25.8	0	0.5	0	0	

Transportation Studies, Inc.

2640 Walnut Avenue, Suite H
Tustin, CA. 92780

Location : RIDGE ROUTE ROAD
Segment : N/O CASTAIC LAKE
Client : STANTEC

Site: SANTA CLARIT
Date: 01/28/15
Day: Wednesday

Interval	NB				SB				Combined			
Begin	AM		PM		AM		PM		AM		PM	
12:00	3	9	18	116	2	5	16	88	5	14	34	204
12:15	1		17		0		18		1		35	
12:30	4		35		2		16		6		51	
12:45	1		46		1		38		2		84	
01:00	2	8	60	269	0	1	24	289	2	9	84	558
01:15	2		79		0		17		2		96	
01:30	1		81		1		150		2		231	
01:45	3		49		0		98		3		147	
02:00	0	1	32	118	1	3	36	129	1	4	68	247
02:15	0		23		1		29		1		52	
02:30	1		31		1		20		2		51	
02:45	0		32		0		44		0		76	
03:00	2	3	26	113	1	9	36	127	3	12	62	240
03:15	0		30		1		33		1		63	
03:30	0		19		2		30		2		49	
03:45	1		38		5		28		6		66	
04:00	0	1	35	114	3	18	23	107	3	19	58	221
04:15	0		25		4		34		4		59	
04:30	1		24		5		17		6		41	
04:45	0		30		6		33		6		63	
05:00	1	8	35	143	6	52	20	76	7	60	55	219
05:15	1		34		12		16		13		50	
05:30	0		38		18		15		18		53	
05:45	6		36		16		25		22		61	
06:00	6	30	35	125	23	103	15	53	29	133	50	178
06:15	4		35		21		18		25		53	
06:30	10		34		32		8		42		42	
06:45	10		21		27		12		37		33	
07:00	26	352	28	94	29	397	9	30	55	749	37	124
07:15	50		25		62		9		112		34	
07:30	139		19		128		3		267		22	
07:45	137		22		178		9		315		31	
08:00	33	97	23	65	61	152	10	36	94	249	33	101
08:15	28		14		32		6		60		20	
08:30	19		18		38		9		57		27	
08:45	17		10		21		11		38		21	
09:00	19	70	22	57	30	71	4	19	49	141	26	76
09:15	14		11		8		6		22		17	
09:30	19		14		15		4		34		18	
09:45	18		10		18		5		36		15	
10:00	12	59	11	27	28	81	4	12	40	140	15	39
10:15	7		6		13		5		20		11	
10:30	15		5		22		2		37		7	
10:45	25		5		18		1		43		6	
11:00	22	101	3	11	25	114	3	9	47	215	6	20
11:15	34		1		39		1		73		2	
11:30	18		5		32		4		50		9	
11:45	27		2		18		1		45		3	
Totals	739		1,252		1,006		975		1,745		2,227	
Split%	42.3		56.2		57.7		43.8					
Day Totals		1,991				1,981				3,972		
Day Splits		50.1				49.9						
Peak Hour	07:15		01:00		07:15		01:30		07:15		01:00	
Volume	359		269		429		313		788		558	
Factor	0.65		0.83		0.60		0.52		0.63		0.60	

* Data File : D1501039

Printed : 2/3/2015

Transportation Studies, Inc.

2640 Walnut Avenue, Suite H
Tustin, CA. 92780

Location: : RIDGE ROUTE ROAD
Segment: : N/O LAKE HUGHES ROAD
Client: : STANTEC

Site: SANTA CLARIT
Date: 01/28/15
Day: Wednesday

Interval	NB				SB				Combined			
Begin	AM		PM		AM		PM		AM		PM	
12:00	4	12	22	126	3	7	21	103	7	19	43	229
12:15	1		23		0		22		1		45	
12:30	3		34		2		20		5		54	
12:45	4		47		2		40		6		87	
01:00	2	7	65	295	1	3	36	307	3	10	101	602
01:15	2		88		0		23		2		111	
01:30	1		78		2		106		3		184	
01:45	2		64		0		142		2		206	
02:00	1	2	34	125	0	3	52	151	1	5	86	276
02:15	0		20		1		29		1		49	
02:30	1		32		2		26		3		58	
02:45	0		39		0		44		0		83	
03:00	2	3	29	126	0	7	46	144	2	10	75	270
03:15	0		31		2		34		2		65	
03:30	0		21		2		39		2		60	
03:45	1		45		3		25		4		70	
04:00	0	2	35	123	5	17	26	125	5	19	61	248
04:15	0		29		2		38		2		67	
04:30	2		24		4		29		6		53	
04:45	0		35		6		32		6		67	
05:00	1	26	37	148	7	54	21	81	8	80	58	229
05:15	6		35		11		18		17		53	
05:30	6		38		20		24		26		62	
05:45	13		38		16		18		29		56	
06:00	14	62	35	128	21	108	21	82	35	170	56	210
06:15	15		35		27		26		42		61	
06:30	16		34		32		21		48		55	
06:45	17		24		28		14		45		38	
07:00	28	367	26	91	26	354	15	51	54	721	41	142
07:15	54		26		52		16		106		42	
07:30	131		18		116		8		247		26	
07:45	154		21		160		12		314		33	
08:00	37	112	24	70	124	219	4	29	161	331	28	99
08:15	31		14		35		9		66		23	
08:30	24		18		30		9		54		27	
08:45	20		14		30		7		50		21	
09:00	25	85	20	61	27	81	5	27	52	166	25	88
09:15	17		16		20		10		37		26	
09:30	20		12		13		2		33		14	
09:45	23		13		21		10		44		23	
10:00	20	69	12	33	26	95	10	30	46	164	22	63
10:15	10		7		22		14		32		21	
10:30	17		8		23		6		40		14	
10:45	22		6		24		0		46		6	
11:00	32	121	3	12	22	132	1	8	54	253	4	20
11:15	34		2		32		0		66		2	
11:30	22		5		50		4		72		9	
11:45	33		2		28		3		61		5	
Totals	868		1,338		1,080		1,138		1,948		2,476	
Split%	44.6		54.0		55.4		46.0					
Day Totals		2,206				2,218				4,424		
Day Splits		49.9				50.1						
Peak Hour	07:15		01:00		07:15		01:30		07:15		01:00	
Volume	376		295		452		329		828		602	
Factor	0.61		0.84		0.71		0.58		0.66		0.73	

Data File : D1501040

Printed : 2/3/2015

Transportation Studies, Inc.

2640 Walnut Avenue, Suite H
Tustin, CA. 92780

Location : RIDGE ROUTE ROAD
Segment : N/O CASTAIC
Client : STANTEC

Site: SANTA CLARIT
Date: 01/28/15
Day: Wednesday

Interval	SB				NB				Combined			
Begin	AM		PM		AM		PM		AM		PM	
12:00	3	9	34	144	8	26	26	146	11	35	60	290
12:15	2		31		4		42		6		73	
12:30	1		35		7		44		8		79	
12:45	3		44		7		34		10		78	
01:00	2	3	41	177	3	10	43	209	5	13	84	386
01:15	0		32		2		65		2		97	
01:30	1		44		2		51		3		95	
01:45	0		60		3		50		3		110	
02:00	2	14	52	195	1	9	44	165	3	23	96	360
02:15	8		52		2		37		10		89	
02:30	3		55		1		32		4		87	
02:45	1		36		5		52		6		88	
03:00	4	20	60	182	3	14	43	186	7	34	103	368
03:15	1		34		3		44		4		78	
03:30	6		52		6		46		12		98	
03:45	9		36		2		53		11		89	
04:00	6	47	41	185	3	18	63	219	9	65	104	404
04:15	7		50		1		39		8		89	
04:30	12		38		8		55		20		93	
04:45	22		56		6		62		28		118	
05:00	25	134	45	158	0	32	60	223	25	166	105	381
05:15	25		40		5		54		30		94	
05:30	42		37		10		55		52		92	
05:45	42		36		17		54		59		90	
06:00	36	184	41	153	24	88	48	193	60	272	89	346
06:15	40		34		24		49		64		83	
06:30	51		40		18		52		69		92	
06:45	57		38		22		44		79		82	
07:00	54	322	30	96	28	181	41	149	82	503	71	245
07:15	70		30		29		38		99		68	
07:30	102		18		58		28		160		46	
07:45	96		18		66		42		162		60	
08:00	94	237	17	76	28	122	46	138	122	359	63	214
08:15	58		21		30		26		88		47	
08:30	43		22		26		40		69		62	
08:45	42		16		38		26		80		42	
09:00	42	140	5	42	26	91	34	120	68	231	39	162
09:15	31		18		16		38		47		56	
09:30	35		7		25		24		60		31	
09:45	32		12		24		24		56		36	
10:00	36	137	7	31	30	127	29	71	66	264	36	102
10:15	35		14		27		12		62		26	
10:30	42		5		36		19		78		24	
10:45	24		5		34		11		58		16	
11:00	27	161	4	16	28	128	11	41	55	289	15	57
11:15	40		5		33		7		73		12	
11:30	51		4		31		9		82		13	
11:45	43		3		36		14		79		17	
Totals	1,408		1,455		846		1,860		2,254		3,315	
Split%	62.5		43.9		37.5		56.1					
Day Totals		2,863				2,706				5,569		
Day Splits		51.4				48.6						
Peak Hour	07:15		01:45		07:30		04:30		07:15		04:30	
Volume	362		219		182		231		543		410	
Factor	0.89		0.91		0.69		0.93		0.84		0.87	

Data File : D1501041

Printed : 2/3/2015

Transportation Studies, Inc.

2640 Walnut Avenue, Suite H
Tustin, CA. 92780

Location: : RIDGE ROUTE ROAD
Segment: : E/O I-5 NB RAMPS
Client: : STANTEC

Site: SANTA CLARIT
Date: 01/28/15
Day: Wednesday

Interval	WB				EB				Combined			
Begin	AM		PM		AM		PM		AM		PM	
12:00	20	83	112	480	40	157	140	648	60	240	252	1,128
12:15	27		130		33		166		60		296	
12:30	12		124		40		164		52		288	
12:45	24		114		44		178		68		292	
01:00	12	53	106	456	24	112	170	711	36	165	276	1,167
01:15	9		104		39		196		48		300	
01:30	16		118		29		171		45		289	
01:45	16		128		20		174		36		302	
02:00	22	74	130	518	25	99	180	726	47	173	310	1,244
02:15	26		150		27		194		53		344	
02:30	18		126		28		164		46		290	
02:45	8		112		19		188		27		300	
03:00	18	137	143	526	20	126	212	765	38	263	355	1,291
03:15	44		130		36		188		80		318	
03:30	31		141		34		177		65		318	
03:45	44		112		36		188		80		300	
04:00	38	187	107	415	50	170	175	780	88	357	282	1,195
04:15	25		120		36		207		61		327	
04:30	58		87		48		182		106		269	
04:45	66		101		36		216		102		317	
05:00	62	280	150	501	38	235	224	769	100	515	374	1,270
05:15	71		126		56		189		127		315	
05:30	74		103		68		186		142		289	
05:45	73		122		73		170		146		292	
06:00	96	388	144	494	112	339	138	542	208	727	282	1,036
06:15	92		108		64		138		156		246	
06:30	96		122		86		154		182		276	
06:45	104		120		77		112		181		232	
07:00	96	564	84	316	90	494	143	531	186	1,058	227	847
07:15	136		82		101		146		237		228	
07:30	168		78		144		112		312		190	
07:45	164		72		159		130		323		202	
08:00	134	431	106	301	103	432	155	446	237	863	261	747
08:15	102		84		107		113		209		197	
08:30	90		62		92		83		182		145	
08:45	105		49		130		95		235		144	
09:00	94	402	66	226	105	407	106	362	199	809	172	588
09:15	98		54		78		92		176		146	
09:30	116		44		126		91		242		135	
09:45	94		62		98		73		192		135	
10:00	94	351	34	156	98	518	66	240	192	869	100	396
10:15	74		41		122		64		196		105	
10:30	101		50		148		72		249		122	
10:45	82		31		150		38		232		69	
11:00	94	448	39	116	130	548	43	166	224	996	82	282
11:15	116		27		118		36		234		63	
11:30	104		23		152		42		256		65	
11:45	134		27		148		45		282		72	
Totals	3,398		4,505		3,637		6,686		7,035		11,191	
Split%	48.3		40.3		51.7		59.7					
Day Totals		7,903				10,323				18,226		
Day Splits		43.4				56.6						
Peak Hour	07:15		01:45		10:15		04:15		07:15		04:45	
Volume	602		534		550		829		1,109		1,295	
Factor	0.90		0.89		0.92		0.93		0.86		0.87	

Data File : D1501042

Printed : 2/3/2015

Transportation Studies, Inc.

2640 Walnut Avenue, Suite H
Tustin, CA. 92780

Location: : RIDGE ROUTE ROAD
Segment: : BETWEEN I-5 RAMPS
Client: : STANTEC

Site: SANTA CLARIT
Date: 01/28/15
Day: Wednesday

Interval	EB				WB				Combined			
Begin	AM		PM		AM		PM		AM		PM	
12:00	12	32	72	292	38	151	148	671	50	183	220	963
12:15	8		80		61		196		69		276	
12:30	4		75		26		185		30		260	
12:45	8		65		26		142		34		207	
01:00	10	27	62	280	16	90	140	607	26	117	202	887
01:15	8		48		16		141		24		189	
01:30	6		96		21		150		27		246	
01:45	3		74		37		176		40		250	
02:00	4	7	90	356	38	129	186	683	42	136	276	1,039
02:15	1		70		45		184		46		254	
02:30	1		94		32		157		33		251	
02:45	1		102		14		156		15		258	
03:00	10	27	100	363	31	229	178	753	41	256	278	1,116
03:15	6		79		74		191		80		270	
03:30	7		86		54		214		61		300	
03:45	4		98		70		170		74		268	
04:00	8	27	92	460	67	297	154	668	75	324	246	1,128
04:15	1		126		35		206		36		332	
04:30	9		106		102		154		111		260	
04:45	9		136		93		154		102		290	
05:00	5	60	114	427	96	400	247	847	101	460	361	1,274
05:15	6		125		104		230		110		355	
05:30	19		92		92		164		111		256	
05:45	30		96		108		206		138		302	
06:00	32	124	74	334	127	502	239	757	159	626	313	1,091
06:15	40		84		119		160		159		244	
06:30	32		94		130		186		162		280	
06:45	20		82		126		172		146		254	
07:00	33	242	88	284	140	853	156	538	173	1,095	244	822
07:15	34		74		212		132		246		206	
07:30	94		68		217		128		311		196	
07:45	81		54		284		122		365		176	
08:00	71	253	44	224	182	587	162	451	253	840	206	675
08:15	72		59		139		109		211		168	
08:30	52		56		117		89		169		145	
08:45	58		65		149		91		207		156	
09:00	70	203	46	179	126	552	101	365	196	755	147	544
09:15	48		44		132		90		180		134	
09:30	38		50		160		72		198		122	
09:45	47		39		134		102		181		141	
10:00	56	225	32	126	156	499	52	243	212	724	84	369
10:15	45		34		90		64		135		98	
10:30	65		28		142		76		207		104	
10:45	59		32		111		51		170		83	
11:00	64	229	18	68	132	657	58	180	196	886	76	248
11:15	56		14		168		46		224		60	
11:30	63		23		161		36		224		59	
11:45	46		13		196		40		242		53	
Totals	1,456		3,393		4,946		6,763		6,402		10,156	
Split%	22.7		33.4		77.3		66.6					
Day Totals		4,849				11,709				16,558		
Day Splits		29.3				70.7						
Peak Hour	07:30		04:15		07:15		05:00		07:15		05:00	
Volume	318		482		895		847		1,175		1,274	
Factor	0.85		0.89		0.79		0.86		0.80		0.88	

Data File : D1501043

Printed : 2/3/2015

Transportation Studies, Inc.

2640 Walnut Avenue, Suite H
Tustin, CA. 92780

Location : SLOAN CANYON ROAD
Segment : E/O THE OLD ROAD
Client : STANTEC

Site: SANTA CLARIT
Date: 01/28/15
Day: Wednesday

Interval	EB				WB				Combined			
Begin	AM		PM		AM		PM		AM		PM	
12:00	23	54	76	320	18	42	146	627	41	96	222	947
12:15	12		87		16		179		28		266	
12:30	10		79		4		152		14		231	
12:45	9		78		4		150		13		228	
01:00	16	66	72	298	2	28	128	612	18	94	200	910
01:15	20		58		12		114		32		172	
01:30	12		86		12		185		24		271	
01:45	18		82		2		185		20		267	
02:00	14	58	70	309	10	46	121	502	24	104	191	811
02:15	14		49		10		122		24		171	
02:30	6		82		9		116		15		198	
02:45	24		108		17		143		41		251	
03:00	32	114	60	273	7	51	129	568	39	165	189	841
03:15	17		65		13		157		30		222	
03:30	36		72		20		144		56		216	
03:45	29		76		11		138		40		214	
04:00	17	111	68	295	12	101	158	518	29	212	226	813
04:15	32		78		34		120		66		198	
04:30	28		64		28		134		56		198	
04:45	34		85		27		106		61		191	
05:00	24	155	77	334	36	240	120	557	60	395	197	891
05:15	48		100		49		132		97		232	
05:30	40		78		69		150		109		228	
05:45	43		79		86		155		129		234	
06:00	40	163	64	288	70	378	148	497	110	541	212	785
06:15	43		70		94		111		137		181	
06:30	28		82		112		126		140		208	
06:45	52		72		102		112		154		184	
07:00	78	351	48	194	109	653	122	386	187	1,004	170	580
07:15	74		60		132		95		206		155	
07:30	104		46		200		84		304		130	
07:45	95		40		212		85		307		125	
08:00	85	301	62	199	174	494	68	238	259	795	130	437
08:15	68		47		116		60		184		107	
08:30	86		48		122		44		208		92	
08:45	62		42		82		66		144		108	
09:00	54	265	51	161	91	417	62	222	145	682	113	383
09:15	68		26		113		50		181		76	
09:30	63		40		101		56		164		96	
09:45	80		44		112		54		192		98	
10:00	67	254	24	145	104	461	32	130	171	715	56	275
10:15	58		24		109		32		167		56	
10:30	74		41		120		36		194		77	
10:45	55		56		128		30		183		86	
11:00	81	285	18	83	106	467	42	102	187	752	60	185
11:15	71		24		101		26		172		50	
11:30	53		19		116		22		169		41	
11:45	80		22		144		12		224		34	
Totals	2,177		2,899		3,378		4,959		5,555		7,858	
Split%	39.2		36.9		60.8		63.1					
Day Totals		5,076				8,337				13,413		
Day Splits		37.8				62.2						
Peak Hour	07:15		04:45		07:15		12:00		07:15		12:00	
Volume	358		340		718		627		1,076		947	
Factor	0.86		0.85		0.85		0.88		0.88		0.89	

* Data File : D1501044

Printed : 2/3/2015

Transportation Studies, Inc.

2640 Walnut Avenue, Suite H
Tustin, CA. 92780

Location : LAKE HUGHES ROAD
Segment : W/O CASTAIC ROAD
Client : STANTEC

Site: SANTA CLARIT
Date: 01/28/15

Interval	EB				WB				Combined				Day: Wednesday
Begin	AM		PM		AM		PM		AM		PM		
12:00	58	142	182	776	38	250	188	905	96	392	370	1,681	
12:15	33		206		71		208		104		414		
12:30	21		168		39		279		60		447		
12:45	30		220		102		230		132		450		
01:00	24	115	168	701	22	166	188	1,022	46	281	356	1,723	
01:15	32		136		57		236		89		372		
01:30	23		210		61		307		84		517		
01:45	36		187		26		291		62		478		
02:00	36	118	170	732	52	207	229	991	88	325	399	1,723	
02:15	21		160		48		259		69		419		
02:30	20		162		52		260		72		422		
02:45	41		240		55		243		96		483		
03:00	58	196	134	667	17	181	228	992	75	377	362	1,659	
03:15	38		185		26		274		64		459		
03:30	53		174		64		282		117		456		
03:45	47		174		74		208		121		382		
04:00	32	194	214	818	56	276	210	924	88	470	424	1,742	
04:15	47		173		72		194		119		367		
04:30	54		223		82		260		136		483		
04:45	61		208		66		260		127		468		
05:00	56	334	196	892	66	441	292	958	122	775	488	1,850	
05:15	106		260		113		232		219		492		
05:30	88		216		142		216		230		432		
05:45	84		220		120		218		204		438		
06:00	78	323	173	743	99	508	218	718	177	831	391	1,461	
06:15	66		206		143		180		209		386		
06:30	81		198		118		168		199		366		
06:45	98		166		148		152		246		318		
07:00	136	647	124	486	126	653	146	578	262	1,300	270	1,064	
07:15	134		152		159		142		293		294		
07:30	195		98		162		152		357		250		
07:45	182		112		206		138		388		250		
08:00	164	572	120	455	152	503	115	494	316	1,075	235	949	
08:15	148		122		141		116		289		238		
08:30	138		109		119		141		257		250		
08:45	122		104		91		122		213		226		
09:00	144	556	112	370	162	635	104	422	306	1,191	216	792	
09:15	125		82		158		98		283		180		
09:30	109		94		160		106		269		200		
09:45	178		82		155		114		333		196		
10:00	125	559	73	310	128	678	94	329	253	1,237	167	639	
10:15	143		66		146		77		289		143		
10:30	158		73		190		70		348		143		
10:45	133		98		214		88		347		186		
11:00	162	656	48	200	172	807	58	239	334	1,463	106	439	
11:15	157		52		166		57		323		109		
11:30	169		46		233		68		402		114		
11:45	168		54		236		56		404		110		
Totals	4,412		7,150		5,305		8,572		9,717		15,722		
Split%	45.4		45.5		54.6		54.5						
Day Totals		11,562				13,877				25,439			
Day Splits		45.4				54.6							
Peak Hour	07:30		05:00		11:00		01:30		11:00		04:30		
Volume	689		892		807		1,086		1,463		1,931		
Factor	0.88		0.86		0.85		0.88		0.91		0.98		

* Data File : D1501045

Printed : 2/3/2015

Transportation Studies, Inc.

2640 Walnut Avenue, Suite H
Tustin, CA. 92780

Location : LAKE HUGHES ROAD
Segment : E/O CASTAIC ROAD
Client : STANTEC

Site: SANTA CLARIT
Date: 01/28/15

Interval	EB				WB				Combined				Day: Wednesday
Begin	AM		PM		AM		PM		AM		PM		
12:00	7	23	40	184	6	15	46	166	13	38	86	350	
12:15	5		43		3		50		8		93		
12:30	3		44		3		34		6		78		
12:45	8		57		3		36		11		93		
01:00	2	10	57	221	8	19	36	269	10	29	93	490	
01:15	4		41		5		40		9		81		
01:30	2		64		4		102		6		166		
01:45	2		59		2		91		4		150		
02:00	10	26	44	207	8	22	45	171	18	48	89	378	
02:15	3		35		1		30		4		65		
02:30	9		57		8		40		17		97		
02:45	4		71		5		56		9		127		
03:00	2	12	43	205	2	25	36	172	4	37	79	377	
03:15	5		51		8		40		13		91		
03:30	1		45		8		58		9		103		
03:45	4		66		7		38		11		104		
04:00	1	19	67	259	4	53	42	159	5	72	109	418	
04:15	8		58		14		31		22		89		
04:30	1		66		13		46		14		112		
04:45	9		68		22		40		31		108		
05:00	4	44	65	286	11	103	41	164	15	147	106	450	
05:15	14		85		28		44		42		129		
05:30	18		68		38		37		56		105		
05:45	8		68		26		42		34		110		
06:00	14	63	61	224	50	192	33	131	64	255	94	355	
06:15	14		64		46		36		60		100		
06:30	14		47		52		32		66		79		
06:45	21		52		44		30		65		82		
07:00	38	220	50	157	58	332	24	104	96	552	74	261	
07:15	46		42		60		34		106		76		
07:30	66		27		98		16		164		43		
07:45	70		38		116		30		186		68		
08:00	54	142	38	142	75	204	23	73	129	346	61	215	
08:15	30		28		40		18		70		46		
08:30	36		43		52		16		88		59		
08:45	22		33		37		16		59		49		
09:00	20	90	28	108	38	133	10	53	58	223	38	161	
09:15	28		31		39		18		67		49		
09:30	22		29		18		18		40		47		
09:45	20		20		38		7		58		27		
10:00	21	101	19	70	36	144	16	39	57	245	35	109	
10:15	22		16		34		9		56		25		
10:30	32		14		32		7		64		21		
10:45	26		21		42		7		68		28		
11:00	42	169	14	34	32	172	6	26	74	341	20	60	
11:15	42		4		41		4		83		8		
11:30	31		7		51		7		82		14		
11:45	54		9		48		9		102		18		
Totals	919		2,097		1,414		1,527		2,333		3,624		
Split%	39.4		57.9		60.6		42.1						
Day Totals		3,016				2,941				5,957			
Day Splits		50.6				49.4							
Peak Hour	07:15		04:45		07:15		01:15		07:15		01:00		
Volume	236		286		349		278		585		490		
Factor	0.84		0.84		0.75		0.68		0.79		0.74		

Data File : D1501046

Printed : 2/3/2015

Transportation Studies, Inc.

2640 Walnut Avenue, Suite H
Tustin, CA. 92780

Location : THE OLD ROAD
Segment : N/O SLOAN CANYON
Client : STANTEC

Site: SANTA CLARIT
Date: 01/28/15
Day: Wednesday

Interval	NB				SB				Combined			
Begin	AM		PM		AM		PM		AM		PM	
12:00	14	36	90	377	28	81	54	259	42	117	144	636
12:15	14		105		18		65		32		170	
12:30	4		100		19		82		23		182	
12:45	4		82		16		58		20		140	
01:00	7	23	82	378	16	70	56	252	23	93	138	630
01:15	8		74		20		55		28		129	
01:30	7		126		10		77		17		203	
01:45	1		96		24		64		25		160	
02:00	6	28	80	377	14	63	62	236	20	91	142	613
02:15	6		74		19		54		25		128	
02:30	6		93		10		49		16		142	
02:45	10		130		20		71		30		201	
03:00	8	42	98	402	32	107	56	229	40	149	154	631
03:15	8		92		15		55		23		147	
03:30	14		120		38		60		52		180	
03:45	12		92		22		58		34		150	
04:00	8	86	112	436	12	100	46	246	20	186	158	682
04:15	30		92		30		76		60		168	
04:30	24		120		30		58		54		178	
04:45	24		112		28		66		52		178	
05:00	20	160	122	454	28	159	74	294	48	319	196	748
05:15	27		122		52		99		79		221	
05:30	49		122		41		61		90		183	
05:45	64		88		38		60		102		148	
06:00	36	240	111	384	41	177	57	262	77	417	168	646
06:15	52		97		44		68		96		165	
06:30	85		90		38		80		123		170	
06:45	67		86		54		57		121		143	
07:00	74	402	66	281	82	325	43	171	156	727	109	452
07:15	96		80		78		58		174		138	
07:30	126		74		90		36		216		110	
07:45	106		61		75		34		181		95	
08:00	94	310	40	173	74	268	56	202	168	578	96	375
08:15	78		52		58		58		136		110	
08:30	79		28		76		56		155		84	
08:45	59		53		60		32		119		85	
09:00	62	273	58	186	68	277	44	151	130	550	102	337
09:15	67		40		48		29		115		69	
09:30	70		50		91		40		161		90	
09:45	74		38		70		38		144		76	
10:00	78	291	34	111	44	222	21	139	122	513	55	250
10:15	70		34		70		30		140		64	
10:30	59		21		58		38		117		59	
10:45	84		22		50		50		134		72	
11:00	66	295	23	64	50	243	22	102	116	538	45	166
11:15	74		14		79		32		153		46	
11:30	69		17		60		22		129		39	
11:45	86		10		54		26		140		36	
Totals	2,186		3,623		2,092		2,543		4,278		6,166	
Split%	51.1		58.8		48.9		41.2					
Day Totals		5,809				4,635				10,444		
Day Splits		55.6				44.4						
Peak Hour	07:15		04:45		07:00		04:45		07:15		04:45	
Volume	422		478		325		300		739		778	
Factor	0.84		0.98		0.90		0.76		0.86		0.88	

Data File : D1501047

Printed : 2/3/2015

Transportation Studies, Inc.

2640 Walnut Avenue, Suite H
Tustin, CA. 92780

Location : PARKER ROAD
Segment : W/O I-5 SB RAMPS
Client : STANTEC

Site: SANTA CLARIT
Date: 01/28/15

Interval	EB				WB				Combined				Day: Wednesday
Begin	AM		PM		AM		PM		AM		PM		
12:00	2	16	56	223	8	30	52	233	10	46	108	456	
12:15	6		57		11		66		17		123		
12:30	2		61		6		64		8		125		
12:45	6		49		5		51		11		100		
01:00	4	12	56	222	7	14	50	231	11	26	106	453	
01:15	4		54		3		52		7		106		
01:30	3		58		1		50		4		108		
01:45	1		54		3		79		4		133		
02:00	2	18	59	271	1	12	65	262	3	30	124	533	
02:15	6		61		3		68		9		129		
02:30	2		66		4		61		6		127		
02:45	8		85		4		68		12		153		
03:00	4	21	66	237	4	25	52	276	8	46	118	513	
03:15	6		51		3		84		9		135		
03:30	4		52		6		64		10		116		
03:45	7		68		12		76		19		144		
04:00	19	71	59	230	1	10	63	300	20	81	122	530	
04:15	12		60		0		84		12		144		
04:30	16		46		3		72		19		118		
04:45	24		65		6		81		30		146		
05:00	34	171	70	252	1	35	80	350	35	206	150	602	
05:15	32		55		7		111		39		166		
05:30	40		60		12		82		52		142		
05:45	65		67		15		77		80		144		
06:00	49	246	46	187	15	71	78	328	64	317	124	515	
06:15	50		55		24		92		74		147		
06:30	82		45		16		80		98		125		
06:45	65		41		16		78		81		119		
07:00	87	423	44	127	18	117	68	240	105	540	112	367	
07:15	90		32		24		60		114		92		
07:30	125		25		30		60		155		85		
07:45	121		26		45		52		166		78		
08:00	66	294	28	100	66	170	45	175	132	464	73	275	
08:15	96		28		43		40		139		68		
08:30	68		16		33		48		101		64		
08:45	64		28		28		42		92		70		
09:00	60	201	19	70	32	129	36	145	92	330	55	215	
09:15	34		18		32		35		66		53		
09:30	53		18		26		38		79		56		
09:45	54		15		39		36		93		51		
10:00	47	197	13	50	34	130	30	100	81	327	43	150	
10:15	49		11		30		23		79		34		
10:30	44		14		38		32		82		46		
10:45	57		12		28		15		85		27		
11:00	56	227	7	26	42	182	15	56	98	409	22	82	
11:15	54		6		42		15		96		21		
11:30	68		7		50		16		118		23		
11:45	49		6		48		10		97		16		
Totals	1,897		1,995		925		2,696		2,822		4,691		
Split%	67.2		42.5		32.8		57.5						
Day Totals		3,892				3,621				7,513			
Day Splits		51.8				48.2							
Peak Hour	07:00		02:15		07:45		04:45		07:30		04:45		
Volume	423		278		187		354		592		604		
Factor	0.85		0.82		0.71		0.80		0.89		0.91		

Data File : D1501048

Printed : 2/3/2015

Transportation Studies, Inc.

2640 Walnut Avenue, Suite H
Tustin, CA. 92780

Location : CASTAIC ROAD
Segment : N/O LAKE HUGHES ROAD
Client : STANTEC

Site: SANTA CLARIT
Date: 01/28/15
Day: Wednesday

Interval	SB				NB				Combined			
Begin	AM		PM		AM		PM		AM		PM	
12:00	3	11	30	150	11	20	46	175	14	31	76	325
12:15	2		32		4		46		6		78	
12:30	2		46		4		38		6		84	
12:45	4		42		1		45		5		87	
01:00	0	4	39	135	0	19	36	175	0	23	75	310
01:15	0		28		7		38		7		66	
01:30	1		38		4		60		5		98	
01:45	3		30		8		41		11		71	
02:00	4	16	32	140	4	8	66	172	8	24	98	312
02:15	2		38		0		37		2		75	
02:30	1		36		2		36		3		72	
02:45	9		34		2		33		11		67	
03:00	2	15	24	133	4	17	50	184	6	32	74	317
03:15	2		44		4		48		6		92	
03:30	5		31		4		50		9		81	
03:45	6		34		5		36		11		70	
04:00	5	22	26	129	4	11	36	153	9	33	62	282
04:15	4		38		1		34		5		72	
04:30	8		33		2		37		10		70	
04:45	5		32		4		46		9		78	
05:00	4	28	28	129	2	29	44	154	6	57	72	283
05:15	11		40		12		38		23		78	
05:30	6		34		7		38		13		72	
05:45	7		27		8		34		15		61	
06:00	4	18	34	101	13	37	39	133	17	55	73	234
06:15	4		24		9		32		13		56	
06:30	6		21		1		30		7		51	
06:45	4		22		14		32		18		54	
07:00	10	49	30	78	8	45	27	127	18	94	57	205
07:15	12		10		12		42		24		52	
07:30	16		20		12		30		28		50	
07:45	11		18		13		28		24		46	
08:00	8	40	9	48	23	76	30	114	31	116	39	162
08:15	12		12		16		44		28		56	
08:30	8		18		15		22		23		40	
08:45	12		9		22		18		34		27	
09:00	12	85	11	29	17	98	12	50	29	183	23	79
09:15	29		4		24		14		53		18	
09:30	25		8		21		8		46		16	
09:45	19		6		36		16		55		22	
10:00	14	84	10	45	26	111	8	51	40	195	18	96
10:15	21		14		25		21		46		35	
10:30	29		7		34		4		63		11	
10:45	20		14		26		18		46		32	
11:00	38	133	6	9	37	145	4	18	75	278	10	27
11:15	24		2		32		5		56		7	
11:30	33		1		42		7		75		8	
11:45	38		0		34		2		72		2	
Totals	505		1,126		616		1,506		1,121		2,632	
Split%	45.0		42.8		55.0		57.2					
Day Totals		1,631				2,122				3,753		
Day Splits		43.5				56.5						
Peak Hour	11:00		12:15		11:00		01:15		11:00		01:30	
Volume	133		159		145		205		278		342	
Factor	0.88		0.86		0.86		0.78		0.93		0.87	

Data File : D1501049

Printed : 2/3/2015

Transportation Studies, Inc.

2640 Walnut Avenue, Suite H
Tustin, CA. 92780

Location : CASTAIC ROAD
Segment : S/O LAKE HUGHES ROAD
Client : STANTEC

Site: SANTA CLARIT
Date: 01/28/15
Day: Wednesday

Interval	SB				NB				Combined			
Begin	AM		PM		AM		PM		AM		PM	
12:00	30	82	64	270	30	135	101	431	60	217	165	701
12:15	18		83		36		90		54		173	
12:30	20		60		22		144		42		204	
12:45	14		63		47		96		61		159	
01:00	18	73	62	241	16	99	108	482	34	172	170	723
01:15	19		44		31		121		50		165	
01:30	14		69		30		149		44		218	
01:45	22		66		22		104		44		170	
02:00	15	53	63	231	26	103	151	533	41	156	214	764
02:15	12		48		24		132		36		180	
02:30	5		54		25		138		30		192	
02:45	21		66		28		112		49		178	
03:00	37	110	46	217	18	101	138	511	55	211	184	728
03:15	20		50		21		123		41		173	
03:30	35		56		26		150		61		206	
03:45	18		65		36		100		54		165	
04:00	14	112	53	238	28	133	94	459	42	245	147	697
04:15	22		56		33		83		55		139	
04:30	43		56		38		132		81		188	
04:45	33		73		34		150		67		223	
05:00	30	151	51	254	30	193	163	472	60	344	214	726
05:15	44		69		52		76		96		145	
05:30	40		60		59		106		99		166	
05:45	37		74		52		127		89		201	
06:00	41	129	46	256	46	212	118	373	87	341	164	629
06:15	20		68		56		99		76		167	
06:30	36		80		52		79		88		159	
06:45	32		62		58		77		90		139	
07:00	60	214	45	185	48	224	94	332	108	438	139	517
07:15	49		58		64		71		113		129	
07:30	57		40		52		85		109		125	
07:45	48		42		60		82		108		124	
08:00	38	209	56	214	66	238	76	318	104	447	132	532
08:15	51		60		66		84		117		144	
08:30	64		44		54		92		118		136	
08:45	56		54		52		66		108		120	
09:00	63	221	54	160	80	288	75	266	143	509	129	426
09:15	40		23		66		58		106		81	
09:30	60		32		78		67		138		99	
09:45	58		51		64		66		122		117	
10:00	46	214	32	147	74	325	53	206	120	539	85	353
10:15	59		26		57		55		116		81	
10:30	61		36		98		34		159		70	
10:45	48		53		96		64		144		117	
11:00	48	244	24	86	80	381	38	141	128	625	62	227
11:15	64		29		75		26		139		55	
11:30	56		6		112		46		168		52	
11:45	76		27		114		31		190		58	
Totals	1,812		2,499		2,432		4,524		4,244		7,023	
Split%	42.7		35.6		57.3		64.4					
Day Totals		4,311				6,956				11,267		
Day Splits		38.3				61.7						
Peak Hour	11:00		12:00		11:00		01:30		11:00		01:30	
Volume	244		270		381		536		625		782	
Factor	0.80		0.81		0.84		0.89		0.82		0.90	

Data File : D1501050

Printed : 2/3/2015

Transportation Studies, Inc.

2640 Walnut Avenue, Suite H
Tustin, CA. 92780

Location : CASTAIC ROAD
Segment : S/O RIDGE ROUTE ROAD
Client : STANTEC

Site: SANTA CLARIT
Date: 01/28/15
Day: Wednesday

Interval	NB				SB				Combined			
Begin	AM		PM		AM		PM		AM		PM	
12:00	3	6	23	124	1	6	30	107	4	12	53	231
12:15	1		40		2		36		3		76	
12:30	0		29		1		16		1		45	
12:45	2		32		2		25		4		57	
01:00	0	4	22	108	4	8	20	99	4	12	42	207
01:15	4		34		2		27		6		61	
01:30	0		30		2		20		2		50	
01:45	0		22		0		32		0		54	
02:00	1	3	32	138	1	2	36	99	2	5	68	237
02:15	0		60		0		26		0		86	
02:30	0		26		1		18		1		44	
02:45	2		20		0		19		2		39	
03:00	3	4	36	165	4	4	24	134	7	8	60	299
03:15	0		38		0		42		0		80	
03:30	0		66		0		30		0		96	
03:45	1		25		0		38		1		63	
04:00	0	5	44	132	1	10	36	151	1	15	80	283
04:15	3		27		1		32		4		59	
04:30	0		34		4		32		4		66	
04:45	2		27		4		51		6		78	
05:00	3	22	50	180	6	39	50	177	9	61	100	357
05:15	3		42		8		50		11		92	
05:30	2		30		15		36		17		66	
05:45	14		58		10		41		24		99	
06:00	8	34	59	175	18	58	19	89	26	92	78	264
06:15	10		40		11		21		21		61	
06:30	4		38		11		23		15		61	
06:45	12		38		18		26		30		64	
07:00	10	42	20	79	24	70	21	80	34	112	41	159
07:15	10		22		20		26		30		48	
07:30	12		16		14		17		26		33	
07:45	10		21		12		16		22		37	
08:00	7	54	54	115	18	101	16	58	25	155	70	173
08:15	5		30		18		18		23		48	
08:30	28		23		27		16		55		39	
08:45	14		8		38		8		52		16	
09:00	23	62	5	46	18	74	7	24	41	136	12	70
09:15	14		16		22		4		36		20	
09:30	12		10		12		5		24		15	
09:45	13		15		22		8		35		23	
10:00	15	68	6	12	24	81	2	10	39	149	8	22
10:15	13		2		24		4		37		6	
10:30	18		3		13		3		31		6	
10:45	22		1		20		1		42		2	
11:00	22	102	1	13	21	83	2	6	43	185	3	19
11:15	20		6		30		2		50		8	
11:30	17		3		18		2		35		5	
11:45	43		3		14		0		57		3	
Totals	406		1,287		536		1,034		942		2,321	
Split%	43.1		55.5		56.9		44.5					
Day Totals		1,693				1,570				3,263		
Day Splits		51.9				48.1						
Peak Hour	11:00		05:45		08:30		04:45		11:00		05:00	
Volume	102		195		105		187		185		357	
Factor	0.59		0.83		0.69		0.92		0.81		0.89	

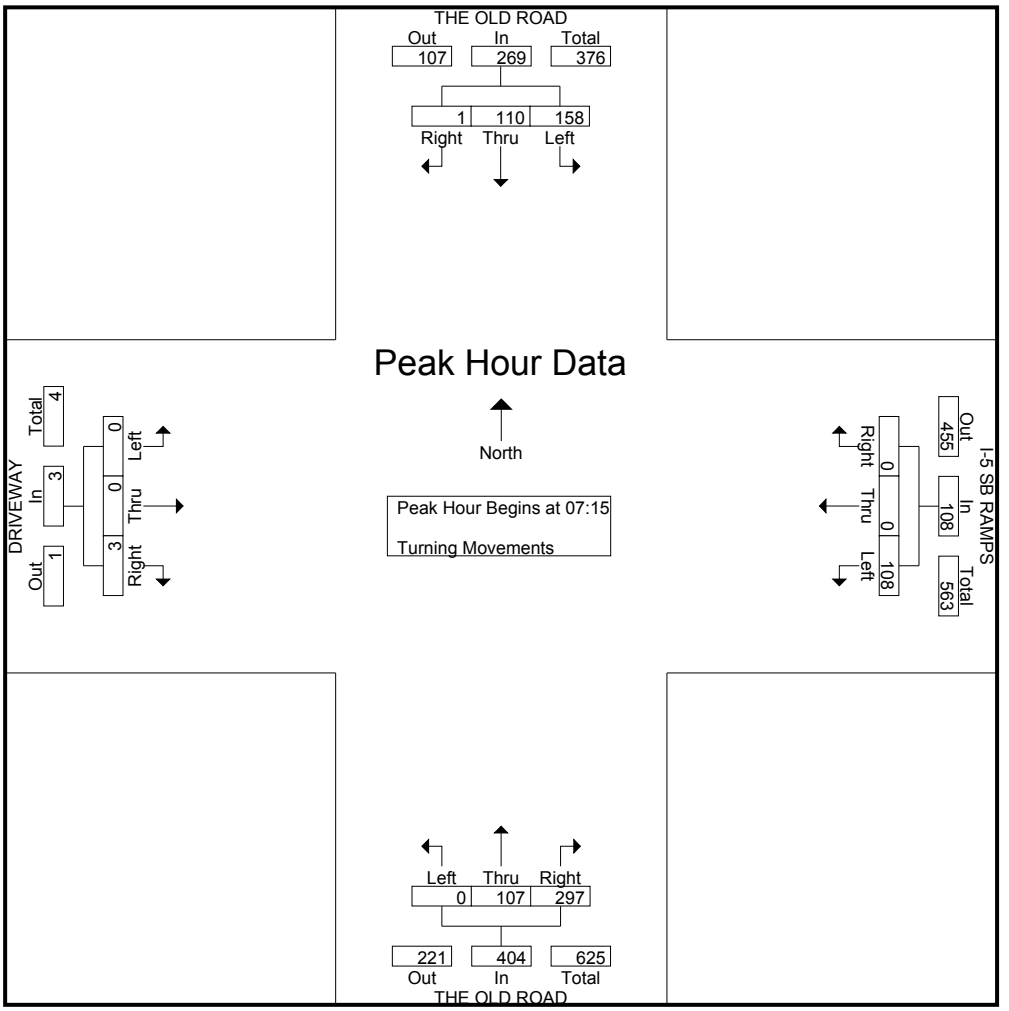
Data File : D1501051

Printed : 2/3/2015

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : h1501003
Site Code : 00000000
Start Date : 1/27/2015
Page No : 2

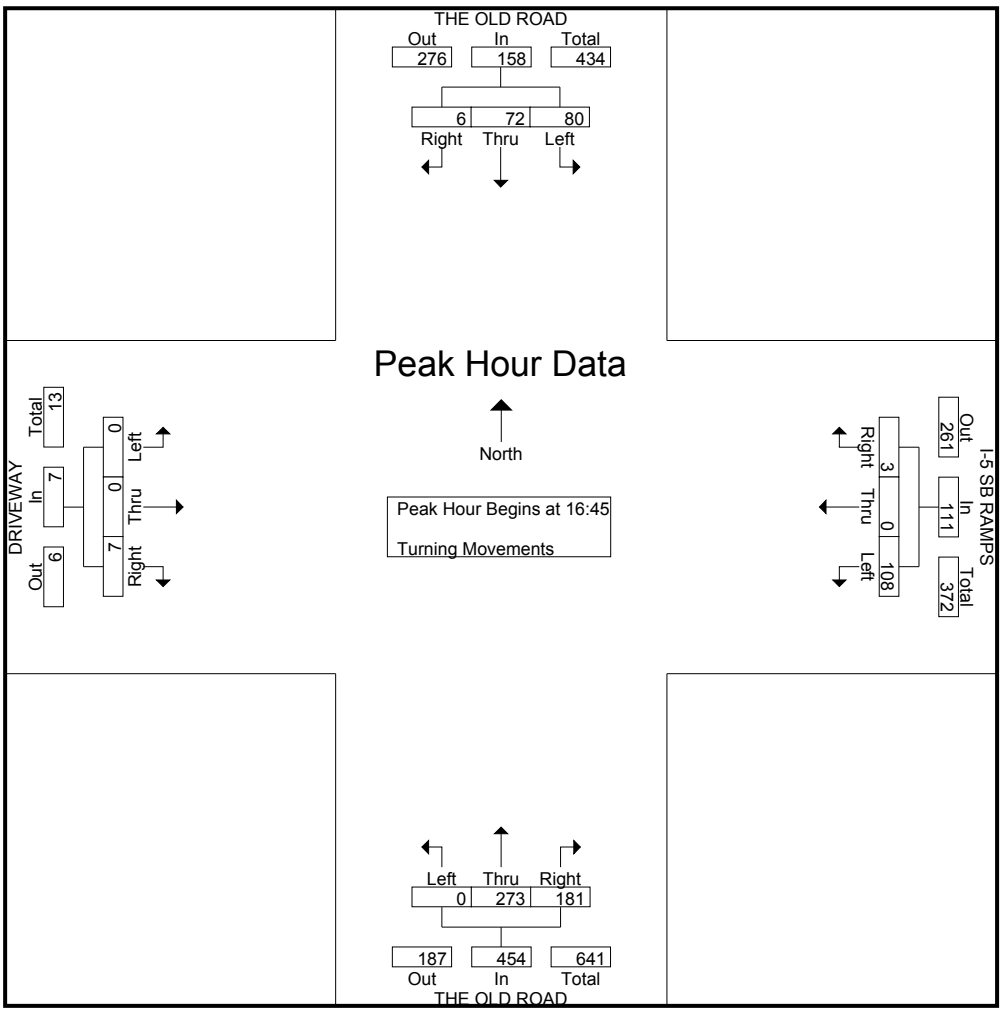
	THE OLD ROAD Southbound				I-5 SB RAMPS Westbound				THE OLD ROAD Northbound				DRIVEWAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	0	18	44	62	0	0	**28**	**28**	74	11	0	85	0	0	0	0	175
07:30	0	31	**52**	**83**	0	0	25	25	73	22	0	95	1	0	0	1	204
07:45	**1**	**37**	35	73	0	0	27	27	**84**	**38**	0	**122**	**2**	0	0	**2**	**224**
08:00	0	24	27	51	0	0	28	28	66	36	0	102	0	0	0	0	181
Total Volume	1	110	158	269	0	0	108	108	297	107	0	404	3	0	0	3	784
% App. Total	0.4	40.9	58.7		0	0	100		73.5	26.5	0		100	0	0		
PHF	.250	.743	.760	.810	.000	.000	.964	.964	.884	.704	.000	.828	.375	.000	.000	.375	.875



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : h1501003
Site Code : 00000000
Start Date : 1/27/2015
Page No : 3

	THE OLD ROAD Southbound				I-5 SB RAMPS Westbound				THE OLD ROAD Northbound				DRIVEWAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	2	21	24	**47**	0	0	30	30	**46**	71	0	117	0	0	0	0	**194**
17:00	0	11	20	31	**1**	0	19	20	46	**78**	0	**124**	1	0	0	1	176
17:15	**3**	**23**	10	36	1	0	28	29	45	60	0	105	**3**	0	0	**3**	173
17:30	1	17	**26**	44	1	0	**31**	**32**	44	64	0	108	3	0	0	3	187
Total Volume	6	72	80	158	3	0	108	111	181	273	0	454	7	0	0	7	730
% App. Total	3.8	45.6	50.6		2.7	0	97.3		39.9	60.1	0		100	0	0		
PHF	.500	.783	.769	.840	.750	.000	.871	.867	.984	.875	.000	.915	.583	.000	.000	.583	.941



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S- Direction: THE OLD ROAD
E-W Direction: LAKE HUGHES / SLOAN

File Name : h1501004
Site Code : 00000000
Start Date : 1/22/2015
Page No : 1

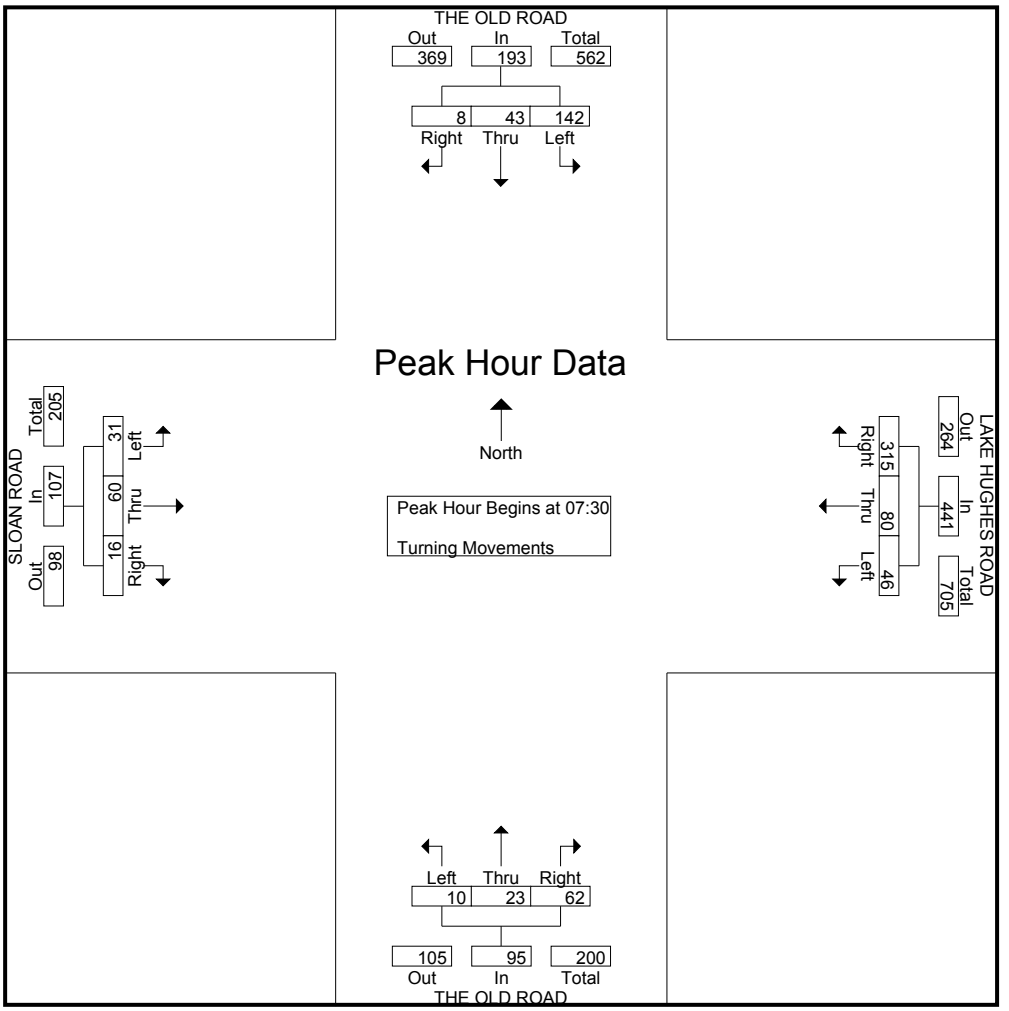
Groups Printed- Turning Movements

	THE OLD ROAD Southbound			LAKE HUGHES ROAD Westbound			THE OLD ROAD Northbound			SLOAN ROAD Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00	1	8	30	68	9	5	3	3	0	1	9	3	140
07:15	6	9	36	65	4	7	10	4	1	3	10	7	162
07:30	0	6	47	92	16	7	14	3	3	5	28	11	232
07:45	3	15	43	104	21	17	10	6	2	3	19	5	248
Total	10	38	156	329	50	36	37	16	6	12	66	26	782
08:00	2	13	24	68	25	16	17	7	2	3	6	9	192
08:15	3	9	28	51	18	6	21	7	3	5	7	6	164
08:30	2	9	34	66	10	7	12	4	5	1	6	10	166
08:45	1	6	21	49	24	7	12	14	2	6	6	5	153
Total	8	37	107	234	77	36	62	32	12	15	25	30	675
16:00	5	8	35	73	24	6	11	15	8	6	15	7	213
16:15	3	10	30	68	23	11	15	9	6	3	13	12	203
16:30	3	5	25	90	33	12	10	18	3	11	14	11	235
16:45	4	10	32	65	38	13	14	6	9	3	11	6	211
Total	15	33	122	296	118	42	50	48	26	23	53	36	862
17:00	5	7	18	72	33	10	11	10	4	7	4	11	192
17:15	3	9	36	84	34	12	11	9	9	5	10	7	229
17:30	6	13	27	89	35	14	21	15	3	5	14	14	256
17:45	3	13	34	72	42	4	7	7	6	4	22	10	224
Total	17	42	115	317	144	40	50	41	22	21	50	42	901
Grand Total	50	150	500	1176	389	154	199	137	66	71	194	134	3220
Apprch %	7.1	21.4	71.4	68.4	22.6	9	49.5	34.1	16.4	17.8	48.6	33.6	
Total %	1.6	4.7	15.5	36.5	12.1	4.8	6.2	4.3	2	2.2	6	4.2	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : h1501004
Site Code : 00000000
Start Date : 1/22/2015
Page No : 2

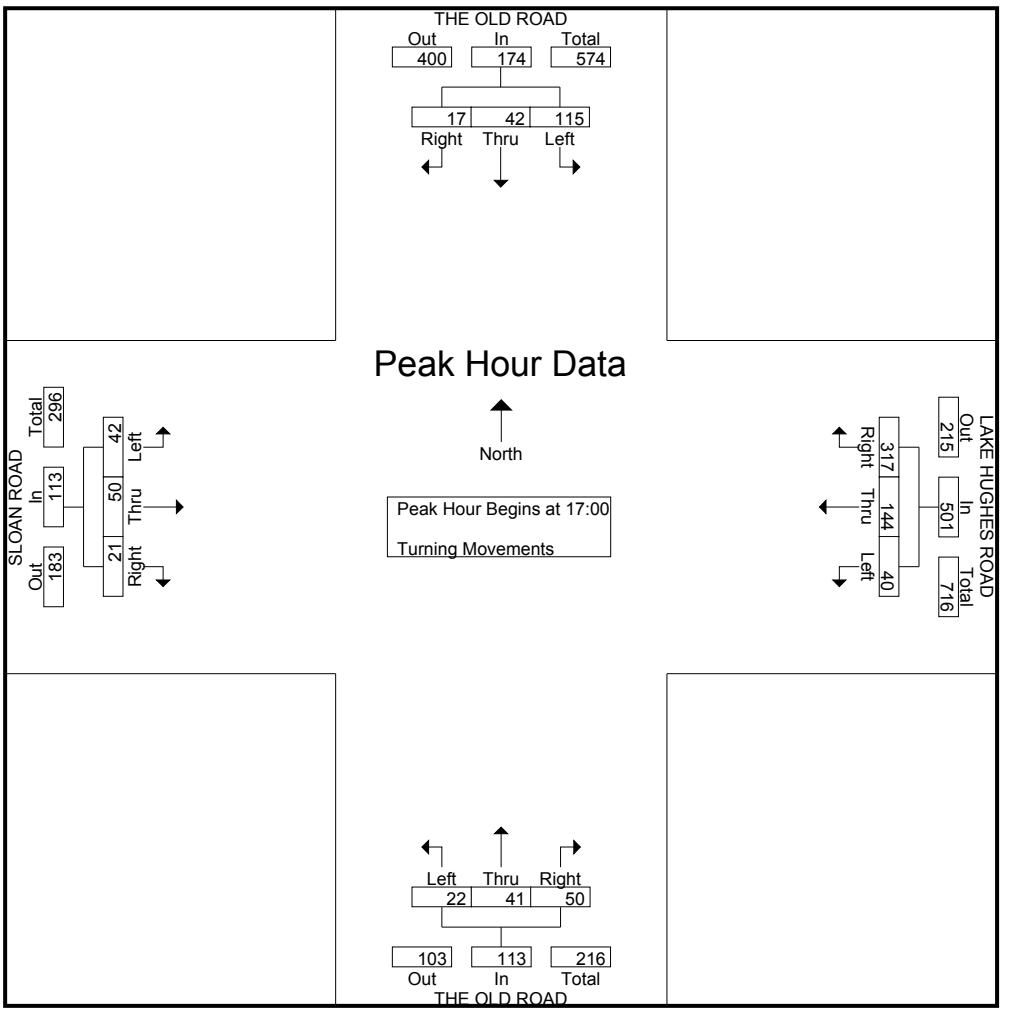
	THE OLD ROAD Southbound				LAKE HUGHES ROAD Westbound				THE OLD ROAD Northbound				SLOAN ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	0	6	**47**	53	92	16	7	115	14	3	**3**	20	**5**	**28**	**11**	**44**	232
07:45	**3**	**15**	43	**61**	**104**	21	**17**	**142**	10	6	2	18	3	19	5	27	**248**
08:00	2	13	24	39	68	**25**	16	109	17	**7**	2	26	3	6	9	18	192
08:15	3	9	28	40	51	18	6	75	**21**	7	3	**31**	5	7	6	18	164
Total Volume	8	43	142	193	315	80	46	441	62	23	10	95	16	60	31	107	836
% App. Total	4.1	22.3	73.6		71.4	18.1	10.4		65.3	24.2	10.5		15	56.1	29		
PHF	.667	.717	.755	.791	.757	.800	.676	.776	.738	.821	.833	.766	.800	.536	.705	.608	.843



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : h1501004
Site Code : 00000000
Start Date : 1/22/2015
Page No : 3

	THE OLD ROAD Southbound				LAKE HUGHES ROAD Westbound				THE OLD ROAD Northbound				SLOAN ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	5	7	18	30	72	33	10	115	11	10	4	25	**7**	4	11	22	192
17:15	3	9	**36**	48	84	34	12	130	11	9	**9**	29	5	10	7	22	229
17:30	**6**	**13**	27	46	**89**	35	**14**	**138**	**21**	**15**	3	**39**	5	14	**14**	33	**256**
17:45	3	13	34	**50**	72	**42**	4	118	7	7	6	20	4	**22**	10	**36**	224
Total Volume	17	42	115	174	317	144	40	501	50	41	22	113	21	50	42	113	901
% App. Total	9.8	24.1	66.1		63.3	28.7	8		44.2	36.3	19.5		18.6	44.2	37.2		
PHF	.708	.808	.799	.870	.890	.857	.714	.908	.595	.683	.611	.724	.750	.568	.750	.785	.880



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S- Direction: I-5 NB RAMPS
E-W Direction: LAKE HUGHES ROAD

File Name : h1501005
Site Code : 00000000
Start Date : 1/27/2015
Page No : 1

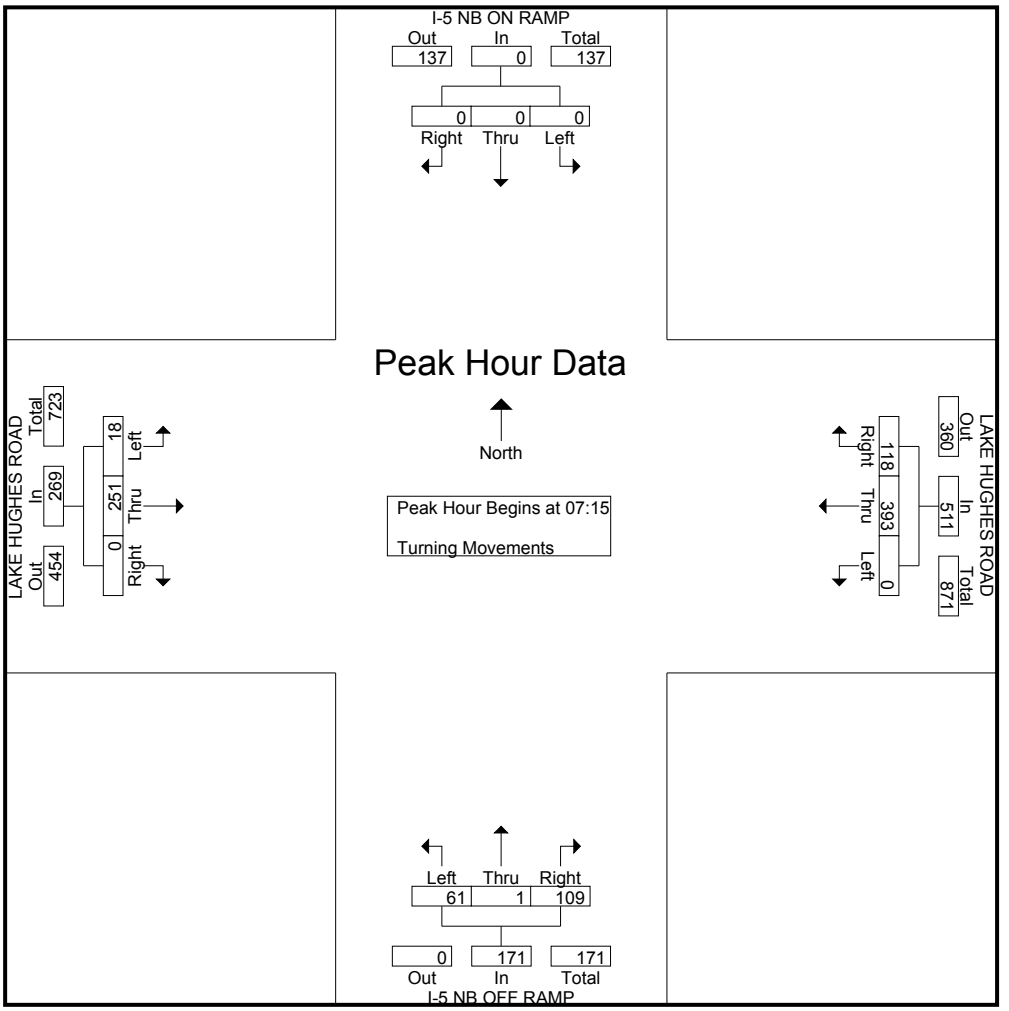
Groups Printed- Turning Movements

	I-5 NB ON RAMP Southbound			LAKE HUGHES ROAD Westbound			I-5 NB OFF RAMP Northbound			LAKE HUGHES ROAD Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00	0	0	0	33	67	0	24	0	16	0	55	1	196
07:15	0	0	0	24	85	0	28	0	11	0	43	4	195
07:30	0	0	0	34	98	0	25	1	13	0	63	7	241
07:45	0	0	0	27	130	0	30	0	15	0	90	5	297
Total	0	0	0	118	380	0	107	1	55	0	251	17	929
08:00	0	0	0	33	80	0	26	0	22	0	55	2	218
08:15	0	0	0	29	57	0	35	0	19	0	36	2	178
08:30	0	0	0	27	44	0	16	1	12	0	47	4	151
08:45	0	0	0	26	44	0	32	1	15	0	39	3	160
Total	0	0	0	115	225	0	109	2	68	0	177	11	707
16:00	0	0	0	43	67	0	64	0	37	0	49	6	266
16:15	0	0	0	66	55	0	59	0	38	0	43	6	267
16:30	0	0	0	53	57	0	56	0	54	0	45	3	268
16:45	0	0	0	53	66	0	65	0	71	0	56	3	314
Total	0	0	0	215	245	0	244	0	200	0	193	18	1115
17:00	0	0	0	55	73	0	68	0	71	0	40	4	311
17:15	0	0	0	39	65	0	65	1	59	0	50	4	283
17:30	0	0	0	41	57	0	65	0	58	0	67	6	294
17:45	0	0	0	43	58	0	57	0	63	0	46	9	276
Total	0	0	0	178	253	0	255	1	251	0	203	23	1164
Grand Total	0	0	0	626	1103	0	715	4	574	0	824	69	3915
Apprch %	0	0	0	36.2	63.8	0	55.3	0.3	44.4	0	92.3	7.7	
Total %	0	0	0	16	28.2	0	18.3	0.1	14.7	0	21	1.8	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : h1501005
Site Code : 00000000
Start Date : 1/27/2015
Page No : 2

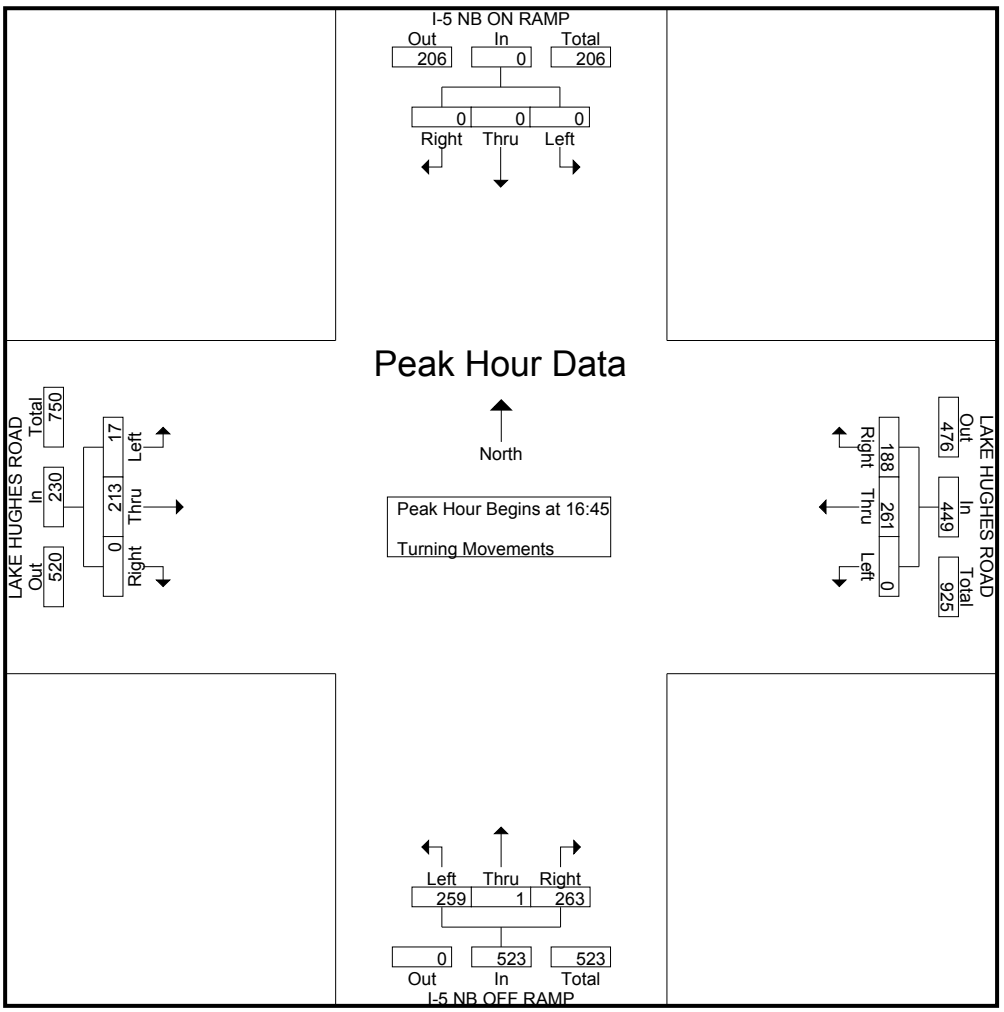
	I-5 NB ON RAMP Southbound				LAKE HUGHES ROAD Westbound				I-5 NB OFF RAMP Northbound				LAKE HUGHES ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	0	0	0	0	24	85	0	109	28	0	11	39	0	43	4	47	195
07:30	0	0	0	0	**34**	98	0	132	25	**1**	13	39	0	63	**7**	70	241
07:45	0	0	0	0	27	**130**	0	**157**	**30**	0	15	45	0	**90**	5	**95**	**297**
08:00	0	0	0	0	33	80	0	113	26	0	**22**	**48**	0	55	2	57	218
Total Volume	0	0	0	0	118	393	0	511	109	1	61	171	0	251	18	269	951
% App. Total	0	0	0		23.1	76.9	0		63.7	0.6	35.7		0	93.3	6.7		
PHF	.000	.000	.000	.000	.868	.756	.000	.814	.908	.250	.693	.891	.000	.697	.643	.708	.801



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : h1501005
Site Code : 00000000
Start Date : 1/27/2015
Page No : 3

	I-5 NB ON RAMP Southbound				LAKE HUGHES ROAD Westbound				I-5 NB OFF RAMP Northbound				LAKE HUGHES ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	0	0	0	0	53	66	0	119	65	0	**71**	136	0	56	3	59	**314**
17:00	0	0	0	0	**55**	**73**	0	**128**	**68**	0	71	**139**	0	40	4	44	311
17:15	0	0	0	0	39	65	0	104	65	**1**	59	125	0	50	4	54	283
17:30	0	0	0	0	41	57	0	98	65	0	58	123	0	**67**	**6**	**73**	294
Total Volume	0	0	0	0	188	261	0	449	263	1	259	523	0	213	17	230	1202
% App. Total	0	0	0		41.9	58.1	0		50.3	0.2	49.5		0	92.6	7.4		
PHF	.000	.000	.000	.000	.855	.894	.000	.877	.967	.250	.912	.941	.000	.795	.708	.788	.957



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S- Direction: CASTAIC ROAD
E-W Direction: LAKE HUGHES ROAD

File Name : H1501006
Site Code : 00000000
Start Date : 1/27/2015
Page No : 1

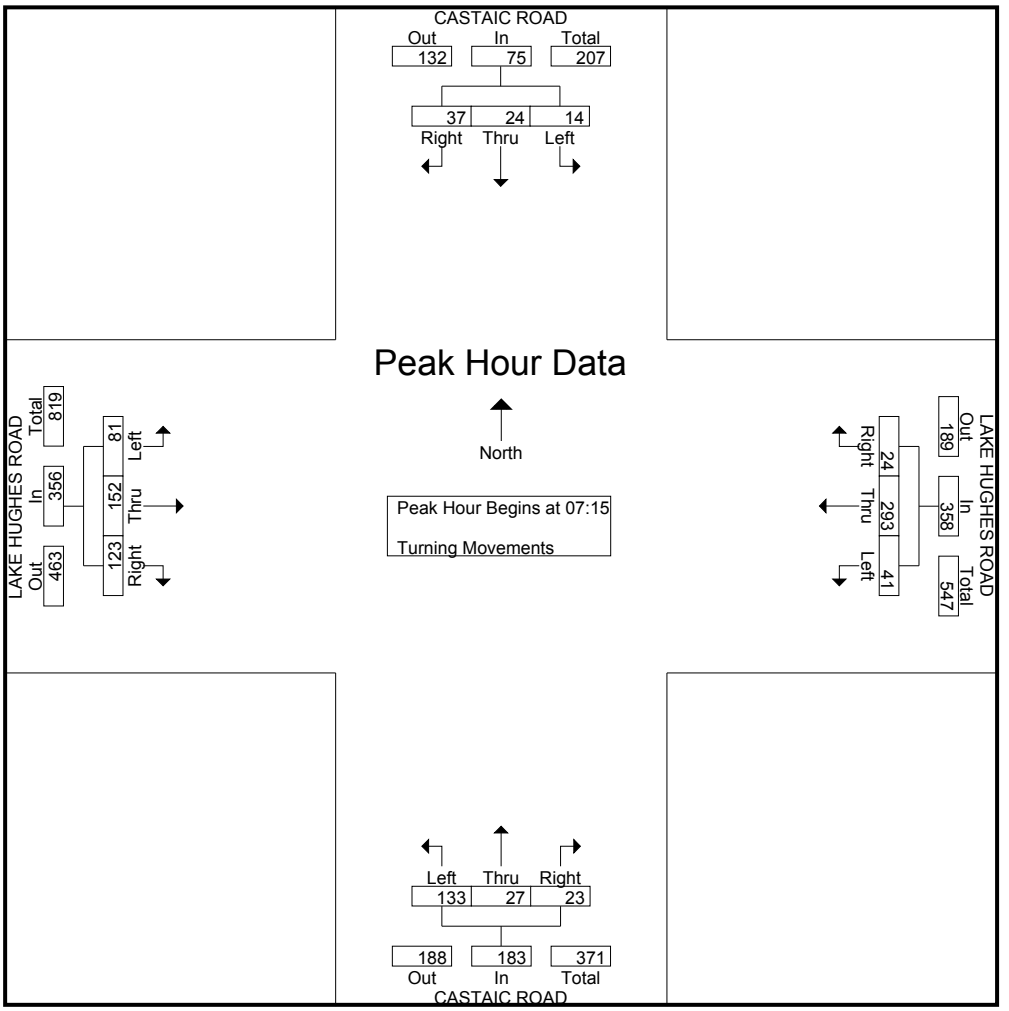
Groups Printed- Turning Movements

	CASTAIC ROAD Southbound			LAKE HUGHES ROAD Westbound			CASTAIC ROAD Northbound			LAKE HUGHES ROAD Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00	12	1	5	4	46	8	10	4	34	33	36	14	207
07:15	7	7	3	3	61	8	6	5	29	29	20	15	193
07:30	10	6	3	6	76	13	8	7	36	27	41	25	258
07:45	9	3	3	8	87	11	6	7	32	37	64	15	282
Total	38	17	14	21	270	40	30	23	131	126	161	69	940
08:00	11	8	5	7	69	9	3	8	36	30	27	26	239
08:15	9	3	3	6	35	7	2	10	32	27	22	22	178
08:30	10	6	1	3	34	10	6	7	26	30	16	19	168
08:45	11	8	5	5	27	5	2	8	28	25	17	19	160
Total	41	25	14	21	165	31	13	33	122	112	82	86	745
16:00	30	7	8	9	30	8	17	18	45	42	43	26	283
16:15	22	10	11	6	33	9	7	8	72	36	39	32	285
16:30	21	7	5	6	35	9	9	11	61	33	45	26	268
16:45	29	9	8	12	31	3	7	10	55	30	48	34	276
Total	102	33	32	33	129	29	40	47	233	141	175	118	1112
17:00	27	9	6	10	28	5	10	17	61	37	52	18	280
17:15	24	9	11	8	35	6	11	8	48	39	57	24	280
17:30	19	15	6	1	29	6	13	11	53	36	58	31	278
17:45	27	12	6	9	27	4	4	15	45	34	43	29	255
Total	97	45	29	28	119	21	38	51	207	146	210	102	1093
Grand Total	278	120	89	103	683	121	121	154	693	525	628	375	3890
Apprch %	57.1	24.6	18.3	11.4	75.3	13.3	12.5	15.9	71.6	34.4	41.1	24.5	
Total %	7.1	3.1	2.3	2.6	17.6	3.1	3.1	4	17.8	13.5	16.1	9.6	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : H1501006
Site Code : 00000000
Start Date : 1/27/2015
Page No : 2

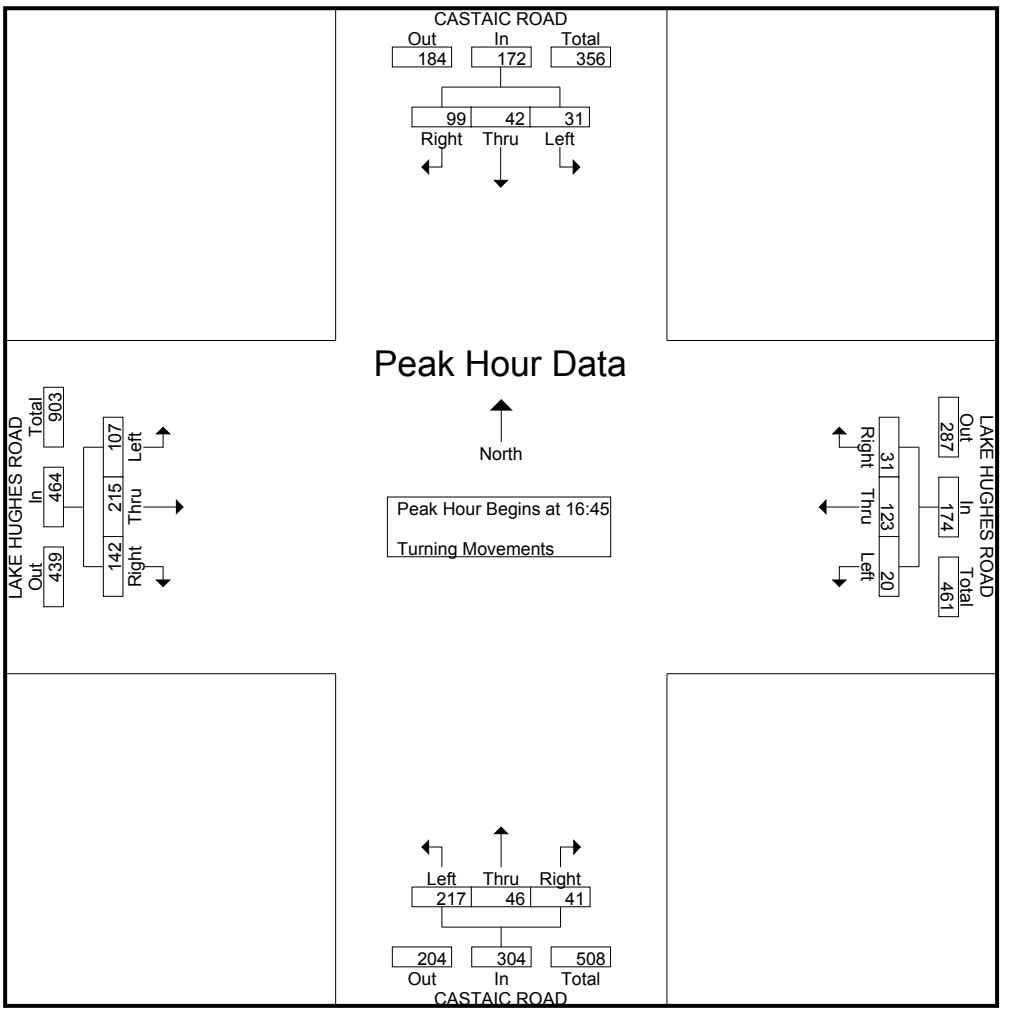
	CASTAIC ROAD Southbound				LAKE HUGHES ROAD Westbound				CASTAIC ROAD Northbound				LAKE HUGHES ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	7	7	3	17	3	61	8	72	6	5	29	40	29	20	15	64	193
07:30	10	6	3	19	6	76	**13**	95	**8**	7	**36**	**51**	27	41	25	93	258
07:45	9	3	3	15	**8**	**87**	11	**106**	6	7	32	45	**37**	**64**	15	**116**	**282**
08:00	**11**	**8**	**5**	**24**	7	69	9	85	3	**8**	36	47	30	27	**26**	83	239
Total Volume	37	24	14	75	24	293	41	358	23	27	133	183	123	152	81	356	972
% App. Total	49.3	32	18.7		6.7	81.8	11.5		12.6	14.8	72.7		34.6	42.7	22.8		
PHF	.841	.750	.700	.781	.750	.842	.788	.844	.719	.844	.924	.897	.831	.594	.779	.767	.862



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : H1501006
Site Code : 00000000
Start Date : 1/27/2015
Page No : 3

	CASTAIC ROAD Southbound				LAKE HUGHES ROAD Westbound				CASTAIC ROAD Northbound				LAKE HUGHES ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	**29**	9	8	**46**	**12**	31	3	46	7	10	55	72	30	48	**34**	112	276
17:00	27	9	6	42	10	28	5	43	10	**17**	**61**	**88**	37	52	18	107	**280**
17:15	24	9	**11**	44	8	**35**	**6**	**49**	11	8	48	67	**39**	57	24	120	280
17:30	19	**15**	6	40	1	29	6	36	**13**	11	53	77	36	**58**	31	**125**	278
Total Volume	99	42	31	172	31	123	20	174	41	46	217	304	142	215	107	464	1114
% App. Total	57.6	24.4	18		17.8	70.7	11.5		13.5	15.1	71.4		30.6	46.3	23.1		
PHF	.853	.700	.705	.935	.646	.879	.833	.888	.788	.676	.889	.864	.910	.927	.787	.928	.995



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S- Direction: RIDGE ROUTE ROAD
E-W Direction: LAKE HUGHES ROAD

File Name : H1501007
Site Code : 00005724
Start Date : 1/27/2015
Page No : 1

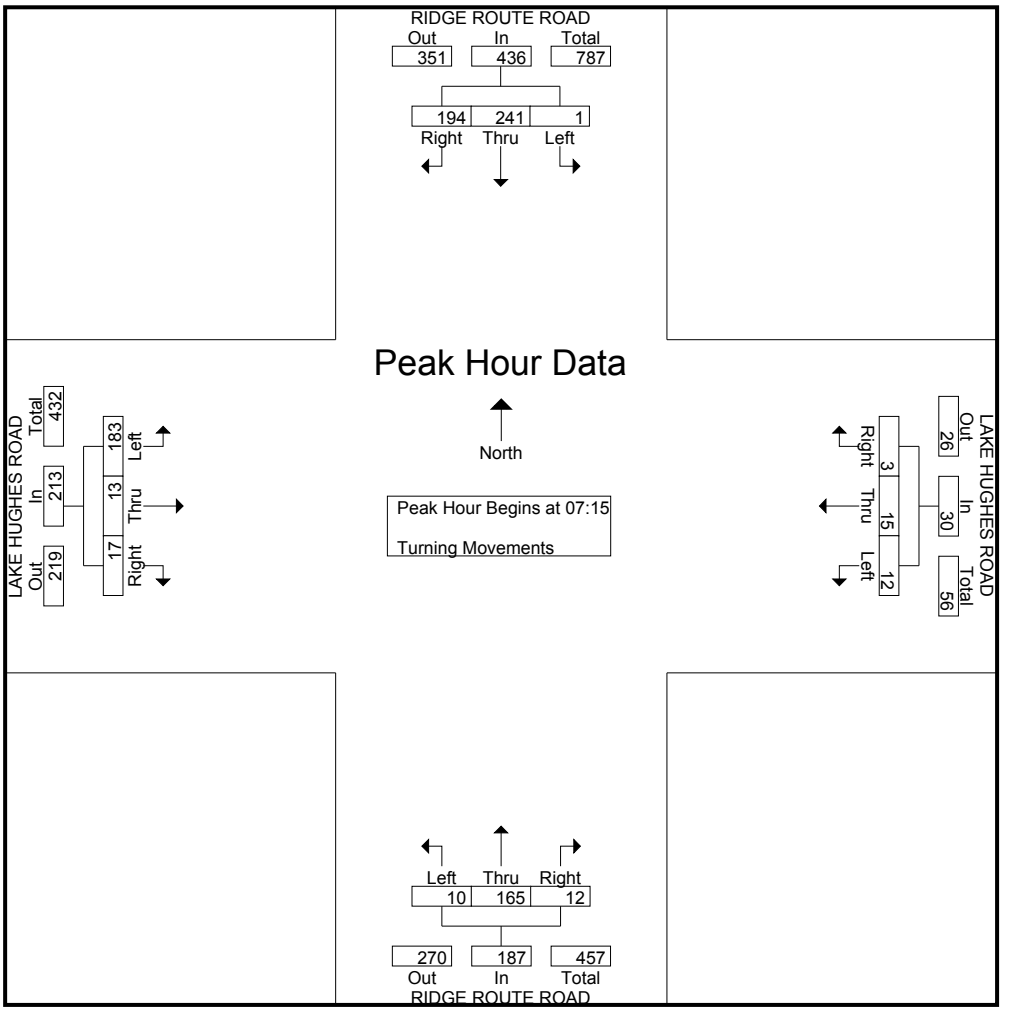
Groups Printed- Turning Movements

	RIDGE ROUTE ROAD Southbound			LAKE HUGHES ROAD Westbound			RIDGE ROUTE ROAD Northbound			LAKE HUGHES ROAD Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00	13	20	0	1	4	5	4	15	5	2	6	16	91
07:15	16	31	1	0	1	2	3	27	3	2	2	30	118
07:30	33	56	0	0	4	3	2	43	2	7	3	52	205
07:45	69	72	0	0	3	3	1	67	3	3	2	78	301
Total	131	179	1	1	12	13	10	152	13	14	13	176	715
08:00	76	82	0	3	7	4	6	28	2	5	6	23	242
08:15	13	21	1	2	4	3	2	14	3	2	0	14	79
08:30	15	33	1	1	6	3	1	20	3	2	5	9	99
08:45	12	29	0	0	2	3	3	7	5	7	4	4	76
Total	116	165	2	6	19	13	12	69	13	16	15	50	496
16:00	11	15	0	2	3	3	4	11	11	6	4	8	78
16:15	12	18	2	1	6	5	12	24	5	7	4	18	114
16:30	10	19	0	2	6	5	9	15	7	5	1	8	87
16:45	5	21	0	0	10	5	8	21	7	4	5	14	100
Total	38	73	2	5	25	18	33	71	30	22	14	48	379
17:00	7	22	2	2	6	2	4	23	8	9	6	11	102
17:15	9	16	0	2	4	2	4	19	6	12	8	22	104
17:30	4	13	0	0	11	5	3	25	5	6	3	11	86
17:45	4	12	0	0	3	1	3	25	9	7	2	14	80
Total	24	63	2	4	24	10	14	92	28	34	19	58	372
Grand Total	309	480	7	16	80	54	69	384	84	86	61	332	1962
Apprch %	38.8	60.3	0.9	10.7	53.3	36	12.8	71.5	15.6	18	12.7	69.3	
Total %	15.7	24.5	0.4	0.8	4.1	2.8	3.5	19.6	4.3	4.4	3.1	16.9	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : H1501007
Site Code : 00005724
Start Date : 1/27/2015
Page No : 2

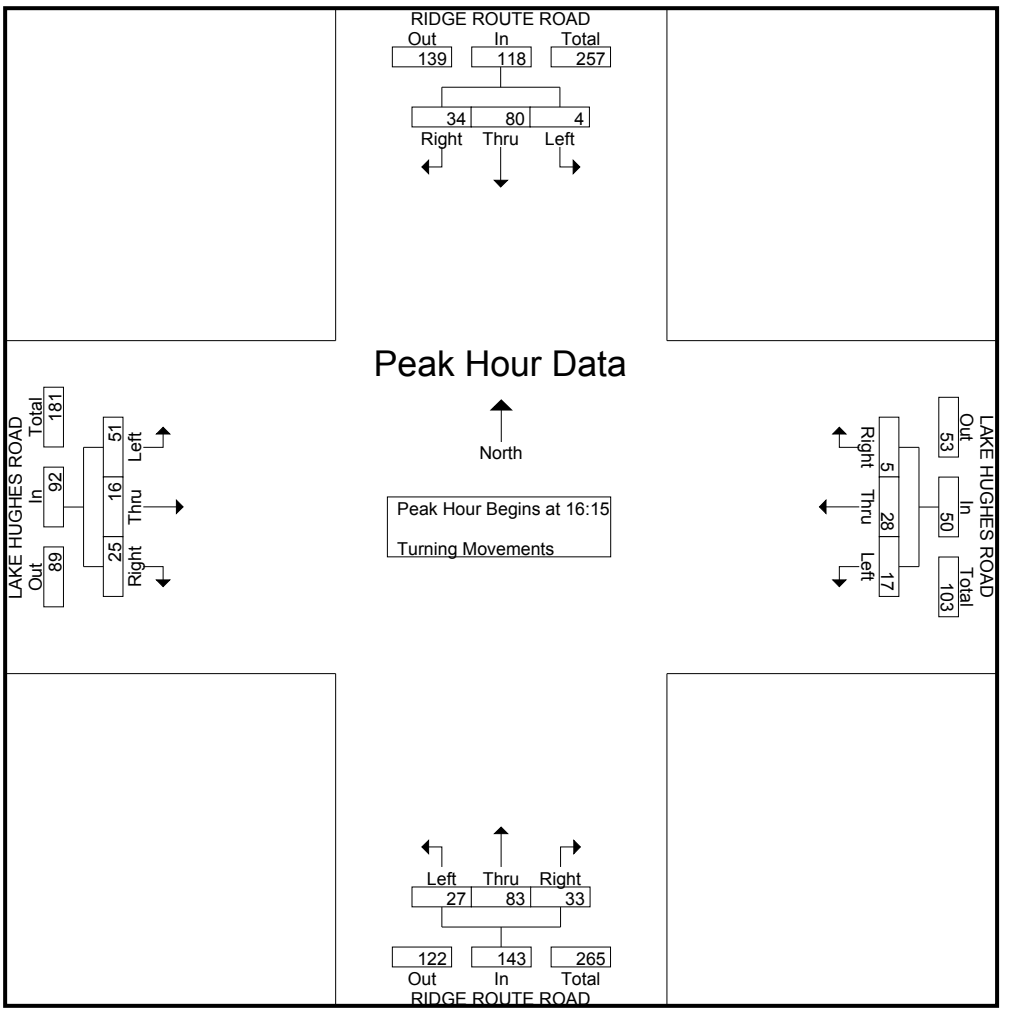
	RIDGE ROUTE ROAD Southbound				LAKE HUGHES ROAD Westbound				RIDGE ROUTE ROAD Northbound				LAKE HUGHES ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	16	31	**1**	48	0	1	2	3	3	27	**3**	33	2	2	30	34	118
07:30	33	56	0	89	0	4	3	7	2	43	2	47	**7**	3	52	62	205
07:45	69	72	0	141	0	3	3	6	1	**67**	3	**71**	3	2	**78**	**83**	**301**
08:00	**76**	**82**	0	**158**	**3**	**7**	**4**	**14**	**6**	28	2	36	5	**6**	23	34	242
Total Volume	194	241	1	436	3	15	12	30	12	165	10	187	17	13	183	213	866
% App. Total	44.5	55.3	0.2		10	50	40		6.4	88.2	5.3		8	6.1	85.9		
PHF	.638	.735	.250	.690	.250	.536	.750	.536	.500	.616	.833	.658	.607	.542	.587	.642	.719



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : H1501007
Site Code : 00005724
Start Date : 1/27/2015
Page No : 3

	RIDGE ROUTE ROAD Southbound				LAKE HUGHES ROAD Westbound				RIDGE ROUTE ROAD Northbound				LAKE HUGHES ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:15																	
16:15	**12**	18	**2**	**32**	1	6	**5**	12	**12**	**24**	5	**41**	7	4	**18**	**29**	**114**
16:30	10	19	0	29	**2**	6	5	13	9	15	7	31	5	1	8	14	87
16:45	5	21	0	26	0	**10**	5	**15**	8	21	7	36	4	5	14	23	100
17:00	7	**22**	2	31	2	6	2	10	4	23	**8**	35	**9**	**6**	11	26	102
Total Volume	34	80	4	118	5	28	17	50	33	83	27	143	25	16	51	92	403
% App. Total	28.8	67.8	3.4		10	56	34		23.1	58	18.9		27.2	17.4	55.4		
PHF	.708	.909	.500	.922	.625	.700	.850	.833	.688	.865	.844	.872	.694	.667	.708	.793	.884



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S- Direction: THE OLD ROAD
E-W Direction: PARKER ROAD

File Name : H1501008
Site Code : 00005724
Start Date : 1/28/2015
Page No : 1

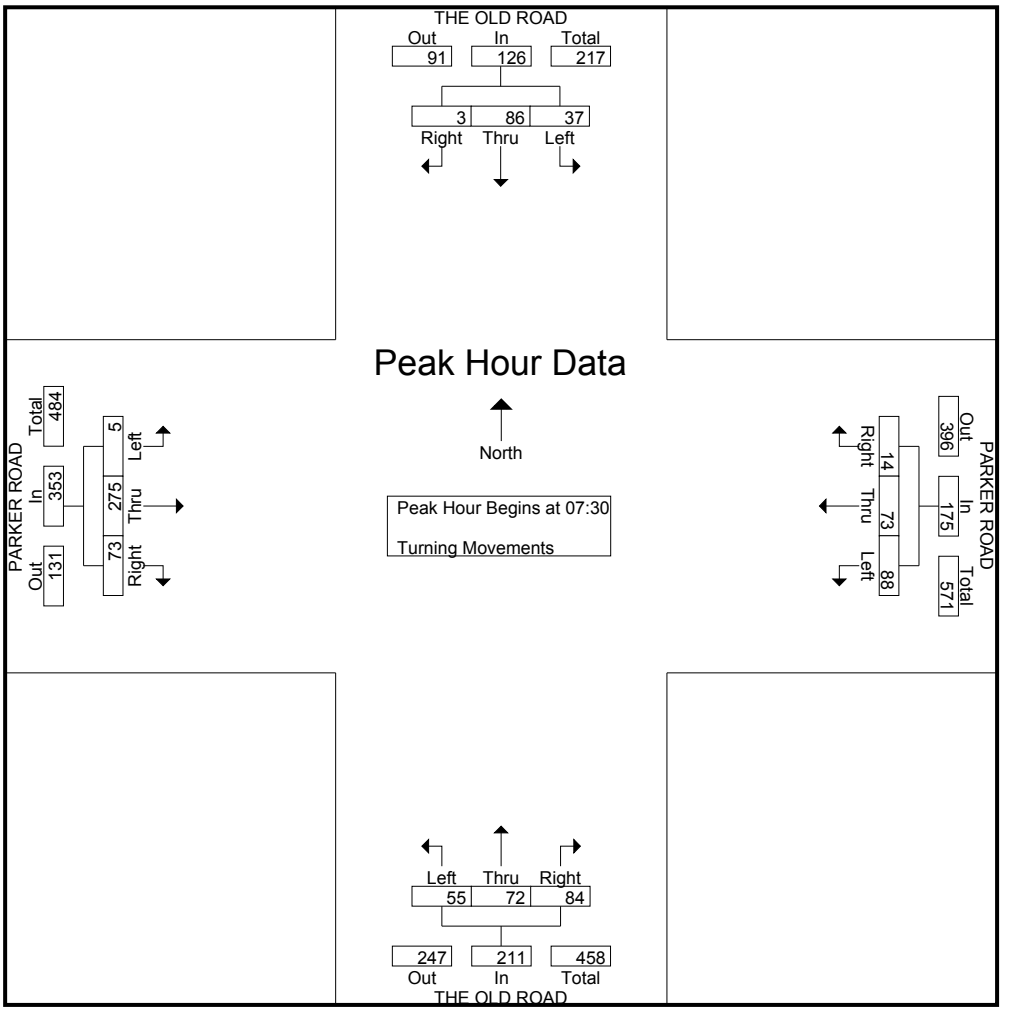
Groups Printed- Turning Movements

	THE OLD ROAD Southbound			PARKER ROAD Westbound			THE OLD ROAD Northbound			PARKER ROAD Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00	2	6	9	4	12	4	12	5	4	8	59	0	125
07:15	0	14	8	2	14	13	10	5	3	13	68	2	152
07:30	2	14	10	2	10	13	19	5	4	10	76	0	165
07:45	0	20	7	2	20	18	21	13	8	19	97	2	227
Total	4	54	34	10	56	48	62	28	19	50	300	4	669
08:00	1	29	13	4	25	35	25	20	21	22	54	1	250
08:15	0	23	7	6	18	22	19	34	22	22	48	2	223
08:30	2	12	11	0	18	5	23	20	13	10	44	3	161
08:45	1	9	7	4	14	16	14	15	6	8	38	1	133
Total	4	73	38	14	75	78	81	89	62	62	184	7	767
16:00	5	17	6	17	45	20	20	19	9	13	27	2	200
16:15	2	17	9	11	33	14	25	17	15	9	37	1	190
16:30	3	11	15	11	40	19	17	21	18	10	35	0	200
16:45	1	8	6	8	55	17	18	20	5	4	33	3	178
Total	11	53	36	47	173	70	80	77	47	36	132	6	768
17:00	1	10	11	12	53	23	18	13	8	8	29	2	188
17:15	6	10	10	14	58	21	22	23	16	6	38	3	227
17:30	4	24	3	14	53	18	14	15	11	5	34	3	198
17:45	5	18	10	10	51	15	19	18	13	8	26	0	193
Total	16	62	34	50	215	77	73	69	48	27	127	8	806
Grand Total	35	242	142	121	519	273	296	263	176	175	743	25	3010
Apprch %	8.4	57.8	33.9	13.3	56.8	29.9	40.3	35.8	23.9	18.6	78.8	2.7	
Total %	1.2	8	4.7	4	17.2	9.1	9.8	8.7	5.8	5.8	24.7	0.8	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : H1501008
Site Code : 00005724
Start Date : 1/28/2015
Page No : 2

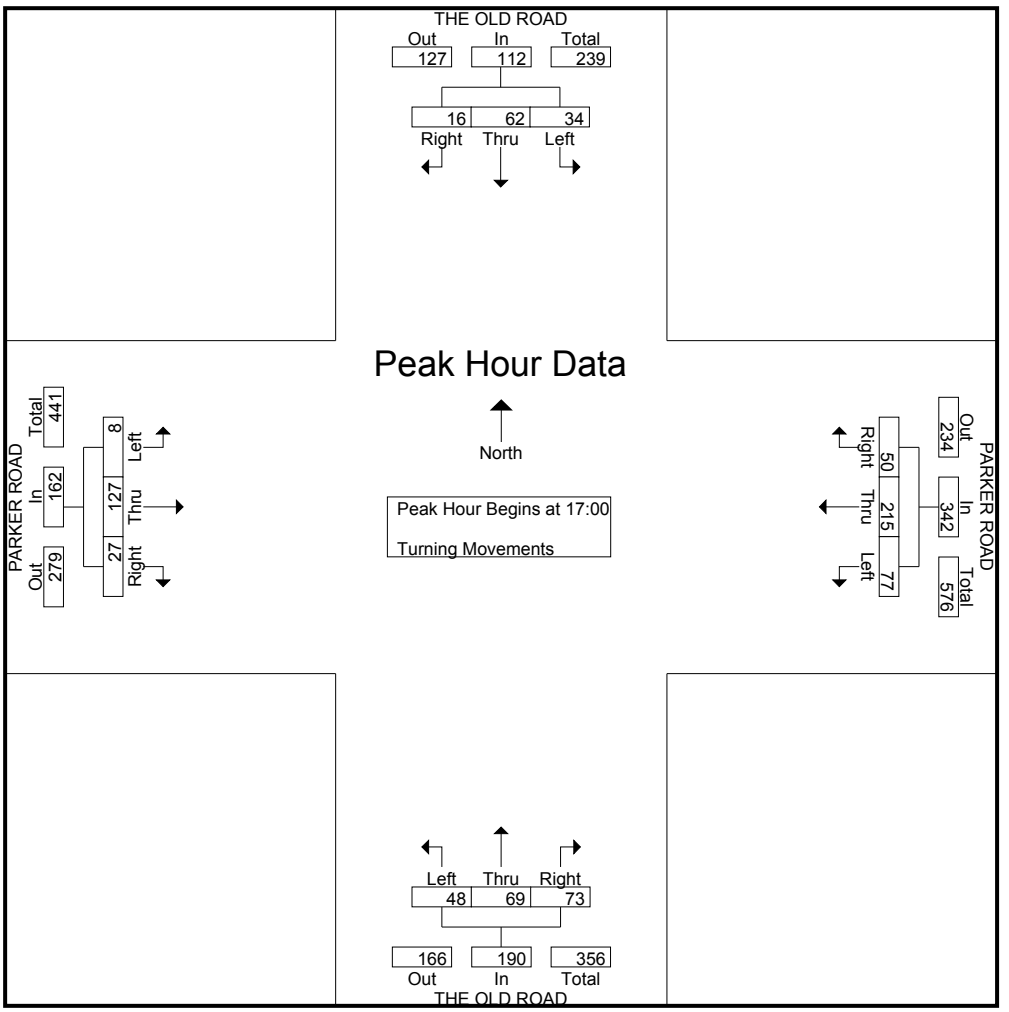
	THE OLD ROAD Southbound				PARKER ROAD Westbound				THE OLD ROAD Northbound				PARKER ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	**2**	14	10	26	2	10	13	25	19	5	4	28	10	76	0	86	165
07:45	0	20	7	27	2	20	18	40	21	13	8	42	19	**97**	**2**	**118**	227
08:00	1	**29**	**13**	**43**	4	**25**	**35**	**64**	**25**	20	21	66	**22**	54	1	77	**250**
08:15	0	23	7	30	**6**	18	22	46	19	**34**	**22**	**75**	22	48	2	72	223
Total Volume	3	86	37	126	14	73	88	175	84	72	55	211	73	275	5	353	865
% App. Total	2.4	68.3	29.4		8	41.7	50.3		39.8	34.1	26.1		20.7	77.9	1.4		
PHF	.375	.741	.712	.733	.583	.730	.629	.684	.840	.529	.625	.703	.830	.709	.625	.748	.865



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : H1501008
Site Code : 00005724
Start Date : 1/28/2015
Page No : 3

	THE OLD ROAD Southbound				PARKER ROAD Westbound				THE OLD ROAD Northbound				PARKER ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	1	10	**11**	22	12	53	**23**	88	18	13	8	39	**8**	29	2	39	188
17:15	**6**	10	10	26	**14**	**58**	21	**93**	**22**	**23**	**16**	**61**	6	**38**	**3**	**47**	**227**
17:30	4	**24**	3	31	14	53	18	85	14	15	11	40	5	34	3	42	198
17:45	5	18	10	**33**	10	51	15	76	19	18	13	50	8	26	0	34	193
Total Volume	16	62	34	112	50	215	77	342	73	69	48	190	27	127	8	162	806
% App. Total	14.3	55.4	30.4		14.6	62.9	22.5		38.4	36.3	25.3		16.7	78.4	4.9		
PHF	.667	.646	.773	.848	.893	.927	.837	.919	.830	.750	.750	.779	.844	.836	.667	.862	.888



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S- Direction: I-5 SB ON RAMP
E-W Direction: PARKER ROAD

File Name : H1501009
Site Code : 00000000
Start Date : 1/22/2015
Page No : 1

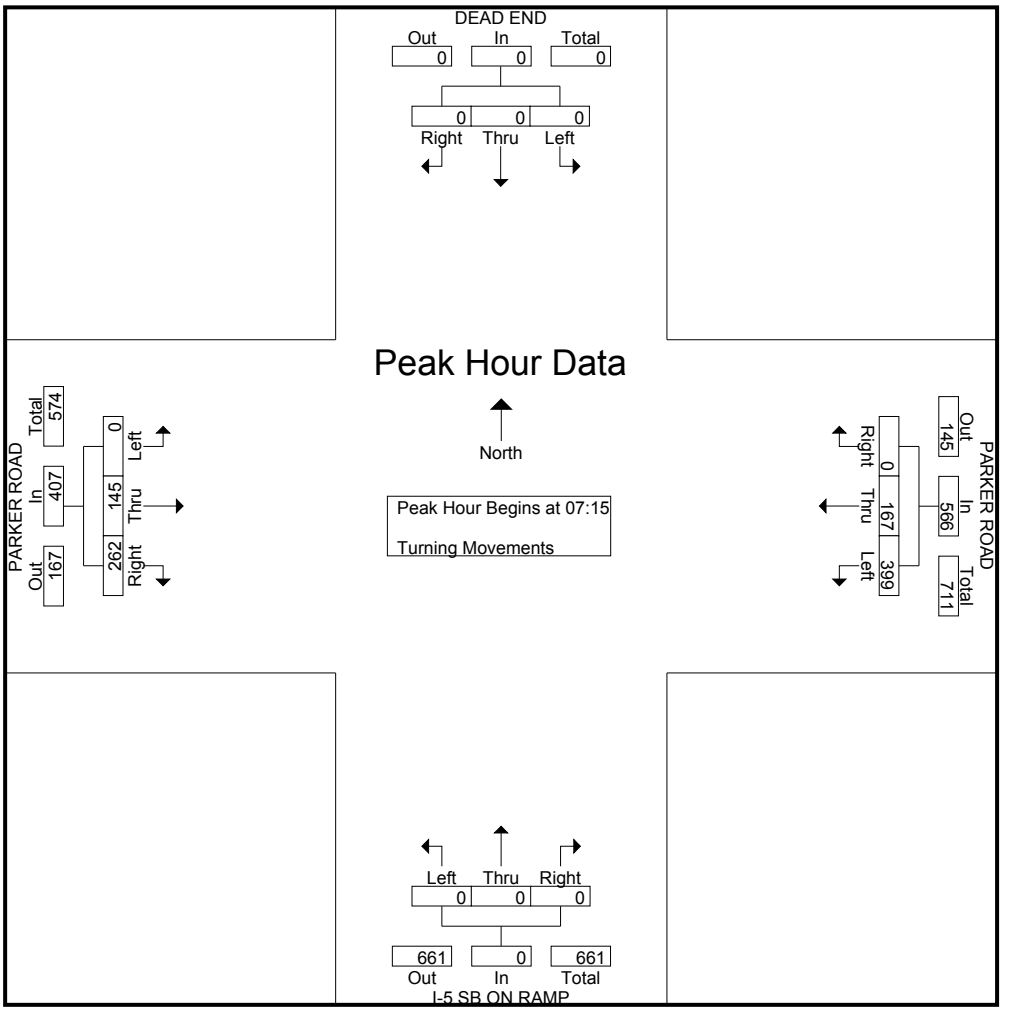
Groups Printed- Turning Movements

	DEAD END Southbound			PARKER ROAD Westbound			I-5 SB ON RAMP Northbound			PARKER ROAD Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00	0	0	0	0	21	84	0	0	0	69	12	0	186
07:15	0	0	0	0	30	94	0	0	0	78	14	0	216
07:30	0	0	0	0	26	113	0	0	0	75	51	0	265
07:45	0	0	0	0	57	103	0	0	0	67	45	0	272
Total	0	0	0	0	134	394	0	0	0	289	122	0	939
08:00	0	0	0	0	54	89	0	0	0	42	35	0	220
08:15	0	0	0	0	40	71	0	0	0	53	34	0	198
08:30	0	0	0	0	35	65	0	0	0	38	21	0	159
08:45	0	0	0	0	33	77	0	0	0	42	18	0	170
Total	0	0	0	0	162	302	0	0	0	175	108	0	747
16:00	0	0	0	0	72	61	0	0	0	31	25	0	189
16:15	0	0	0	0	69	51	0	0	0	35	28	0	183
16:30	0	0	0	0	73	84	0	0	0	40	27	0	224
16:45	0	0	0	0	66	76	0	0	0	28	42	0	212
Total	0	0	0	0	280	272	0	0	0	134	122	0	808
17:00	0	0	0	0	90	88	0	0	0	31	36	0	245
17:15	0	0	0	0	84	82	0	0	0	29	23	0	218
17:30	0	0	0	0	90	83	0	0	0	28	31	0	232
17:45	0	0	0	0	88	74	0	0	0	28	48	0	238
Total	0	0	0	0	352	327	0	0	0	116	138	0	933
Grand Total	0	0	0	0	928	1295	0	0	0	714	490	0	3427
Apprch %	0	0	0	0	41.7	58.3	0	0	0	59.3	40.7	0	
Total %	0	0	0	0	27.1	37.8	0	0	0	20.8	14.3	0	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : H1501009
Site Code : 00000000
Start Date : 1/22/2015
Page No : 2

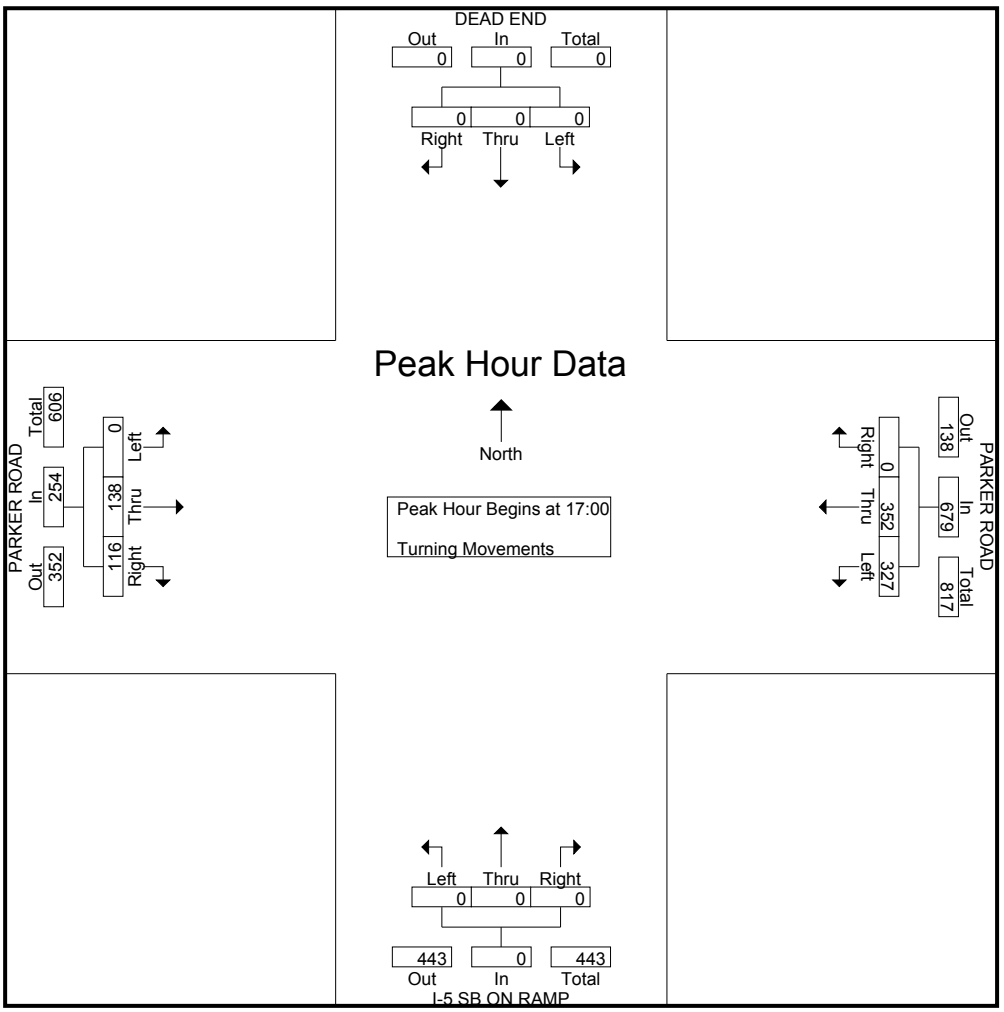
	DEAD END Southbound				PARKER ROAD Westbound				I-5 SB ON RAMP Northbound				PARKER ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	0	0	0	0	0	30	94	124	0	0	0	0	**78**	14	0	92	216
07:30	0	0	0	0	0	26	**113**	139	0	0	0	0	75	**51**	0	**126**	265
07:45	0	0	0	0	0	**57**	103	**160**	0	0	0	0	67	45	0	112	**272**
08:00	0	0	0	0	0	54	89	143	0	0	0	0	42	35	0	77	220
Total Volume	0	0	0	0	0	167	399	566	0	0	0	0	262	145	0	407	973
% App. Total	0	0	0		0	29.5	70.5		0	0	0		64.4	35.6	0		
PHF	.000	.000	.000	.000	.000	.732	.883	.884	.000	.000	.000	.000	.840	.711	.000	.808	.894



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : H1501009
Site Code : 00000000
Start Date : 1/22/2015
Page No : 3

	DEAD END Southbound				PARKER ROAD Westbound				I-5 SB ON RAMP Northbound				PARKER ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	0	0	0	0	0	**90**	**88**	**178**	0	0	0	0	**31**	36	0	67	**245**
17:15	0	0	0	0	0	84	82	166	0	0	0	0	29	23	0	52	218
17:30	0	0	0	0	0	90	83	173	0	0	0	0	28	31	0	59	232
17:45	0	0	0	0	0	88	74	162	0	0	0	0	28	**48**	0	**76**	238
Total Volume	0	0	0	0	0	352	327	679	0	0	0	0	116	138	0	254	933
% App. Total	0	0	0		0	51.8	48.2		0	0	0		45.7	54.3	0		
PHF	.000	.000	.000	.000	.000	.978	.929	.954	.000	.000	.000	.000	.935	.719	.000	.836	.952



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S- Direction: I-5 NB OFF RAMP
E-W Direction: RIDGE ROUTE ROAD

File Name : H1501010
Site Code : 00000000
Start Date : 1/22/2015
Page No : 1

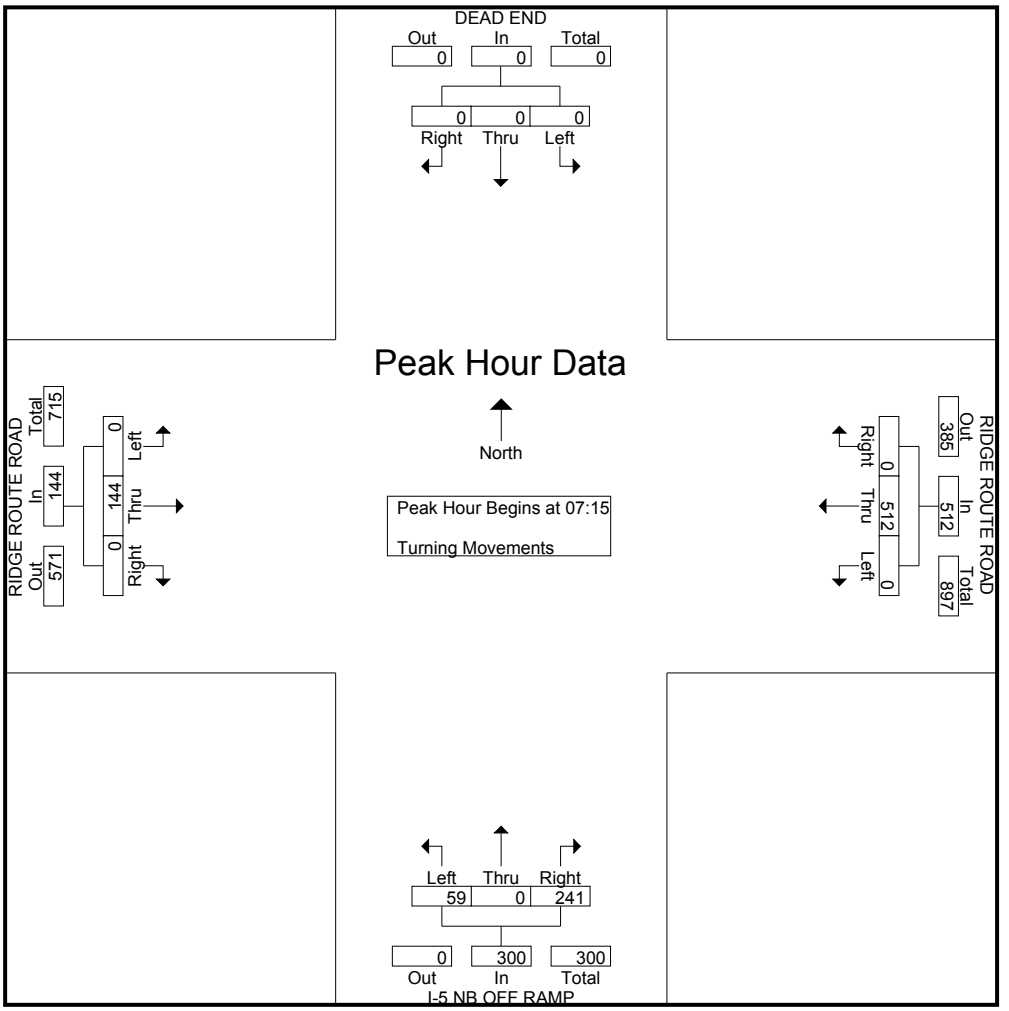
Groups Printed- Turning Movements

	DEAD END Southbound			RIDGE ROUTE ROAD Westbound			I-5 NB OFF RAMP Northbound			RIDGE ROUTE ROAD Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00	0	0	0	0	87	0	48	0	15	0	10	0	160
07:15	0	0	0	0	118	0	61	0	10	0	14	0	203
07:30	0	0	0	0	132	0	64	0	12	0	50	0	258
07:45	0	0	0	0	138	0	58	0	19	0	46	0	261
Total	0	0	0	0	475	0	231	0	56	0	120	0	882
08:00	0	0	0	0	124	0	58	0	18	0	34	0	234
08:15	0	0	0	0	88	0	49	0	16	0	34	0	187
08:30	0	0	0	0	89	0	55	0	17	0	20	0	181
08:45	0	0	0	0	88	0	60	0	14	0	16	0	178
Total	0	0	0	0	389	0	222	0	65	0	104	0	780
16:00	0	0	0	0	90	0	109	0	50	0	25	0	274
16:15	0	0	0	0	75	0	110	0	39	0	27	0	251
16:30	0	0	0	0	109	0	127	0	46	0	25	0	307
16:45	0	0	0	0	105	0	135	0	44	0	42	0	326
Total	0	0	0	0	379	0	481	0	179	0	119	0	1158
17:00	0	0	0	0	128	0	119	0	46	0	37	0	330
17:15	0	0	0	0	106	0	127	0	57	0	26	0	316
17:30	0	0	0	0	126	0	125	0	50	0	32	0	333
17:45	0	0	0	0	112	0	120	0	52	0	43	0	327
Total	0	0	0	0	472	0	491	0	205	0	138	0	1306
Grand Total	0	0	0	0	1715	0	1425	0	505	0	481	0	4126
Apprch %	0	0	0	0	100	0	73.8	0	26.2	0	100	0	
Total %	0	0	0	0	41.6	0	34.5	0	12.2	0	11.7	0	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : H1501010
Site Code : 00000000
Start Date : 1/22/2015
Page No : 2

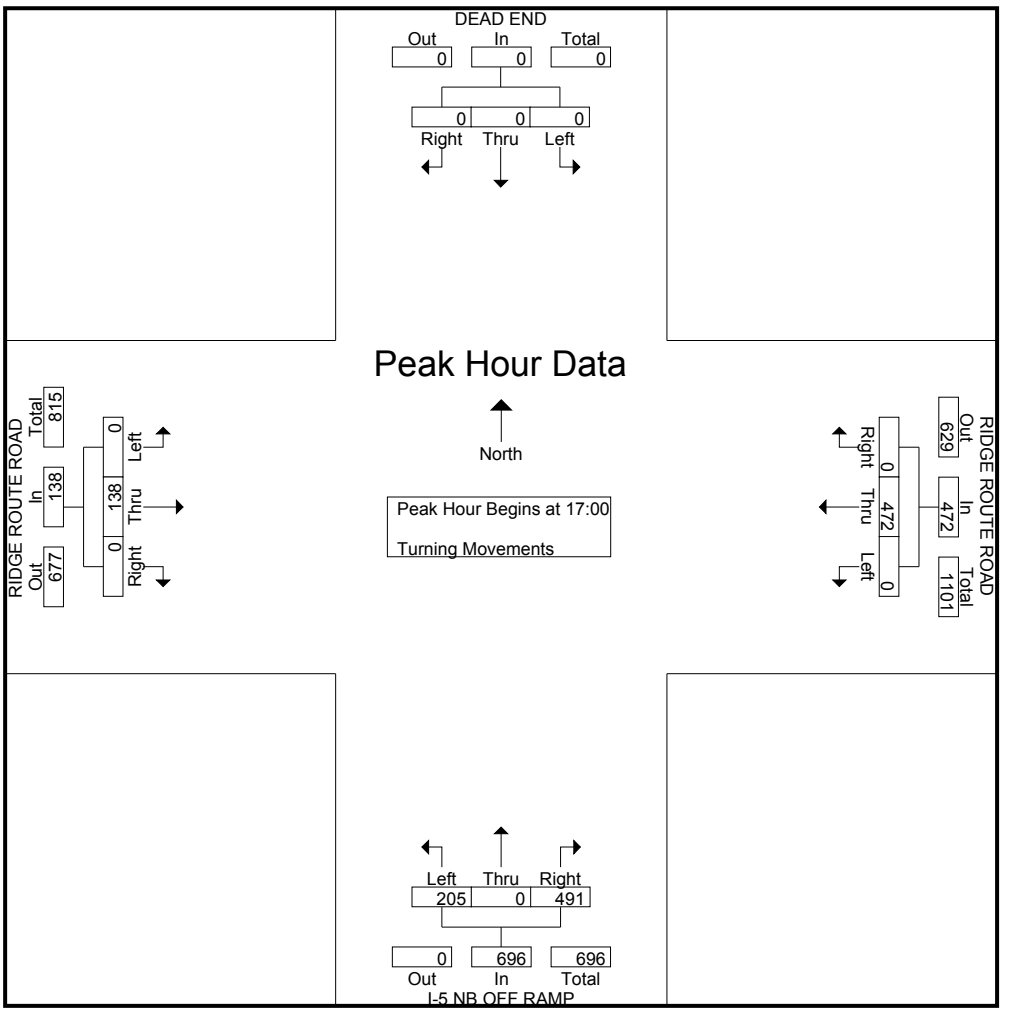
	DEAD END Southbound				RIDGE ROUTE ROAD Westbound				I-5 NB OFF RAMP Northbound				RIDGE ROUTE ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	0	0	0	0	0	118	0	118	61	0	10	71	0	14	0	14	203
07:30	0	0	0	0	0	132	0	132	**64**	0	12	76	0	**50**	0	**50**	258
07:45	0	0	0	0	0	**138**	0	**138**	58	0	**19**	**77**	0	46	0	46	**261**
08:00	0	0	0	0	0	124	0	124	58	0	18	76	0	34	0	34	234
Total Volume	0	0	0	0	0	512	0	512	241	0	59	300	0	144	0	144	956
% App. Total	0	0	0		0	100	0		80.3	0	19.7		0	100	0		
PHF	.000	.000	.000	.000	.000	.928	.000	.928	.941	.000	.776	.974	.000	.720	.000	.720	.916



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : H1501010
Site Code : 00000000
Start Date : 1/22/2015
Page No : 3

	DEAD END Southbound				RIDGE ROUTE ROAD Westbound				I-5 NB OFF RAMP Northbound				RIDGE ROUTE ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	0	0	0	0	0	**128**	0	**128**	119	0	46	165	0	37	0	37	330
17:15	0	0	0	0	0	106	0	106	**127**	0	**57**	**184**	0	26	0	26	316
17:30	0	0	0	0	0	126	0	126	125	0	50	175	0	32	0	32	**333**
17:45	0	0	0	0	0	112	0	112	120	0	52	172	0	**43**	0	**43**	327
Total Volume	0	0	0	0	0	472	0	472	491	0	205	696	0	138	0	138	1306
% App. Total	0	0	0		0	100	0		70.5	0	29.5		0	100	0		
PHF	.000	.000	.000	.000	.000	.922	.000	.922	.967	.000	.899	.946	.000	.802	.000	.802	.980



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: SANTA CLARITA
N-S- Direction: CASTAIC ROAD
E-W Direction: RIDGE ROUTE ROAD

File Name : H1501011
Site Code : 00000000
Start Date : 1/22/2015
Page No : 1

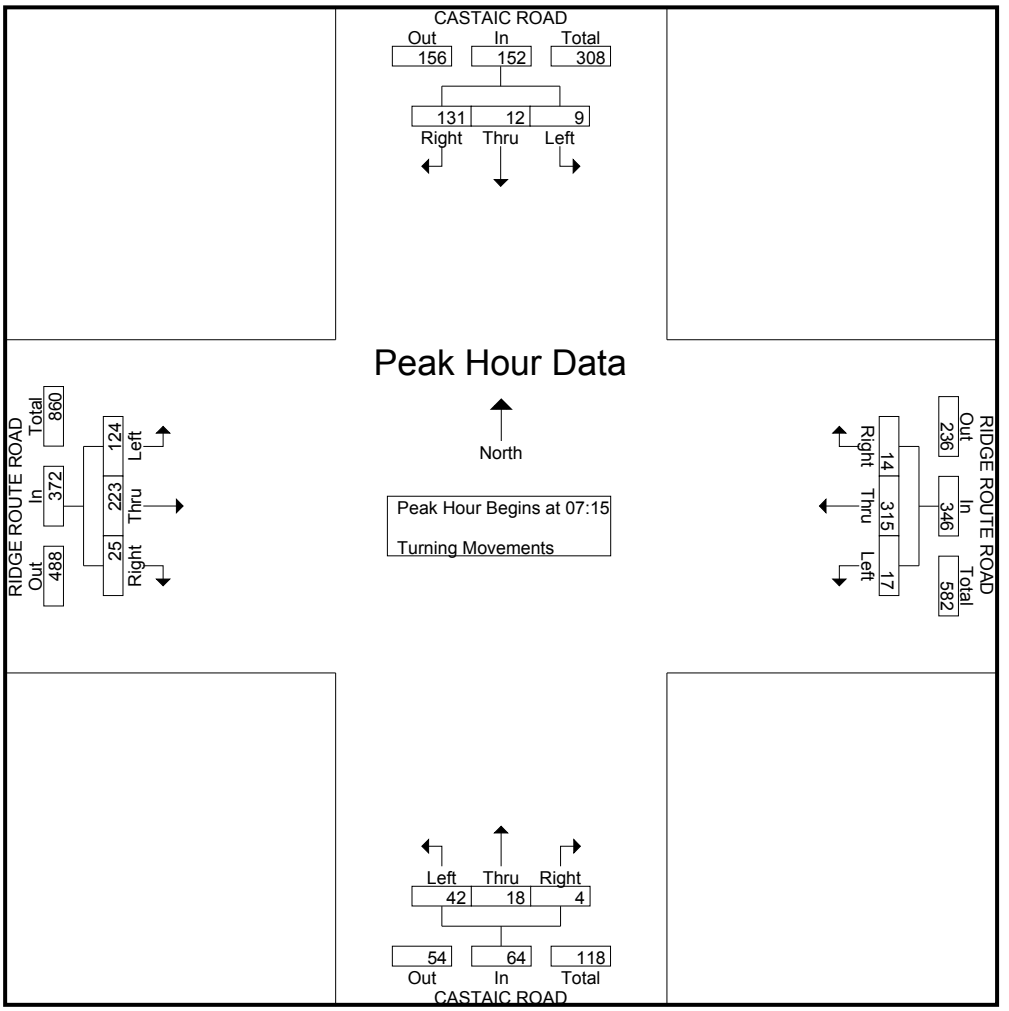
Groups Printed- Turning Movements

	CASTAIC ROAD Southbound			RIDGE ROUTE ROAD Westbound			CASTAIC ROAD Northbound			RIDGE ROUTE ROAD Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00	27	1	2	7	67	4	1	3	9	11	30	18	180
07:15	35	0	1	1	68	4	1	6	8	10	42	24	200
07:30	25	4	2	3	93	4	2	2	11	3	78	29	256
07:45	33	2	3	8	87	5	0	5	7	5	62	32	249
Total	120	7	8	19	315	17	4	16	35	29	212	103	885
08:00	38	6	3	2	67	4	1	5	16	7	41	39	229
08:15	29	4	2	1	50	6	4	9	6	10	41	33	195
08:30	34	5	0	2	41	5	4	3	14	5	34	30	177
08:45	37	4	4	2	38	5	3	1	9	13	21	38	175
Total	138	19	9	7	196	20	12	18	45	35	137	140	776
16:00	30	8	2	3	35	4	4	12	30	19	47	59	253
16:15	32	12	3	6	31	4	3	6	10	23	55	59	244
16:30	37	7	2	4	41	9	4	14	29	23	69	56	295
16:45	38	15	4	3	36	4	4	15	27	62	63	53	324
Total	137	42	11	16	143	21	15	47	96	127	234	227	1116
17:00	36	6	1	10	34	6	5	18	49	31	67	53	316
17:15	35	8	5	7	34	5	4	5	37	26	58	62	286
17:30	39	9	8	8	46	1	5	8	32	29	56	59	300
17:45	33	10	3	3	38	11	7	15	44	51	55	54	324
Total	143	33	17	28	152	23	21	46	162	137	236	228	1226
Grand Total	538	101	45	70	806	81	52	127	338	328	819	698	4003
Apprch %	78.7	14.8	6.6	7.3	84.2	8.5	10.1	24.6	65.4	17.8	44.4	37.8	
Total %	13.4	2.5	1.1	1.7	20.1	2	1.3	3.2	8.4	8.2	20.5	17.4	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : H1501011
Site Code : 00000000
Start Date : 1/22/2015
Page No : 2

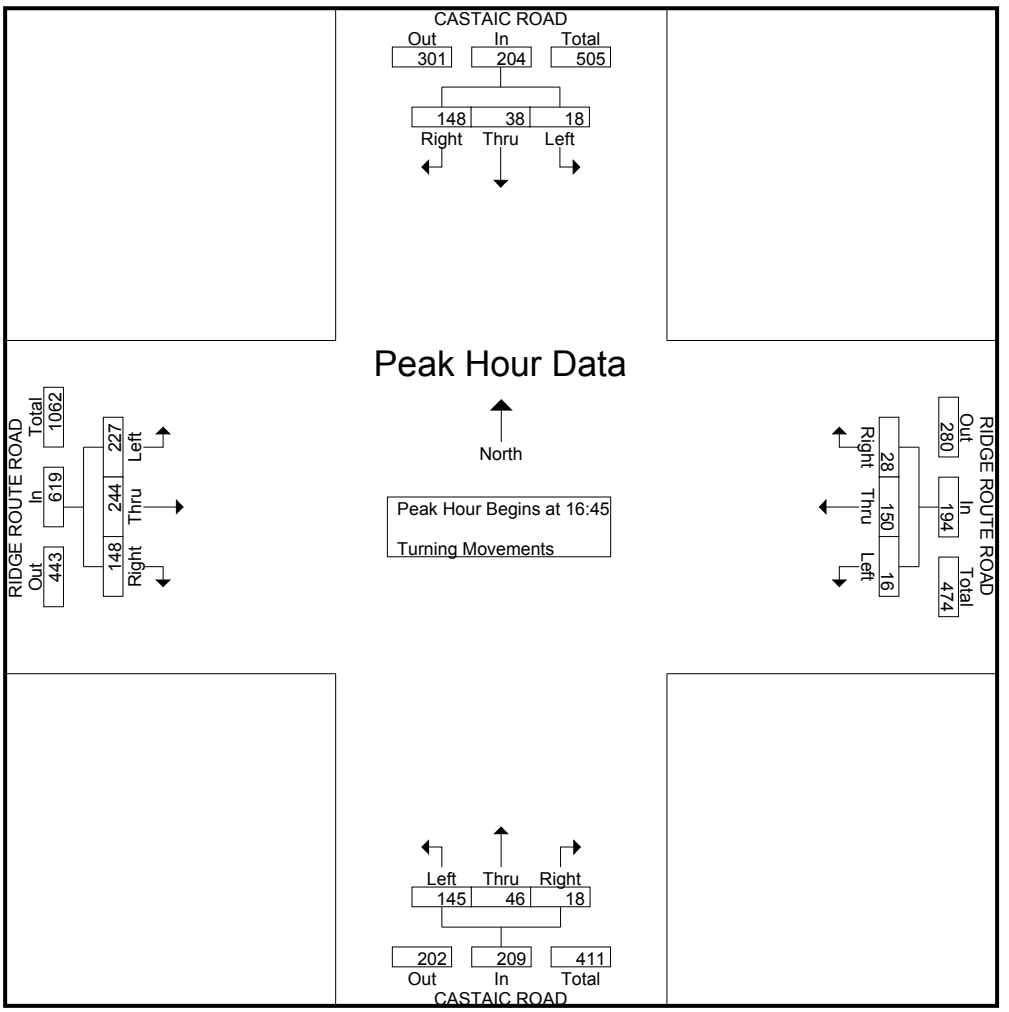
	CASTAIC ROAD Southbound				RIDGE ROUTE ROAD Westbound				CASTAIC ROAD Northbound				RIDGE ROUTE ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	35	0	1	36	1	68	4	73	1	**6**	8	15	**10**	42	24	76	200
07:30	25	4	2	31	3	**93**	4	**100**	**2**	2	11	15	3	**78**	29	**110**	**256**
07:45	33	2	**3**	38	**8**	87	**5**	100	0	5	7	12	5	62	32	99	249
08:00	**38**	**6**	3	**47**	2	67	4	73	1	5	**16**	**22**	7	41	**39**	87	229
Total Volume	131	12	9	152	14	315	17	346	4	18	42	64	25	223	124	372	934
% App. Total	86.2	7.9	5.9		4	91	4.9		6.2	28.1	65.6		6.7	59.9	33.3		
PHF	.862	.500	.750	.809	.438	.847	.850	.865	.500	.750	.656	.727	.625	.715	.795	.845	.912



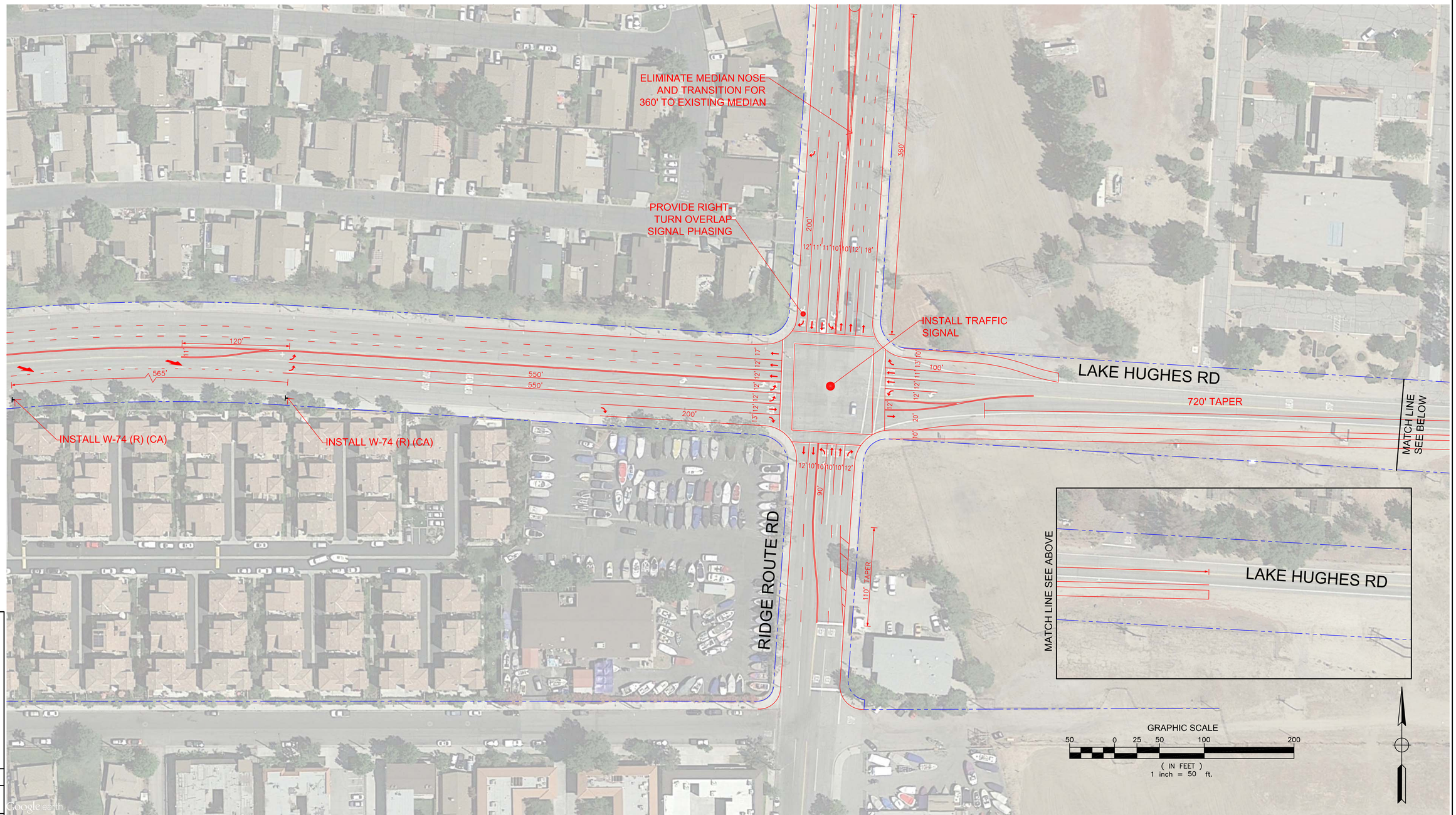
Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : H1501011
Site Code : 00000000
Start Date : 1/22/2015
Page No : 3

	CASTAIC ROAD Southbound				RIDGE ROUTE ROAD Westbound				CASTAIC ROAD Northbound				RIDGE ROUTE ROAD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	38	**15**	4	**57**	3	36	4	43	4	15	27	46	**62**	63	53	**178**	**324**
17:00	36	6	1	43	**10**	34	**6**	50	**5**	**18**	**49**	**72**	31	**67**	53	151	316
17:15	35	8	5	48	7	34	5	46	4	5	37	46	26	58	**62**	146	286
17:30	**39**	9	**8**	56	8	**46**	1	**55**	5	8	32	45	29	56	59	144	300
Total Volume	148	38	18	204	28	150	16	194	18	46	145	209	148	244	227	619	1226
% App. Total	72.5	18.6	8.8		14.4	77.3	8.2		8.6	22	69.4		23.9	39.4	36.7		
PHF	.949	.633	.563	.895	.700	.815	.667	.882	.900	.639	.740	.726	.597	.910	.915	.869	.946



Appendix D CONCEPT MITIGATION PLAN



CONSTRUCTION DIVISION SHALL CONTACT TRAFFIC AND LIGHTING DIVISION PRIOR TO ISSUANCE OF PERMIT

NO.	PROJECT	CADD FILE NAME	DATE	BY	REVISIONS

T.G. Page: 4369 / H-6

REGISTERED PROFESSIONAL ENGINEER FENG XU No. 80744 Exp. 3-31-17 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

Stantec

FENG XU, RCE 80744 EXPIRE 3-31-17 DATE:

REVIEWED DATE:

RECOMMENDED DATE:

APPROVED
GAIL FARBER, DIRECTOR OF PUBLIC WORKS

BY: ASSISTANT DEPUTY DIRECTOR DATE

NORTHLAKE ASSOCIATES, LLC
NORTHLAKE SPECIFIC PLAN
CASTAIC,CA

CONCEPT MITIGATION PLAN
RIDGE ROUTE RD AND LAKE HUGHES RD

VTTM 73336 | SHEET 1 OF 3 | SCALE: 1" = 50' | T.S.

THIS PLAN EXPIRES TWO YEARS AFTER APPROVAL DATE

9/6/2016 8:01 AM
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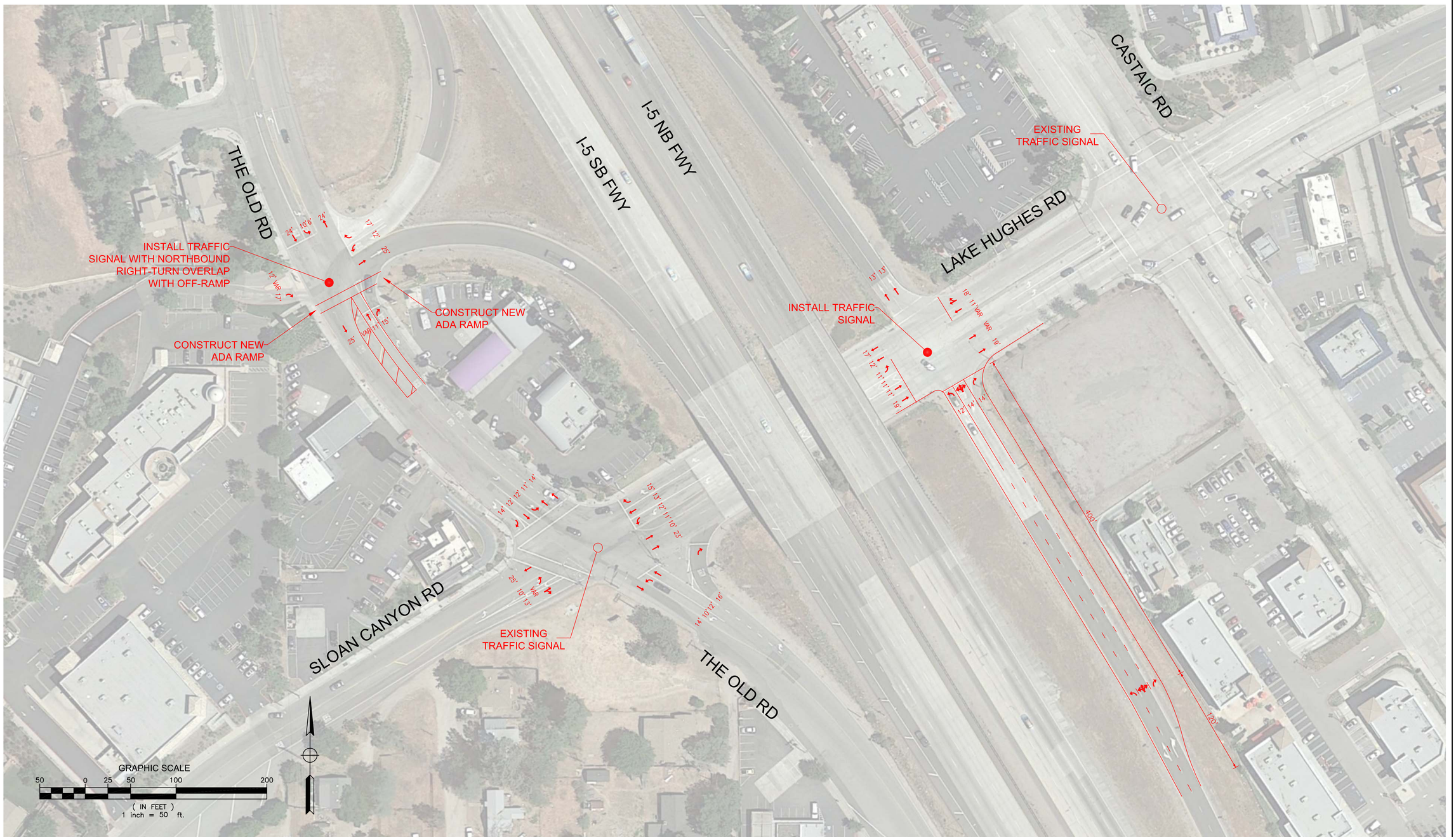

CONSTRUCTION DIVISION SHALL CONTACT TRAFFIC AND LIGHTING DIVISION PRIOR TO ISSUANCE OF PERMIT

NO.	PROJECT	CADD FILE NAME	DATE	BY	REVISIONS

T.G. Page: 4369 / G-6

REGISTERED PROFESSIONAL ENGINEER
FENG XU
No. 80744
Exp. 3-31-17
CIVIL
STATE OF CALIFORNIA

PLANS PREPARED BY:

Stantec

FENG XU, RCE 80744 EXPIRE 3-31-17 DATE:

REVIEWED
DATE:

RECOMMENDED
DATE:

APPROVED
GAIL FARBER, DIRECTOR OF PUBLIC WORKS

BY: ASSISTANT DEPUTY DIRECTOR DATE

NORTHLAKE ASSOCIATES, LLC
NORTHLAKE SPECIFIC PLAN
CASTAIC,CA

CONCEPT MITIGATION PLAN
THE OLD RD, LAKE HUGHES RD TO
I-5 RAMPS

VTTM 73336 | SHEET 2 OF 3 | SCALE: 1" = 50' | T.S.

THIS PLAN EXPIRES TWO YEARS AFTER APPROVAL DATE

9/10/2015 9:29 AM
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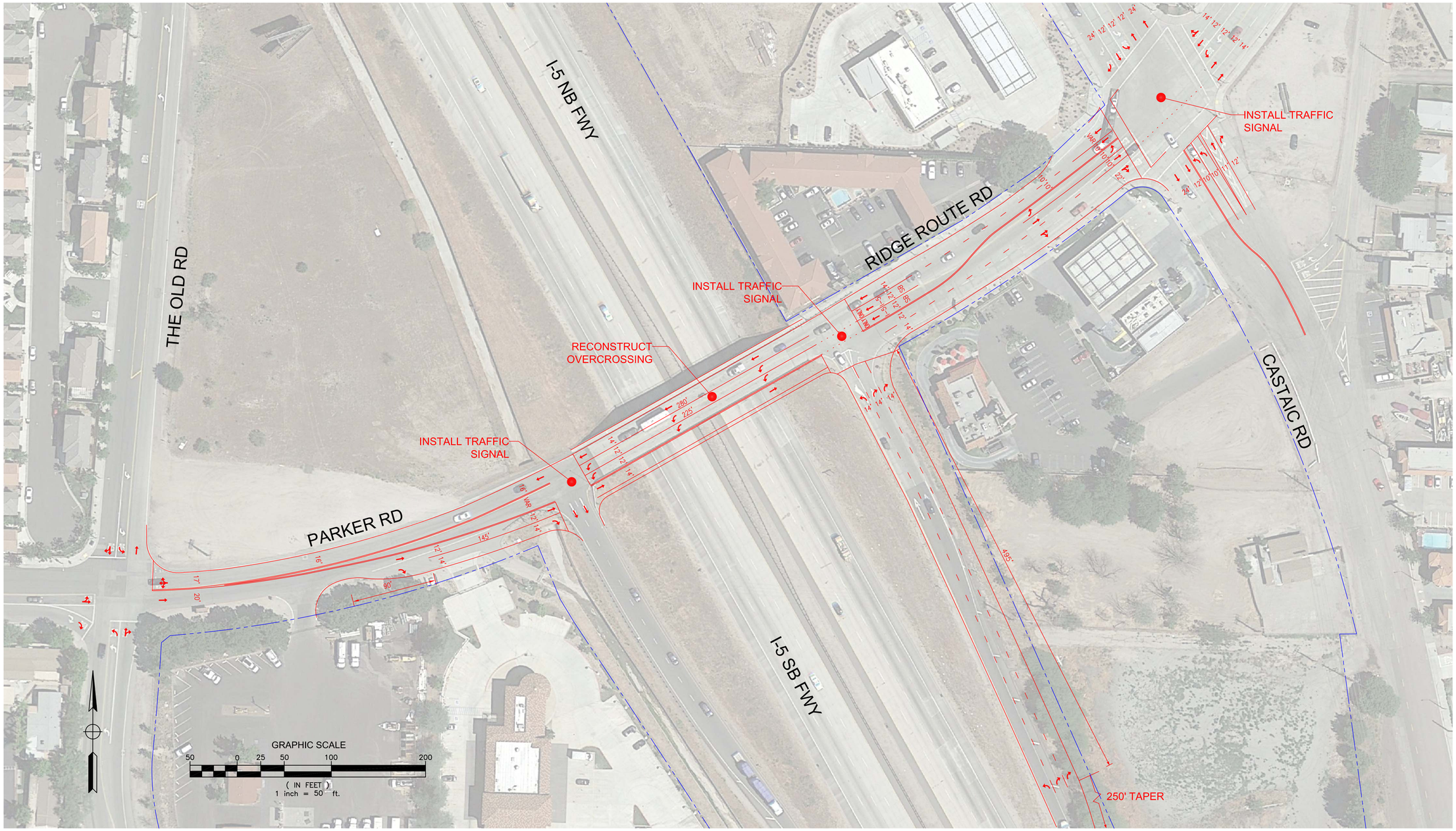
D.3



NO.	PROJECT	CADD FILE NAME	DATE	BY	REVISIONS

T.G. Page: 4369 / H-7

CONSTRUCTION DIVISION SHALL CONTACT TRAFFIC AND LIGHTING DIVISION PRIOR TO ISSUANCE OF PERMIT

REGISTERED PROFESSIONAL ENGINEER FENG XU No. 80744 Exp. 3-31-17 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

Stantec

FENG XU, RCE 80744 EXPIRE 3-31-17 DATE:

REVIEWED DATE:

RECOMMENDED DATE:

APPROVED
GAIL FARBER, DIRECTOR OF PUBLIC WORKS

BY: ASSISTANT DEPUTY DIRECTOR DATE

NORTHLAKE ASSOCIATES, LLC
NORTHLAKE SPECIFIC PLAN
CASTAIC, CA

CONCEPT MITIGATION PLAN
THE OLD RD AND PARKER RD -
RIDGE ROUTE RD AND CASTAIC RD

VTTM 73336 | SHEET 3 OF 3 | SCALE: 1" = 50' | T.S.

THIS PLAN EXPIRES TWO YEARS AFTER APPROVAL DATE

4/14/2016 10:02 AM
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D.4

Appendix EHCM WORKSHEETS

Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	190	280	1130	450	0	0
Future Volume (vph)	190	280	1130	450	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		250	300		0	0
Storage Lanes		1	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frt		0.850				
Flt Protected			0.950			
Satd. Flow (prot)	1845	1568	3335	1810	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	1845	1568	3335	1810	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		77				
Link Speed (mph)	30			30	30	
Link Distance (ft)	486			342	585	
Travel Time (s)	11.0			7.8	13.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	3%	5%	5%	2%	2%
Adj. Flow (vph)	190	280	1130	450	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	190	280	1130	450	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1		
Detector Template						
Leading Detector (ft)	50	50	50	50		
Trailing Detector (ft)	0	0	0	0		
Detector 1 Position(ft)	0	0	0	0		
Detector 1 Size(ft)	50	50	50	50		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		
Turn Type	NA	Perm	Split	NA		
Protected Phases	4		8	8		
Permitted Phases		4				
Detector Phase	4	4	8	8		
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0		
Minimum Split (s)	20.0	20.0	20.0	20.0		

Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Total Split (s)	35.0	35.0	55.0	55.0		
Total Split (%)	38.9%	38.9%	61.1%	61.1%		
Maximum Green (s)	31.0	31.0	51.0	51.0		
Yellow Time (s)	3.5	3.5	3.5	3.5		
All-Red Time (s)	0.5	0.5	0.5	0.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.0	4.0	4.0	4.0		
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Recall Mode	None	None	None	None		
Walk Time (s)	5.0	5.0	5.0	5.0		
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		
Pedestrian Calls (#/hr)	0	0	0	0		
Act Effct Green (s)	40.0	40.0	42.0	42.0		
Actuated g/C Ratio	0.44	0.44	0.47	0.47		
v/c Ratio	0.23	0.38	0.73	0.53		
Control Delay	18.4	15.3	17.2	15.2		
Queue Delay	0.0	0.0	0.0	0.2		
Total Delay	18.4	15.3	17.3	15.4		
LOS	B	B	B	B		
Approach Delay	16.5			16.7		
Approach LOS	B			B		

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 15 (17%), Referenced to phase 2: and 6:, Start of Green			
Natural Cycle: 40			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 16.7		Intersection LOS: B	
Intersection Capacity Utilization 83.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: I-5 SB & Parker



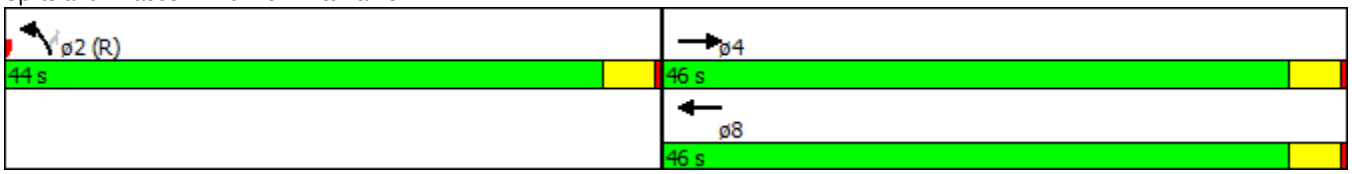


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	190	0	0	1360	230	860
Future Volume (vph)	190	0	0	1360	230	860
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		400	400
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	0.91	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	1810	0	0	4893	1703	2682
Flt Permitted					0.950	
Satd. Flow (perm)	1810	0	0	4893	1703	2682
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						860
Link Speed (mph)	30			30	30	
Link Distance (ft)	342			421	1215	
Travel Time (s)	7.8			9.6	27.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	5%	6%	6%	6%	6%
Adj. Flow (vph)	190	0	0	1360	230	860
Shared Lane Traffic (%)						
Lane Group Flow (vph)	190	0	0	1360	230	860
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1			1	1	1
Detector Template						
Leading Detector (ft)	50			50	50	50
Trailing Detector (ft)	0			0	0	0
Detector 1 Position(ft)	0			0	0	0
Detector 1 Size(ft)	50			50	50	50
Detector 1 Type	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0			0.0	0.0	0.0
Detector 1 Queue (s)	0.0			0.0	0.0	0.0
Detector 1 Delay (s)	0.0			0.0	0.0	0.0
Turn Type	NA			NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases						2
Detector Phase	4			8	2	2
Switch Phase						
Minimum Initial (s)	4.0			4.0	4.0	4.0
Minimum Split (s)	20.0			20.0	20.0	20.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	46.0			46.0	44.0	44.0
Total Split (%)	51.1%			51.1%	48.9%	48.9%
Maximum Green (s)	42.0			42.0	40.0	40.0
Yellow Time (s)	3.5			3.5	3.5	3.5
All-Red Time (s)	0.5			0.5	0.5	0.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	4.0			4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Recall Mode	None			None	C-Max	C-Max
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	34.4			34.4	47.6	47.6
Actuated g/C Ratio	0.38			0.38	0.53	0.53
v/c Ratio	0.27			0.73	0.26	0.47
Control Delay	36.9			10.8	13.6	2.0
Queue Delay	0.0			0.1	0.0	0.0
Total Delay	36.9			10.8	13.6	2.0
LOS	D			B	B	A
Approach Delay	36.9			10.8	4.4	
Approach LOS	D			B	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 88 (98%), Referenced to phase 2:NBL and 6:, Start of Green			
Natural Cycle: 40			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 10.1		Intersection LOS: B	
Intersection Capacity Utilization 83.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 10: I-5 NB & Parker



Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	330	330	1040	630	0	0
Future Volume (vph)	330	330	1040	630	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		250	300		0	0
Storage Lanes		1	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frt		0.850				
Flt Protected			0.950			
Satd. Flow (prot)	1845	1568	3335	1810	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	1845	1568	3335	1810	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		95				
Link Speed (mph)	30			30	30	
Link Distance (ft)	486			342	585	
Travel Time (s)	11.0			7.8	13.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	3%	5%	5%	2%	2%
Adj. Flow (vph)	330	330	1040	630	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	330	330	1040	630	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1		
Detector Template						
Leading Detector (ft)	50	50	50	50		
Trailing Detector (ft)	0	0	0	0		
Detector 1 Position(ft)	0	0	0	0		
Detector 1 Size(ft)	50	50	50	50		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		
Turn Type	NA	Perm	Split	NA		
Protected Phases	4		8	8		
Permitted Phases		4				
Detector Phase	4	4	8	8		
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0		
Minimum Split (s)	20.0	20.0	20.0	20.0		

Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Total Split (s)	35.0	35.0	55.0	55.0		
Total Split (%)	38.9%	38.9%	61.1%	61.1%		
Maximum Green (s)	31.0	31.0	51.0	51.0		
Yellow Time (s)	3.5	3.5	3.5	3.5		
All-Red Time (s)	0.5	0.5	0.5	0.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.0	4.0	4.0	4.0		
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Recall Mode	None	None	None	None		
Walk Time (s)	5.0	5.0	5.0	5.0		
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		
Pedestrian Calls (#/hr)	0	0	0	0		
Act Effct Green (s)	39.2	39.2	42.8	42.8		
Actuated g/C Ratio	0.44	0.44	0.48	0.48		
v/c Ratio	0.41	0.45	0.66	0.73		
Control Delay	21.7	16.6	20.3	23.2		
Queue Delay	0.1	0.0	0.3	0.7		
Total Delay	21.8	16.6	20.6	23.9		
LOS	C	B	C	C		
Approach Delay	19.2			21.8		
Approach LOS	B			C		

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 15 (17%), Referenced to phase 2: and 6:, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 21.1		Intersection LOS: C	
Intersection Capacity Utilization 110.6%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 2: I-5 SB & Parker



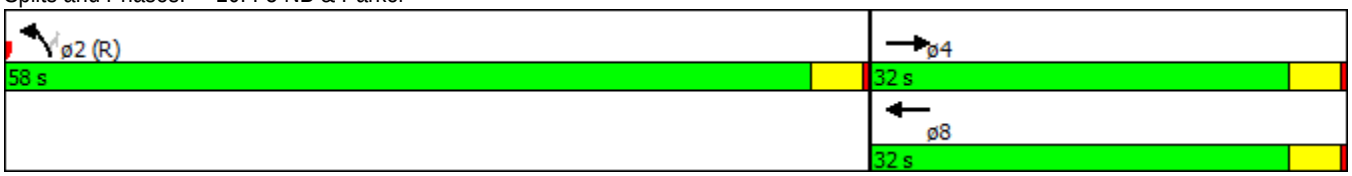


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	330	0	0	1270	400	1590
Future Volume (vph)	330	0	0	1270	400	1590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		400	400
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	0.91	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	1810	0	0	4893	1703	2682
Flt Permitted					0.950	
Satd. Flow (perm)	1810	0	0	4893	1703	2682
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						483
Link Speed (mph)	30			30	30	
Link Distance (ft)	342			421	1215	
Travel Time (s)	7.8			9.6	27.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	5%	6%	6%	6%	6%
Adj. Flow (vph)	330	0	0	1270	400	1590
Shared Lane Traffic (%)						
Lane Group Flow (vph)	330	0	0	1270	400	1590
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1			1	1	1
Detector Template						
Leading Detector (ft)	50			50	50	50
Trailing Detector (ft)	0			0	0	0
Detector 1 Position(ft)	0			0	0	0
Detector 1 Size(ft)	50			50	50	50
Detector 1 Type	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0			0.0	0.0	0.0
Detector 1 Queue (s)	0.0			0.0	0.0	0.0
Detector 1 Delay (s)	0.0			0.0	0.0	0.0
Turn Type	NA			NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases						2
Detector Phase	4			8	2	2
Switch Phase						
Minimum Initial (s)	4.0			4.0	4.0	4.0
Minimum Split (s)	20.0			20.0	20.0	20.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	32.0			32.0	58.0	58.0
Total Split (%)	35.6%			35.6%	64.4%	64.4%
Maximum Green (s)	28.0			28.0	54.0	54.0
Yellow Time (s)	3.5			3.5	3.5	3.5
All-Red Time (s)	0.5			0.5	0.5	0.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	4.0			4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Recall Mode	None			None	C-Max	C-Max
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	27.4			27.4	54.6	54.6
Actuated g/C Ratio	0.30			0.30	0.61	0.61
v/c Ratio	0.60			0.85	0.39	0.88
Control Delay	45.1			36.1	10.6	17.2
Queue Delay	4.5			0.0	0.0	0.0
Total Delay	49.6			36.1	10.6	17.2
LOS	D			D	B	B
Approach Delay	49.6			36.1	15.8	
Approach LOS	D			D	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 88 (98%), Referenced to phase 2:NBL and 6:, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 26.1		Intersection LOS: C	
Intersection Capacity Utilization 110.6%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 10: I-5 NB & Parker



APPENDIX C-2

LOS ANGELES COUNTY PUBLIC WORKS DECEMBER 2, 2024 APPROVAL LETTER

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

MARK PESTRELLA, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: T-4

December 2, 2024

Mr. Daryl Zerfass
Stantec
38 Technology Drive
Irvine, CA 92618

Dear Ms. Morris and Mr. Zerfass:

NORTHLAKE SPECIFIC PLAN
TRANSPORTATION ANALYSIS FOR CEQA – NOVEMBER 19, 2024
UNINCORPORATED CASTAIC AREA

Public Works reviewed the Transportation Impact Analysis (TIA) dated November 19, 2024, for the proposed Northlake Specific Plan Development located east of the Interstate 5 freeway and north of Lake Hughes Road in the unincorporated Castaic area.

Project Description

The project proposed the development of 1,143 single family residential units, 1,341 multi-family residential units, 345 age qualified single family residential units, and 315 affordable mixed-use housing units and 6 market-rate live-work units for a total of 3,150 residential units. The project also proposed highway commercial (e.g., retail near the highway), a middle school (as an option), private and public recreational parks, and a fire station.

Project's Transportation Impact

According to the TIA, the project would not result in new transportation impacts to the unincorporated County. We generally agree with the findings in the TIA.

If you have any questions, please contact Mr. Stephen Lamm, Traffic Safety and Mobility Division, at (626) 300-4764 or slamm@pw.lacounty.gov.

Very truly yours,

MARK PESTRELLA, P.E.
Director of Public Works



Amir S. Ibrahim, P.E., L.S.
Principal Engineer
Los Angeles County Public Works

SL:vr
SP:TSM/DOCS/STU/LTR&MEMOS/ESTU2023000255-NORTHLAKE-TIA-APPROVAL

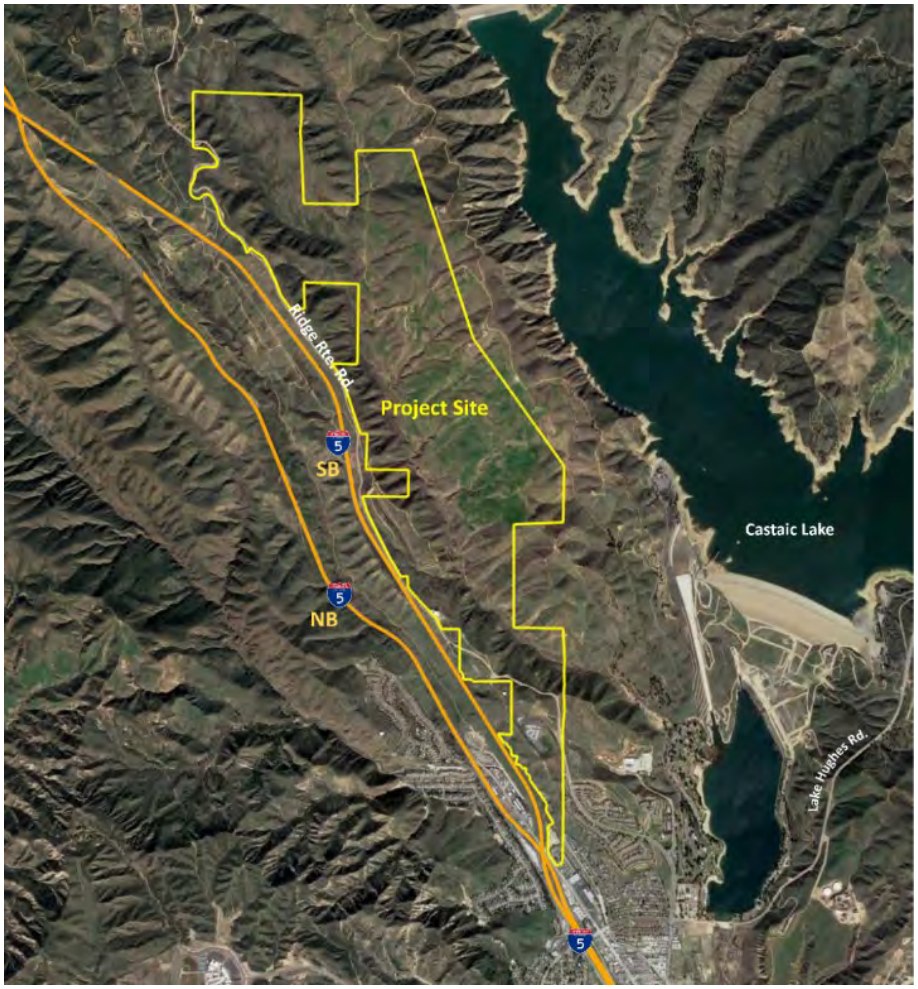
Enc.

bc: Land Development (Suarez, Lasso)

APPENDIX D-1

WILDLAND FIRE RISK REPORT, NORTHLAKE PROJECT

Wildland Fire Risk Report
NorthLake Project



Prepared for:
Northlake Associates, LLC
10250 Constellation Boulevard, STE 2750
Los Angeles, CA 90067

and

Los Angeles County Fire Department

Prepared By:

firesafe PLANNING, INC.

12/04/24

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Executive Summary

Firesafe Planning Inc. performed an assessment of risks related to wildfires (Wildland Fire Risk) in order to assess the intensity of a wildfire approaching the Project Site (See Figure 2 below). This report provides the results of that assessment and objective hazard and risk assessments which can be used to establish the community mitigations (hazard less mitigations = risk) that are equal to or greater than the hazards which would be encountered in a worst-case scenario.

The study takes into consideration existing/future vegetative interface fuels, topography, fire history and weather conditions during extreme fire conditions. The report provides results of computer calculations that measured the fire intensity, flame lengths, rate of spread, and fire travel distance (arrival times) from worst-case scenario wildfires in both the extreme (Diablo wind) and the predominant (Onshore wind) wind conditions.

The results of fire behavior calculations have been incorporated into the analysis of the interfaces of the project with adjacent wildlands and the potential ingress/egress routes used by the Project Site on a daily basis and under emergency conditions where evacuation might be possible.

The California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act*" guidelines encompass the CEQA Appendix G, Section XX, subsection a, b, and c requirements and as this report addresses the guidelines, it addresses the Appendix G issues in the same effort.

The Project Site has three configurations (referred to as alternatives) under review for this analysis. The first is the project as previously approved (Previously Approved Project); the second, a configuration that avoids Grasshopper Creek entirely (Creek Avoidance Alternative); and the third configuration which partially avoids the Grasshopper Creek areas (Partial Creek Avoidance Alternative).

When viewed side-by-side, the differences in scope of the two alternatives are more readily visible, as shown (Figure 7, page 13). The Partial Creek Avoidance Alternative will not develop to the north as much as the other two alternatives.

This report has examined the topography (slope, aspect, elevation, location of development as it relates to the upslope and downslope areas), weather history, fire history, wildland fuels (type, configuration, continuity, and density), and current/anticipated infrastructure (roads, fuel modification, fire resources, and water distribution and storage system). The current and future (code and regulation requirements which will be in place by the time of development) regulations, codes, standards, guidelines, and recommended practices relating to wildland fire safety are also addressed. It has been assumed that this project will comply with all current and future regulations in the development of the site and the construction of the structures.

The analysis of Wildland Fire Risk starts with the review of the hazards, the likelihood of an event, and the intensity of that event which is then examined against the vulnerability (exposure and susceptibility) to provide a "level of risk". This has been accomplished using fire modeling (BehavePlus and FlamMap) software as provided by the U. S. Forest Service.

Static Modeling using BehavePlus (single site, set conditions) indicates that in a worst-case scenario (not currently present at or near the development area) a maximum flame length of 50'+/- may be possible when the fire is running upslope, in a continuous fuel bed (SCAL18 sage and buckwheat), in line with the wind, on a very dry hot day. If the fuels were to become six-foot chaparral fuel beds (not shown/achieved in historic fuel coverage data), the flame length could reach 63' (Sh5 fuel). This configuration is not present in the current (fuels prior to the Route Fire) interface and does not seem to have been present in the past in a review of aerial images over the past 30 years except on north facing slopes in small areas which are not below the development area(s) and not likely to produce a self-sustaining maximum fire output burning in equilibrium.

In a review of all flame lengths for all scenarios run in FlamMap, no cells within or adjacent to the Project Site had values greater than those for the worst-case scenario (63' flame length) in BehavePlus. Using the Minimum Travel Time feature of FlamMap, it is possible to project the time it might take for a given fire scenario to travel the distance from the origin to each of the evacuation points within the Project Site and when they might impact the Evacuation Points. These results are provided for each scenario in the appendix and summarized in the matrix (Matrix 1, page 64) in this report.

All scenarios have at least one Evac (evacuation) Point which is viable for 4 hours or more, with the exception of the Freeway Spots scenario where only 30 minutes are available before Ridge Route Road is impacted for a period of time. All of the fire scenarios are run under extreme conditions. When in alignment (wind, slope, aspect, and fuels), the rate of spread is extremely high and the fire travels large distance in a short period of time. In all scenarios, burn through of the community is not modeled or expected given the fuel modification zones, hardened structures and restrictions on vegetation which will be in place by the various codes, ordinances and standard required by the Los Angeles County Fire Department for new development within the Very High Fire Hazard Severity Zones.

The size, location and configuration of the Project Site makes it unlikely that a fire will impact the entire Project Site at a single time, but rather the fire will impact sections of the project interface over a period of time which will allow for resources to be redistributed and for evacuation opportunities after the fire front has passed a specific location. Travel within the Project Site should be viable at all times given the distance from the wildland fuels and the wildland fire protection features which will be provided (as required by the various code, ordinances and regulations).

The development will provide more water storage than is required by the fire code and will in fact, provide additional regional fire duration capacity which benefits many structures beyond the development area.

A site will be provided for a new fire station within the development. In addition, the project will pay its proportionate fees for the construction of that station which will enhance the regional fire protection already in place. With the new fire station, adequate fire resources are present to protect the development.

This report reaches the conclusion that the expected fire behavior in the interface of the NorthLake development indicates that the fire behavior could produce extreme fire behavior and as such, implementation of wildland fire protection measures will be necessary. Many of these measures are required by the State and Local fire/building regulations, fire department standards and guidelines, and by mitigations already considered and applied by the development review processes to the Previously Approved project. Fire behavior modeling suggests that there will be several hours in which to evacuate the Project Site under fire scenarios where the fire is burning into the community from an adjacent area under each of the development scenarios considered, except with the Freeway Spots scenario, where all configurations will have a period of time where Ridge Route Road is impacted for 90 minutes or more and would require sheltering in place within the development for this period. The north evacuation route would be open during that period. Where fires are initialized within the Project Site or near its boundary, the fire incident command and control will have to determine if the population will be moved or "sheltered in place".

The proposed community with its increased built-in fire protection features (defensible space, fuel modification, hardening of the structures and required maintenance), placement of the structures on the topography, overall orientation to the fuels, wind, and slope and nested (safe center) configuration would be a candidate for a "shelter in place" decision. While "shelter in place" is never a first option, history shows us that moving populations once the fire has arrived has increased risk and should not be attempted when safe alternatives exist.

The configuration of the Project Site, the placement of the structures and features on the topography and the nature of the wildland fuels surrounding the Project Site create conditions where the fire will travel at great speeds when wind, slope and fuel align but the three access points that empty onto Ridge Route Road are not impacted by fire at the same time.

The fire behavior modeling in this report with flame lengths of up to 63' under the worst-case scenario would be protected by the LACFD standards. Fuel modification is designed to reduce and change the fuel types as the combustible vegetation gets closer to the structure. As "rule of thumb" two times the maximum flame length is adequate protection from radiant heat in a hardened structure. These distances also protect from direct flame contact and convected heat. The structure hardening (includes ember intrusion projection) protects from embers and brands which may travel long distances under worst-case conditions.

With respect to the defensible space distance for the perimeter structures, the LACFD requires distances up to 200 feet of fuel modification depending on the adjacent fire potential as measured by the slope, aspect, fuel characteristics, fire history and weather data (wind, temperature and relative humidity). While the distance required in the thinning zones may be allowed to be reduced based on the level of hazard present, the zones nearest the structures are rarely reduced. In any event, LACFD's 200' fuel modification requirement more than satisfies the needed distance based on 63' flame length (126').

Additionally, the implementation of the Zone 0 (first five feet from the structure) and LACFD's decision to make the fuel modification zone on all sides of the structure and not just the wildland interface will only enhance the already robust level of protection for the Project Site.

It has been determined that, with the mitigations in place, the development area will have a less than significant impact on the wildland fire related issues raised under the AG guidelines.

Purpose and Scope of Report

Firesafe Planning Inc. performed an assessment of risks related to wildfires in order to assess the intensity of a wildfire approaching the Project Site. This report provides the results of that assessment and objective hazard and risk assessments which can be used to establish the community mitigations (hazard less mitigations = risk) that are equal to or greater than the hazards which would be encountered in a worst-case scenario.

The study takes into consideration existing/future vegetative interface fuels, topography, fire history and weather conditions during extreme fire conditions. The report provides results of computer calculations that measured the fire intensity, flame lengths, rate of spread, and fire travel distance (arrival times) from worst-case scenario wildfires in both the extreme (Diablo wind) and the predominant (Onshore wind) wind conditions.

The results of fire behavior calculations have been incorporated into the analysis of the interfaces of the project with adjacent wildlands and the potential ingress/egress routes used by the Project Site on a daily basis and under emergency conditions where evacuation might be possible.

The Fire Hazard Planning Technical Advisory General Plan Technical Advice Series, 2022 Update Finalized – August 2022, Figure 7, Page 31, from the Governor's Office of Planning and Research provided a visualization of risk vs hazard for wildfires as shown below (Figure 1). This report will use this guidance and terminology.

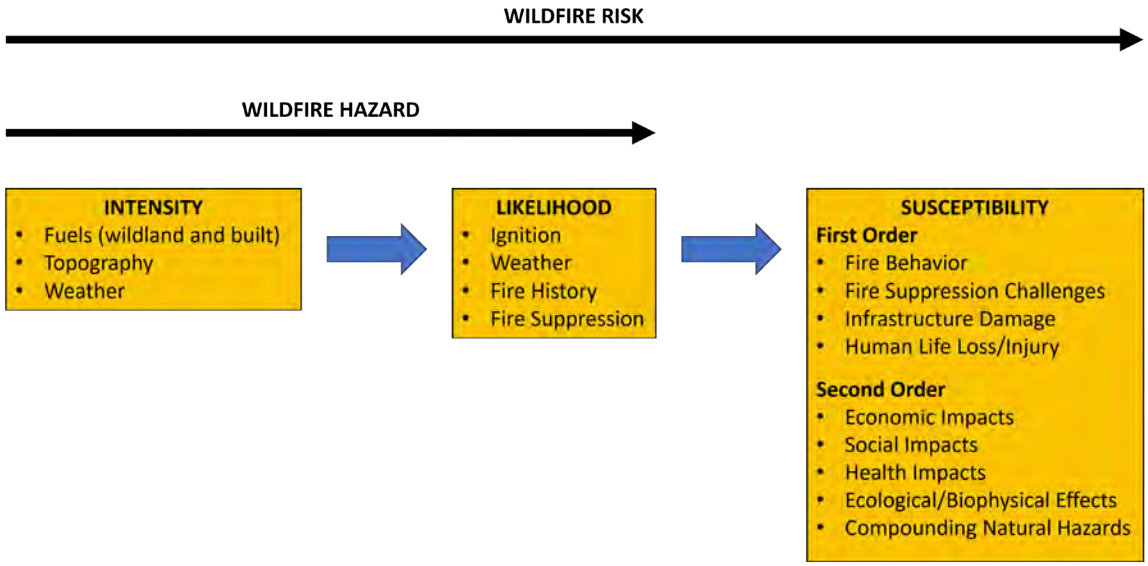


Figure 1 - Visualization of risk vs. hazard for wildfires-

Scope

This document will address the following tasks as outlined in the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act*" (AG Guidelines):

1. Determination if project impact will substantially impair an adopted emergency response plan or emergency evacuation plan;
2. Determine the project-specific Wildland Fire Hazard and Wildland Fire Risk to quantify issues that may exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
3. Determine if the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment;
4. Determine if people or structures will be exposed to significant risks due to the completion of the project; and
5. Consider whether a project will "expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires".

CEQA Appendix G,

Section XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a. Substantially impair an adopted emergency response plan or emergency evacuation plan.

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The AG guidelines encompass the CEQA Appendix G, Section XX, subsection a, b, and c requirements and as this report addresses the guidelines, it addresses the Appendix G issues in the same effort.

Project Description

The Project Site is located in an unincorporated area of Los Angeles County, California, near the community of Castaic, California. The Project Site is north of Interstate 5 and the community of Castaic, east of Ridge Route Road, west of Castaic Lake and south of the Templin Highway, as shown in Figure 2 (below) and Figure 3 (next page).

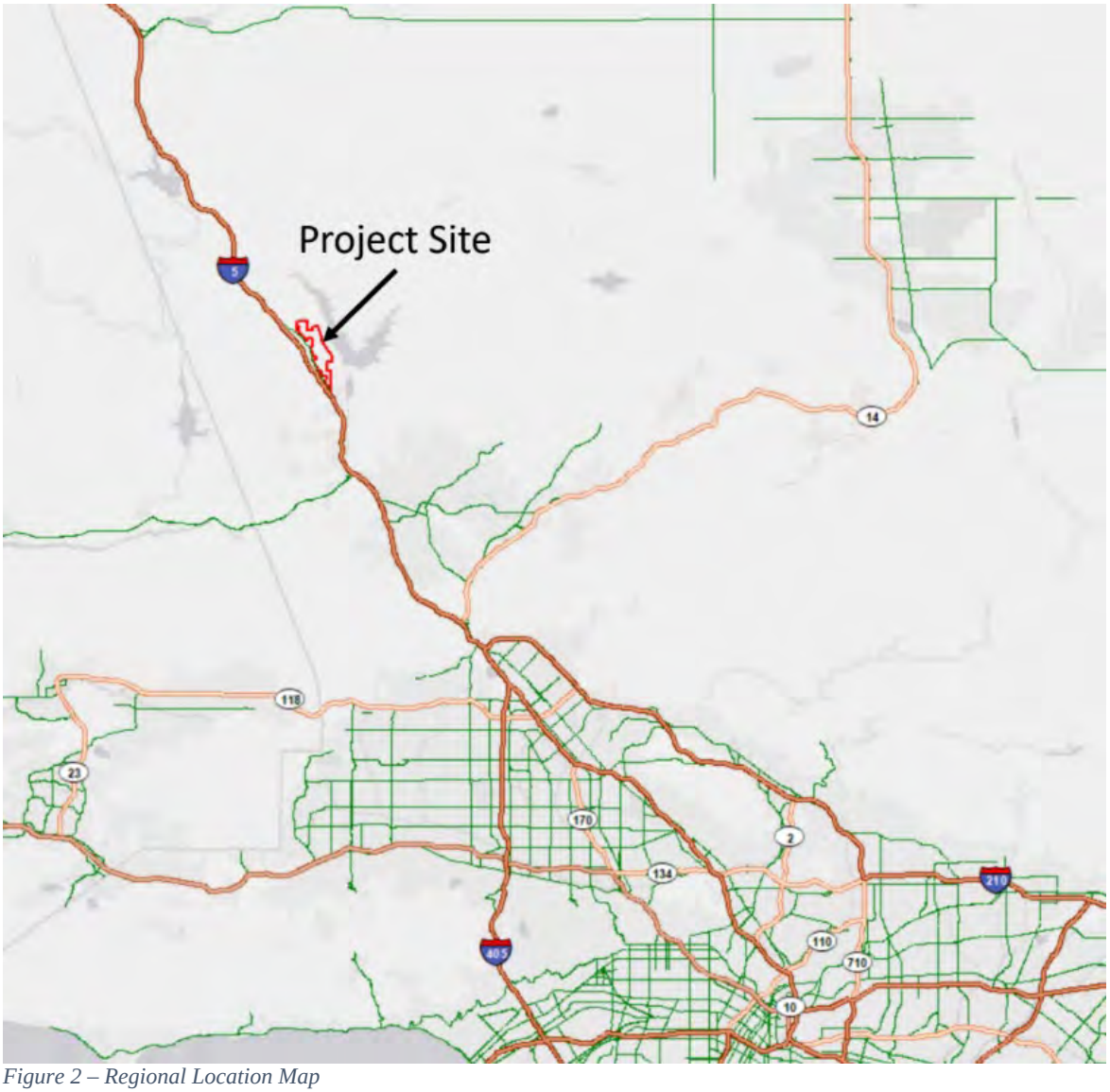


Figure 2 – Regional Location Map

The Project Site has three configurations under review for this analysis. The first is the project as previously approved (Previously Approved Project); the second, a configuration that avoids Grasshopper Creek entirely (Creek Avoidance Alternative); and the third configuration which partially avoids the Grasshopper Creek areas (Partial Creek Avoidance Alternative).

Each of these configurations (which are further broken down into planning areas) have different impacts as it relates to wildfire risk and will be analyzed as such. Each configuration is described in detail as follows:

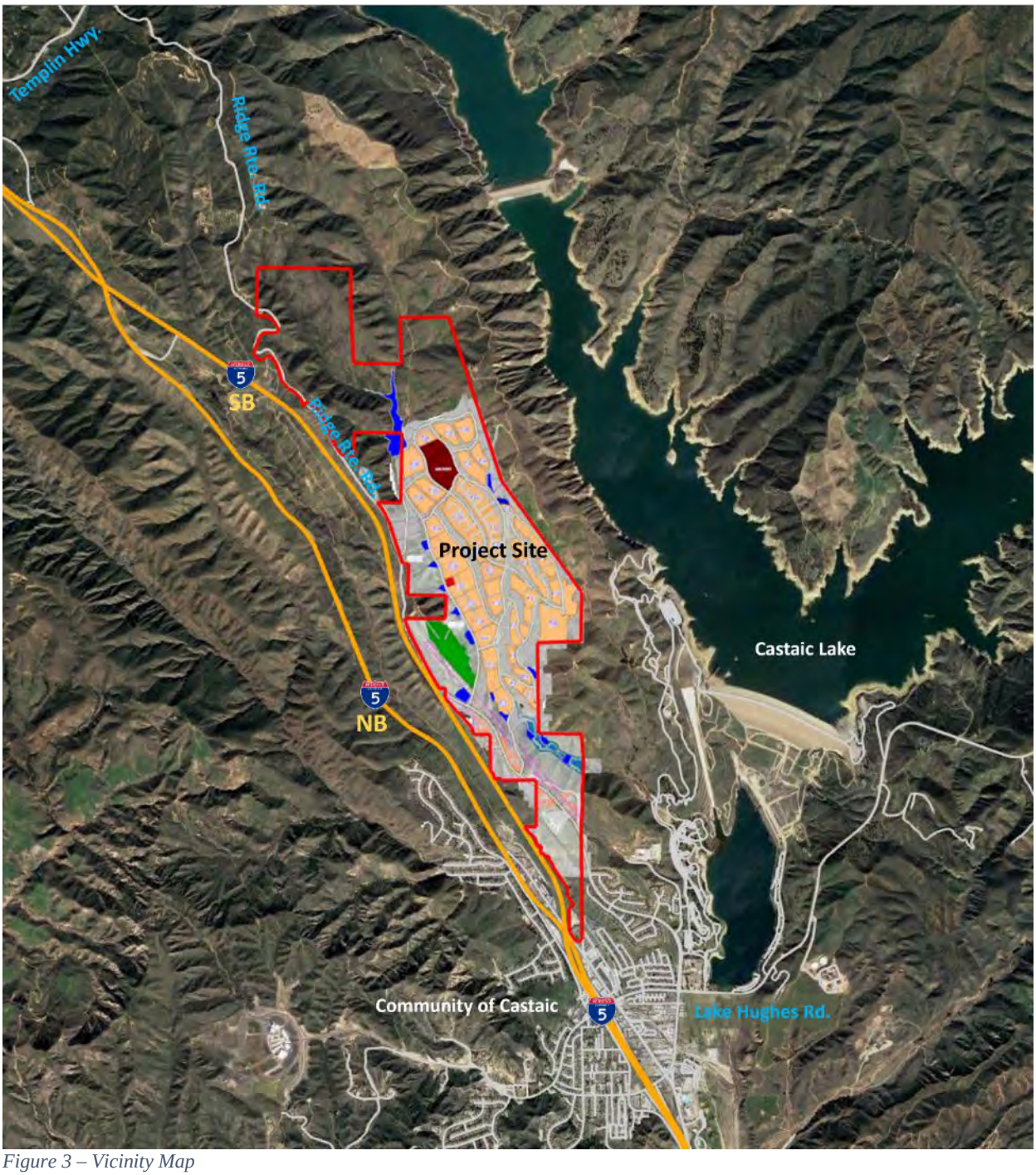


Figure 3 – Vicinity Map

Previously Approved Project

The project analyzed in the 2017 Supplemental Environmental Impact Report (SEIR)(decertified) would implement the previously adopted NorthLake Specific Plan (NLSP), but with a reduction of the area and intensity of physical development and an increase in open space as compared to the NLSP. Specifically, the Previously Approved Project involves the phased development of up to 3,150 residential units, 8.9 acres of commercial uses, 799.5 acres of parks and open space, a 22.9-acre school site, and a 1.4-acre pad for a future fire station. A total of 315 affordable units and 6 market rate live-work units will be provided; 95 of those will be designated as senior-living affordable units.

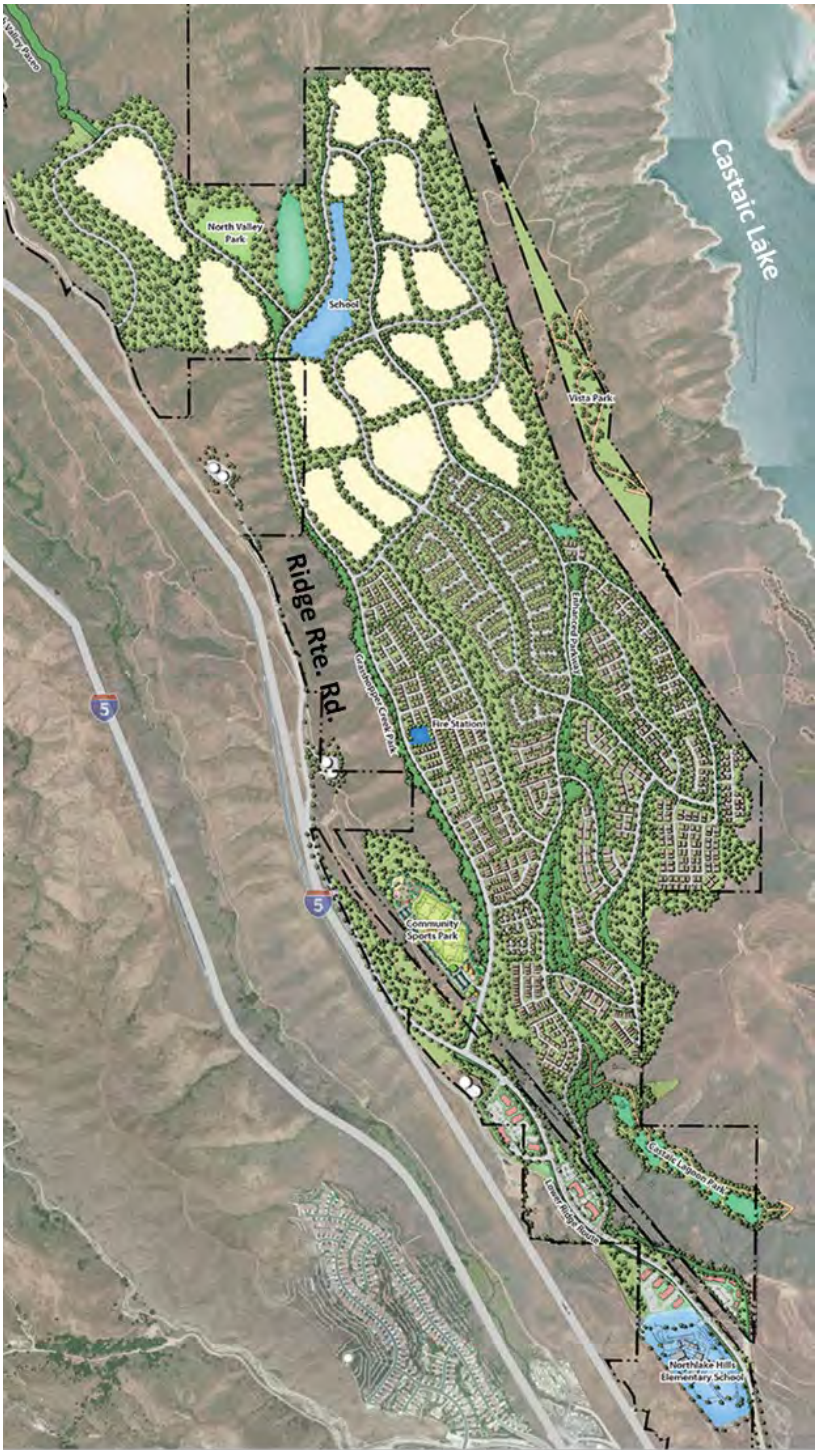
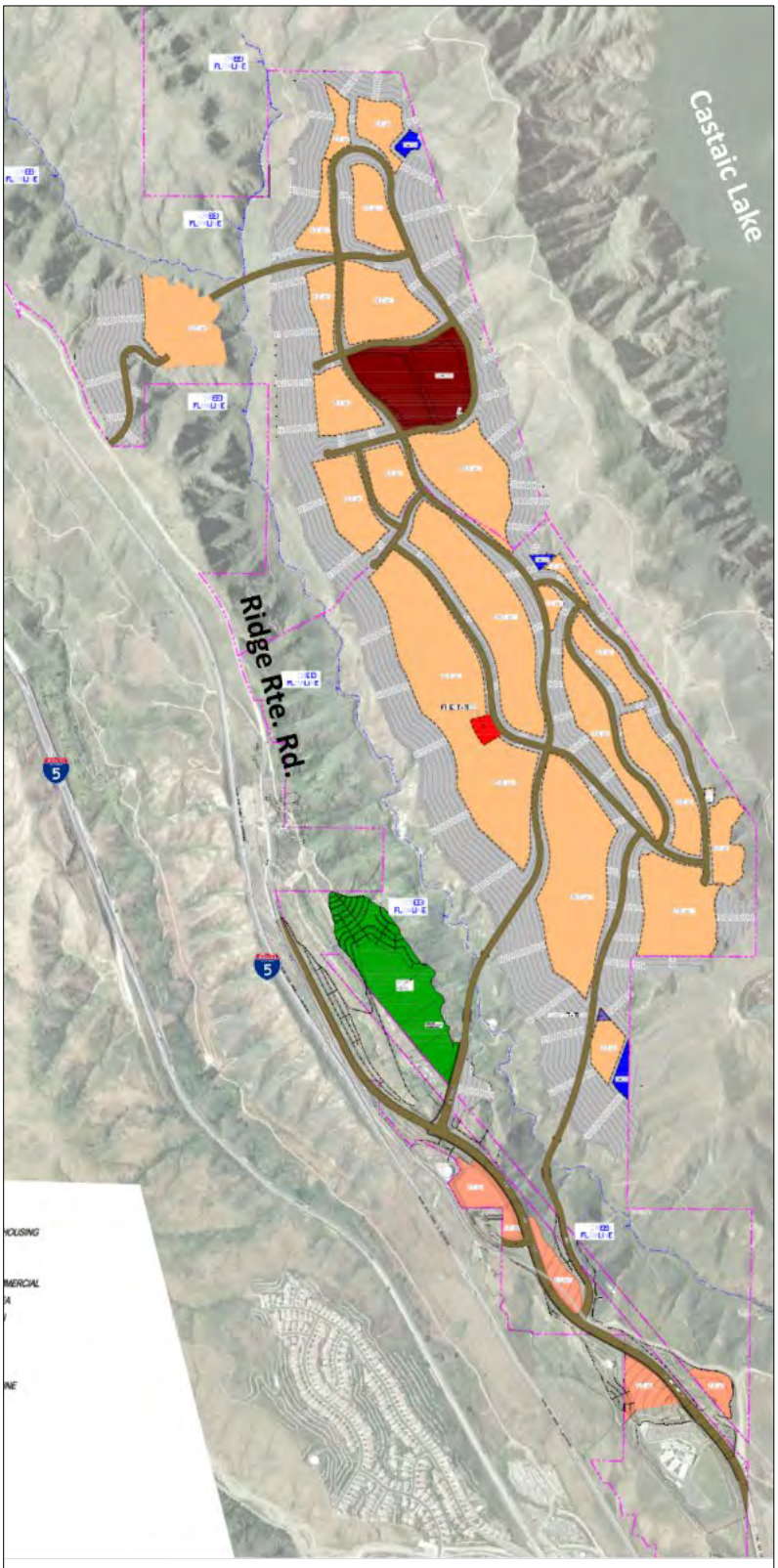


Figure 4 – Previously Approved Project Layout

Creek Avoidance Alternative (CAA)

This Creek Avoidance Alternative (CAA) assumes the same design basis as the previously assessed screening alternative in the SEIR (DSEIR, Section 6.5, Alternatives Deemed Not Feasible, Section 6.5.1 Creek Avoidance Alternative): avoid disturbing the creek bottom that runs through the Project Site while developing a viable land plan effectuating the NLSP. The existing landform is created by landslides that traverse the Project Site from the westerly side of Grasshopper Creek (Creek) to the easterly side of the Project boundary.

Typically, per standard engineering and design



practices and Los Angeles County requirements, all underlying landslides would be required to be removed and recompacted in order to provide a suitable soil condition for project development. Grasshopper Creek has several existing landslides directly underneath the creek bottom that extend from approximately 10 feet to 200 feet easterly and westerly of the creek bottom.

A 300-foot setback was determined to be an appropriate buffer from the creek bottom for the Creek Avoidance Alternative. Thus, the developable area for the Creek Avoidance Alternative will commence at the creek setback line and ascend easterly to the easterly boundary of the Creek Avoidance Alternative. The Creek Avoidance Alternative requires the realignment and new construction of Ridge Route Road. The CAA would require approximately 8.2 million cubic yards of export from the Project Site and the construction of three clear-span bridges to access the project from Ridge Route Road.

The developable acreage for the Creek Avoidance Alternative decreases the developable area from 364 to 286 acres, thereby reducing the amount of area available for development. After incorporating other conditioned site elements such as a 21 acres school site and 1-acre fire station (as per the Specific Plan) along with 167.0 acres of recreation

Figure 5 – Creek Aviodance Alternative Layout

and park areas, under the Creek Avoidance Alternative design, the residential unit count will be reduced to 1,815 (of which 165 units are affordable).

As compared to the 3,150 dwelling units (of which 315 are affordable units and 6 market rate live-work units) under the previously Approved Project, the Creek Avoidance Alternative would result in a reduction of 1,335 dwelling units. The Creek Avoidance Alternative will have similar commercial acreage as the previously approved project. Proportionately, the affordable unit count would be reduced from 315 to 165 units.

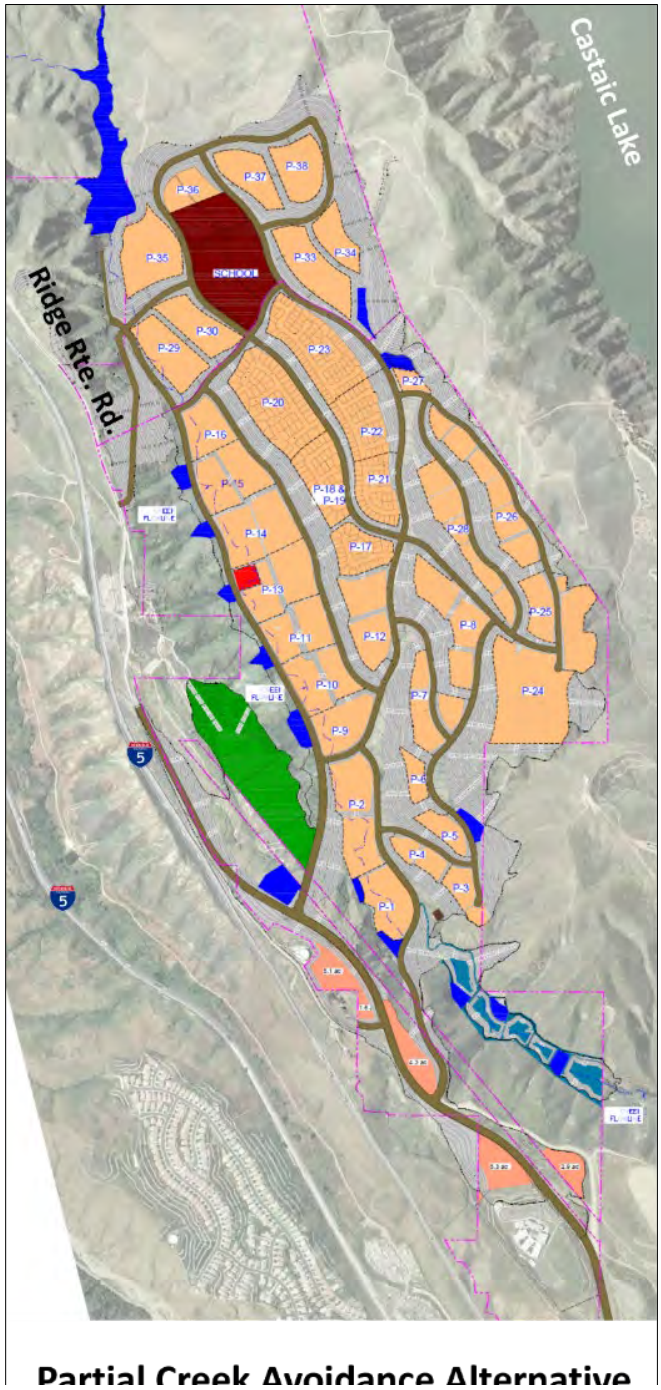


Figure 6 – Partial Creek Avoidance Alternative Layout

Partial Creek Avoidance Alternative (PCAA)

The Partial Creek Avoidance Alternative (PCAA) would leave Phase 1 of the Previously Approved Project but reduces scope of the Phase 2 development of the Previously Approved Project. The reduced Phase 2 area design avoids a cluster of smaller and larger landslides in the northern portion of the Phase 2 area. This is proposed to avoid disturbing the landslides and risk additional loss of Creek area (similar to the issues with the CAA). This alternative design would preserve both a portion of the Creek and sensitive habitat within Phase 2 area of the Project Site.

This alternative provides a balanced site within the proposed Phase 2 grading footprint and does not require any additional import or export of soil similar to the Previously Approved Project, while reducing the total disturbed area in Phase 2 by 61%, thereby creating additional undisturbed open space. It also reduces the impacts to that portion of the Creek on the Project Site by approximately 20%.

Furthermore, this alternative significantly reduces the raw earthwork of Phase 2 by approximately 10 million cubic yards. The alternate design maintains the Previously Approved Project unit count of 3,150.

The PCAA includes the agreed affordable component of 315 affordable units and 6 market rate live-work units, mixed-use, and

live-work units, and preserves the school and fire station sites, commercial sites, and the sports park, all of which were provided in the Previously Approved Project and remain unchanged in this alternate design.

When viewed side-by-side, the impacts of the two alternatives are more readily visible, as shown below (Figure 7). The Partial Creek Avoidance Alternative will not develop to the north as much as the other two alternatives.

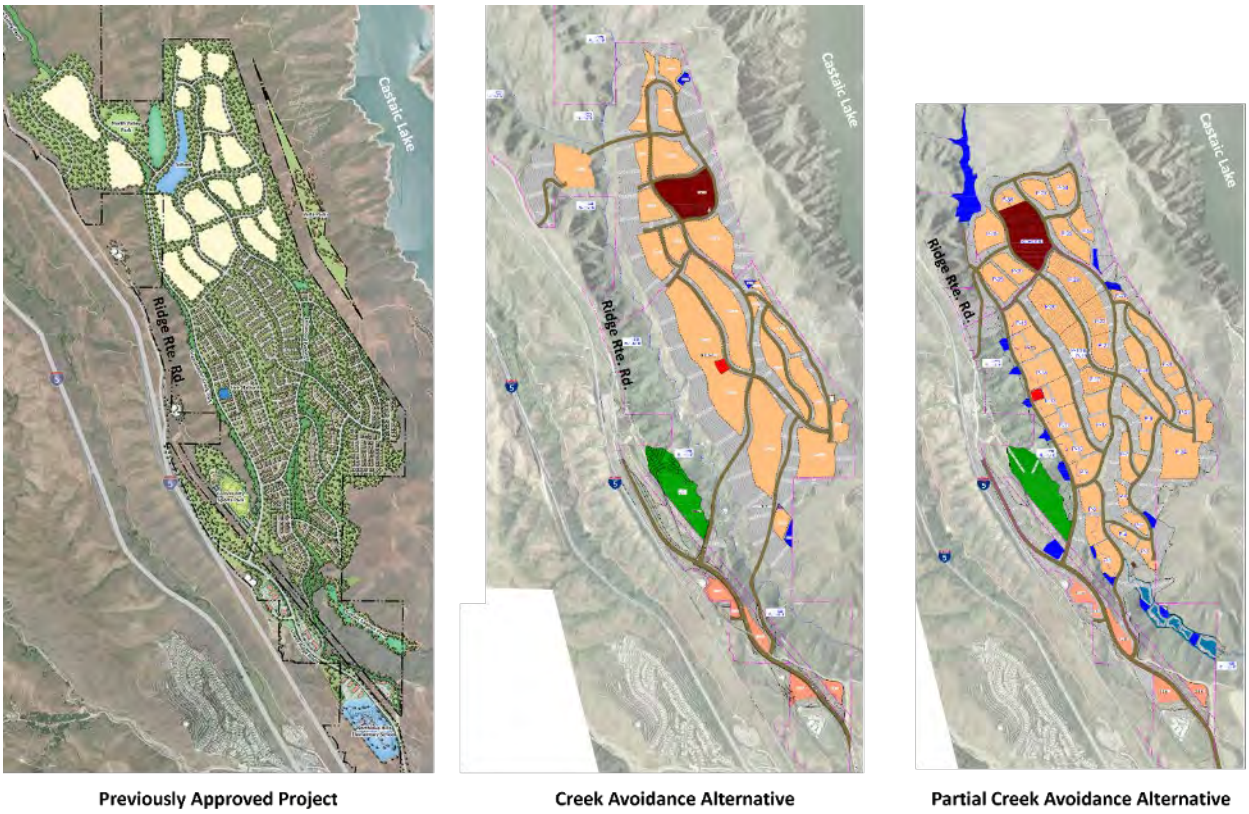


Figure 7 – Comparision of three layout alternative

Current Environmental Conditions

General Location of Site and Adjacent Wildland

The Project Site will have undeveloped natural areas on all sides of it. While these areas do have roads, infrastructures, recreational facilities, and a few structures, the area immediately adjacent to the Project Site development area will be native or natural open space areas. Figure 8, on the next page, provides an illustration of the general vegetation classifications around the Project Site as provided in the latest data available from the Landfire Database site supplied by the United States Forest Service (USFS) and Department of the Interior (DOI) at https://landfire.gov/index.php.

The interface is primarily Herbaceous (grasses) and Shrublands (chaparral/brush). To the east is Castaic Lake which provides a non-burnable barrier to fires driven by NE or E winds. To the west is Interstate 5 which can provide opportunities for fire suppression activities but, as will be

discussed in a later section, does not provide a guarantee of success in stopping a fire under wind-driven conditions as indicated by the area fire history.

In Figure 8 below, the orange areas are mostly seasonal grasslands, and the brown areas are shrublands or chaparral. In Figure 9, on page 15, the vegetation classification is shown down to the EVT (Existing Vegetation Type). Again, the orange areas are mostly grass. The brown areas are now divided between the lighter brown (Buckwheat/Sage) and the darker brown (Chaparral) where the heavier of the two fuels (Chaparral) increases as the topography moves north (higher). Before transitioning out of the Sage/Buckwheat, the area to the east and northeast of the Project Site has the heavier fuels on the north aspects and lighter fuels on the more southern aspects where the ridgelines run west/east in the orientation.

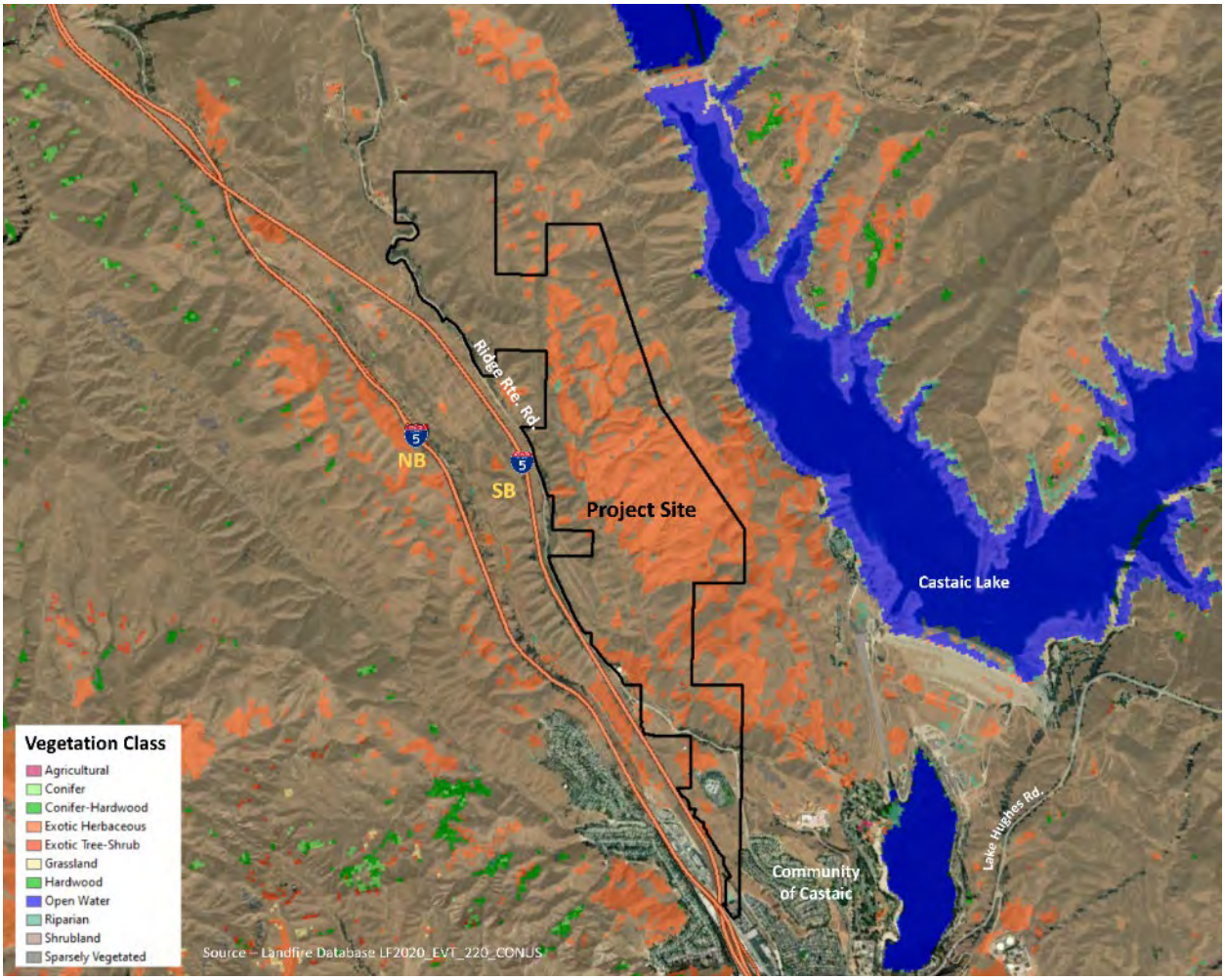


Figure 8 – Vegetation Classificiation Map

Wildland vegetation (fuel) is relatively homogeneous within the future interface at the Project Site boundaries (at the edge of the development area). Some canopy vegetation (mostly oak trees) exists, primarily in the bottoms of larger drainages.

Figure 10, on page 16, provides a detailed accounting of the vegetation types on the Project Site as provided by the SEIR. This assessment, while more specific, agrees with the Landfire data

indicating the interface is primarily shrubland with grasslands. Much of the grassland within the Project Site will be within the development area.

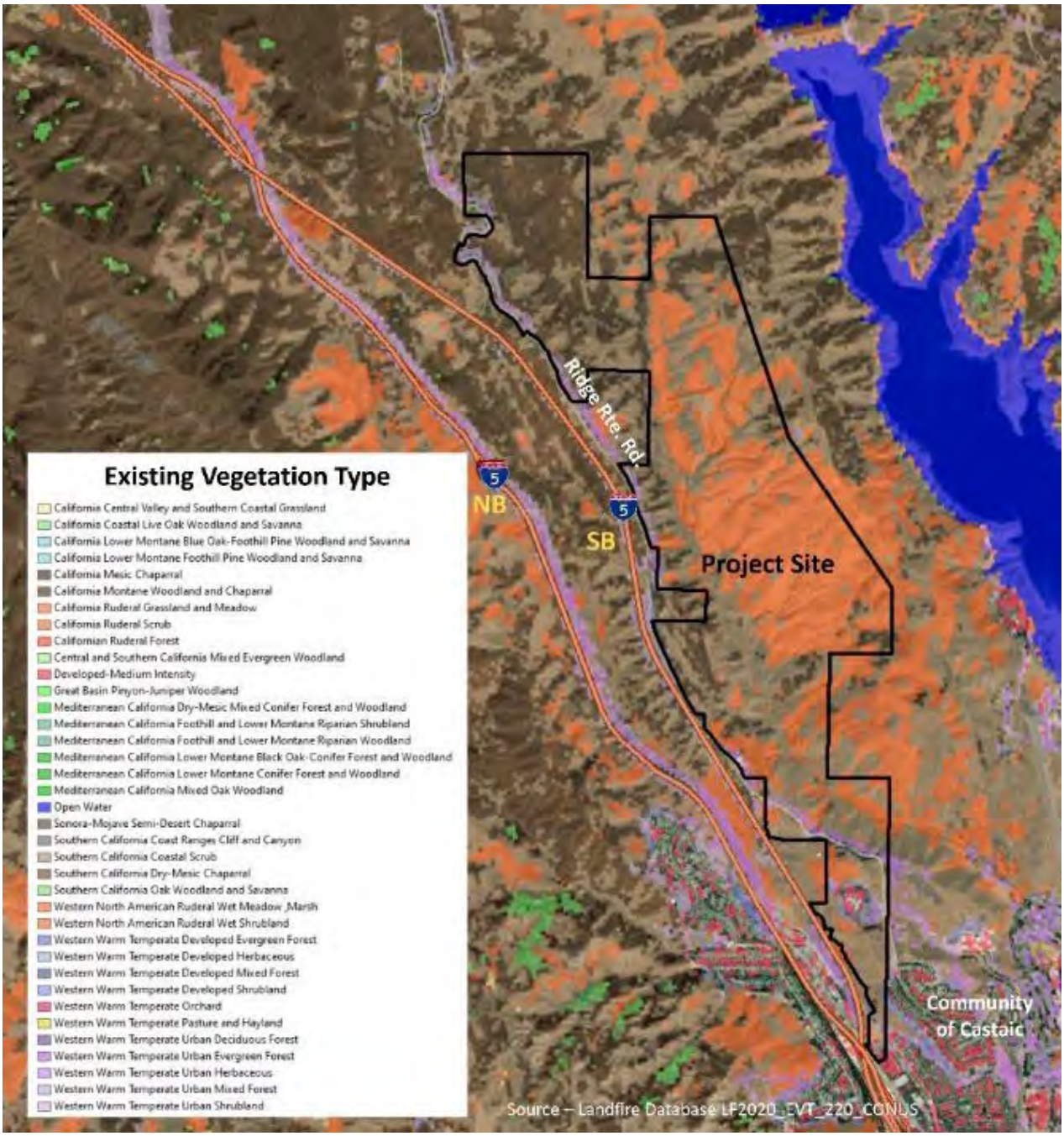
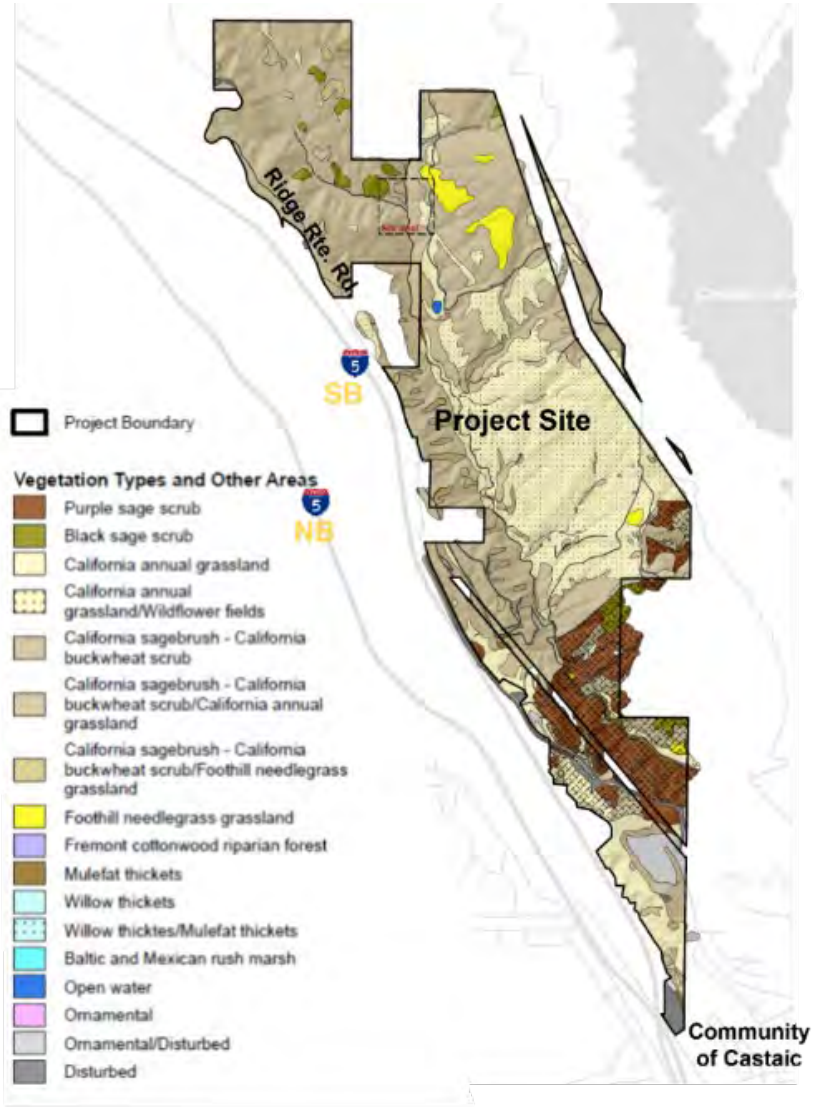


Figure 9 – Existing Vegetation Type Map

To the east of the Project Site is the Castaic Lake State Recreational Area. This area contains boat ramps, day-use facilities, campgrounds, and support buildings/structures for the County staff who operate the facility. This area is shown in Figure 11.

The Project Site has three significant utility easements which run through the site. On the east side is a power line easement for the Los Angeles Department of Water and Power; through the center is an existing oil pipeline which will be relocated by the project, and to the southwest and west is another powerline easement belonging to Southern California Edison (SCE). The powerline easements will remain in the same general area that they currently exist, with some minor tower relocations on the SCE line. The location of all three is shown in Figure 12 on the next page.



Source - NorthLake Specific Plan Project, Draft Supplemental Environmental Impact Report, Vegetation Types and Other Areas, Exhibit 5.2-1.

Figure 10 - Vegetation Type from SEIR

The powerlines will be addressed later in this document as they pertain to wildland fire hazard/risk and evacuation. The relocated pipeline will not be a factor in either the hazard/risk analysis or in the evacuation discussion as it will be buried to a depth that will make it unaffected by a wildland fire.

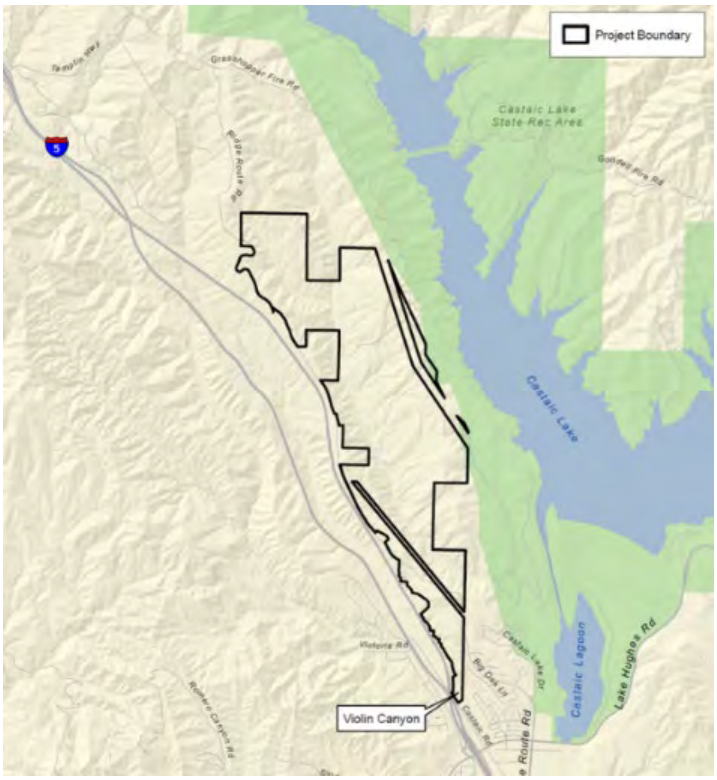


Figure 11 – Castaic Lake Sate Recreation Area Map

Grasshopper Creek runs through the Project Site and is the subject of the two alternatives provided in the report. This is a seasonal creek and only holds water during wet periods.

This drainage is called an intermittent stream, which is a United States Geologic Survey (USGS) designated "blueline" watercourse.

Figure 13, on the next page, shows the Creek as it exits the Project Site on the south, and Figure 14, also on the next page, shows the upper reach of the watercourse at north end of the Project Site.



Figure 12 – Project Site Utility Easements

While the Creek has some vegetation in the bottom of the watercourse, not present in the general landscape around it, the volume and nature of this vegetation will not add to the wildland fuel load beyond that which is already present in the chaparral fuels.

The 2023 Fire Plan for the County of Los Angeles Fire Department states;
Much of the Santa Clarita Valley and the Santa Monica Mountains have the following vegetation types: coastal sage, riparian, oak woodlands, and chaparral.

Coastal sage communities are typically found in lower elevations and drier sites of coastal south-facing slopes. Various plants include purple sage (Salvia leucophylla), California sagebrush (Artemisia californica), coast buckwheat (Eriogonum latifolium), laurel sumac (Malosma laurina), and lemonade berry (Rhus integrifolia).

Riparian communities are woodlands with multi-layered vegetation, including Arroyo willows (Salix lasiolepis), California black walnut (Juglans californica), California sycamore (Platanus racemosa), Fremont cottonwood (Populus fremontii), Mexican elderberry (Sambucus nigra), California bay laurel (Umbellularia californica), and mule fat (Baccharis salicifolia). Oak woodlands are found on northern slopes blanketed with coast live oak (Quercus agrifolia), valley oak (Quercus lobata) in warmer areas, hollyleaf cherry (Prunus ilicifolia), California bay laurel (Umbellularia californica), coffeeberry (Frangula californica), and poison oak (Toxicodendron pubescens).

Chaparral communities typically have shrubby vegetation seen on both coastal and inland hillsides and are separated into two types: soft chaparral (usually called coastal sage scrub) and taller, hard chaparral. Chaparral is dominated by evergreen and drought deciduous shrubs one to fifteen feet tall. Most plants are recognized by tough, leathery leaves that reduce water loss in dry climates. Many chaparral plants contain volatile oils, which produce a strong odor and increase flammability. Common examples include various species of ceanothus (Ceonothus spp.), manzanita (Arctostaphylos spp.), sage (Salvia spp.), sagebrush (Artemisia spp.) sumac (Malosma spp.), toyon (Heteromeles arbutifolia), and chamise (Adenostoma spp.).

There are also significant oak woodland communities along shaded canyon slopes and riparian communities within streambeds. Streambeds have cottonwoods (Populus spp.), willows (Salix spp.), and related vegetation requiring more water.

Determining wildfire risks in LA County involves assessing fire-adapted chaparral ecosystems, dynamic Mediterranean weather conditions, values at risk, and the fire protection system's ability to respond. The California Strategic Fire Plan employs an intensive assessment process graphically depicting fuels, weather, and assets at risk in a Geographic Information System (GIS) program.

The project site has many of the vegetation communities listed in the Fire Plan. The photos on the next page are good examples of the those listed above. Figure 13 provides an example of the bottom of one of the streambeds with the vegetation quickly changing to grassland and grass/scrub mixtures where the additional water is not available.

Figure 14 is the classic example of a north slope (aspect) which is covered with chaparral species while the flatter and southern slopes are mostly grasslands. This is explained in more detail later in this report.

The Los Angeles County Fire Department is one of six contract counties (Orange, Los Angeles, Kern, Ventura, Santa Barbara, and Marin), which have executed a contract with the State of California to provide wildland fire protection on State Responsibility Areas (SRA).

The Los Angeles County Fire Department has the responsibility as a contract county to implement the 2018 California Strategic Fire Plan in Los Angeles County. As such, the Department functionally operates as a CAL FIRE unit and is responsible for all Strategic Fire Plan activities within the County. The project site will meet or exceed the fire protection requirements of the Los Angeles County Fire Department.



Figure 13 – South end of Project Site at the Grasshopper Creek interface



Figure 14 – North end of the Project Site at the Grasshopper Creek interface

Agency responsible for fire protection

The Los Angeles County Fire Department is the service provider to the Project Site and land immediately adjacent. Overall jurisdiction is classified as FRA (Federal Responsibility Area), SRA (State Responsibility Area) or LRA (Local Responsibility Area) as shown in Figure 15, below. FRA is federal land, in this case, a national forest. SRA is land with the State of California for which the state has the primary responsibility for wildland fire protection. In this case, the Los Angeles County Fire Department is a in contractual agreement with CAL Fire to provide wildland fire protection on SRA land that CalFire would normally provide within the wildland areas of Los Angeles County. LRA is land within incorporated cities and unincorporated land within the county which does not meet the criteria for inclusion in the SRA.

In the figure below (Figure 15), the green areas are FRA, the light red areas are SRA, and the yellow areas are LRA. Unshaded areas are not in a wildland responsibility area. However, the Project Site is in and surrounded by SRA lands.

SRA/LRA/FRA

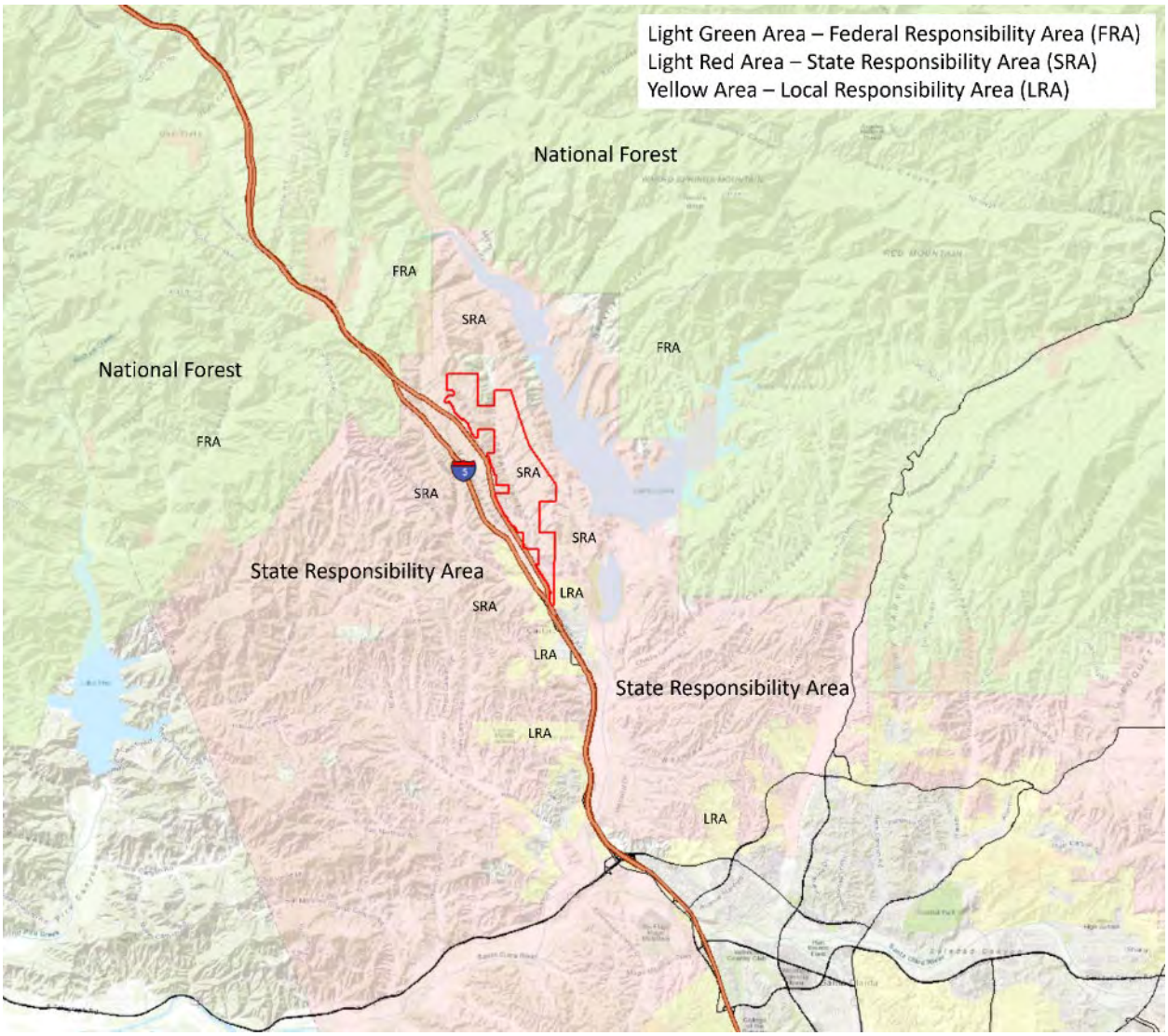


Figure 15 – Map Responsabilty Areas (SRA/LRA/FRA)

Fire Severity Zones and proximity

Fire Hazard Severity Zones are currently based on potential fuels, fire weather conditions, and terrain and represent potential fire hazard exposure to structures and other human infrastructure assets. FHSZ areas are adopted as a Title 14 regulation, and fulfill the obligations laid out in Public Resources Code (PRC) Sections 4201-04, and are essential in various fire safety regulations, building construction standards, and real estate hazard disclosure requirements. These zones were initially determined in November 2007 for SRA and September 2008 for LRA SRA has been revised by CalFire and the LRA update is underway. Some changes are expected in LRA, but the entire Project Site is already at the highest level of wildland risk currently, and have remained so in the updated SRA zones.

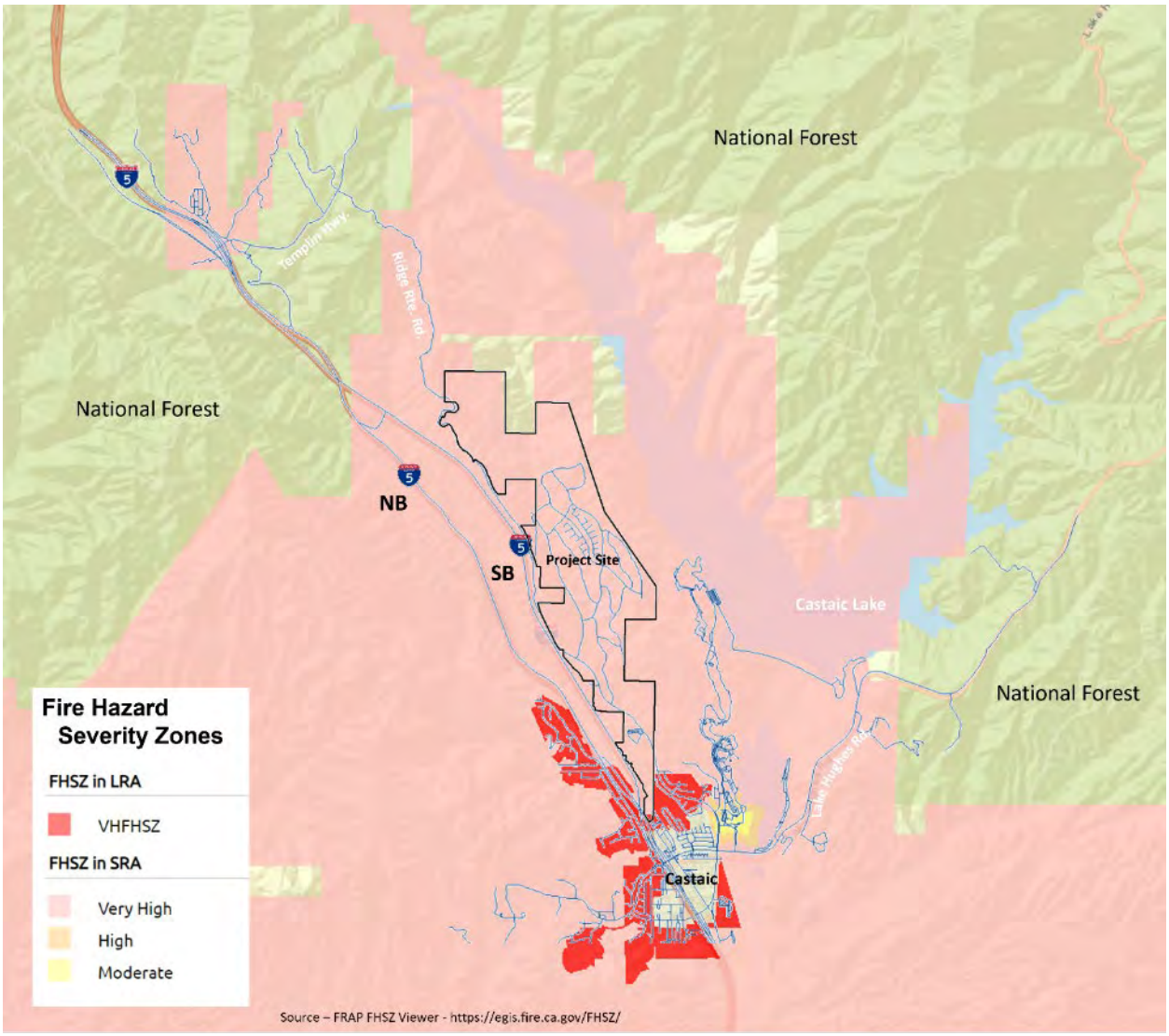


Figure 16 – Fire Hazard Severity Zones (current)

Wildland Interface/Intermix

The wildland urban interface (WUI) is defined by the U.S. Forest Service as any area where "humans and their development meet or intermix with wildland fuel." This area includes

communities that are within a half-mile of this interface. The WUI is classified into two categories:

1. Interface WUI — where structures are adjacent to the wildland vegetation. A clear line of delineation is provided.



2. Intermix WUI — where structures intermingle with wildland vegetation. Each structure or group of structures has its own interface.



Source: "Fire FAQs-Are Structures Fuel? The Wildland Urban Interface and the 'Built' Environment", Daniel Leavell, Stephen A. Fitzgerald, Carrie Berger, Gavin Horn, EM 9291 Published August 2020

The Project Site will utilize a WUI Interface for each of the planning areas. Some native areas will remain between planning areas but most of the development will create an area where the only interface with native fuels will be on the perimeter. Figure 7, on page 13, illustrates this well. This is discussed in more detail in the analysis of each alternative.

Codes, guidelines, and standards

The Project Site will be required to provide protection measures as required by a number of Laws, Codes, Ordinances, Regulations, Guidelines, and Standards (collectively, Regulations). Below are the major Regulations which will impact on the Project Site:

- PRC Sections 4290 through 4299.
- PRC Sections 4201 through 4204 for State Responsibility.
- Title 14 of the California Code of Regulations (14 CCR), Division 1.5, Chapter 7, Subchapter 2, Articles 1-5, "State Minimum Fire Safe Regulations".
- California Code of Regulations, Title 24, Part 9, California Fire Code, Chapter 49 as amended and adopted by the County of Los Angeles.
- California Code of Regulations, Title 24, Part 2 (Volumes 1 and 2), California Building Code, Chapter 7A as amended and adopted by the County of Los Angeles.
- California Code of Regulations, Title 24, Part 2.5, California Residential Code, Section R337 as amended and adopted by the County of Los Angeles.

- Los Angeles County Code, Title 32, Los Angeles County Fire Code
    - Section 503 - Fire Apparatus Access Roads
    - Section 507 – Fire Protection Water Supplies
    - Section 4905 - Wildfire Protection Building Construction
    - Section 4906 - Vegetation Management
    - Section 4907 – Defensible Space
    - Appendix B - Fire-Flow Requirements for Buildings
    - Appendix C - Fire Hydrant Locations and Distribution

The Project Site will have wildland specific requirements before, during and after construction.

Prior to Construction

The Protect Site will be required to have an approved Preliminary Fuel Modification Plan prior to any subdivision or land; or, have final approval prior to the issuance of a permit for any permanent structure used for habitation (Fire Code Section 4908.1).

Protection During Construction

The Los Angeles County Fire Department has adopted Chapter 33 of the California State Fire Code entitled, Fire Safety During Construction and Demolition. This section of the Fire Code provides requirements for "Precautions Against Fire", Combustible and Flammable Liquids, Flammable Gases and Explosive. Additionally, it requires readily accessible means of reporting emergencies, access roadways and fire department water supplies to all areas where combustible construction is occurring. This section requires the development, implementation and maintenance of an approved, written Site Safety Plan establishing a fire prevention program at the Project Site applicable throughout all phases of the construction, repair, alteration or demolition work. This plan addresses the requirements of the Fire Code, the duties of staff and staff training requirements. The Site Safety Plan must be submitted and approved before the issuance of a building permit. Any changes to the plan must be submitted and approved by the fire department.

Protection After Construction

The Project Site is within a Fire Hazard Severity Zone which requires the enforcement of Fire Chapter 49 as amended and adopted by the County of Los Angeles. This chapter provides for increased wildfire building construction protection (maintenance, additions, and remodels compliance wildland standards), vegetation management, defensible space and compliance with an Approved Fire Protection Plan. These requirements provide for the implementation and maintenance of California Building Code Chapter 7A, California Residential Code Section R337 and Californian Reference Standards Code Chapter 12-7A as amended and adopted by the County of Los Angeles. It further requires that building and structures be maintained in accordance with California Public Resources Code Section 4291, California Code of Regulations, Title 14, Division 1.5, Chapter 7, Subchapter 3, Article 3, Section 1299.03; California Government Code Section 51182 and California Code of Regulation, Title 19, Division 1, Chapter 7, Subchapter 1, Section 3.07. The Project Site is also with the SRA which requires it to comply with the SRA Fire Safe Development Regulation as specified in Title 14, Division 1.5, Chapter 7, Subchapter 2. The Project Site will need to be maintained to the same standards and Regulations that were applicable at the time of construction on an ongoing basis.

Public Information and Resident Education

All of the requirements for the fuel modification zones, defensible space requirements, limitations on remodels/additions on the interface lots and community planting restrictions will cover included in the disclosure documents provided to the owners during the escrow process. Additionally, these requirements will be fully detailed in the Project Site CCR's (Covenants, Conditions, and Restrictions) which are legal documents which are filed with the county recorder's office and made a part of the official real estate records that run with the land that is part of the community. The HOA will have a responsibility to inform the residents of the requirements, review and approve changes to the property and provide a process to ensure compliance with the community standard where applicable.

Project Analysis - Wildfire Hazard and Risk

The analysis of Wildland Risk starts with the review of the hazards, the likelihood of an event, and the intensity of that event which is then examined against the vulnerability (exposure and susceptibility) to provide a "level of risk".

Wildfire Hazard

Likelihood

Wildfire likelihood is the probability of a wildfire burning in a specific location. At the community level, wildfire likelihood is accessed in the area where housing units are present. The likelihood is the probability that any specific location will experience a wildfire in any given year. Fire history is the main data source for this analysis along with potential ignition sources and weather conditions that lead to extreme fire behavior.

Fire History

The Project Site is within/adjacent to a historic fire corridor. When the fire history is viewed in total (all records available) this is evident (Figure 18, next page). On the following two pages are illustrations of the fire history over the past 10, 20 and 50 years to provide some ability to see the data over time. On page 27(Figure 22), is a map of all fires over 50 acres that have occurred within 7.5 miles of the center of the Project Site since January of 2004. They are listed to the left in Figure 17.

Year	Agency	Unit_id	Fire Name	Alarm Date	Gis Acres
2004	USF	ANF	INTERSTATE	20040625	374
2004	USF	ANF	EAST	20040807	1,337
2004	CCO	LAC	WAYSIDE	20040503	91
2005	CCO	LAC	OAK	20050625	134
2006	USF	LPF	DAY	20060904	161,816
2007	CCO	LAC	BUCKWEED	20071021	38,348
2007	USF	ANF	RANCH	20071020	58,410
2009	CCO	LAC	SLOAN	20090717	82
2009	USF	ANF	ISLAND	20090701	61
2009	USF	ANF	OSITO	20090713	332
2012	CCO	LAC	FIVE MILE FIRE	20120608	489
2013	CCO	LAC	LAKE	20130517	660
2013	USF	ANF	BEE	20130809	206
2013	USF	ANF	POWERHOUSE	20130530	30,268
2015	USF	ANF	WARM	20150816	270
2017	CCO	LAC	LAKE	20170617	733
2017	CCO	LAC	RYE	20171205	6,048
2018	CCO	LAC	CHARLIE	20180922	3,351
2019	USF	ANF	FIVE	20190803	156
2020	CCO	LAC	CASTAIC	20200801	178
2020	USF	ANF	LAKE	20200812	30,999
2020	CCO	VNC	HOLSER	20200817	2,189
2020	CCO	LAC	EQUESTRIAN	20200608	84
2021	USF	ANF	ROUTE	20210911	455
2021	CCO	LAC	NORTH	20210428	552
2022	CCO	LAC	ROUTE	20220831	5,208

Figure 17 – Fires in the Project Site area over the past 50 years

Of the 26 fires listed to the left, only three burned onto the Project Site. Five Mile 2012, Lake 2013, and Route 2022. The recent Route Fire was the largest at 5,208 acres. The Five Mile and Lake Fires (2013) were 489 and 660 acres respectively.

One in five fires on the list is a major fire (over 30,000 acres). This represents approximately 20% of the large fires in this area.

The list of large fires spans 18 years, making the regional large fire return interval less than one year, but the Project Site has had all three of its fires in the past ten years, making the site interval over three years.

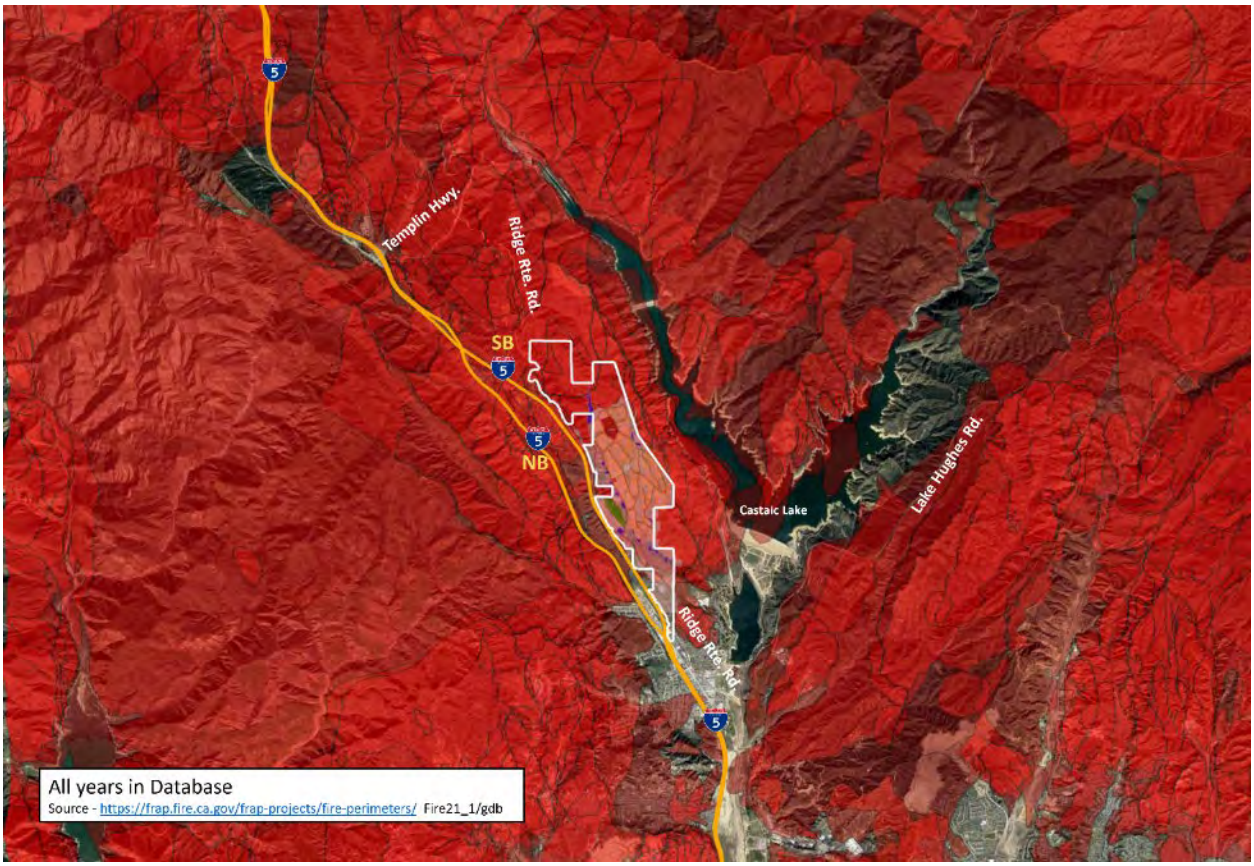


Figure 18 – Fire History for the regional area (all fires/all years)

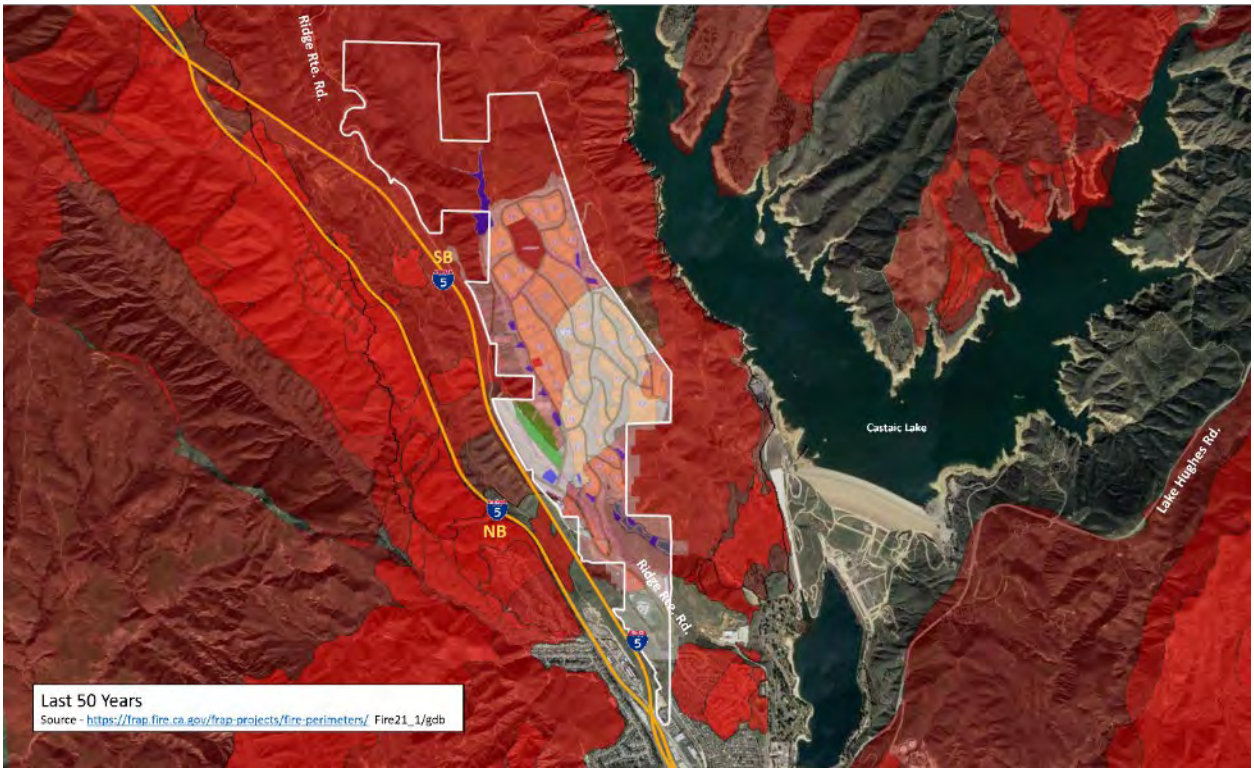


Figure 19 – Fire History for the regional area (past 50 years)

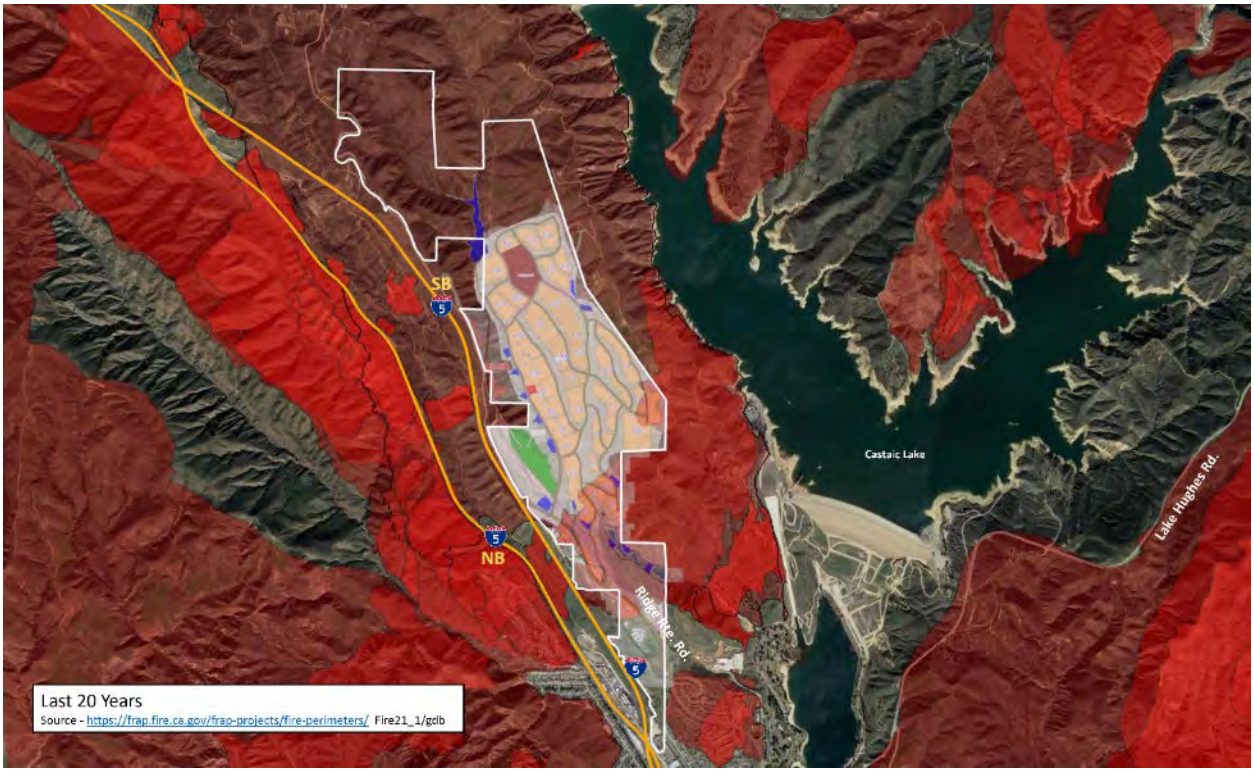


Figure 20 – Fire History for the regional area (past 20 year s)

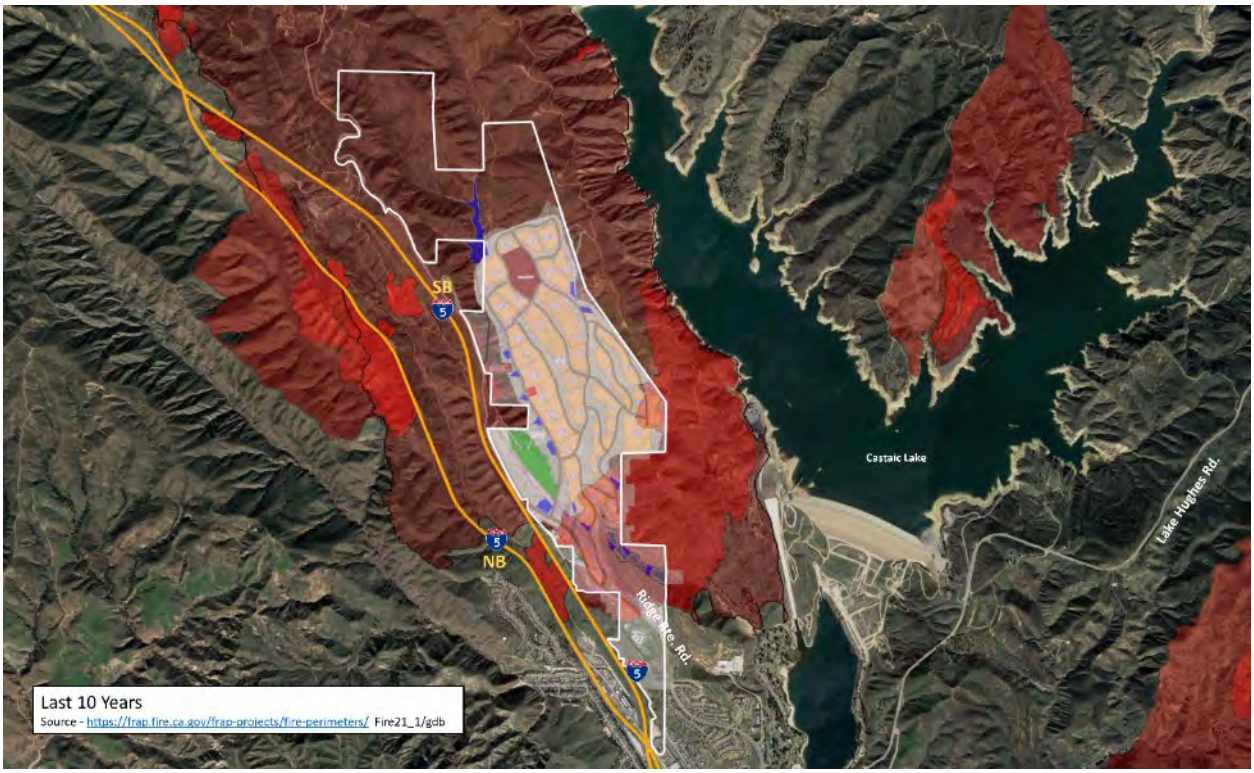


Figure 21 – Fire History for the regional area (past 10 years)

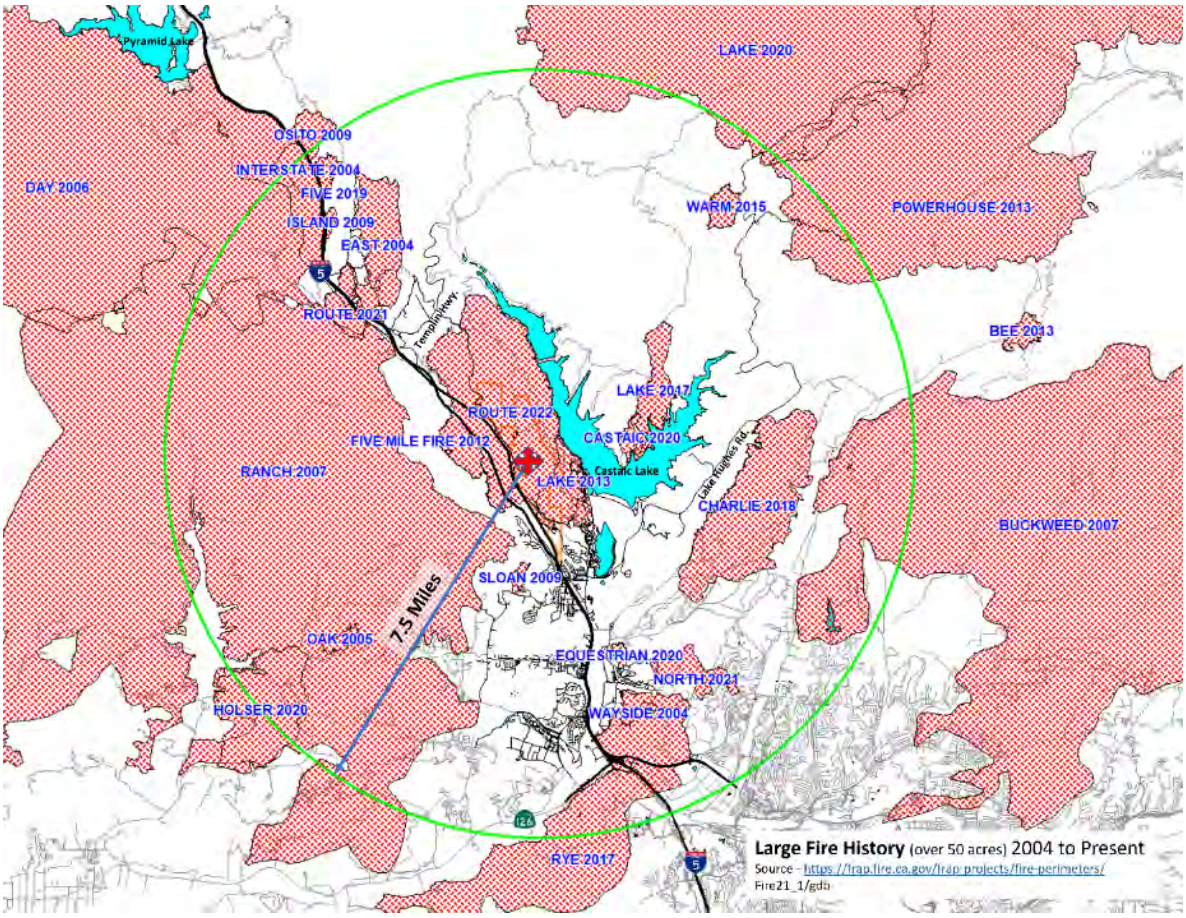


Figure 22 – Large Fire History for the regional area since 2004

Large fires in the area are due to a several issues. Access and topography are part of it. Roads in the lands to the east, west and north of the Project Site have limited access to the areas where these fire burn. The topography is steep and well-vegetated. The general area does not have a large number of fire stations which can arrive quickly in the early stages and fires that occur are generally related to the transportation and infrastructure (powerlines and roads) in the area that provide the ignition sources in many cases. This area is also prone to thunderstorms/lightning which produce strong winds and ignitions without the rainfall necessary to put out the spot fires. All of these factors are covered in more detail later in this report.

The most recent fire to impact the area/Project Site is the Route Fire which started on August 31, 2022. This fire burned approximately 5,208 acres over several days, but the majority of this acreage was consumed in the first operational period (12 hours). The Route Fire started on the west side of the interstate (I-5) at approximately noon. The fire was contained to the west side of the northbound interstate until it carried (spotted) over to the area between the northbound and southbound lanes (large island area) where it quickly established itself and then spotted again over the southbound lanes and into the Project Site. https://fireaviation.com/2022/10/01/report-shows-use-of-four-helicopter-quick-reaction-force-through-the-night-limited-final-size-of-route-fire/

Figure 23, on the next page, provides the final fire perimeter, and an outline of the Project Site and indicates the approximate area of origin north of the terminus of The Old Road and North Red Oak Court.

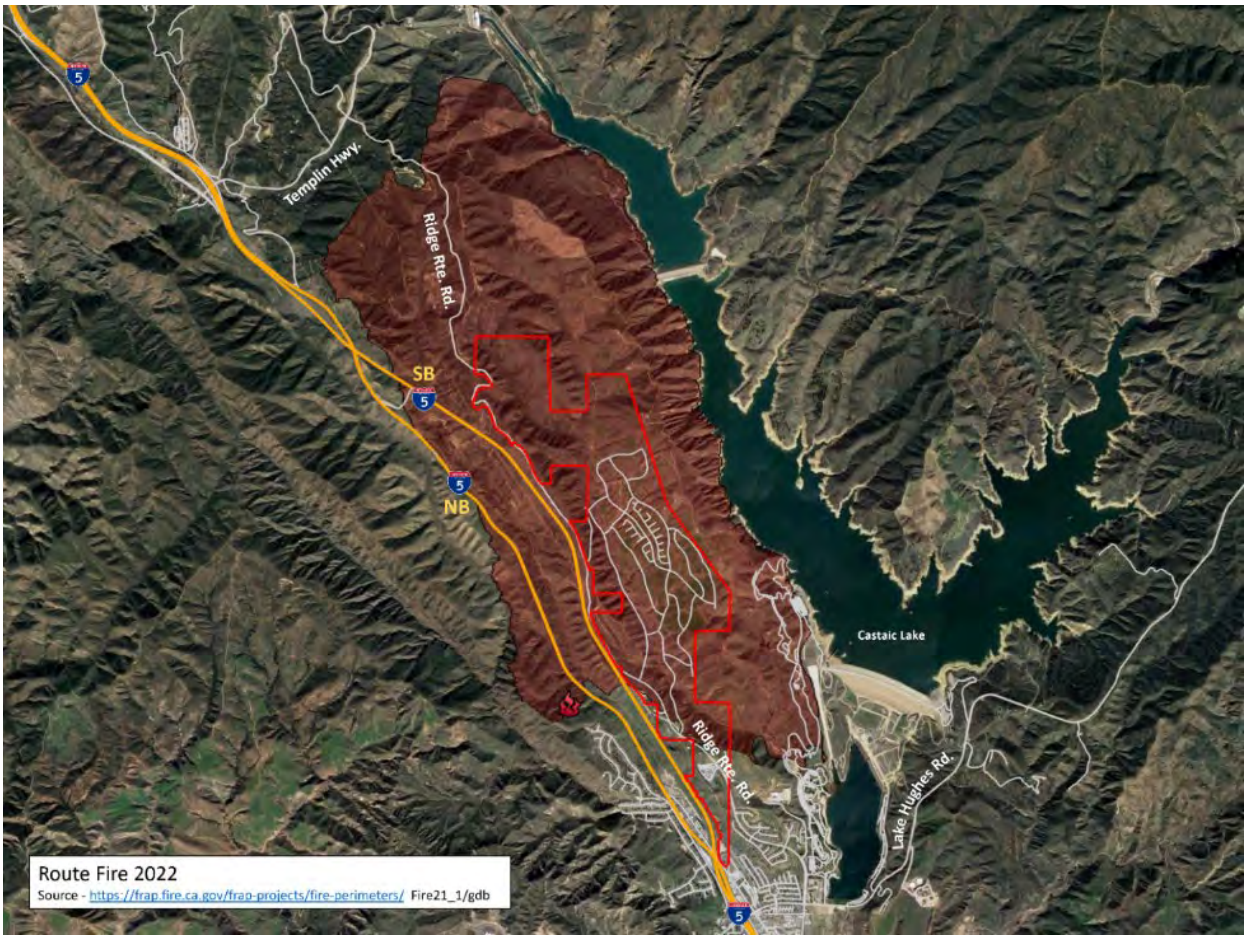
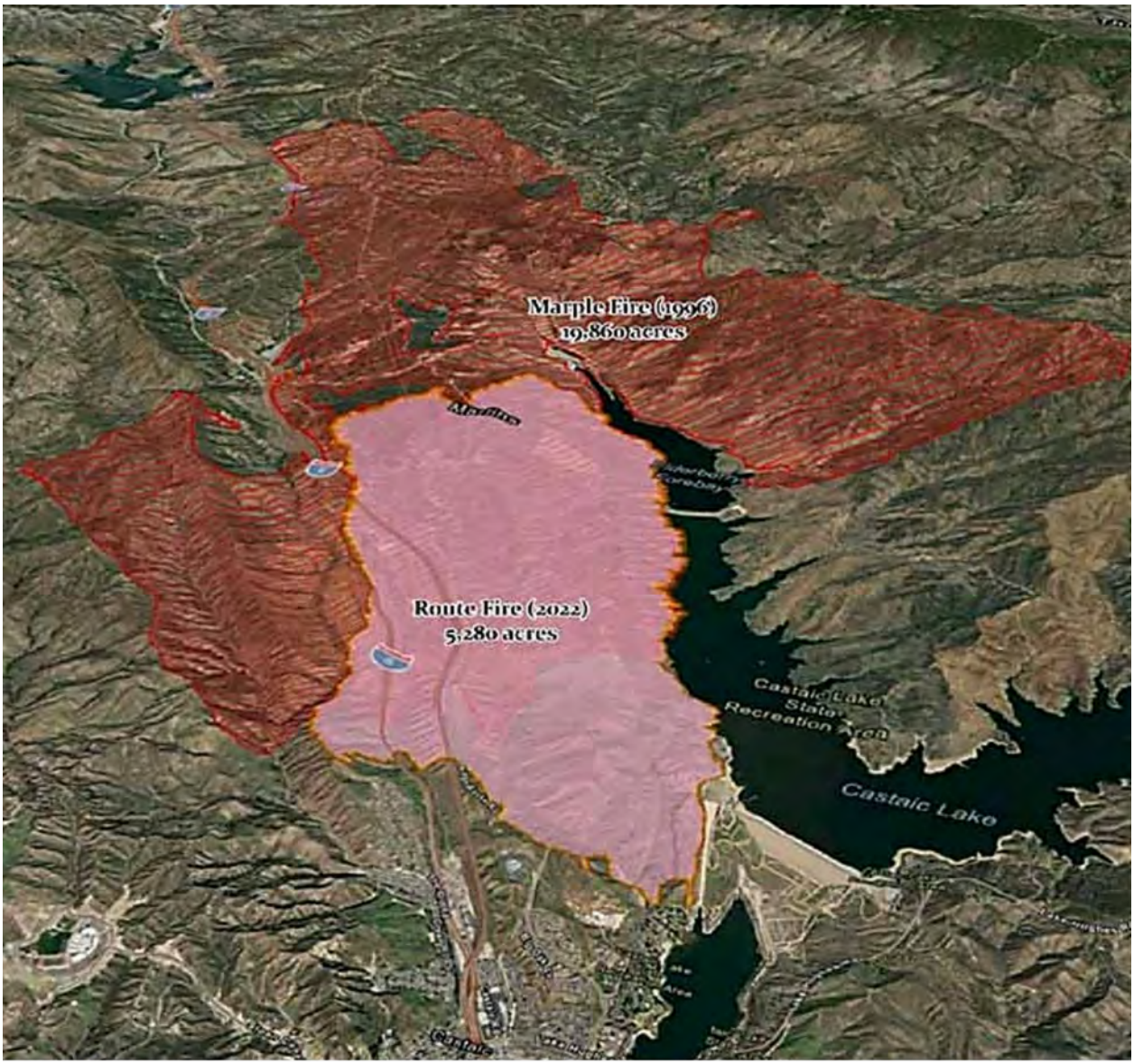


Figure 23 -Route Fire 2022 Map

The fire moved quickly once established in both areas (between northbound/southbound and on the Project Site). The SW/SSW wind pushed the fire to the NE/NNE. The fire progression was stopped to the east by Castaic Lake along the entire eastern flank. Aerial tankers and helicopters were used to keep the fire from moving west into Violin Canyon as it had done on the Marple Fire in 1996 (author's personal observation while working on the Marple Fire in 1996). The Marple Fire was the only fire other than the recent Route Fire (2022) to burn over a majority of the Project Site in the past 50 years.

The Route Fire was stopped in the first 24 hours due to the availability of aircraft and the wind change that occurred after, in the evening and the size and abilities of the initial attack forces. It is impossible to directly compare the two fires as the Marple Fire consumed over 10,000 acres in the first eight hours. Both fires started in late August around noon. Once the Marple Fire burned around the north end of the lake, its eastward progress was no longer suppressed. Additionally, the Marple Fire continued to burn for several operational periods subjecting the control line to the diurnal effects of the onshore/offshore changes taking the fire in different directions at different times and requiring resources to be deployed in all areas simultaneously. https://fireaviation.com/2022/10/01/report-shows-use-of-four-helicopter-quick-reaction-force-through-the-night-limited-final-size-of-route-fire/ The shifting of the onshore and offshore flow reverses the fire direction under these conditions approximately every 12 hours, making the head of the fire bounce back and forth from opposite sides of the site perimeter.

As the Marple Fire burned into the national forest, containment opportunities were reduced, and suppression methods had to be modified to meet the Forest Service's practices. Within the forest, fire is a natural process, and some suppression efforts actually produce more long-term consequences than the fire itself. The two fires are overlayed in the graphic below (Figure 24). Specifics about the Route Fire (most recent fire to burn over the Project Site) will be covered in each section of this report where applicable.



https://fireaviation.com/2022/10/01/report-shows-use-of-four-helicopter-quick-reaction-force-through-the-night-limited-final-size-of-route-fire/

Figure 24 – Comparison of Marple Fire 1996 to Route Fire 2022

Weather

Weather has a significant impact on the ability of a small fire to become a large fire. Within the weather category, wind, relative humidity, temperature, and interaction with the topography are especially impactful.

High temperature, low humidity, and wind combine to create "Fire Weather". In the area of the Project Site, the regional weather has a strong history of extreme Fire Weather to the point where National Weather Service has a specific system used to identify when the extreme conditions are being achieved and additional action should be taken. On its website, CalFire describes as follows:

> *The National Weather Service issues Red Flag Warnings & Fire Weather Watches to alert fire departments of the onset, or possible onset, of critical weather and dry conditions that could lead to rapid or dramatic increases in wildfire activity.*
>
> *A Red Flag Warning is issued for weather events which may result in extreme fire behavior that will occur within 24 hours. A Fire Weather Watch is issued when weather conditions could exist in the next 12-72 hours. A Red Flag Warning is the highest alert. During these times extreme caution is urged by all residents, because a simple spark can cause a major wildfire. A Fire Weather Watch is one level below a warning, but fire danger is still high.* Red Flag Warnings & Fire Weather Watches (ca.gov)

Extreme Fire Behavior is a term used by the National Wildfire Coordinating Group (NWCG) for conditions which imply a level of fire behavior characteristics that ordinarily precludes methods of direct control action. One or more of the following is usually involved: high rate of spread, prolific crowning and/or spotting, presence of fire whirls, strong convection column. Predictability is difficult because such fires often exercise some degree of influence on their environment and behave erratically, sometimes dangerously.

Temperature

Temperature in and of itself does not have a large impact on fire behavior but the effects of temperature on other factors such as Relative Humidity make temperature important to the fire behavior discussion. More direct sunlight increases fuel temperatures and decreases the amount of heat needed to raise the fuel to its ignition temperature but since most wildland fuels must be raised to over 400°F to sustain combustion, the difference of 10 or 20 degrees in the atmospheric temperature has limited direct effect.

Relative Humidity

Relative humidity (RH) indicates how much moisture is in the air. Expressed as a percentage, it provides an objective measurement of the amount of water vapor that is in the air compared to the amount needed to be saturated (100% RH). When RH is low, moisture can be removed from the vegetation at a high rate creating drier vegetation conditions which burn easily and at a faster rate. Fuels (wildland) are categorized by the amount of time (time lag) it takes them to adjust the plant moisture level to the atmospheric level (63% of the difference) in one-hour, ten-hour,

hundred-hour, and thousand-hour fuels. One- and ten-hour fuels have the most impact on the flaming front (active burning) of wildland fires in grass/brush fuels. *For example, a grass fuel (one-hour) could be at a very high level of fuel moisture (90%) due to overnight fog. When the sun comes up and the fog burns off or a dry air mass moves into the area, if the RH where to drop to 20, then in the first hour, the fuel moisture would move from 90% to 45% (63% of the difference between 90% moisture in the fuel and 20% moisture in the air) in the first hour and down to 30% by the end of the second hour and 24% by the end of the third hour. Each time moving 63% of the difference between the fuel moisture and the air moisture.*

Humidity varies with temperature (generally, when temperature increases, humidity decreases; and vice versa). Humidity is important because it affects fuel moisture content and therefore, the fuel's combustibility. This is the reason that hot, dry Santa Ana wind conditions tend to create Fire Weather and increase the level of risk as they continue to impact the fuels for serval days, weeks, or months in the dry season for southern California. Hot, dry, and windy are a bad combination.

Wind

Wind is the most obvious factor for creating Extreme Fire Behavior. While Extreme Fire Behavior is possible without extreme wind, such as a fuel- driven, plume-dominated wildfire, they are often found together. The Station Fire, in 2009, was a prime example of a fuel and low relative humidity driven fire, with much of the fire growth occurring in the absence of significant winds (The Station Fire: An Example of a Large Wildfire in the Absence of Significant Winds (weather.gov)). This was not what is normally seen in the recent history of fires in Southern California. Wind is normally one of the prime factors. The reason for this is that, in fine fuels like grasses, wind can accelerate the fire to the maximum flame length and Rate of Spread (ROS) with little wind compared to the wind speeds that are possible under fire weather conditions.

One method of illustrating this fact is to show grass wildland fuels (dry climate) at various wind speeds and look for the point at which the fire from a specific fuel reaches its maximum energy output (all fuel consumed; no additional fuel to burn). Using the BehavePlus software from the U.S. Forest Service to complete the comparison, an extreme moisture scenario was used (3% for one-hour fuels, 4% for ten-hour fuels, 5% for 100-hour fuels, 30% for live herbaceous fuels and 50% for live woody fuels) for the fuel moisture levels in the time lag dead and live fuels. Three dry climate grass fuels were used (GR1, GR2. GR4), which are the fuels normally found in southern California for grasses. The results (Figure 25, on the next page) indicate that the GR1 fuel reaches the maximum flame length and ROS at 5 mph (midflame wind speed), while the GR2 fuel reaches maximums at 13 mph and the GR4 at 25 mph. For this example, the 20-foot winds are two times the midflame wind speed. 20-foot winds are defined as sustained winds averaged over a 10-minute period and measured 20 feet above the average height of nearby vegetation. (This is the standard reported by the Remote Automated Weather Stations (RAWS) owned by land management agencies and used in the National Fire Danger Rating System (NFDRS)). Using the 20-foot winds at two times the midflame wind speed allows for the perspective of how little wind is needed on a flat plain. When the slope is added, the GR1 is at maximum without wind, the GR2 drops to 9 mph and the GR4 drops to 22 mph. Figure 25 provides the output from the Behave modeling for this example.

Max ROS
Head Fire
Surface Fire Flame Length (ft)

Midflame Wind Speed	Fuel Model		
mi/h	gr1	gr2	gr4
0	0.6	1.4	2.7
5	2.6	6.3	11.8
10	2.6	9.9	18.6
11	2.6	10.6	19.8
12	2.6	11.2	21.0
13	2.6	11.6	22.1
14	2.6	11.6	23.2
15	2.6	11.6	24.3
16	2.6	11.6	25.4
17	2.6	11.6	26.4
18	2.6	11.6	27.4
19	2.6	11.6	28.5
20	2.6	11.6	29.4
21	2.6	11.6	30.4
22	2.6	11.6	31.4
23	2.6	11.6	32.3
24	2.6	11.6	33.2
25	2.6	11.6	33.7
26	2.6	11.6	33.7

Max ROS with 100% slope
Head Fire
Surface Fire Flame Length (ft)

Midflame Wind Speed	Fuel Model		
mi/h	gr1	gr2	gr4
0	2.6	7.6	14.3
4	2.6	9.1	17.0
5	2.6	9.6	17.9
6	2.6	10.1	18.9
7	2.6	10.6	19.8
8	2.6	11.1	20.8
9	2.6	11.6	21.8
10	2.6	11.6	22.7
11	2.6	11.6	23.7
12	2.6	11.6	24.7
13	2.6	11.6	25.6
14	2.6	11.6	26.6
15	2.6	11.6	27.5
16	2.6	11.6	28.4
17	2.6	11.6	29.3
18	2.6	11.6	30.2
19	2.6	11.6	31.1
20	2.6	11.6	32.0
21	2.6	11.6	32.9
22	2.6	11.6	33.7
23	2.6	11.6	33.7
24	2.6	11.6	33.7
25	2.6	11.6	33.7
26	2.6	11.6	33.7

Figure 25 – BehavePlus Outputs for Rate of Spread in dry climate grass fuels

The regional area around the Project Site has two (2) Remote Access Weather Stations or RAWS, which are monitored/ maintained by a governmental agency to measure, record, and transmit Fire Weather data on a routine basis over extended periods of time. Most of these RAWS sites have been in place for many years, if not decades.

These sites are good for establishing the long-term wind (speed, direction, and gusts), temperature, and RH.

The Del Valle and Saugus RAWS are located to the south of the Project Site. The Del Valle RAWS is approximately 5 miles to the SSW, and the Saugus RAWS is approximately 8 miles to the SE of the southern boundary of the Project Site. The locations are provided in Figure 26 (next page) as well as four locations closer to the Project Site, three of which are weather stations maintained and monitored by Southern California Edison (SCE) as part of the company's Wildland Fire Safety program and one private weather station which is part of the Citizen Weather Observing Program (CWOP) sponsored by the National Weather Service. The company uses data to make decisions on Public Safety Power Shutoff (PSPS) actions. The data is available to safety personnel and the general public in nearly "real-time". Most of these SCE sites are mounted on utility poles owned by the company.

The RAWS sites have over 10 years of recent data, while the SCE sites have all come online within the past 5 years and some in the area have been installed in the past year (those have not been used here). Of note, the SE129 site was destroyed in the Route Fire (2022). It has data up to the morning of the fire. The other three SCE/CWOP sites and the two RAWS have data through the point at which the databases were downloaded (after the Route Fire).

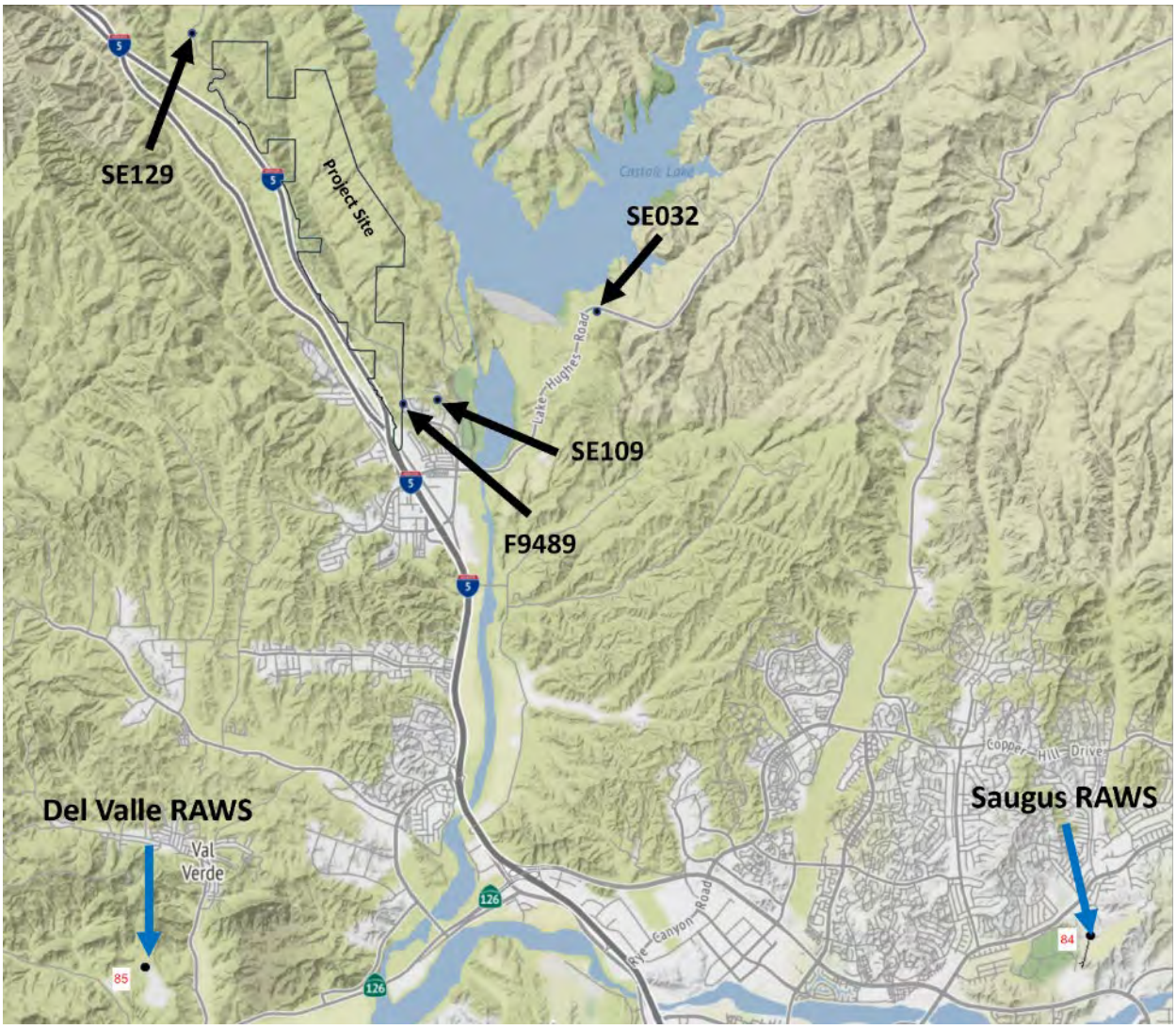
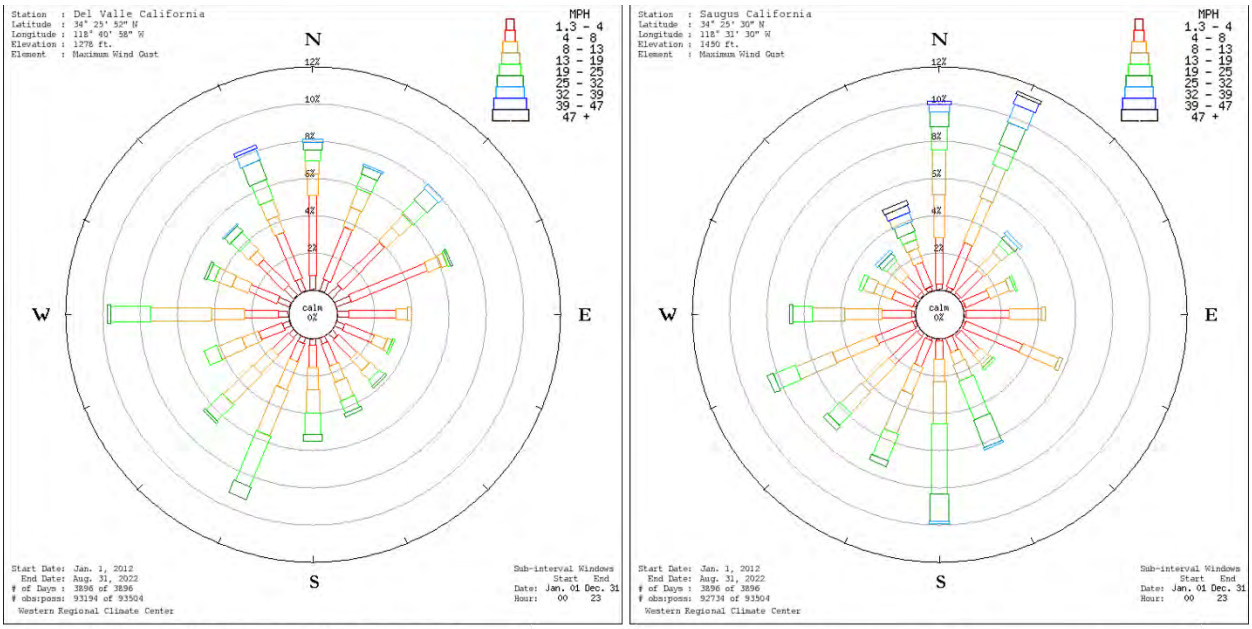


Figure 26 – Location map for location weather collection sites

The data from the RAWS sites shows regional data is fairly consistent. Both sites have the predominant onshore flow (S to W) and the stronger winds from the offshore flow (NW to NE). Both RAWS sites are located in areas that are not wind-protected but are also adjacent to topographic features which have some influence on the direction and speed of the wind. They are at the same general elevation (Del Valle 1,278'/Saugus 1,450'). Each site has over 92,700 datapoints out of 93,504 possible data points within the analysis timeframe (10 years).

Data tables and wind rose graphics are provided for both in Figure 27, on the next page. Both RAWS sites are near the Santa Clarita River drainage and are orientated to topography in a manner that is slightly different from the Project Site.



Del Valle California - Wind Frequency Table (percentage)

Latitude : 34° 25' 52" N
Longitude : 118° 40' 58" W
Elevation : 1278 ft.
Element : Maximum Wind Gust

Start Date : Jan. 1, 2012
End Date : Aug. 31, 2022
# of Days : 3896 of 3896
obs : poss : 93194 of 93504

Sub Interval Windows
Start End
Date Jan. 01 Dec. 31
Hour 00 23

(Greater than or equal to initial interval value and Less than ending interval value.)

Range (mph)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
1.3 - 4	0.7	0.6	0.7	0.8	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.5	0.7	0.7	0.7	8.6
4 - 8	4.3	3.0	3.2	4.4	2.5	1.7	1.4	1.2	1.2	1.0	1.2	1.4	1.8	1.7	1.9	2.7	34.7
8 - 13	1.2	1.1	1.0	0.8	0.6	0.7	0.9	0.9	1.2	1.6	1.3	0.9	1.8	0.9	0.6	0.9	16.5
13 - 19	0.7	1.1	0.9	0.3	0.2	0.3	0.6	1.0	1.2	2.6	2.3	1.4	3.3	1.0	0.6	0.9	18.6
19 - 25	0.6	0.8	1.0	0.2	0.1	0.1	0.4	0.7	1.2	2.9	1.2	0.7	2.1	0.4	0.7	1.1	14.2
25 - 32	0.4	0.4	0.8	0.1	0.0	0.0	0.1	0.2	0.3	0.7	0.2	0.1	0.2	0.2	0.4	1.1	5.2
32 - 39	0.2	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.7	1.7
39 - 47	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4
47 -	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total(%)	8.2	7.2	8.1	6.7	4.1	3.3	3.8	4.5	5.5	9.3	6.5	4.9	9.8	4.9	5.0	8.2	100.0
Calm (<1.3)																	0.0
Ave Speed	9.9	11.3	12.8	7.1	7.0	7.7	10.3	12.1	13.5	16.0	13.4	12.1	13.8	10.7	11.6	15.2	12.0

Predominant Flow

Saugus California - Wind Frequency Table (percentage)

Latitude : 34° 25' 30" N
Longitude : 118° 31' 30" W
Elevation : 1450 ft.
Element : Maximum Wind Gust

Start Date : Jan. 1, 2012
End Date : Aug. 31, 2022
# of Days : 3896 of 3896
obs : poss : 92734 of 93504

Sub Interval Windows
Start End
Date Jan. 01 Dec. 31
Hour 00 23

(Greater than or equal to initial interval value and Less than ending interval value.)

Range (mph)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
1.3 - 4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.2	2.4
4 - 8	2.5	2.5	1.7	1.4	2.3	3.3	1.4	0.8	1.0	1.5	2.1	2.1	1.6	1.2	1.1	1.4	27.9
8 - 13	2.3	2.6	1.3	1.1	1.7	2.1	0.7	0.6	1.2	1.6	2.0	2.5	2.0	1.0	0.7	0.8	24.2
13 - 19	2.4	1.9	0.5	0.3	0.2	0.2	0.2	0.9	2.3	2.3	1.6	2.1	1.7	0.6	0.3	0.5	18.0
19 - 25	1.3	1.1	0.4	0.1	0.1	0.0	0.1	2.2	3.8	1.5	0.9	1.3	1.1	0.2	0.2	0.4	14.7
25 - 32	0.8	1.3	0.3	0.0	0.0	0.0	0.1	1.6	1.5	0.3	0.3	0.3	0.2	0.1	0.3	0.6	7.6
32 - 39	0.4	1.0	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.2	0.5	2.9
39 - 47	0.2	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	1.5
47 -	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.8
Total(%)	10.2	11.3	4.5	3.1	4.5	5.8	2.7	6.5	10.0	7.4	7.1	8.6	6.8	3.4	3.1	5.0	100.0
Calm (<1.3)																	0.0
Ave Speed	14.7	17.2	12.9	9.0	8.1	7.8	9.7	19.2	18.1	14.0	12.1	12.7	12.6	11.0	13.7	19.1	14.0

Predominant Flow

Figure 27 - Output data/graphics for RAWS locations (Del Valle and Saugus)

Using outputs from FlamMap (fire behavior modeling software), it is possible to see how the wind interacts with the topography. In Figure 28, on the next page, the wind directions are imposed over an elevation map (red indicating lower elevations through green indicating higher elevations) to show how the winds are channeled by the mountains and valleys. Note that to the north of Lake Piru (left side of the graphic), wind direction is more impacted in the offshore (NE wind) flow than in the onshore (SW wind) whereas the offshore flow is more impacted in the area of Highway 126 within the Santa Clarita River drainage. This wind channeling effect has an impact on the fire spread direction. When viewing the RAWS data, this is a critical issue to understand. These are the 20-foot winds (wind height) which are adjusted to a midflame wind speed in the modeling. The most radical wind direction changes occur in wind-sheltered or shadowed areas. This issue will be addressed later in this report.

The Project Site is not significantly impacted by either of these two wind directions (Onshore/Offshore) with respect to changes in wind direction at an overall level (wind channeling is not pronounced on or near the Project Site). Site-specific locations may have more localized wind channeling impacts, and these will be addressed later in this report specific to the Project Site and the location being addressed.

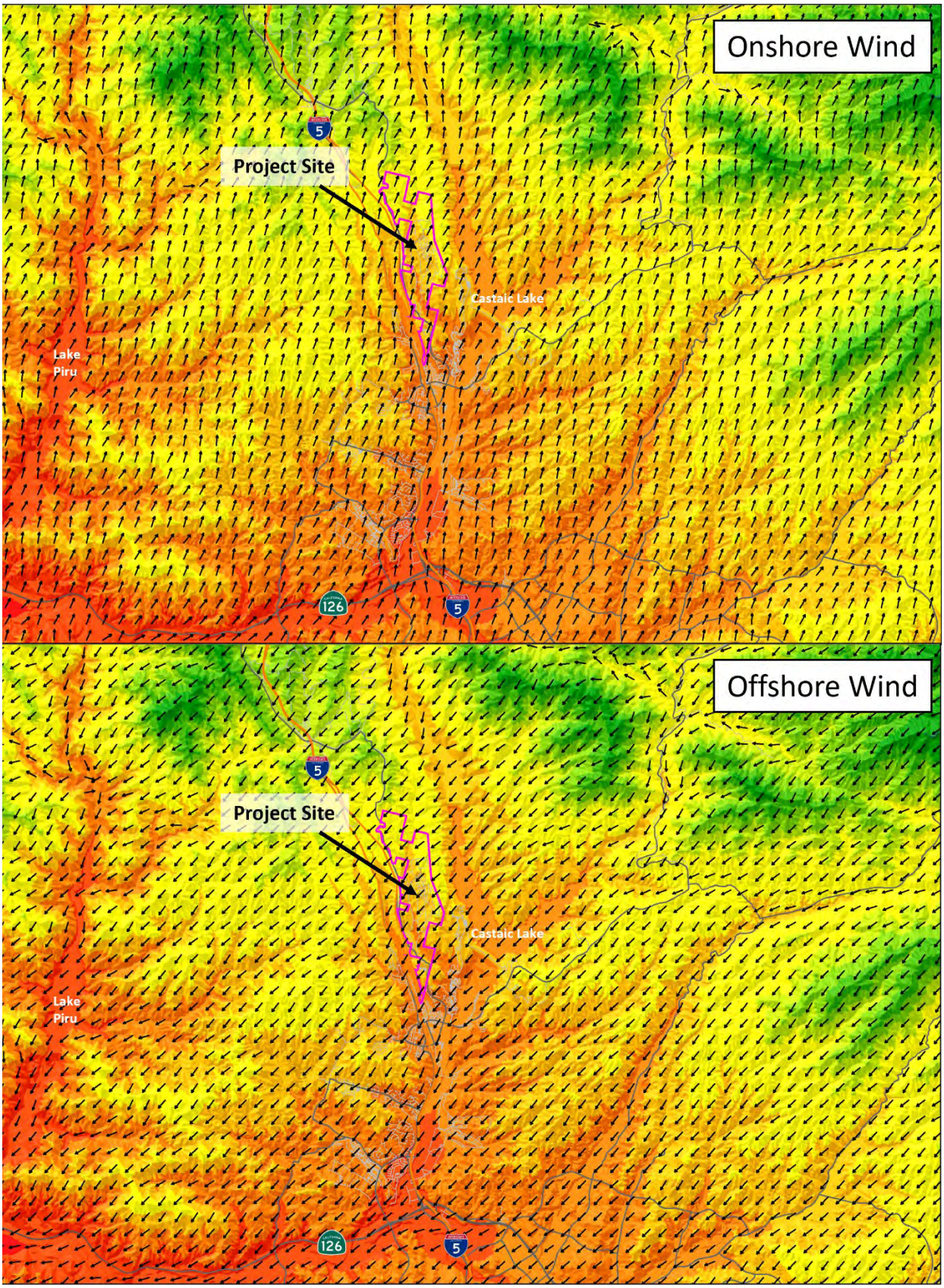


Figure 28 – Onshore/Offshore Winds over the Project Site

Four additional weather data collection points (not RAWS) shown below (Figure 29), provide an understanding of why they will have different wind data from the same time periods as compared to the RAWS sites. SE109 and SE032 are on north-facing slopes while FW9489 is on a south-facing slope and SE129 is on a west-facing slope. All are on a road or near a house. FW9489 is at the top of a slope, SE129 and SE032 are near the top of a slope, and SE109 is about mid-slope but in a narrower canyon than the other three. SE032 is the most exposed (right off the lake), and FS9489 is the most protected, with homes to the north and east of the site. The three SCE sites shown below are mounted on power poles and the FS9489 site is a private weather station that is a part of the CWOP. CWOP runs data checking and analysis on its site to increase the quality of the data.



Figure 29 – Non RAWS weather data locations)

Below, in Figure 30, is a summary of the weather data for the four non-RAWS sites. The highest wind speed and wind gusts are found as SE032, as would be expected given its exposed position. The lowest wind data is provided by FW9489 as discussed previously, due to its protected position and configuration.

All four sites have the minimum and maximum values shown along with the range eliminating the top and bottom 1%. All of these sites have been in place for less than five years with FW9489 only being in service for 1.6 years (data available). SE129 data stops in the morning of the Route Fire 2022 as the site was destroyed by the Route fire and is currently under replacement. All four sites were functioning on the day of the fire and the remaining three continue to function as of this report. Overall, the four locations have very similar findings.

SE129		Temp	RH	Wind	Gust
	Average	64.8	43.8	7.3	12.3
	Min	32.06	3.24	0	0
	Max	110.5	100	35.82	58.3
	1% value	38.86	7.66	0.04	0.7
	99% value	94.1	99.7	22.79	35.9
183,622	values				
3.5	years	Data ends prior to Route Fire			

SE032		Temp	RH	Wind	Gust
	Average	64.3	48.0	6.5	10.8
	Min	33.6	3.96	0	0
	Max	112.1	100	43.4	69.2
	1% value	39.63	8.49	0.25	1.2
	99% value	95.79	99.4	25.43	37.4
244,161	values				
4.6	years				

SE109		Temp	RH	Wind	Gust
	Average	65	48	3.1	7
	Min	28.8	4.4	0	0
	Max	115	99.4	23.5	45.1
	1% value	38.8	8.6	0	0
	99% value	100.2	96.2	13.3	25.3
203,196	values				
3.9	years				

F9489		Temp	RH	Wind	Gust
	Average	68.2	45.7	3.8	4.7
	Min	32	4	0	0
	Max	115	99.0	27	33
	1% value	41	9.0	0	0
	99% value	100	99	16.0	18.0
168,876	values				
1.6	years				

Figure 30 -Weather Data Summaries for non-RAWS locations

The three SCE sites can provide additional insight when the data is processed by direction and speed. Figure 31, on the next page, shows a similar trend with respect to wind direction and speed. SE032 has a maximum wind gust of 69.2 mph, but the 99th percentile is 37.4 in Figure 30 and Figure 31 provides the reason. Only five data points exceeded 60 mph, and only 34 datapoints exceeded 50 mph out of 244,161 data events. SE129 has similar data with a maximum gust of 58.3, a 99th percentile of 35.9, and only 34 datapoints over 50 mph out of 183,622 data points. Data points within the upper and lower one percent of the database are not

normally used as they tend to represent data outliers which do not fit within the statistical norms. It is not possible to know if these outliers are anomaly or data artifacts (a data flaw caused by equipment, techniques or conditions). Understanding the drop from the peak to the 99th percentile or from the minimum value to the 1st percentile provides some insight into the nature of the dataset and provides for a more accurate/reliable value for use in presenting the impacts of the dataset on the overall modeling process.

SE032			Wind Gust (mph)						
% of Total	Count	Cardinal	<20	>20	>30	>40	>50	>60	>70
6.7%	16,445	N	14,491	1,954	179	11	-	-	-
13.6%	33,236	NNE	28,774	4,462	779	58	8	-	-
13.2%	32,113	NE	27,655	4,458	1,358	195	43	4	-
5.6%	13,620	ENE	13,068	552	44	7	2	-	-
2.0%	4,866	E	4,850	16	-	-	-	-	-
1.7%	4,244	ESE	4,244	-	-	-	-	-	-
4.2%	10,348	SE	10,343	5	-	-	-	-	-
4.7%	11,582	SSE	11,569	13	-	-	-	-	-
3.8%	9,265	S	9,233	32	1	-	-	-	-
8.2%	20,033	SSW	19,236	797	24	-	-	-	-
15.1%	36,966	SW	35,417	1,547	48	4	-	-	-
4.4%	10,726	WSW	10,596	130	-	-	-	-	-
1.5%	3,735	W	3,702	33	2	-	-	-	-
2.2%	5,431	WNW	4,921	510	77	9	-	-	-
7.1%	17,336	NW	8,243	9,093	3,113	419	15	-	-
5.7%	13,816	NNW	7,536	6,280	3,088	644	34	1	-
0.2%	399	""							-
100.0%	244,161		213,878	29,882	8,713	1347	102	5	-
			87.6%	**12.2%**	**3.6%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**

Offshore winds are highlighted in light red, and the Onshore winds in light yellow

SE129			Wind Gust (mph)						
% of Total	Count	Cardinal	<20	>20	>30	>40	>50	>60	>70
7.8%	14,386	N	13,373	1,013	267	17	-	-	-
3.6%	6,678	NNE	6,224	454	18	-	-	-	-
5.7%	10,458	NE	8,267	2,191	244	11	-	-	-
6.6%	12,086	ENE	11,264	822	77	15	1	-	-
4.5%	8,205	E	8,137	68	5	-	-	-	-
3.2%	5,908	ESE	5,881	27	2	-	-	-	-
3.2%	5,907	SE	5,867	40	-	-	-	-	-
5.5%	10,178	SSE	10,133	45	1	-	-	-	-
8.1%	14,905	S	14,563	342	4	-	-	-	-
13.1%	24,127	SSW	22,665	1,462	22	-	-	-	-
3.6%	6,697	SW	6,397	300	15	-	-	-	-
1.5%	2,780	WSW	2,687	93	5	-	-	-	-
1.3%	2,300	W	2,124	176	4	-	-	-	-
3.0%	5,461	WNW	4,204	1,257	226	19	-	-	-
14.4%	26,470	NW	13,277	13,193	2,925	345	20	-	-
14.0%	25,658	NNW	17,899	7,759	2,441	266	13	-	-
0.8%	1,418	Null	-	-	-	-	-	-	-
100.0%	183,622		152,962	29,242	6,256	673	34	-	-
			83.3%	**15.9%**	**3.4%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**

Offshore winds are highlighted in light red, and the Onshore winds in light yellow

SE109			Wind Gust (mph)						
% of Total	Count	Cardinal	<20	>20	>30	>40	>50	>60	>70
3.9%	7,967	N	7,820	147	4	-	-	-	-
2.3%	4,595	NNE	4,568	27	-	-	-	-	-
2.8%	5,647	NE	5,469	178	3	-	-	-	-
5.6%	11,421	ENE	9,599	1,822	168	15	-	-	-
4.1%	8,317	E	7,754	563	20	0	-	-	-
3.1%	6,227	ESE	6,174	53	2	-	-	-	-
7.2%	14,601	SE	14,599	2	-	-	-	-	-
7.3%	14,901	SSE	14,898	3	-	-	-	-	-
5.7%	11,618	S	11,608	10	1	-	-	-	-
4.5%	9,114	SSW	9,113	1	-	-	-	-	-
3.6%	7,294	SW	7,294	-	-	-	-	-	-
3.8%	7,662	WSW	7,661	1	-	-	-	-	-
7.1%	14,454	W	14,450	3	-	-	-	-	-
12.3%	25,052	WNW	24,827	225	29	0	-	-	-
16.4%	33,286	NW	30,610	2,676	187	1	-	-	-
8.5%	17,309	NNW	15,980	1,329	108	1	-	-	-
1.8%	3,731	Null	0	-	-	-	-	-	-
100.0%	203,196		192,424	7,040	522	17	-	-	-
			94.7%	**3.5%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**

Figure 31 – Directional Wind Speed Summaries from SCE weather data sites

In Figure 31, on the previous page, the offshore winds are highlighted in light red, and the onshore winds in light yellow. These are the winds that are most likely to occur during a wildland fire. All nonhighlighted areas are less than 6% of the data set for that direction.

From the data derived from the six sites, assumptions about the model inputs for the fire behavior modeling can be created. For this report, the minimum fuel moisture for 1-hr fuels will be 3% based on the RH values shown in Figure 30 as found at the referenced sites.

Wind assumptions, based on the values in Figure 31, will be modeled from the S, SSW, and WSW at 40 mph combined with N, NNE, and NE at 70 mph as the "worst-case" scenarios.

Intensity

The intensity of a wildfire is measured in the energy release expected from the flaming front of the fire (active burning). Intensity is greatly affected by topography, weather, and the amount of fuel available to burn. For example, a brush fire in heavy chaparral in a steep canyon can produce a greater wildfire intensity than short grass fuels on flat ground. Wildfire intensity is measured in units of heat transfer per length of the fire edge within the fire modeling community but is more often expressed in terms of flame length for easier understanding in training and discussion with those who fire fight fires and those who must live with the potential of wildland fires.

Fire intensity is the primary wildfire characteristic related to potential fire effects. Typically, the greater the intensity the greater the loss, but this is not always the case. (USDA Forest Service Gen. Tech. Rep. RMRS-GTR-315. 2013, page 5)

> The factors affecting wildfire intensity include the elements of the fire behavior triangle (fuel, weather, and topography) as well as spread direction (heading, flanking, backing, etc.). At a basic level, wildfire intensity can be assessed for a point, stand, or landscape without consideration of fire spread by assuming that a fire occurs at the given location(s) under specific weather, fuel moisture, and fire spread parameters (heading, flanking, or backing). Typically, this is assessed as the near-maximum potential (for example, heading fire under 97th percentile fuel moisture and wind conditions).
>
> There may be a very low probability of a wildfire occurring under these conditions in any particular area, but nevertheless, this level of assessment provides useful information about the potential wildfire behavior that different areas of a landscape are capable of producing. At the landscape scale, this type of wildfire hazard assessment may also be used to identify where on a landscape there is the potential to meet or exceed specific wildfire behavior thresholds, thus aiding the identification and prioritization of management opportunities. (USDA Forest Service Gen. Tech. Rep. RMRS-GTR-315. 2013, pages 7-8)

In order to assess potential intensity, it is necessary to examine the fuels, topography, and configuration in order to accurately assess both the hazard and the risk to the adjacent areas. The topography includes elevation, slope, aspect, and features, such as canyons, valleys, or rivers.

Fuels (wildland and built)

Wildland fuels on and near the Project Site consist mainly of grass and shrubs. Figure 32, below and Figure 33, on the next page, provide illustrations of the fuels on and near the Project Site. Below, the fuels are classified by number in categories as listed in the legend. In each category, the amount of fuel is generally greater as the number increases. Grass fuel 101 has less combustible fuel available than grass fuel 102. The 100's are grasses, the 120's are grass/shrub mixtures, the 140's are shrub fuels, the 160's are understory fuels, and the 180's are tree litter fuels. These all apply to surface fuels (within 6' of the ground), as canopy fuels are dealt with separately in other modeling modules. The Project Site (shown here with the Partial Creek Avoidance alternative overlaid) is mostly grass and grass/shrub fuels with some areas of shrub-only fuel. Canopy fuels are not predominant. Fuels are assessed in 30-meter grids with the predominant fuel type within the grid representing the entire grid.

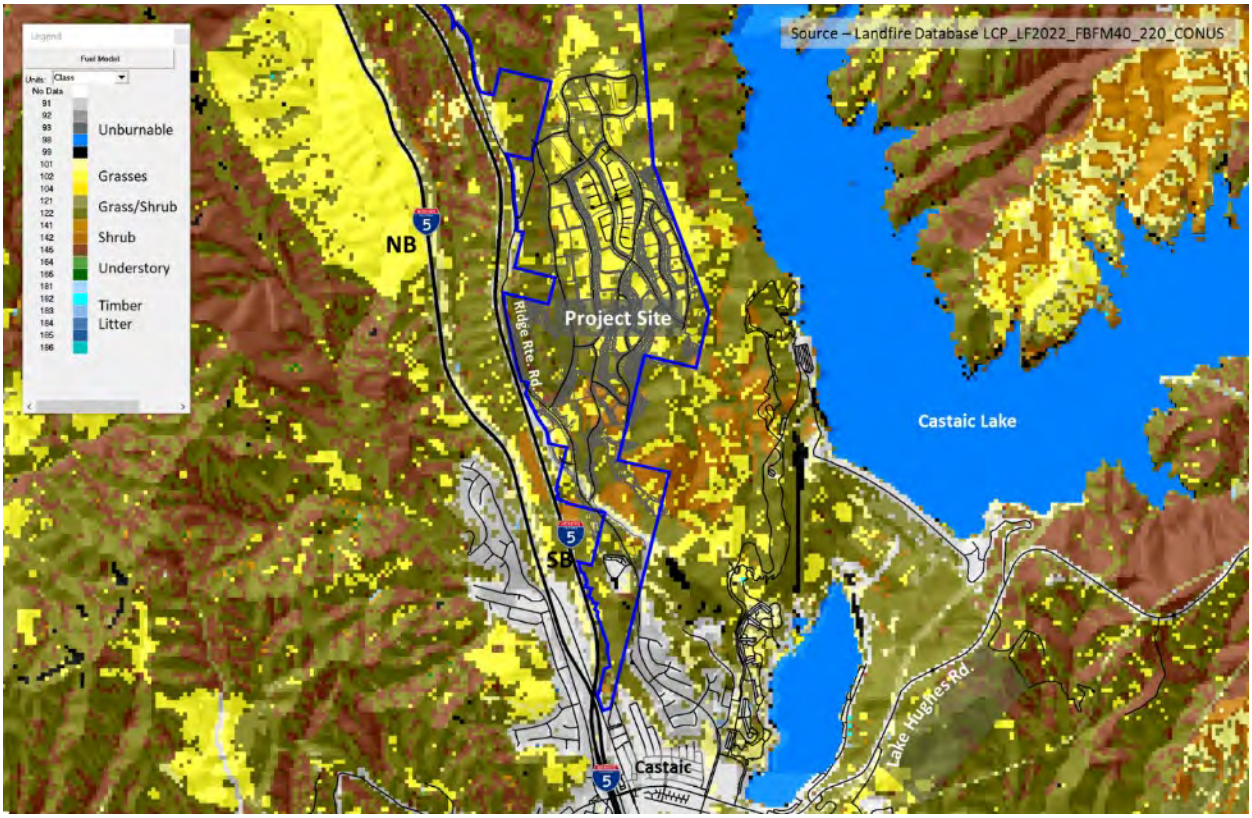


Figure 32 – Wildland Fuels Map

The site is more specifically covered with three types of wildland fuels (as shown in Figure 33, on the next page) Ruderal Grassland and Meadows, Southern California Coastal Scrub, and South California Dry-Mesic Chaparral according to the most recent downloadable Landfire database. These fuel types are also consistent with the finding of the SEIR which was provided in Figure 10 on page 16 of this report. The legend in Figure 33 has been simplified to the Project Site with arrows indicating the predominant wildland fuels.

The existing vegetation type assessment was completed prior to the Route Fire 2022 and is representative of the fuel found during the site visit, which is annotated by location in Appendix

A of this report. The fuels found in the current Landfire Database Landscape file will be used in the modeling for this report (LCP_LF2022_FBFM40_220_CONUS). Developed areas to the south and southwest of the Project Site are at a distance that does not make them a direct impact on wildfire fuel, but they do provide a fuel break from the native fuels and are important to the modeling. They are also categorized as "non-burnable" for the most part. This will be discussed later in the fire behavior section of this report.

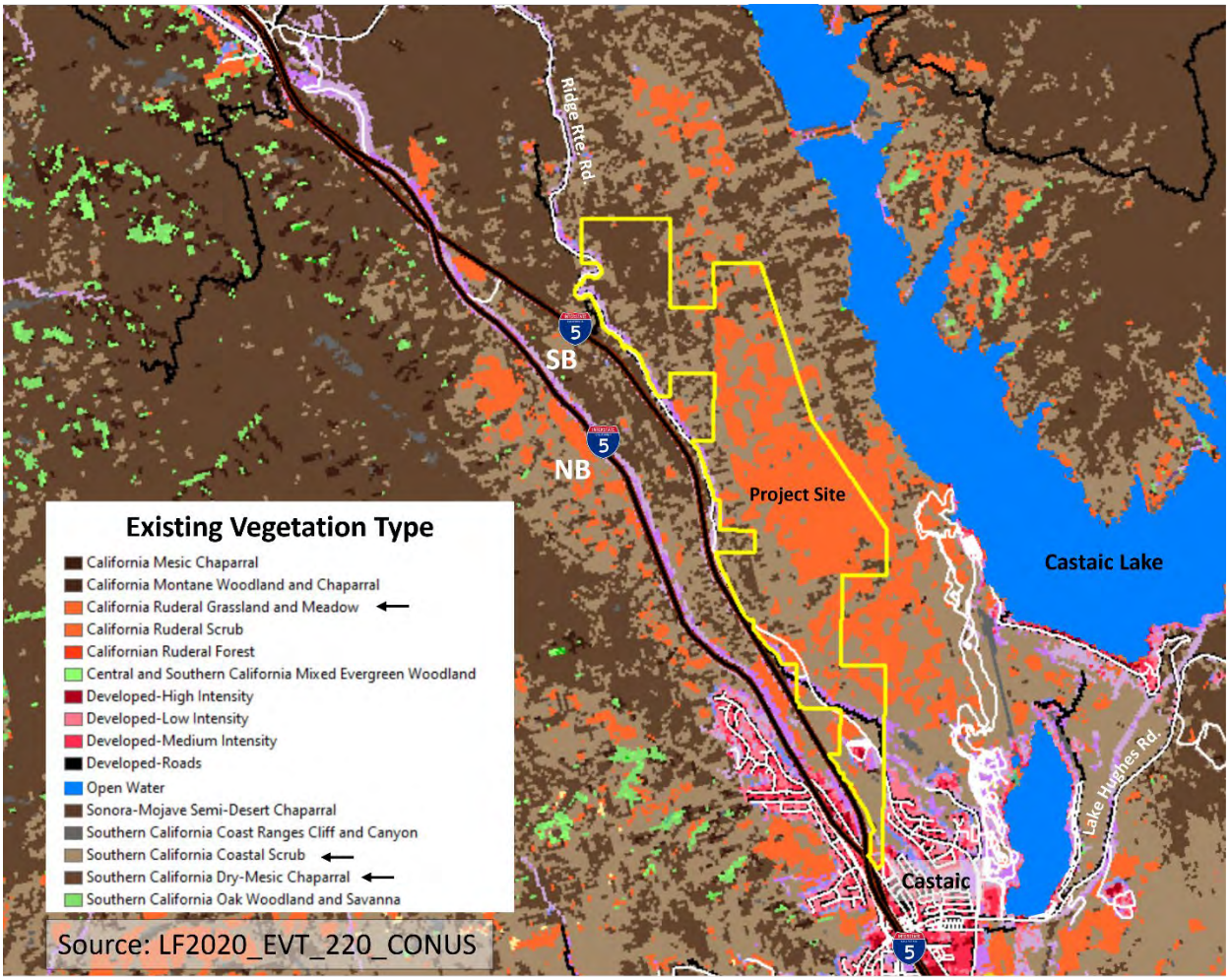


Figure 33 – Existing Vegetation Type Map

Slope

Slope can influence how a fire will move up or down hills. A fire that ignites at the bottom of a steep slope will spread much more quickly upwards because it can pre-heat the upcoming fuels with rising hot air. The upward drafts are more likely to create spot-fire conditions. In the absence of winds, fires usually move faster uphill than downhill, so the steeper the slope, the faster a fire moves. Wind can overpower the slope factor, but generally steeper slopes result in more extreme fire behavior. If the slope is below a site, it will have a more significant impact on the site than if the slope is moving up and away from the site.

Slope can be measured in degrees or percentages. A 45-degree angle is a 100% slope because it rises one foot for each linear foot of the slope. Figure 34, on the next page, provides an

illustration of the slopes around the Project Site prior to grading. The slope percentages shown in the graphic are the average for the 30-meter grid that is displayed for that area. In the graphic one of the possible configurations is provided for reference. The slopes within the development area will be changed during the grading process and, for the most part, will be reduced in steepness or averaged over a larger area. For the purposes of this report, the portions of land in the native interfaces where the wildland fires could be burning are the "area of interest" as they will not be modified and will retain the native fuels.

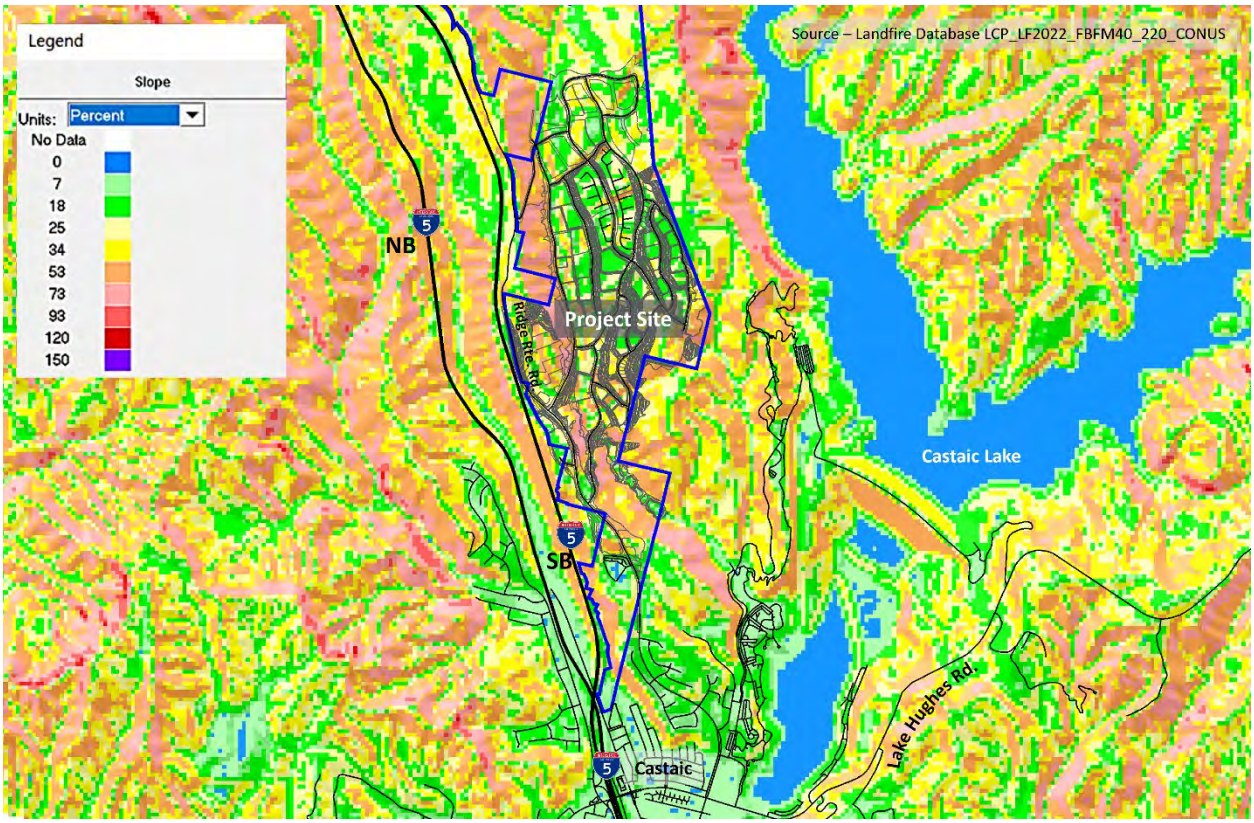


Figure 34 – Slope Map

When averaged over the 30-meter grids, there are no areas with slopes over 80 percent in the interface areas of the Project Site. The values depicted below in Figure 34, are the values that are used in the fire modeling for this report.

Aspect and Elevation

Aspect is the compass direction the slope faces. Elevation and aspect can determine how hot and dry a given area will be. Aspect, in particular, often dictates the amount of direct sunlight that wildland fuels will receive in areas where slopes are steep enough to cast shadows. South aspects tend to get more sun than any other aspect, and north aspects, if the slope is significant enough, can be sheltered from the sun's heat and drying effects. This is why, under the right conditions, fuel loading on the northern aspects of some drainages tend to have more fuel. An example from the Project Site is provided in Figure 35 on the next page.

The National Wildfire Coordinating Group (NWCG) speaks to the issue of south-facing slopes in the S190 (Introduction to Wildland Fire Behavior) training materials. It states, "In the Northern

Hemisphere, the slopes facing south receive direct sun rays and become hotter than the slopes facing any other direction. The higher temperature on the southern exposures results in lower humidity, rapid loss of fuel and soil moisture, and drier, lighter, flashy fuels such as grass. All of these things add together to make southern slopes more susceptible to fires than northern slopes." This statement about northern/southern slopes does not apply to wind-driven fires, only slope and fuel-driven fire. When winds are from the N or NE and align with the heavier fuels on the north slopes, the possibility of extreme wildland fire behavior is increased exponentially. (*S190 - Introduction to Wildland Fire Behavior, Module 2: Principles of Wildland Fire Behavior, Topic 2: Topography, Aspect, p3,* https://training.nwcg.gov/classes/S190/508Files/071231_s190_m2_508.pdf)



Figure 35

The Aspect Map (Figure 36, on the next page) provides an illustration of how the topography will interact with the Project Site. One of the possible alternatives is provided for reference. To the west, aspects are primarily E and SE, and to the East, they are primarily W aspects to the ridgeline above the Project Site, where they transition to E and SE. The north end of the Project Site is mostly S and SW aspects and to the South of the development area, it is extremely varied.

In the general areas of the Project Site, the ridgelines run N/W with faceted smaller drainages running perpendicular to the ridgeline. This configuration is visible on the Elevation Map (Figure 37, on the next page). It shows the Project Site rising up from the south with higher ridgelines to the west and east. The highest point in the Project Site is at the northern boundary in an area that will be developed. It touches the 2,400-foot contour on the USGS topographic map. The lowest point in the Project Site is at the south, where Grasshopper Creeks exits the Project Site at approximately 1,250-foot elevation. The difference is considerable, but it is not enough nor is it in an elevation band that dramatically changes the types of wildland fuels available to burn. All of the adjacent wildland fuels remain "soft chaparral" which generally grows below a 2,500-foot elevation.

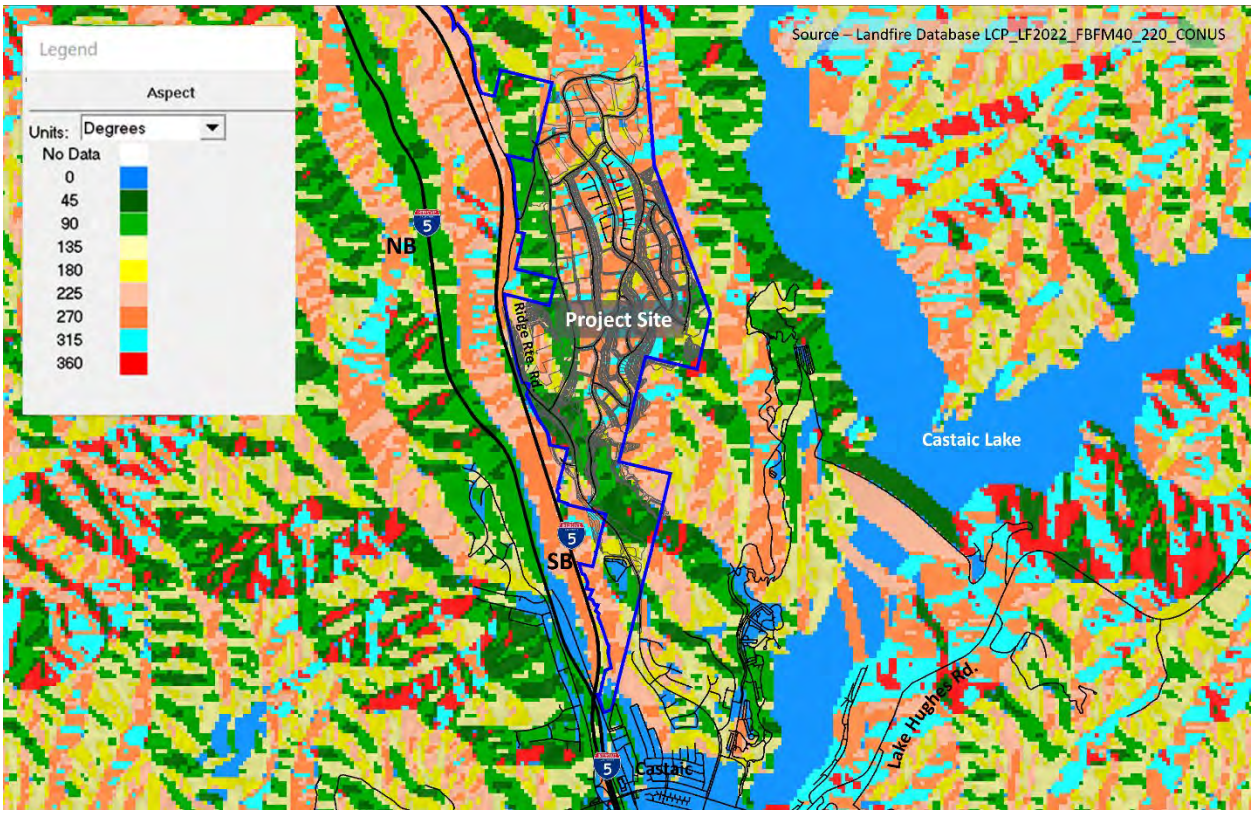


Figure 36 – Aspect Map

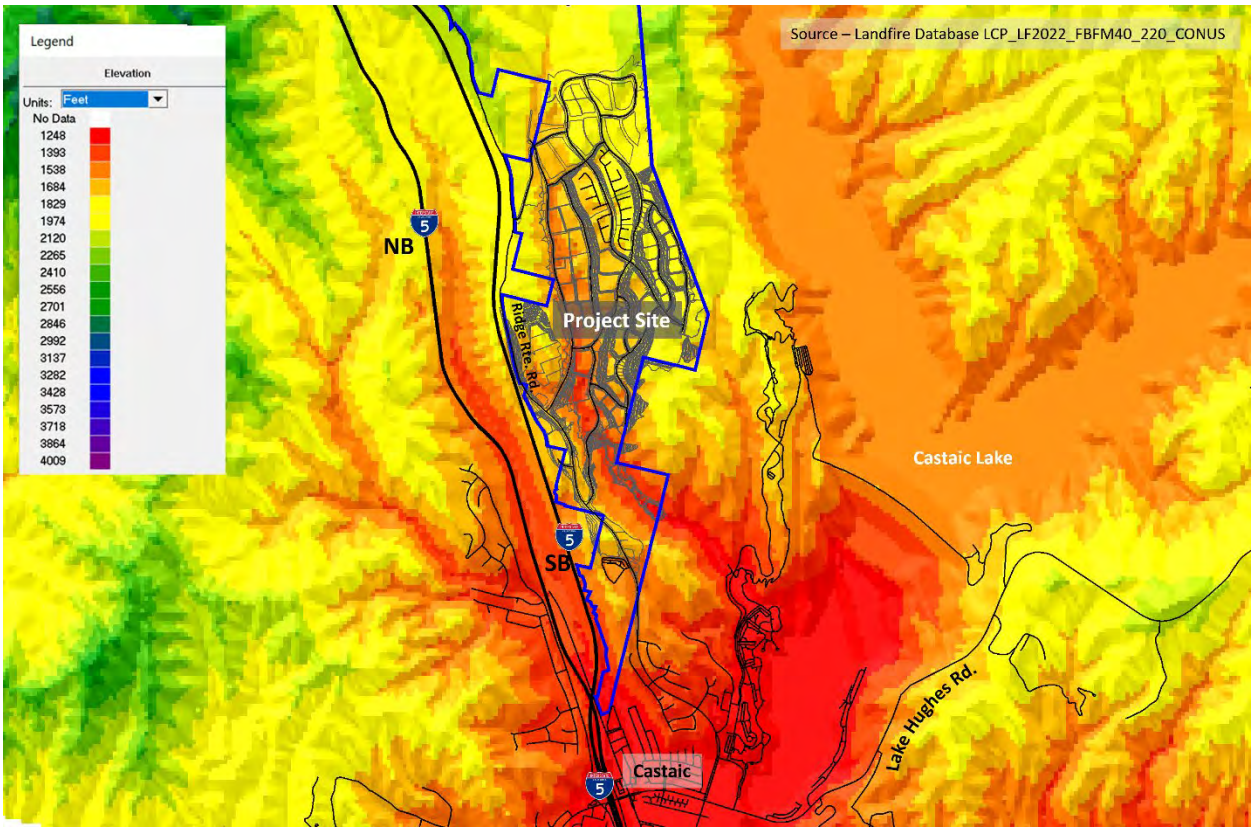


Figure 37 – Elevation Map

Weather

The data from the previously discussed data sites provide the needed assumptions for the fire modeling. In addition to the what (data), it is important to understand the why. For the Project Site, the wind has the largest impact on the amount of risk that can be expected from wildland fires. The topography, fuels, and configurations of the interface between the Project Site and the remaining native vegetation are relatively stable (changes are mostly over longer timeframes) whereas weather changes rapidly and often throughout the day, week, months and seasons.

In the Project Site area, wind tends to have a large impact on the temperature, relative humidity, fuel moisture, and direction of fire travel. Winds for the Project Site are driven by two conditions, onshore flow and offshore flow, when it comes to wildland fire behavior impacts. Onshore flow is created when the land mass heats up (mountains and deserts particularly) inland, creating a low-pressure area. Cooler air from over the ocean flows onshore to fill these low-pressure areas. To some degree, this occurs every day. The inland heating causes daytime onshore winds, and when the night comes, the flow reverses once the air over the ocean is warmer than the air over the land mass. This is depicted in Figure 38 below.

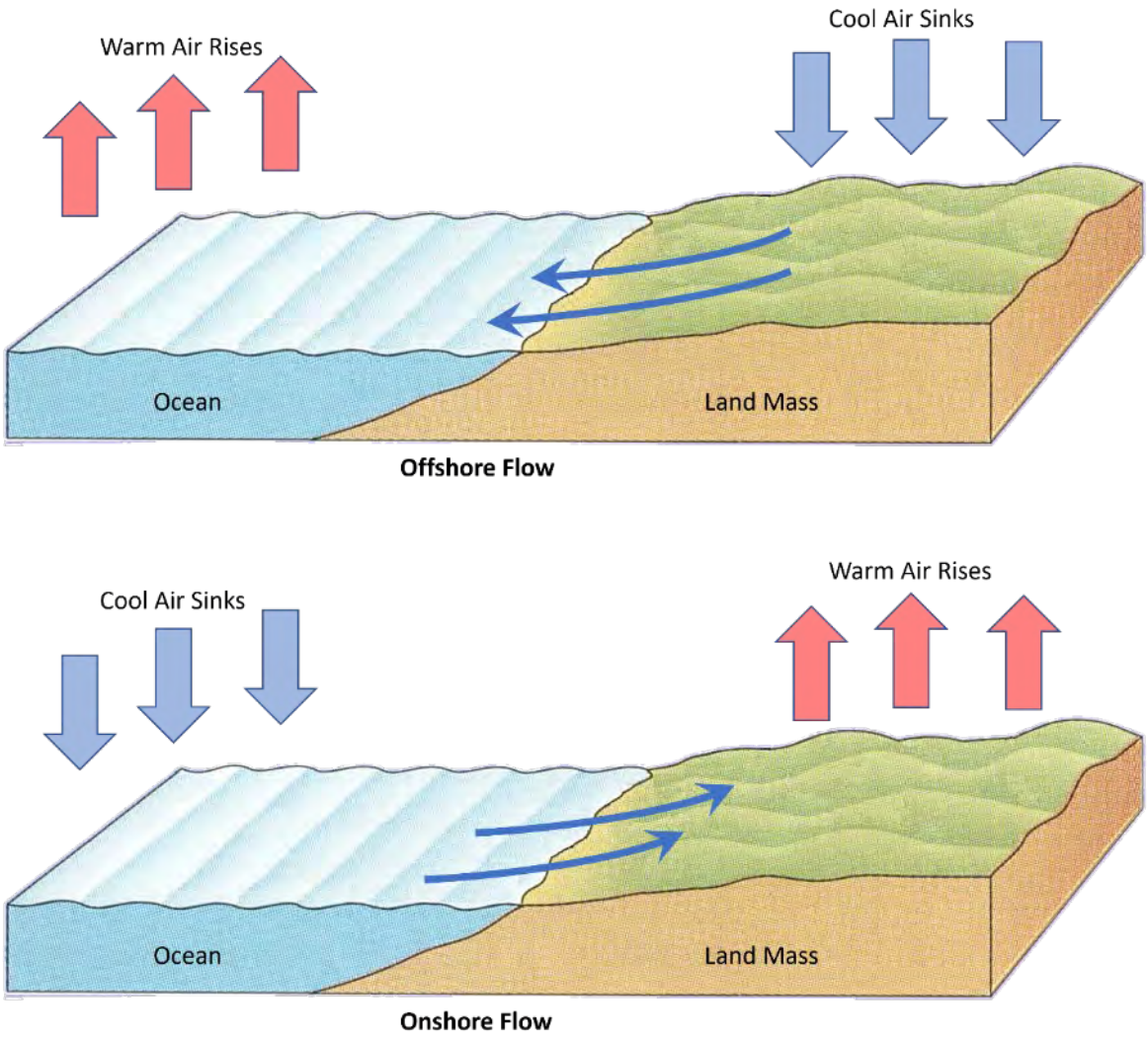


Figure 38 – Onshore vs Offshore Flow

Fronts and large high-pressure domes can override this normal flow. One such event is a high-pressure area to the east (often called a high-pressure dome) which sets up air flow from the interior moving toward low pressure over the ocean. This creates the Santa Ana wind events that occur regularly in southern California but more often in the fall. Figure 39, below, illustrates how the flow might occur (base graphic taken from an actual wind event) when the high pressure is both east and north of the Los Angeles basin. Very often, the high pressure moves from the west to the east while moving from the north to the south across the high desert area or even the "four corners" area of the United States. The wind event is driven by the pressure difference between the high- and low-pressure areas.

Santa Ana winds tend to warm as they travel across the dry areas to the east (sometimes hot areas). The moisture in the air (RH) is reduced by this arid region. The winds are channeled by the topography and in some cases, the wind speeds are significantly increased by this process. This results in high winds which are hot, dry, and sustained. At the Project Site, Santa Ana winds will normally come from the N, NNE, or NE due to the way the air flows through the mountain passes to the north and east of the project site. Most extreme fire behavior in southern California occurs during a Santa Ana wind event.

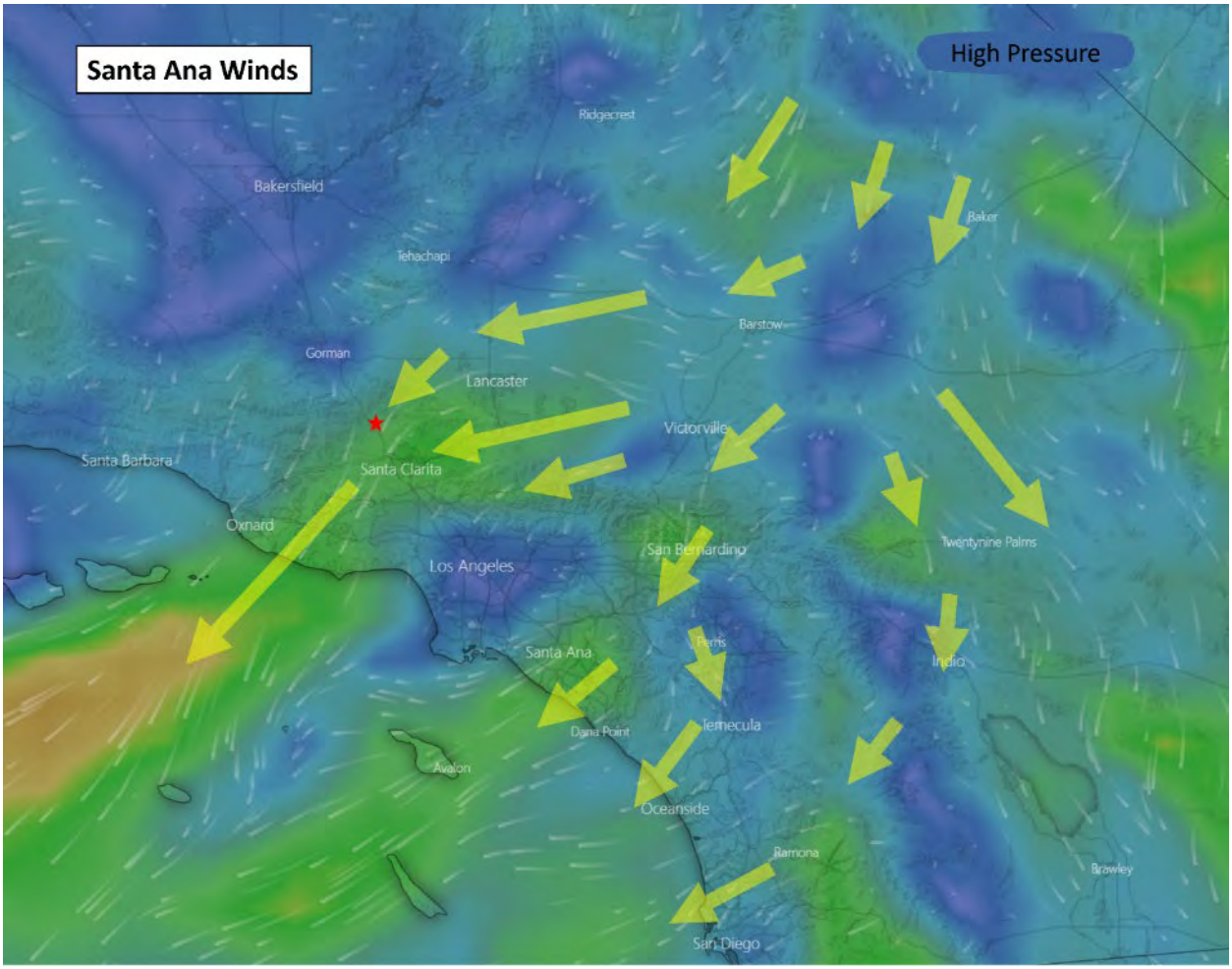


Figure 39 – Santa Ana Wind Event Map

Historical

USGS scientists and collaborators have found that the number of wildfire ignitions and wind speeds outweigh temperature and precipitation in determining the area burned in Southern California's Santa Ana wind-driven fires.

> *Using historical weather data, the researchers identified Santa Ana events from Southern California between 1948 and 2018. Then, using climate and fire records, they determined how well three types of variables explained the total area burned during these events: 1) weather associated with the Santa Ana wind event, 2) climate during the months and years prior to the event, and 3) the number of ignitions during the Santa Ana wind event.*
>
> *The analysis found that most climate and weather-related variables were not strong or consistent drivers of area burned over the 71-year time period studied. Higher temperatures during or in the months prior to Santa Ana Wind events were generally not associated with the area burned, and precipitation was a significant factor only during some months and time periods. In contrast, wind speeds and number of ignitions were strongly and consistently associated with the area burned. (*https://www.usgs.gov/news/research-spotlight-ignitions-and-wind-speed-are-strongest-drivers-area-burned-santa-ana-wind)

As winds and fire starts are the primary contributors to extreme fire behavior, it is important to understand when and how often this occurs. A study completed in 2010 found that the events start in late summer and continue through early spring. Each event lasts a few days but can exceed five days in some cases.

> *Santa Ana winds (SAW) are synoptically driven mesoscale winds observed in Southern California, usually during late fall and winter. Because of the complex topography of the region, SAW episodes can sometimes be extremely intense and pose significant environmental hazards, especially during wildfire incidents. A simple set of criteria was used to identify synoptic-scale conditions associated with SAW events in the NCEP–Department of Energy (DOE) reanalysis. SAW events start in late summer and early fall, peak in December–January, and decrease by early spring. The typical duration of SAW conditions is 1–3 days, although extreme cases can last more than 5 days. SAW events exhibit large interannual variations/ and possible mechanisms responsible for trends and low-frequency variations need further study. A climate run of the NCEP Climate Forecast System (CFS) model showed good agreement and generally small differences with the observed climatological characteristics of SAW conditions. (Jones, Charles & Fujioka, Francis & Carvalho, Leila. (2010). Forecast Skill of Synoptic Conditions Associated with Santa Ana Winds in Southern California. Monthly Weather Review. 138. 4528-4541. 10.1175/2010mwr3406.1.)*

The combination of low moisture content (air and fuels) combined with wind events and ignitions during the wind event provides the necessary conditions for extreme fire behavior and a large wildland fire to occur in the area of the Project Site. Data from the 2010 study is summarized in Figure 40 on the next page.

The climatological properties of the synoptic-scale conditions associated with Santa Ana Winds (SAW) were assessed. This was accomplished using the National Centers for Environmental Prediction-Department of Energy (NCEP-DOE) reanalysis and a climate run of the NCEP Climate Forecast System (CFS) model.

The dark bars refer to NCEP-DOE reanalysis, and the clear bars refer to the CFS climate run.

Mean number of Santa Ana wind events per month. (top)

Frequency distribution of duration of events. (middle)

Frequency distribution of maximum sea level pressure difference between the Great Basin (35°- 45° N, 120"-107.5° W) and Southern California (30"-35° N. 120°- 115° W) domains. (bottom)

Jones, Charles & Fujioka, Francis & Carvalho, Leila. (2010). Forecast Skill of Synoptic Conditions Associated with Santa Ana Winds in Southern California. Monthly Weather Review. 138. 4528-4541. 10.1175/2010mwr3406.1

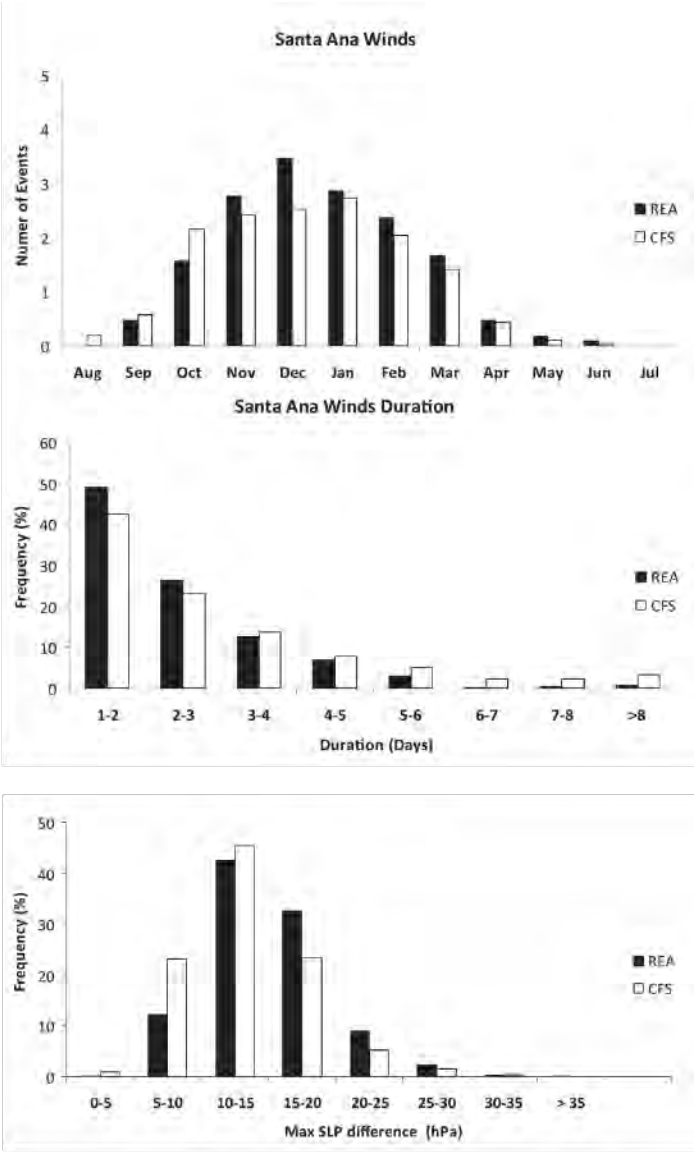


Figure 40 – Santa Ana Wind Event Date Profile

Santa Ana wind events, in and of themselves, do not produce extreme fire behavior conditions. In fact, in the USGS study highlighted on the previous page, the following conclusion was found:

> *The data highlights the fact that regardless of extreme winds and weather conditions, wildfires cannot occur without an ignition. Of the 643 Santa Ana wind events examined in the study, more than 75% had no fires, and even during extreme winds there was a greater than 50% chance of no burning.* (https://www.usgs.gov/news/research-spotlight-ignitions-and-wind-speed-are-strongest-drivers-area-burned-santa-ana-wind)

Expected Fire Activity Based on History

Based on the location of the Project Site adjacent to the I-5 freeway (source of many fire ignitions) and the proximity of the historic fire corridor to the north, coupled with the probability

of wind events in the area during times of low moisture (fuel and air), it must be assumed that extreme fire behavior is going to occur near the Project Site in the near future and continue. Of the 26 large fires to occur in the area around the Project Site (Figure 17, on page 24), all occurred between April and December. Sixteen of the 26 (62%) occurred in June, July, or August, with 8 (31%) occurring in August (Figure 41, below).

These conditions are the reason for this report modeling extreme fire behavior that has not been recorded by the weather data stations or specifically documented in the fires which have occurred in the surrounding area to the Project Site. Mitigation for extreme fire behavior will be necessary.

Month	Occurrences	%	
April	1	4%	
May	3	12%	
June	**5**	**19%**	**19%**
July	**3**	**12%**	**12%**
August	**8**	**31%**	**31%**
September	3	12%	
October	2	8%	
November	0	0%	
December	1	4%	
18 years (2004-2022)	26	100%	62%

Figure 41 – Regional Fire History Occurrence Chart

Wildfire Risk

The assessment of Wildfire Risk is to examine the hazards in terms of the vulnerability of the assets at risk, the amount of exposure those assets have and the susceptibility of the assets to wildfire.

Vulnerability

Vulnerability must be examined at multiple levels (Regional, Landscape, Community, and Parcel). At the end of the day, it all comes down to time, distance and shielding. The amount of time that the fire will impact the area, the distance between the fire and the structures/residents, and the ability of the Project Site to shield its structures/residents from the harmful effects of the fire.

In terms of regional vulnerability, state-wide studies such as the Caltrans Climate Change Vulnerability Assessment Statewide Summary Report 2021 provide a good overview of how different regions of the state of California are expected to be impacted by various climate change issues.

> CalTrans completed a statewide Caltrans Climate Change Vulnerability Assessment for the entire State Highway System in 2019. This study involved applying climate data to refine the agency's understanding of potential climate impacts to the State Highway System, and Caltrans coordinated with various state and federal agencies and academic institutions to obtain the best available climate

> data for California. Discussions with professionals from various engineering disciplines helped identify how changing climate hazards may affect highways, including their design. The assessment allowed Caltrans to begin to understand how climate change may affect the highway and identified a subset of State Highway System assets on which to focus future efforts. (https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/office-of-smart-mobility-and-climate-change/caltrans-climate-change-vulnerability-assessment-statewide-summary-feb2021-a11y.pdf)

Table 1 (Figure 42 in this report) summarizes the lengths of the State Highway System that passes through the medium to very-high wildfire exposure areas. The Project Site is located in District 7 which is expected to see only a 4.3% increase in the number of State Highway System miles that pass through the medium to very high wildfire exposure areas.

Table 1: Centerline Miles of Highway Exposed by Year

District	Year 2025	2055	2085	
1	585	702	784	34.0%
2	1519	1534	1544	1.6%
3	743	743	743	0.0%
4	377	546	631	67.4%
5	761	837	875	15.0%
6	638	630	638	0.0%
7	442	451	461	4.3%
8	483	556	655	35.6%
9	296	333	349	17.9%
10	781	786	786	0.6%
11	371	378	423	14.0%
12	71	72	72	1.4%
Total	7068	7567	7961	12.6%



CALTRANS CLIMATE CHANGE VULNERABILITY ASSESSMENT STATEWIDE SUMMARY REPORT 2021

Figure 42 – CalTrans Climate Change Vulnerability Assessment Wildfire 2021

At the Parcel level, the issue of vulnerability is more specific to the actual structure, the amount of defensible space and the degree of "hardening" of the structure. The current building code standards for structures in the Fire Hazard Severity Zones create the ability for the structure to be more survivable during a fire in the interface. This issue has been studied, and the findings support this view.

The CalFire DSpace (Defensible Space) and DINS (Damage Inspection) Program Analysis program completed an assessment to analyze the effectiveness of Chapter 7A building codes, where they performed a spatial analysis that compared the location of damaged/destroyed commercial and residential structures for the seven largest fires that occurred in 2017 and 2018 (Atlas, Camp, Carr, Nuns, Thomas, Tubbs, and Woolsey) to a 2018 statewide parcel layer. Parcel

data, maintained by counties primarily for location and tax purposes, is the most authoritative dataset for information regarding the value and year built of structures in each area.

This research demonstrates the power of geospatial information to inform research-based decisions. The study demonstrated that structures built to pre-Chapter 7A building codes were more likely to be destroyed in the seven largest fires on record between 2017 and 2018 (Atlas, Camp, Carr, Nuns, Thomas, Tubbs, and Woolsey). The results also demonstrate that residential structures built in High and Very High Fire Hazard Severity Zones (FHSZ) were less likely to be destroyed by wildfire than those built in Low FHSZ and Urban classifications.

Using over 1,000 pre-fire home inspections, we were able to use real-world data to analyze what factors were most strongly associated with residential structure loss in the Camp Fire. Our findings indicate that wooden roofs, single-pane windows, wooden decks/patios, combustible exterior siding, and a combustible fence attached to a structure are the attributes that are most likely to increase the odds of loss for a residential structure. Structures with double pane windows and patio/carport covers, decks, and exterior siding made of non-combustible materials had a significantly lower chance of structure loss. (CAL FIRE Defensible Space and Damage Inspection Program Data Analysis, August 27, 2019, Steven R. Hawks, William L. Brewer)

Between the Regional level and Parcel level are the Landscape and Community levels. The Landscape level is about the vegetation surrounding the development. The U.S. Fire Administration defines this level as:

> *Wildland landscapes are the dense natural areas that surround the community. These large natural areas can be made up of thousands or even millions of acres. They contain diverse natural fuel types, have undergone various levels of development or management, and are under the oversight of state, federal, tribes, cities or other agencies and organizations.*
>
> *These landscapes require the highest level of collaborative management and partnership. Local fire resources can actively work with the larger land management partners in establishing forest management discussions, project prioritization, strategic planning and implementation efforts.* (U.S. *Fire Administration, Wildfire, Healthy Landscapes, https://www.usfa.fema.gov/wui/healthy-landscapes/)*

At the Community level are the issues of placement on the topography, fuel modification zones, roadside clearance, allowable plant palette, and infrastructure (roads, water, design).

Vulnerability is further divided into Exposure and Susceptibility for the purpose of analysis in the case of wildland fires.

Exposure

Exposure is the result of Likelihood and Intensity combining or occurring simultaneously. A community or structure can be directly exposed to wildfire from adjacent wildland vegetation (direct flame contact, radiated heat exposure, or convected heat exposure), or indirectly exposed to wildfire from embers and home-to-home ignition.

The Project Site will have structures that are constructed in accordance with the current codes with respect to wildland fire safety. This means that they will be "hardened", they will have defensible space designed into the configuration, they will be protected with automatic fire sprinklers, and the entire Project Site will have fuel modification zones in accordance with the development requirement of the Los Angeles County Fire Department (up to 200' distance in some cases). Direct exposure to a wildland fire is extremely unlikely, given the requirements applied to this development. Indirect (embers and brands) are likely to occur during a fire in the adjacent wildland. Requirements in the Los Angeles County Building Code Chapter 7A and in the Los Angeles County Residential Code Section R337 provide for ember protection through requirements on vents, gutters, roof valleys, decks, exterior siding, eave protection and several other areas where fire embers might be an issue if they were to land or collect.

The issue of home-to-home ignition is addressed by several mitigations which include: the automatic fire sprinkler systems which are designed to hold the fire to the room of origin, the increased fire resistance nature of the exterior of the structures, the use of double-pane windows with one pane being required to be tempered glass and requirement of Chapter 49 of the Fire Code, and the Public Resources Code Section 4291 which provides for the requirements of the "home ignition zone" to reduce the possibility of structure ignition or fire movement between structures.

The CalFire DSpace (Defensible Space) and DINS (Damage Inspection) Program Analysis program concluded that "*… a higher proportion of parcels built pre-Chapter 7A contained a destroyed structure and a greater proportion of parcels with no damaged or destroyed contained a structure built post 2009"*. It also concluded that, "*… results also demonstrate that residential structures built in High and Very High Fire Hazard Severity Zones (FHSZ) were less likely to be destroyed by wildfire than those built in Low FHSZ and Urban classifications*" which provides some data on the improved outcomes in the zones where construction features are required to be increased for direct and indirect wildland fire impacts.

Susceptibility

The NorthLake project's three configurations are more alike than they are different. Figure 43, on the next page, overlays the three configurations in order to show the similarities and differences. There are two significant differences from a wildland fire perspective.

The Previously Approved configuration and the Creek Avoidance configuration have significantly larger wildland interface perimeters (36.8% and 43.4% respectively) compared to the that of the Partial Creek Avoidance configuration. This means that there are more interfaces with direct impact on the development. Perimeter structures must be protected from radiant heat, direct flame contact and convected heat to a higher degree than the structures which are in the interior of the development envelope. This increased area equates to increased risk potential.

The second difference is the configuration of the development. The Previously Approved and Creek Avoidance configurations have areas at the north end of the Project Site, which have pockets of development with wildland fuels on multiple sides with short distances between them in the development envelope. While not an Intermix condition (as described on page 21), the convoluted interface will increase the complexity of the fire behavior closer to the development area. Additionally, the Creek Avoidance configuration has vegetation on both sides of the

project access roadways (all three), whereas the Previously Approved and Partial Avoidance configurations have this condition on only one of the project access roads. This will be discussed further in the evacuation analysis later in this report.

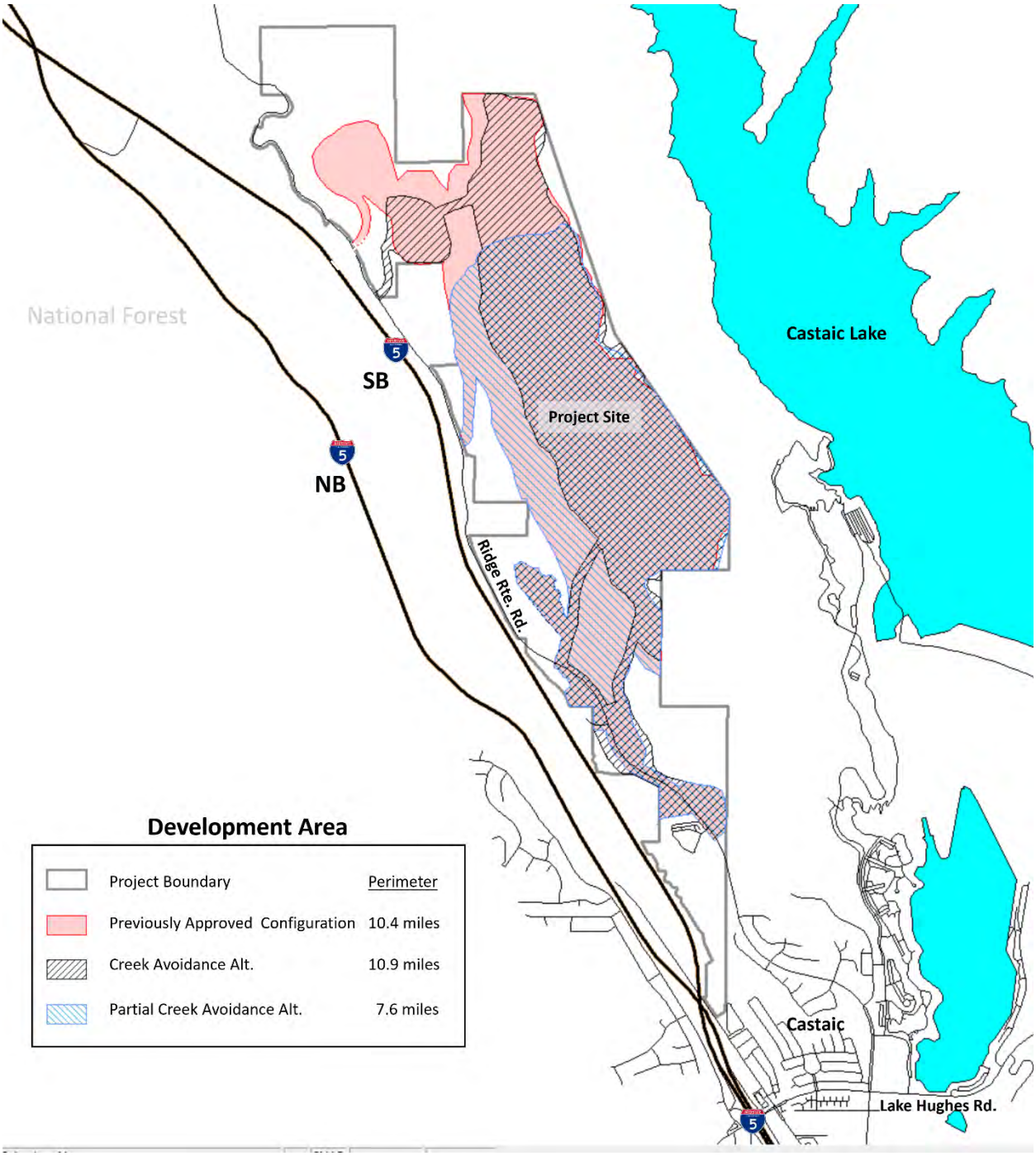


Figure 43 – Project Configurations Overlay

Climatic Conditions

Increasing Temperatures: While temperature increases are likely, according to most of the published materials on climate change in California, the Project Site is not likely to be impacted by this change in terms of wildland fire behavior. The USGS report cited earlier stated, "*Higher temperatures during or in the months prior to Santa Ana Wind events were generally not associated with area burned."* Higher temperatures may well increase the curing rate (rate at which the seasonal growth loses moisture and becomes a dead fuel) of seasonal grasses and increase the decline in fuel moisture during the dry periods, but the wildland fuels which are adjacent to and within the Project Site are drought tolerant. Where they not, they would have already succumbed to the current drought cycles in the region. The temperature is certainly important on an incident-level analysis, but this assessment is considering the worst-case scenario and has already assumed that this has occurred.
(https://www.usgs.gov/news/research-spotlight-ignitions-and-wind-speed-are-strongest-drivers-area-burned-santa-ana-wind).

Shifting Wind Patterns: The Santa Ana winds will continue to shape wildfire activity across Southern California. While Fire Weather and Fire Behavior Modelers continue working to determine how these wind events will be impacted by climate change, this analysis has already taken the worst-case wind into account from the current data available.

Precipitation: The amount of rainfall and when it occurs have an extreme impact on fire conditions every year. Drought-impacted fuels are also more susceptible to wildfire. Wildland fuels in this analysis have assumed an extremely low level of moisture in both the dead and live fuels to account for this aspect of climate change. Changing patterns of rainfall will impact plant growth, thereby altering the amount of fuel for fires.

Changes in Wildland Fuels: After a fire, the lack of precipitation will have an effect on the vegetation that returns. Invasive plants may overtake the native species after a fire. *Most evidence indicates that the strongest impacts of invasive plants on fire regimes in California occur in coastal sage scrub, deserts, and riparian areas.* During this interval, fires may have faster rates of spread but will have lower fireline intensity.

> When one thinks of fire in California, one immediately thinks of the massive conflagrations that occur in central and southern California chaparral and sage-scrub ecosystems, particularly because of their close proximity to dense population centers. These closed-canopy shrublands—particularly intact chaparral—are in fact relatively resistant to invasion by non-native species. However, non-native plants are increasingly closely tied to fire dynamics and to ecosystem responses to fire in some regions.
>
> Under natural conditions, chaparral communities retain most fuels in the canopy layer and have relatively long fire intervals (greater than 20 years). Contrary to common perception, foliar tissue does not easily ignite except under super-heated conditions or when leaf tissue moisture is low. However, several weedy forbs and grasses tend to thrive at the disturbed edges of these shrublands along roads, power lines, and fuel breaks where shrubs are removed. The invasive, annual grasses that often colonize these areas dry out much earlier in the spring than the native shrubs, and with their high surface area to volume ratio, are more prone to ignition than the native

> vegetation. Mediterranean grasses such as Bromus species and slender oats (Avena barbata) are particularly implicated since they act as wicks, spreading fast-moving fire into the canopies of larger shrub vegetation.
> (Invasive Species and Fire in California Ecosystems, Adam M. Lambert, Carla M. D'Antonio, and Tom L. Dudley, 2010).

California sagebrush in the southern part of the state will adjust better to climate change than sagebrush populations in the north, according to UC Irvine researchers in the Department of Ecology & Evolutionary Biology affiliated with the Center for Environmental Biology. (https://ceb.bio.uci.edu/research/ca-sagebrush/)

The Project Site has both shrub and grass fuels at the perimeter/interface. The modeling will show fire activity in the shrub, grass/shrub mixtures and grass fuels. All three are accounted for in the analysis.

Shifting Insect Habitat: Insect infestations are rising in response to the changing climate, increasing tree mortality—particularly in the southern Sierra Nevada —and reducing carbon storage according to the Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act published by the California Attorney General in October of 2022. The Project Site has few trees and will have only small areas of trees at its interface with the native fuels. Insect infestations are not expected to impact the Project Site in any meaningful way.

Hazard and Risk Summary

The Project Site is embedded in an area that is adjacent to native wildland fuels on most of the Project Site wildland interface. The Project Site is located, for the most part, within the Grasshopper Canyon drainage, where most fuels will be at the same level or above the new structures. According to the CalFire database, fires have historically occurred with regular frequency in the regional area around the Project Site and have burned over the Project Site on more than one occasion. Current scientific studies (cited previously in this report) indicate that large fire activity will involve winds pushing the fire to achieve extreme fire behavior. The I-5 corridor is a source of many fires within the area but also serves as a barrier to some fires (fire perimeter stops at the freeway) where fire conditions (ember cast) do not allow the fire to cross over the freeway and continue to burn. Extreme fire behavior is possible and should be modeled in any scenario in which fire behavior outputs are to be used in this report. This is the basis for the analysis that follows.

The Project Site will need to mitigate against direct fire impingement, radiant heat impingement, convected heat impacts, and ember/brand intrusion which are all required by the current Regulations. Additionally, modeling will need to demonstrate that the Project Site can be evacuated in a timely manner or that if evacuation is not possible because of the location of the incipient fire, the community will be able to provide "areas of refuge" until it is safe to evacuate, or the fire is suppressed.

Project Impacts Related to Wildland Fires

Ingress/Egress

All three of the project configurations have the same two southerly access points with respect to the point at which they intersect with Ridge Route Road. The third access point (most northerly) is different for each configuration. The Previously Approved configuration has the third access point at the most northerly intersection of the three whereas the Partial Creek Avoidance configuration has the third point access at the most southerly intersection of the three. For discussion purposes, the Evac (evacuation) points have been labeled in Figure 44. Evac Point 3A is for the Previously Approved configuration, 3B is for the Creek Avoidance configuration, and 3C is for the Partial Creek Avoidance configuration.

The Creek Avoidance configuration differs from the other two in that a large area of native vegetation exists between the first and second access points that do not exist in the other two configurations. Each Evac point will be discussed for each fire scenario.

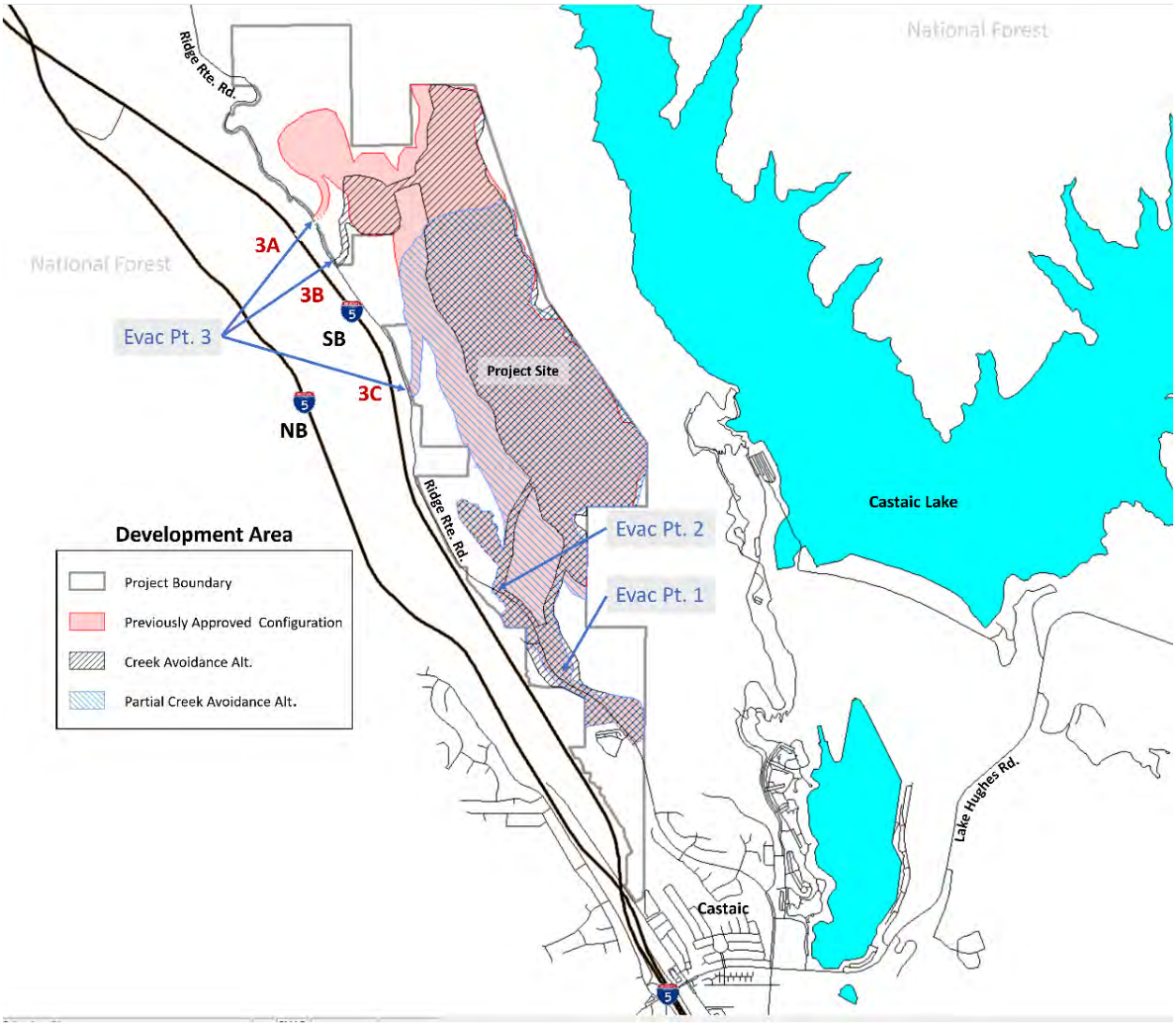


Figure 44 – Evac (Evacuation) Points

Fire Modeling

Fire modeling will provide a number of outputs that can be used to examine the need and appropriateness of project design features and mitigation measures. Static modeling is for a given location or condition which does not account for variables over the landscape. The BehavePlus modeling software will be used for this purpose. *"The BehavePlus, Fire Behavior Prediction, and Fuel Modeling System is the most popular and accurate method for predicting wildland fire behavior in pre-fire defense planning. The BehavePlus fire behavior computer modeling system is utilized by wildland fire experts nationwide. Because the model was designed to predict the spread of a fire, the fire model describes the fire behavior only within the flaming front. The primary driving force in the fire behavior calculations is the dead fuel less than ¼" in diameter; these are the fine fuels that carry the fire. Fuels larger than ¼" in diameter contribute to fire intensity, but not necessarily to fire spread. The BehavePlus fire model describes a wildfire spreading through surface fuels, which are burnable materials within 6' of the ground and contiguous to the ground. This type of modeling demonstrates the potential of wind, or a slope-driven fire that could potentially enter the fuel modification zones from the adjacent wildland areas."* (Andrews, Patricia L. 2014 (published online 2013). Current status and future needs of the BehavePlus Fire Modeling System. International Journal of Wildland Fire 23(1):21-33.)

The Regional modeling in this report will be accomplished using FlamMap which can simulate potential fire behavior characteristics (spread rate, flame length, fireline intensity, etc.), fire growth and spread, and conditional burn probabilities under constant environmental conditions (weather and fuel moisture). The version used in this report (Version 6.1) includes a FARSITE module (previously a separate application) which allows for outputs on wildfire growth and behavior for longer time periods under heterogeneous conditions of terrain, fuels, fuel moistures and weather.

Because environmental conditions remain constant when using FlamMap, MTT (Minimum Travel Time), Burn Probability, and TOM (Treatment Optimization Modeling), it will not simulate temporal variations in fire behavior caused by weather and diurnal fluctuations as FARSITE does. Nor will it display spatial variations caused by backing or flanking fire behavior. These limitations need to be considered when viewing FlamMap output using these models in an absolute rather than relative sense. However, these outputs are well-suited for Landscape-level comparisons of fuel treatment effectiveness because fuel is the only variable that changes. Outputs and comparisons can be used to identify combinations of hazardous fuel and topography, aiding in prioritizing fuel treatments.

The FlamMap software creates a variety of vector and raster maps of potential fire behavior characteristics (for example, spread rate, flame length, crown fire activity) and environmental conditions (dead fuel moistures, mid-flame wind speeds, and solar irradiance) over an entire landscape or for specific modeling applications these same outputs are limited to the simulation footprint (MTT and FARSITE). For practical purposes, the most important result of the FARSITE tests to date has been that **spread rates for all fuel models tended to be over-predicted** by the Rothermel spread equation (Rothermel 1972). (https://firelab.org/project/flammap). The overall result produces a conservative/worst-case analysis.

Static modeling (BehavePlus)

For the Static modeling, a worst-case fire scenario based on current and expected conditions was used. The modeling input assumptions are:

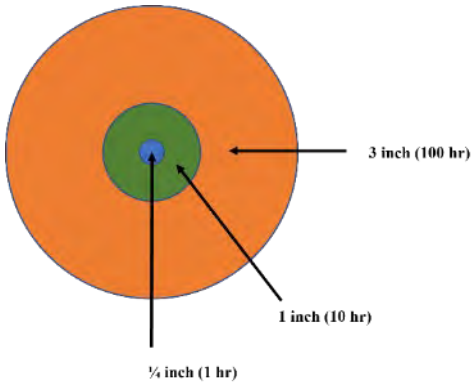


Figure 45 – Dead Fuel Moisture Sizes

1-hr Dead Fuel Moisture	3%
10-hr Dead Fuel Moisture	4%
100-hr Dead Fuel Moisture	5%
Live Herbaceous Fuel Moisture	30%
Live Woody Fuel Moisture	50%

Wind Speeds at 0, 25, 45, 65, and 80 mph with an adjustment factor of 0.5 (unprotected) were used for all to attain the midflame wind speeds. Winds are assumed to upslope in full alignment with fuels and slope. Outputs are for the head of the fire (leading edge) in the direction of maximum spread. Inputs for the modeling are shown in Figure 46, below.

Fuel Moisture

1-h Fuel Moisture	%	3
10-h Fuel Moisture	%	4
100-h Fuel Moisture	%	5
Live Herbaceous Fuel Moisture	%	30
Live Woody Fuel Moisture	%	50

Weather

20-ft Wind Speed	mi/h	0, 25, 45, 65, 80
Wind Adjustment Factor		0.5
Wind Direction (from north)	deg	45

Terrain

Slope Steepness	%	100
Site Aspect	deg	45

Run Option Notes

Maximum effective wind speed limit IS imposed [SURFACE].
Fire spread is in the HEADING direction only [SURFACE].
Wind is in specified directions [SURFACE].
Wind and spread directions are degrees clockwise from north [SURFACE].
Wind direction is the direction from which the wind is blowing [SURFACE].

Figure 46 – BehavePlus Inputs for Worst-case Scenario

The outputs are provided in Appendix B (Modeling Outputs) of this report. In Figure 47, on the next page, the Flame length outputs for each of the select fuel models are provided with some additional information for perspective. The outputs are arranged in two groups, the upper section for fuel with fuelbed depths of four feet or less and the lower section for fuelbed depths of six feet or greater. Within the four-feet or less fuels, SCAL18 fuel is clearly the most impactful (largest flame length/fireline intensity) and within the six-feet or more fuels, the SH5 fuel is the most impactful, both highlighted in yellow on Figure 47. Downslope fuelbeds of six feet or

more do not exist today in the interface areas where the development will meet the native fuels. These areas are, for the most part, Sage and Buckwheat fuels or grasses. SCAL 18 is the Sage and Buckwheat Southern California-specific fuel model (Fuel models designed to be used with the BehavePlus software).

The SCAL18 fuels have the potential to produce a 55-foot flame length (54.9') under 80 mph winds running up slope, in full alignment with the wind, slope (100%), fuels, and aspect. Under the same conditions, the SH5 fuel will produce a flame length of 63 feet (63.3') and the SH7 fuel as a flame length of 59 (59.4'). With "no wind" (zero mph) the flame length for SCAL18 is 23.7 with the 100% or 1:1 slope. In Figure 48, on the next page as well, the matrix shows the interplay between slope and wind for the SCAL18 fuel.

At zero wind/zero slope, the flame length is only 5.2' (green highlight). Increasing the slope to 100% increases the flame length to 23.7', but adding a 25-mph wind to the flat slope has a greater effect moving the flame length to 31.2' (red highlight). For all slope conditions with winds 25 mph or greater, the increase in flame length is only 4-7 feet, whereas at zero wind, the slope increases by 18.5 feet when the slope is increased to 100%. Wind overpowers slope in its ability to increase flame length. Also, of note in Figure 47, several of the fuels (highlighted in blue) simply run out of available fuels and no more increases in flame length well before reaching 65 mph. At this point, an increase in slope or wind has no effect on fire behavior.

Dry Climate Fuels - NorthLake

Head Fire

Surface Fire Flame Length (ft)

Fuel Model	20-ft Wind Speed mi/h				
	0	25	45	65	80
gr1	2.6	2.6	2.6	2.6	2.6
gr2	7.6	11.6	11.6	11.6	11.6
gs1	6.4	11.1	11.7	11.7	11.7
gs2	9.3	16.1	21.9	23.4	23.4
sh1	5.3	9.1	9.8	9.8	9.8
sh2	8.5	13.8	18.3	22.3	25.1
tu5	12.9	19.5	24.2	28.3	31.0
SCAL14	17.6	27.3	32.4	36.6	39.3
SCAL15	13.1	21.3	26.2	30.3	33.0
SCAL17	11.9	20.4	27.2	33.3	35.4
SCAL18	23.7	37.9	45.2	51.1	54.9
sh5	22.3	37.9	48.3	57.2	63.3
sh7	21.8	36.0	45.6	53.8	59.4
SCAL16	17.5	28.6	35.5	41.2	45.1

Fuelbed Depth of 4' or less

6' Plus

All available fuel is consumed, wind no longer has an impact

Fuel model with highest impact

Figure 47 – BehavePlus Output for Flame Length (all fuels)

* Appendix B, Page B-41 provides fuel model descriptions

The expected fire behavior at the Project Site's native wildland interface is highlighted in purple in Figure 48. Figure 34 (Slope Map) did not have any areas greater than 93% slope within the Project Site or adjacent to the perimeter. All manufactured slopes within the Project Site will be 50% or less in slope steepness. The line highlighted in yellow provided the maximum expected

values and the area in green the minimum expected values (no slope/no wind). It should be noted that at 25 mph, flame length is 31.2 feet, this 600% increase in flame length with only 25 mph of wind provides insight to the effects of wind over slope on the fire behavior.

The Project Site will use the maximum values (yellow highlight) when implementing the project features and mitigations provided to make the Project Site safe.

Climate Fuels - NorthLake Slope

Head Fire

Surface Fire Flame Length (ft)

Slope	SCAL18 Fuel	20-ft Wind Speed mi/h			
%	0	25	45	65	80
0	5.2	31.2	39.9	46.6	50.8
10	5.8	31.3	40.0	46.6	50.9
20	7.2	31.5	40.1	46.8	51.0
30	9.0	31.9	40.4	47.0	51.2
40	11.1	32.4	40.8	47.3	51.5
50	13.1	33.0	41.3	47.7	51.9
60	15.3	33.8	41.9	48.3	52.4
70	17.4	34.7	42.6	48.8	52.9
80	19.5	35.7	43.4	49.5	53.5
90	21.6	36.8	44.2	50.3	54.2
100	23.7	37.9	45.2	51.1	54.9

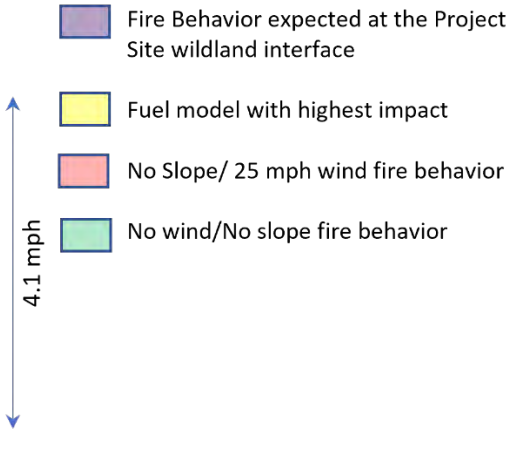


Figure 48 - BehavePlus Output for SCAL18 Fuels Flame Length

The fuel parameters (the variables for each of the fuel models) for each of the dry climate fuels near the Project Site are provided below in Figure 49. These standardized fuel models account for the amount of fuel available for combustion (Fuel Load), the size of the fuel in relationship to the area (SAV ratio or Surface Area to Volume ratio), the fuel bed depth, the level of moisture at which the fuel will no longer combust (moisture of extinction), the amount of live fuel that can be transferred to combustible fuel (Transfer rate), the amount of energy that the particular fuel model can be expected to release (Heat Content) and the amount of dead vs live fuel (live fuel must have the moisture driven off before it can combust).

For reference, Model 4 and Model 6 fuels have been included for reference. It should be noted that Model 4 fuel has a total fuel load of over 16 tons/acre. This level of fuel loading is not found near the Project Site in areas that are impactful to the Project Site, nor are they likely to occur, given the interface slope, aspect, and current vegetation. These older fuel models are not as precise as the newer (Scott and Burgan 40) models and the Southern California specific models are the most applicable (these have been used in this report for shrub fuels).

Fuel model parameters															Dead Component Calculation				
Fuel Model Code	Fuel Model Number	Climate	Fuel load (t/ac) 1-hr	10-hr	100-hr	Live herb	Live woody	Fuel model type[a]	SAV ratio (1/ft)[b] Dead 1-hr	Live herb	Live woody	Fuel bed depth (ft)	Dead fuel extinction moisture (percent)	Heat content BTU/lb)[c]	Fuel Model Code	100% Transfer Dead	Herb	Dead load	Total Load	Percentage id Component
GR1	101	Dry	0.10	0.00	0.00	0.30	0.00	dynamic	2200	2000	9999	0.4	15	8000	GR1	0.10	0.30	0.19	0.40	48%
GR2	102	Dry	0.10	0.00	0.00	1.00	0.00	dynamic	2000	1800	9999	1.0	15	8000	GR2	0.10	1.00	1.10	1.10	100%
GS1	121	Dry	0.20	0.00	0.00	0.50	0.65	dynamic	2000	1800	1800	0.9	15	8000	GS1	0.20	0.50	0.45	1.35	33%
GS2	122	Dry	0.50	0.50	0.00	0.60	1.00	dynamic	2000	1800	1800	1.5	15	8000	GS2	1.00	0.60	1.36	2.60	52%
SH1	141	Dry	0.25	0.25	0.00	0.15	1.30	dynamic	2000	1800	1600	1.0	15	8000	SH1	0.50	0.15	0.52	1.95	27%
SH2	142	Dry	1.35	2.40	0.75	0.00	3.85	static	2000	9999	1600	1.0	15	8000	SH2	4.50	no transfer	4.50	8.35	54%
TU5	165	Dry	4.00	4.00	3.00	0.00	3.00	static	1500	9999	750	1.0	25	8000	TU5	11.00	no transfer	11.00	14.00	79%
SCAL14	N/A	N/A	3.00	4.50	1.05	1.45	5.00	static	350	1500	250	3.0	15	9211	SCAL14	8.55	no transfer	8.55	15.00	57%
SCAL15	N/A	N/A	2.00	3.00	1.00	0.50	2.00	static	640	220	640	3.0	13	10000	SCAL15	6.00	no transfer	6.00	8.50	71%
SCAL17	N/A	N/A	1.30	1.00	1.00	2.00	2.00	static	640	2200	640	4.0	20	8000	SCAL17	3.30	no transfer	3.30	7.30	45%
SCAL18	N/A	N/A	5.50	0.80	0.10	0.75	2.50	static	640	1500	640	3.0	25	9200	SCAL18	6.40	no transfer	6.40	9.65	66%
SH5	145	Dry	3.60	2.10	0.00	0.00	2.90	static	750	9999	1600	5.0	15	8000	SH5	5.70	no transfer	5.70	8.60	66%
SH7	147	Dry	3.50	5.30	2.20	0.00	3.40	static	750	9999	1600	6.0	15	8000	SH7	11.00	no transfer	11.00	14.40	76%
SCAL16	N/A	N/A	2.25	4.80	1.80	3.00	2.85	static	500	1500	500	6.0	15	8000	SCAL16	8.85	no transfer	8.85	14.70	60%
Reference Only																				
Model 4	4	N/A	5.01	4.01	2.00	0.00	5.01	static	2000	1500	1500	6.0	20	8000	Model 4	11.02	no transfer	11.02	16.03	69%
Model 6	6	N/A	1.50	2.50	2.00	0.00	0.00	static	1750	1500	1500	2.5	25	8000	Model 6	6.00	no transfer	6.00	6.00	100%

[a] Fuel model type does not apply to fuel models without live herbaceous load.
[b] The value 9999 was assigned in cases where there is no load in a particular fuel class or category
[c] The same heat content value was applied to both live and dead fuel categories.
Note: Dynamic fuels calculated at 100% herbaceous live fuel load transfer due to extreme low fuel moisture in the worse case scenario

Reference: Scott, Joe H.; Burgan, Robert E. 2005. Standard fire behavior fuel models: a comprehensive set for use with Rothermel's surface fire spread model. Gen. Tech. Rep. RMRS-GTR-153. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. p28.

Figure 49 – Wildland Fuel Model Parameters(a larger version is provided in Appendix B, page B-35)
Yellow highlights show the most impactful fuels under four feet (SCAL18) and over four feet(SH5). The red highlighted is to distinguish the six-foot fuel beds. The green highlight is the predominant fuel on the Project Site.

Also of note is the Rate of Spread for each of the fuels under different wind speeds, as shown below in Figure 50. SCAL18, historic fuel configuration according to Landfire data (not current condition due to Route Fire), has a rate of spread that is similar to or less than the GS2 and SH5 fuels (highlighted in red) found in the Landscape data file which is used for the fire modeling. The Landscape fuels will overestimate the rate of spread over that SCAL18 fuels (highlighted in green) which are likely to return to the Project Site.

Dry Climate Fuels - NorthLake
Head Fire
Surface Fire Rate of Spread (ft/min)

Fuel Model	20-ft Wind Speed mi/h 0	25	45	65	80	
gr1	30.0	30.0	30.0	30.0	30.0	
gr2	108.9	268.7	268.7	268.7	268.7	
gs1	54.0	181.3	203.3	203.3	203.3	
gs2	75.1	249.7	486.6	565.2	565.2	
sh1	31.7	102.1	120.2	120.2	120.2	
sh2	23.9	69.6	127.4	196.4	254.2	
tu5	29.1	71.6	113.8	159.5	195.5	
SCAL14	45.4	117.9	170.9	222.3	260.1	
SCAL15	52.8	151.3	236.8	325.0	392.3	
SCAL17	84.7	273.9	511.7	795.3	907.0	
SCAL18	81.2	225.6	329.8	430.4	504.3	Fuelbed Depth of 4' or less
sh5	150.6	477.4	807.9	1168.3	1453.3	
sh7	106.0	316.5	526.9	755.4	935.6	6' Plus
SCAL16	78.8	231.0	367.3	509.2	618.3	

Figure 50 – BehavePlus Output for Rate of Spread (all fuels)

Static modeling has shown that flame lengths of 55 feet could be expected if the fire was running upslope, in alignment with the wind, in a continuous fuelbed, with a wind of 80 mph (Figure 48). Flame lengths of 63 feet are possible if those fuels were to grow to be six-foot-high chaparral based on the SH5 fuel model (Figure 47). BehavePlus 6.0.0 has a chaparral module for refining these calculations. If this module is run in the same scenario parameters and the maximum value

for fuelbed depth is input at 10 feet, and the Dead Load Fraction is set to the maximum value in the model of 64%, the maximum flame length is 51.5 feet, as shown below in Figure 51.

Based on the worst-case modeling calculations, a maximum flame length of approximately 50 feet could be expected under extreme conditions which are not present on the Project Site currently or in the recent past (prior to the Route Fire).

Inputs: SURFACE

Description		Dry Climate Fuels - NorthLake Chaparral
Fuel/Vegetation, Surface/Understory		
Chaparral Fuel Type		Chamise, MixedBrush
Chaparral Fuel Bed Depth	ft	10
Chaparral Dead Load Fraction	%	64
Fuel Moisture		
1-h Fuel Moisture	%	3
10-h Fuel Moisture	%	4
100-h Fuel Moisture	%	5
Live Herbaceous Fuel Moisture	%	30
Live Woody Fuel Moisture	%	50
Weather		
20-ft Wind Speed	mi/h	0, 25, 45, 65, 80
Wind Adjustment Factor		0.5
Wind Direction (from north)	deg	45
Terrain		
Slope Steepness	%	100
Site Aspect	deg	45

Dry Climate Fuels - NorthLake Chaparral

Head Fire

Surface Fire Flame Length (ft)

20-ft Wind Speed	Chaparral Fuel Type	
mi/h	Chamise	MixedBrush
0	11.7	23.3
25	20.3	38.3
45	20.8	44.1
65	20.8	48.6
80	20.8	51.5

Figure 51 – BehavePlus Inputs and Outputs for Chaparral Fuels Comparision

Regional Modeling (FlamMap/MTT)

Using the FlamMap software it is possible to track the expected path of the fire across the landscape (wildland) and provide rough timeframes for the arrival of the fire front. Specifically, the Minimum Travel Time (MTT) module provides both the path of the fire (major and minor paths) and the excepted arrival interval from the starting point of the scenario. In this section, this function will be used to estimate the amount of time that would be available for evacuation at each of the Evacuation Points discussed earlier. Each scenario will be completed for all three project configurations (Previously Approved Project, Creek Avoidance Alternative, Partial Creek

Avoidance Alternative). The information generated here will be used in the traffic analysis for evacuation timeframes.

The inputs to the FlamMap software are as follows:

- Onshore winds are set to 40 mph for all scenarios except the Route Fire scenario based on the weather history for the area. 99th percentile value was under 40 mph.
- Offshore winds are set to 70 mph for all scenarios based on the weather history for the area. Maximum recorded wind gust was 69.2 mph; 99th percentile value was 37.4 mph.
- Foliar Moisture Content is set to 100% (very few trees in the area of the Project Site).
- Crown Fire Calculation Method set to Finney (2004) as this is the method used in the FARSITE modeling software and it the most appropriate for the model as it is being used (minimum travel time).
- Winds are calculated using Generated Gridded Wind (Wind Ninja) rather than generating them in Wind Ninja and importing the results.
- Fuel Moisture settings were fixed using a 3,4,5,30,50 moisture scenario as discussed previously.
- Fuel Moisture Conditions were not used as the moisture scenario is worst-case. Since the lowest recorded moisture is being used, conditioning the fuels will not lower them.
- Maximum Simulation Time was set to 420 minutes as the evacuations would be completed prior to this point.
- Spot Probability was set to 100% to maximize the worst-case conditions.
- Spotting Delay was set to zero to maximize the worst-case conditions.
- Ignition and barrier files are scenario specific but identical for each configuration alternative.

Scenarios have been completed for the following conditions:

1. **RouteFireSim** - Route Fire 2022 (wind 25 mph at 255 degrees) attempting to model the fire that actually occurred.
2. **SSWat40Spot** - SSW wind at 40 mph (spot fires), fire from a small source which will include fire acceleration as it grows to equilibrium and becomes self-sustaining. This fire represents an onshore flow with fire running at maximum wind speed under dry conditions.
3. **SSWat40Line** - SSW wind at 40 mph (line of fire). Same fire as above from an established fire burning from the perimeter as head fire.
4. **Sat40Line –** S wind at 40 mph (line of fire), an established fire burning from the perimeter as head fire. Moving the onshore from the SSW to the south as the data indicated could happen.

5. **FreewaySpotsat40 -** S wind at 40 mph (freeway spot fires), fire from a small source which will include fire acceleration as it grows to equilibrium and becomes self-sustaining. Using a worst-case location to show a series of spot fires consistent with hot object from a vehicle on the freeway.
6. **LakeSpotsat40 -** S wind at 40 mph (lakeside spot fires), fire from a small source which will include fire acceleration as it grows to equilibrium and becomes self-sustaining. Fire simulated as an escaped warming fire in the drainage below the Project Site
7. **NEat70Line** - NE wind at 70 mph (line of fire), an established fire burning from the perimeter as head fire. A line of fire burning into the Project Site from the NE under Santa Ana wind conditions.
8. **NNEat70Line -** NNE wind at 70 mph (project boundary) (line of fire), an established fire burning from the perimeter as head fire. Same scenario with winds from the NNE as in an early Santa Ana condition.
9. **Nat70Line** - N wind at 70 mph (line of fire), an established fire burning from the perimeter as head fire. Fire simulates the worst-case location and wind direction as the fire runs quickly down the east side of the Project Site under extreme conditions.
10. **Templin Trigger** - N Wind at 70 mph (line of fire Templin Hwy) (line of fire), an established fire burning from the perimeter as head fire. This is an effort to show how much time would be available if the decision to evacuate was made at the time the fire reached this point of origin.

Each of these fires corresponds to historic wind data from the weather site discussed previously and summarized in Figures 27 and 31 above. Each scenario has been accomplished for each of the development configurations. Outputs are provided in the appendixes. The outcomes are summarized in the matrix on page 67. The matrix specifies the amount of time that the Evacuation Point would remain viable during the specific scenario.

In addition to the Evacuation Points, Route Points (control points) have been assigned to five locations along Ridge Route for the purpose of indicating when this access route will be impacted by fire which is not associated with driving to a specific Evacuation Point. While an entire neighborhood may be evacuated over time to eliminate possible future impact on the population, this evaluation is focused on the "population at immediate risk" and determining if they can effectively be moved to a safe location. These areas are identified in each scenario in Appendix B as dark gray polygons which are in the areas the fire reaches first based on the modeled scenarios.

As indicated in the matrix, every scenario has at least one exit that is viable for a minimum of four hours before the fire reaches it, with the exception of the Freeway Spots scenario, where only 30 minutes are provided; this limitation will be in place for 60-90 minutes for all project scenarios. It should be noted that by the time Evac Point 3B is impacted, the fire threats to Evac Points 1 and 2 are gone, as shown on page 68 (Figure 53). Fires in the wildland fuels, adjacent to the Project Site, tend to burn in "ribbons of fire" which have a flaming front and little fire behavior behind the flaming front. For this reason, once the fire has passed, so has most of the risk associated with the fire. The four-hour window is a function of the fuels, topography,

location of the road and the fire weather conditions. In the case of the Project Site, this represents a considerable time for evacuation of the those who are “at immediate risk”.

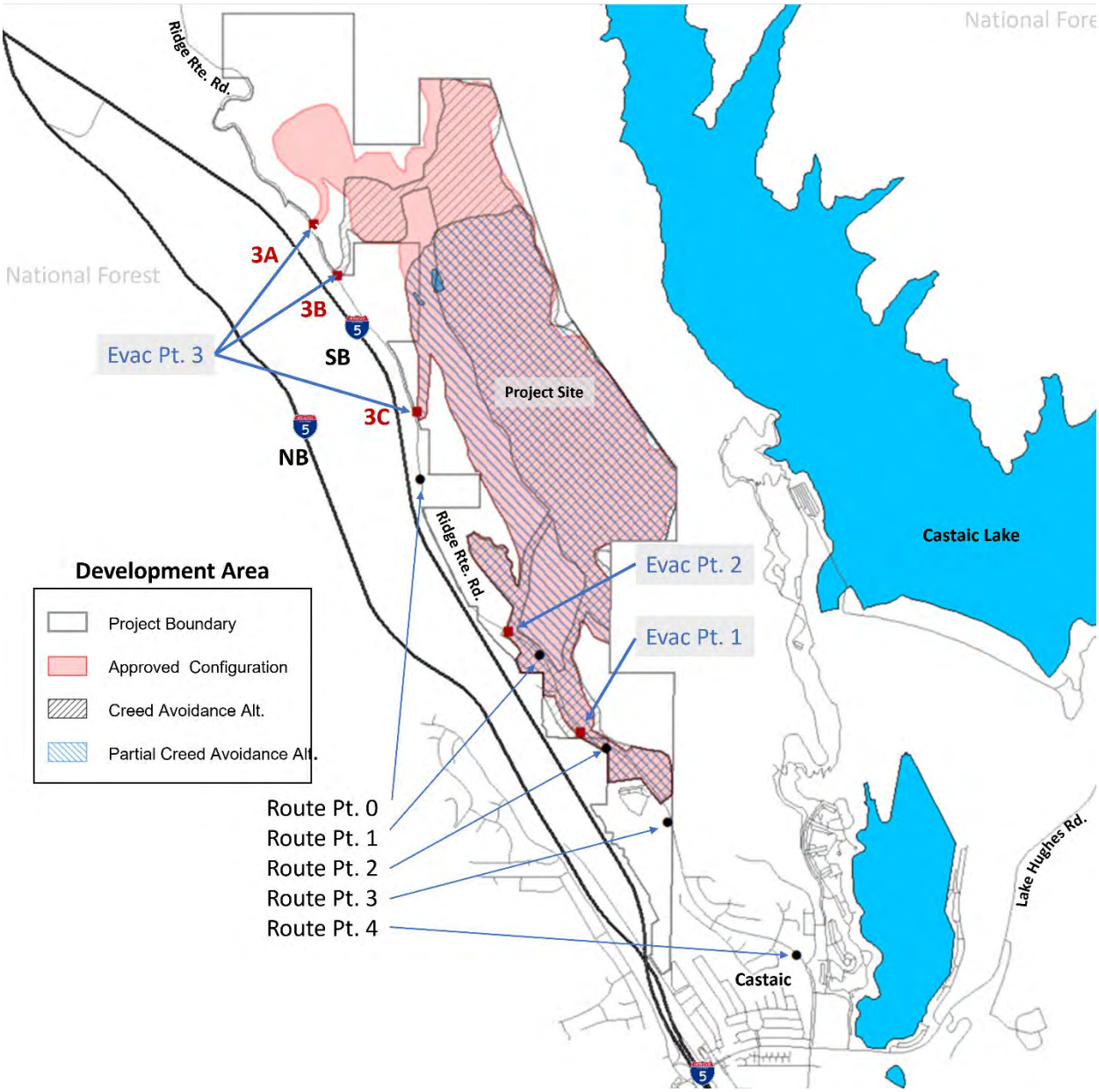


Figure 52 – Evacuation and Route Points

The assumption used here is that the Project Site will not have fire burn through (structures and landscape acting as fuel for the fire) as it will be constructed to the current building standards for wildland interface and all of the residential units will be protected by automatic fire sprinklers as required by the California Building and Fire Codes.

Evacuation from wildfires is a complicated process; assessing when to move “at risk” populations, determining if there is sufficient time to safely move them, assembling the resource necessary to institute the evacuation process (notification, routing, control, and dispersing) and

implementation of the plan once established require many inputs and a good understand of future fire behavior (expectations).
While evacuation is a law enforcement function in California, it is done with input or a request from the fire agencies involved. In fast-moving events such as the ones modeled in this report, a combination of actions is likely. Residents closest to the impacted areas should be moved first and then the evacuation area expanded based on risk to the community and/or evacuation routes. It may be necessary to use "areas of refuge" or "shelter in place" for short periods of time in areas which are less at risk or will not be impacted before the evacuation is completed. In no case should evacuations be conducted which places the population at more risk than that of staying in the location they are currently at.

As evidenced by the scenario outputs in Appendix B, the entire Project Site is never impacted at the same time. There is always some portion of the community which is not impacted or has already been impacted and is now no longer a significant risk to the occupants/evacuees. Unlike other disasters like wind events, earthquakes or even flooding, a wildland fire at the Project Site can only impact a portion of the site at any given time. Movement back into the interior of the Project Site improves the safety of those who are still in the community at the time of the fire reaching the site.

Based on the alternative available, the length of time that the evacuation routes are available and the fact that many of the closures (evacuation points and routes) are temporary in nature with areas within the Project Site where evacuees can be held without extreme risk from the fire, evacuation should not be an issue for the Project Site. The traffic engineer has run scenarios to validate the time needed to empty the "at risk" populations and the entire Project Site[1]. Fire will impact portions of the site before the entire site is evacuated but alternatives exist to change routes, use areas of refuge on a temporary basis or shelter population which are not currently at risk until those "at risk" have been moved to safer areas.

[1] Stantec, *Northlake Specific Plan Wildland Fire Evacuation Scenarios – Evacuation Time Estimates*, May __ , 2023

Scenario	Evac Pt 1	Evac Pt 2	Evac Pt 3A	Evac Pt 3B	Evac Pt 3C
1. Route Fire Sim	Prev. Approved Plan – No time constraints CAA – Closes in 90 min* (reopens after 60 min) PCAA – No time constraints	Prev. Approved Plan – 60 min (reopens after 30 min) CAA – 60 min (reopens after 30 min) PCAA – 60 min (reopens after 30 min)	Prev. Approved Plan – No time constraints CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 60 min* (remains closed) PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – 60 min* (remains closed)
2. SSWat40Spot	Prev. Approved Plan – No time constraints CAA – No time constraints PCAA – No time constraints	Prev. Approved Plan – 60 min (reopens after 30 min) CAA – No time constraints PCAA – No time constraints	Prev. Approved Plan – 60 min* (remains closed) CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 60 min* (remains closed) PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – 60 min* (remains closed)
3. SSWat40Line	Prev. Approved Plan – No time constraints CAA – No time constraints PCAA – No time constraints	Prev. Approved Plan – No time constraints CAA – No time constraints PCAA – No time constraints	Prev. Approved Plan – 60 min* (remains closed) CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 60 min* (remains closed) PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – 60 min* (remains closed)
4. Sat40Line	Prev. Approved Plan – No time constraints CAA – No time constraints PCAA – No time constraints	Prev. Approved Plan – No time constraints CAA – No time constraints PCAA – No time constraints	Prev. Approved Plan – No time constraints CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – No time constraints PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – No time constraints
5. FreewaySpotsat 40	Prev. Approved Plan –30 min (reopens after 90 min) CAA – 30 min (reopens after 90 min) PCAA – 30 min (reopens after 90 min)	Prev. Approved Plan –30 min (reopens after 90 min) CAA – 30 min (reopens after 60 min) PCAA – 30 min (reopens after 90 min)	Prev. Approved Plan – 30 min* (reopens after 90 min) CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 30 min* (remains closed) PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – 30 min* (reopens after 90 min)
6. LakeSpotsat40	Prev. Approved Plan –60 min* (reopens after 30 min) CAA – 60 min* (reopens after 30 min) PCAA – 60 min* (reopens after 30 min)	Prev. Approved Plan – No time constraints CAA – 90 min*(reopens after 30 min) PCAA – No time constraints	Prev. Approved Plan – No time constraints CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 120 min* (remains closed) PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – No time constraints
7. NEat70Line	Prev. Approved Plan – No time constraints CAA – No time constraints PCAA – No time constraints	Prev. Approved Plan – No time constraints CAA – No time constraints PCAA – No time constraints	Prev. Approved Plan – 0 min (closed for the first 4.75 hours of the fire) CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 0 min (closed for the first 90 min of the fire) PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – 0 min (remains closed for the entire duration of the fire)
8. NNEat70Line	Prev. Approved Plan – No time constraint for 4+ hours* (reopens after 30 min) CAA – No time constraint for 4+ hours* (reopens after 30 min) PCAA – No time constraint for 4+ hours* (reopens after 30 min)	Prev. Approved Plan – No time constraints CAA – 90 min (reopens after 30 min) PCAA – No time constraint for 4+ hours* (reopens after 30 min)	Prev. Approved Plan – 0 min* (closed for the first 4 hours of the fire) CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 0 min* (closed for the first 4 hours of the fire) PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – 0 min* (remains closed for the entire duration of the fire)
9. Nat70Line	Prev. Approved Plan – No time constraint for 4+ hours* (reopens after 30 min) CAA – No time constraint for 4+ hours* (reopens after 30 min) PCAA – No time constraint for 4+ hours* (reopens after 30 min)	Prev. Approved Plan –60 min (reopens after 30 min) CAA – 60 min (reopens after 30 min) PCAA – 60 min (reopens after 30 min)	Prev. Approved Plan – 0 min* (remains closed for the entire duration of the fire) CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 0 min* (remains closed for the entire duration of the fire) PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – 0 min* (remains closed for the entire duration of the fire)
10. Templin Trigger	Prev. Approved Plan – No time constraint for 4+ hours* (reopens after 30 min) CAA – No time constraint for 4+ hours* (reopens after 30 min) PCAA – No time constraint for 4+ hours* (reopens after 30 min)	Prev. Approved Plan – No time constraints CAA – 60 min (reopens after 45 min) PCAA – 60 min (reopens after 45 min)	Prev. Approved Plan – 0 min (closed for the first 6 min of the fire) CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 0 min* (remains closed for the entire duration of the fire) PCAA – N/A	Prev. Approved Plan – N/A CAA – 0 min* (remains closed for the entire duration of the fire) PCAA – N/A

* Evac Point is not Limited at this point but the travel path for ingress/egress is Limited, such as closures on Ridge Route Road.
Green highlight indicates that the exit point will be viable for four hours or more before it is Limited by the fire. Time in Parentheses () is the time period for this the exit is limited.
N/A = not applicable
Source: Wildland Fire Risk Report for the NorthLake Project, 2023

Matrix 1

Modeling Summary

In a worst-case scenario, flame lengths of 50'+/- may be possible when the fire is running upslope, in a continuous fuel bed (SCAL18 sage and buckwheat), in line with the wind, on a very dry hot day. If the fuels were to become six-foot chaparral fuel beds, the flame length could reach 63' (Sh5 fuel). This configuration is not present in the current (fuels prior to the Route Fire) interface and does not seem to have been present in the past in a review of aerial images over the past 30 years except on north facing slopes in small areas which are not below the development area(s) and not likely to produce a self-sustaining maximum fire output burning in equilibrium.

In a review of all flame lengths for all scenarios run in FlamMap, no cells within or adjacent to the Project Site had values greater than those for the worst-case scenario in BehavePlus (Figure 47). Using the Minimum Travel Time feature of FlamMap, it is possible to project the time it might take for a given fire scenario to travel the distance from the origin to each of the evacuation points within the Project Site and when they might impact the Evacuation Points. These results are provided for each scenario in the appendix and summarized in the matrix.

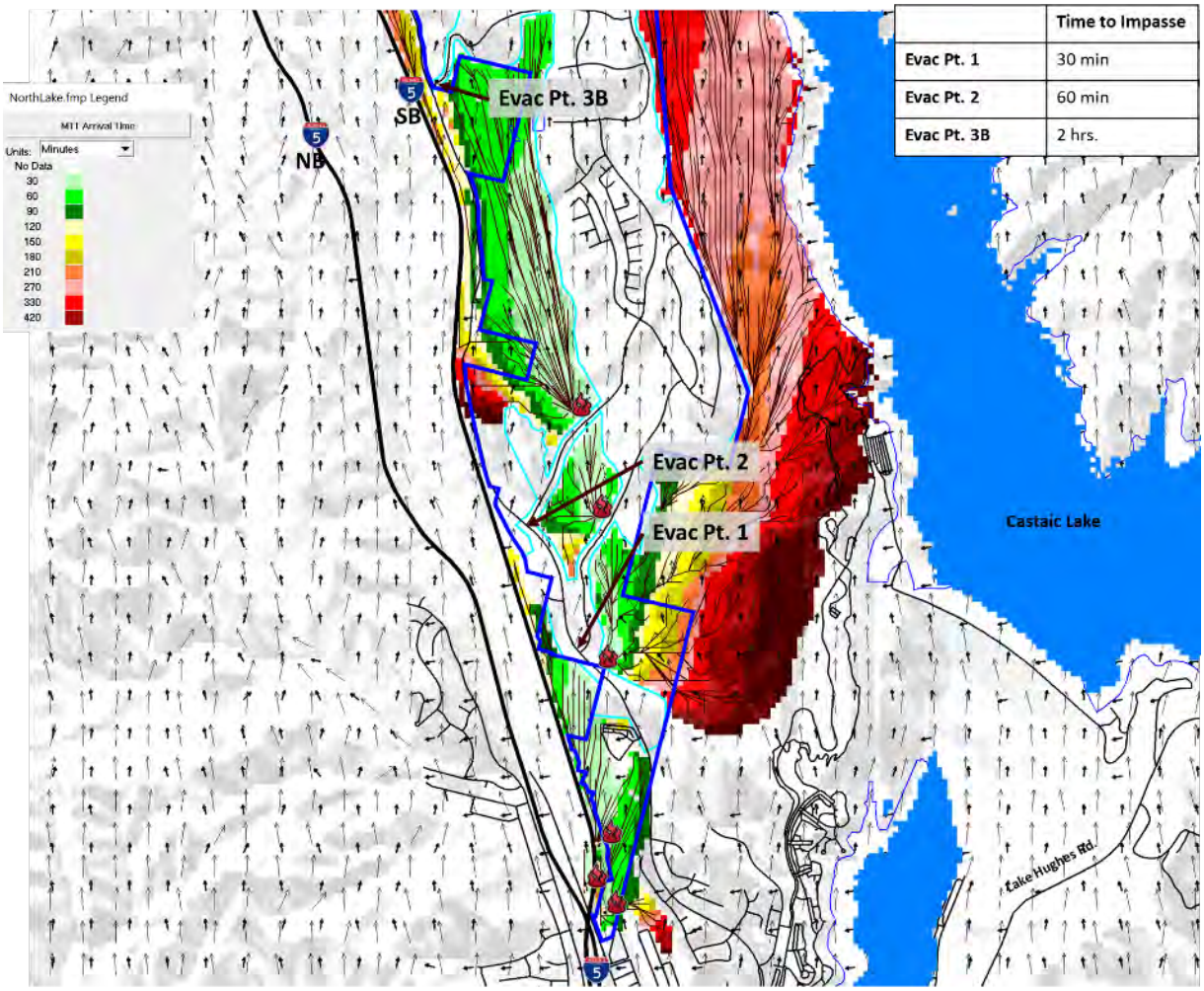


Figure 53 - Creek Avoidance Alternative/Freeway Spots Scenario Modeling Output

All project scenarios have at least one Evac Point which is viable for 4+ hours or more with the exception of the Freeway Spots scenario where only 30 minutes is available prior to a 60–90-minute closure (which would require sheltering within the community). All of the fire scenarios are run under extreme conditions. When in alignment (wind, slope, aspect and fuels), the rate of spread is extremely high and the fire travels large distance in a short period of time. In all scenarios, burn through of the community is not modeled or expected given the fuel modification zones, hardened structures and restrictions on vegetation which will be in place by the Regulation and standards required by the Los Angeles County Fire Department for new development within the Very High Fire Hazard Severity Zones.

The size, location and configuration of the Project Site makes it unlikely that a fire will impact the entire Project Site at a single time, but rather the fire will impact sections of the project interface over a period of time which will allow for resources to be redistributed and for evacuation opportunities after the fire front has pasted a specific location. Travel within the Project Site should be viable at all times given the distance from the wildland fuels and the protection features which will be provided.

Water Supply and Infrastructure

As part of the project, a total of 6 water tanks (5 new and 1 existing) with a combined capacity of approximately 13.35 million gallons (MG), would be located on a total of 3 water tank sites to serve the proposed project. In addition to the tanks mentioned above, the project will construct a water tank site for the benefit of the Newhall County Water District (NCWD). This water tank site, together with future improvements by NCWD, will improve the efficiency and reliability of the overall water system.

The Project Site will be gravity fed from the tanks with fire flow water reserved beyond the daily usage requirements. This allows for the fire flow to be available regardless of the status of electrical power. This meets the duration flow requirements by holding the required amount of fire protection water in reserve in the water tanks beyond the daily use requirements which in addition to the reserved fire flow capacity.

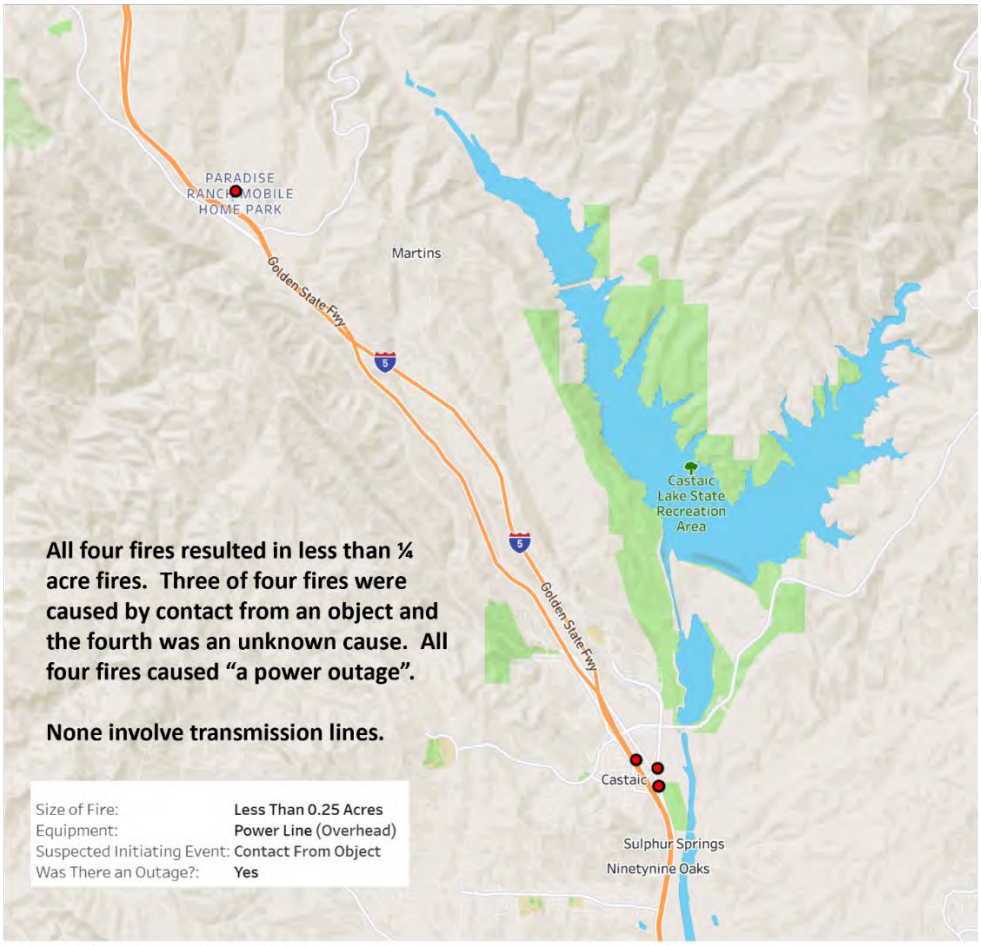
In accordance with the Los Angeles County Fire Code (2020):

> *The minimum fire-flow for one- and two-family dwellings, and Group R-3 buildings located in a fire hazard zone shall not be less than 1,250 gallons per minute (15,141.6 L/min) for a 1-hour duration at 20 psi (138 kPa).*
>
> *For the subdivision of undeveloped land for other than single-family dwellings, due to the undetermined building size and type of construction, the required fire flow shall be 4,000 gallons per minute (15,141.6 L/min) for a duration of four hours with public hydrant spacing of 300 feet (91.44 m). The required fire-flow for the subdivision of land consisting of lots having existing structures shall be in accordance with Table B105.1(2) for fire-flow and duration.*

All power lines within the Project Site will be underground with the exception of the transmission lines, which run across the Project Site but do not directly provide power to the Project Site. The transmission lines are much higher than the distribution lines and do not have vegetation impacts (touching) that are common to the distribution and services lines (majority of power line fires).

A review of the California Public Utilities Commission (CPUC) utility-reported fire incident data as presented by the California State Auditor in the March 24, 2022, report (Electrical System Safety, California's Oversight of the Efforts by Investor-Owned Utilities to Mitigate the Risk of Wildfires Needs Improvement) indicated that only four incidents occurred in the general area of the Project Site. These are shown in Figure 54, below. All four incidents occurred in areas which are not under the Transmission Lines which run through the Project Site.

Utility-Caused Fire Incidents Reported by the Three Largest Utilities From 2015 Through 2020



Source: CPUC's utility-reported fire incident data.

Notes: CPUC requires only the three largest utilities—PG&E, SCE, and SDG&E—to report these fire-incident data. The Camp Fire is not included in this figure. According to the CPUC's wildfire safety enforcement branch program manager, it was not included in PG&E's 2018 ignition report because the investigation of the fire was still open when the data were reported. After we brought this oversight to the CPUC's attention, the program manager stated that CPUC would work with PG&E to obtain amended data for 2018 that includes the Camp Fire.

Electrical System Safety, California's Oversight of the Efforts by Investor-Owned Utilities to Mitigate the Risk of Wildfires Needs Improvement, March 24, 2022, report # 2021-117, https://auditor.ca.gov/reports/2021-117/index.html

Figure 54 – CUPC Utility-reported Fire Incident Data (Report # 2021-117)

While fires are caused by electrical lines all over the state, utilities in the state of California are taking steps to increase the safety of all power lines by:

1. Undergrounding distribution lines
2. Improving safety on transmission lines through the replacement of equipment before it fails
3. Increased routine inspections
4. The use of "covered conductors" rather than "bare wire" as has been used in the past.
5. Expanded line clearance, increased hazard-tree assessments and removals, insuring adequate cleared brush at the base of poles/towers
6. Public Safety Power Shut Offs during high-risk weather events
7. Installing and monitoring of over 2,000 Remote Automated Weather Stations, expanded use of Artificial Intelligence/Machine Learning capabilities (AI/ML) for improved forecasting and the installation of High-Definition Cameras for real time monitoring of high-risk areas during extreme weather events.
8. Installation of Sectionalizing Devices and Fast Acting Fuses to decrease the risk of fire inducting events.
   https://www.sce.com/sites/default/files/custom-files/SCE%202022%20WMP%20Update.pdf

All areas within the Project Site and transmission lines which are relocated by the Project Site will be subject to the increased safety requirements.

Fire Protection Resources

Impacts During Construction

Prior to combustible construction on site the LACFD requires that "all weather" fire department access roadways, fire hydrants (or approved water source alternative) and initial fuel modification zones (bare earth is acceptable at this point) are installed and approved prior to the "framing stage". Prior to C of O (certificate of occupancy) the LACFED requires that all fire department life safety system (fire sprinklers, standpipes if applicable), fire lanes, street signs, addressing, wayfinding if appropriate, defensible space requirement and structure hardening as required by the various laws, codes, ordinance and standards enforced by the fire department and building/planning agencies be in place, tested, inspected and approve.

Impacts Over the Life of the Project

Maintenance requirements for each of the safety systems or devices are assigned to specific entities (homeowners, Homeowners Associations (HOA), Local government). Repair/replacement and maintenance of these systems is established in the CCR's for the homeowners and HOA(s), while the local governmental agency is responsible for the public improvements in the Right of Way (ROW). The responsibilities and funding source for the common areas (not in the ROW) are set in the CCR's. Homeowners are responsible in the single-family communities and HOA's in the structures where community ownership of the underlying property or areas of the structure(s) exist.

Fuel Modification Zones, installed automatic fire sprinklers (except the NFPA13D system in one and two family dwellings) and defensible space are inspected by the fire department on a routine

basis (annually or bi-annually in most cases) and in the case of fire sprinklers (NFPA 13 and 13R), they are inspected and certified by third party venders on a five year interval.

Fire Suppression Resources

The Santa Clarita Valley is serviced by the Los Angeles County Fire Department. The regional area is well resourced with 15 current fire stations (See Figure 55, below) and two projected new fire station sites (one within the NorthLake project and FS177, one of three new fire stations to be constructed in the Newhall Ranch project).

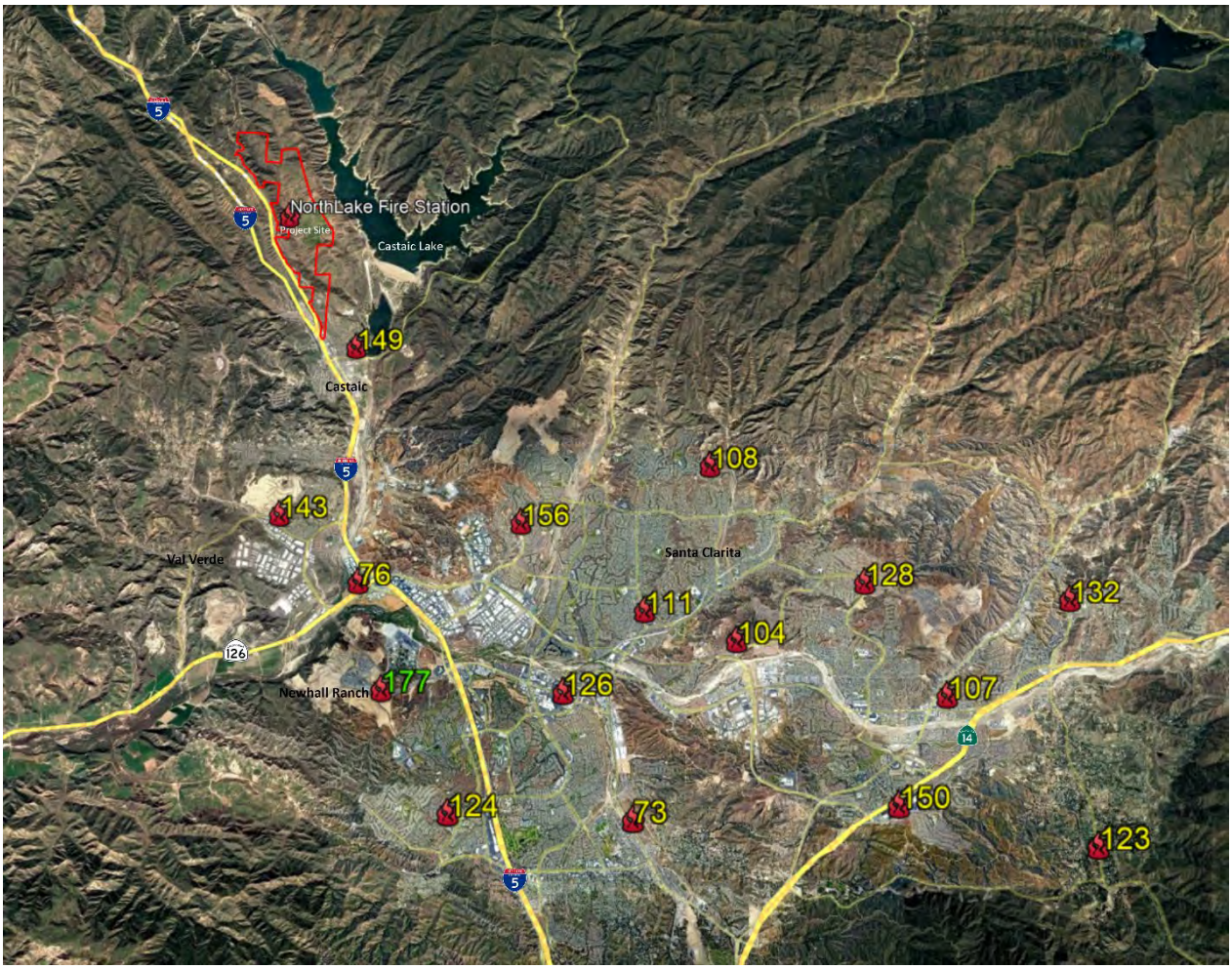


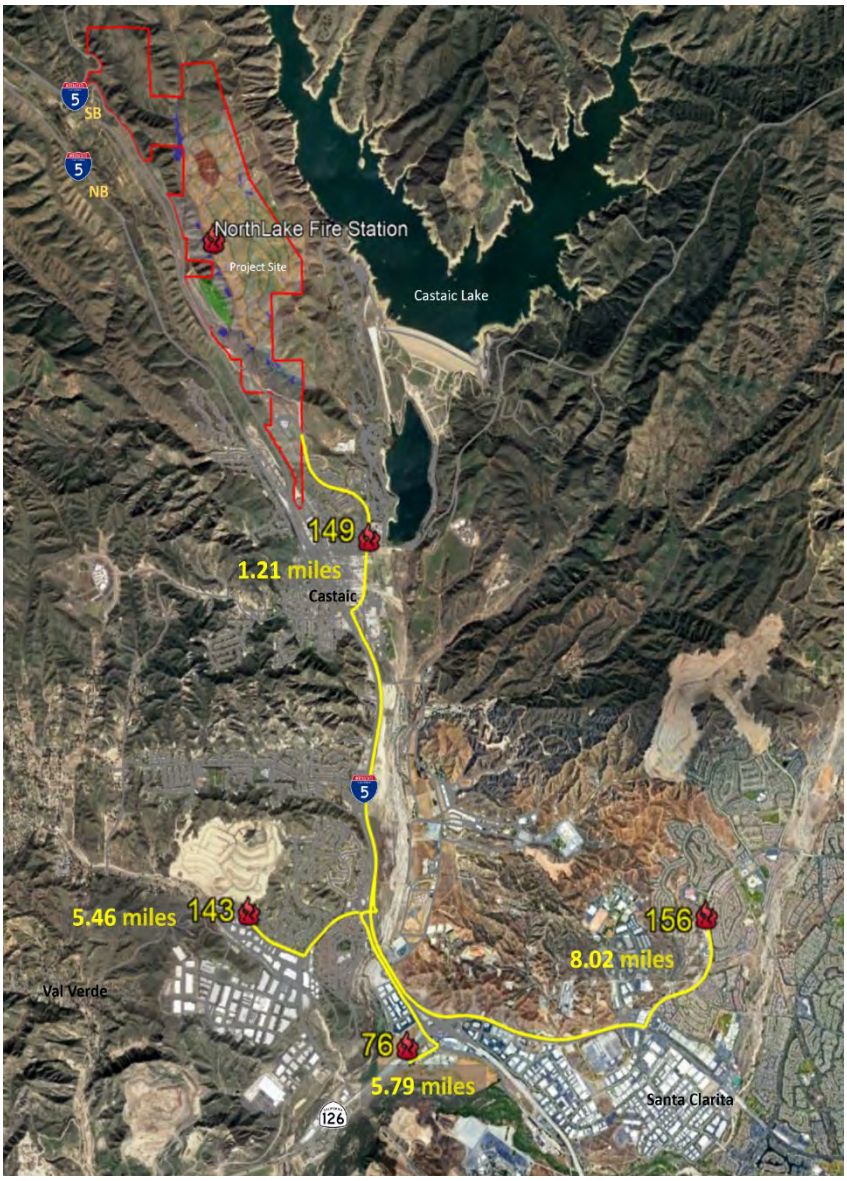
Figure 55 – Regional Fire Resources

The SEIR indicates the following:

> *Wildfire response resources in the Santa Clarita area include the LACFD as well as the Fire Services mutual aid system, the California Division of Forestry, and the U.S. Forest Service (USFS). The combination of forces applied depend upon the severity of the wildfire, other wildfires in progress, and the availability of resources. Suppression efforts can involve fire equipment, heavy construction equipment, and air fire bombardment aircraft in addition to hand crews. In addition to the fire stations discussed above, the LACFD operates nine fire*

suppression camps assigned to the Air and Wildland Division. Fire suppression camps supply crews on a daily basis to assist in the suppression of wildland fires. They also perform storm-related functions, such as the filling of sandbags, and provide additional manpower at search and rescue incidents. Of the four camps located in the Santa Clarita Valley area, two are staffed with paid fire suppression aids, and the other two are staffed by a workforce comprised of adult male prisoners provided by the California Department of Corrections (CDC). This partnership with the CDC provides the Fire Department with a large labor pool. The closest fire suppression camp to the subject site is located at 35100 N. San Francisquito Canyon Road in Santa Clarita. (SEIR, Section 5.5)

The distance from the south Project Site access (Ridge Route Rd.) to the four closest existing fire stations is provided in Figure 56. The Project Site will provide a site for a new fire station within the Project Site boundary and will contribute to the fire station construction through the conditions of approval for development in Los Angeles County. The project is required to pay the LACFD a mitigation fee in the amount in effect as of the Effective Date. This fee payment is in addition to the required conveyance of one fire station site in a location deemed mutually acceptable to the developer and the LACFD.



In addition to the 177 fire stations under the fire departments direct control, LACFD participates in several mutual-aid, auto-aid and cooperative agreements with neighboring fire department, state and federal fire agencies and has access to resources from the entire state of California under the California Master Mutual-Aid plan under California Office of Emergency Services.

Figure 56 – Distances to closest four fire station (existing) from southern project boundary on Ridge Route Rd.

Operational Considerations

How, when, how long will it take, and to where are all considerations that need to be considered when making tactical decisions on wildfires. Normally the majority of the effort is put towards fire suppression on the active fireline if conditions warrant it; indirect attack if not. When people are in "harm's way", the situation shifts dramatically. The protection of the egress pathways, the structures themselves and the area where refuge can be found, become the priority.

The decision to "Shelter in Place" is never the first choice. Getting people "out of harm's way" is always the preferred option. Not every scenario can be anticipated, and there will be scenarios that would require the incident commander(s) or field officer of the fire and law enforcement agencies to decide on how to protect the citizens when emergent conditions arise. Below is a simple decision tree for evacuation vs. protecting people in place. Evacuation is always the preferred option but sometimes, circumstances may generate conditions where moving "at risk" population will place them in more danger. It should be noted that most evacuation scenarios are generated from large fires burning into communities. These fires would have already been burning for a period of time and would, no doubt, have been discovered. Emergency personnel would be working on the decisions below to determine where evacuation is warranted. The modeling shows that if the fire reaches certain points, evacuation is not a likely choice. If there is not enough time to safely move the population at risk to an uninvolved area, consideration of where to best protect them is the next action on the decision tree.

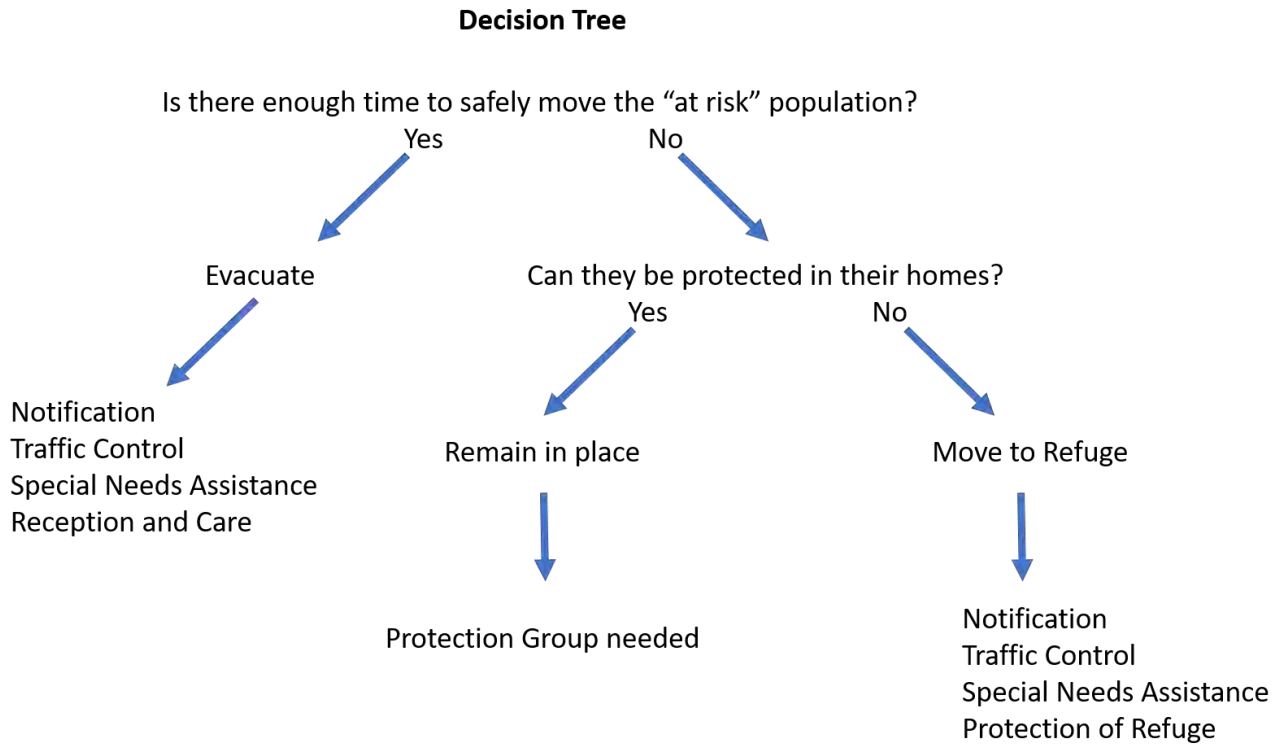


Figure 57 – Evacuation Decision Tree

In planned communities, a legal entity (normally an HOA) is responsible for common areas and the maintenance of community resources. This often includes lighting, landscape, parks, pools

and in some communities' roads, bridges, open space and when the housing products include, joint land ownership, even property insurance. Where the community has been designed and developed with wildland fire defenses such as fuel modification zones, greenbelts, roadside clearance for evacuation routes and/or special maintenance areas within the community, it is the HOA or other legal entity who is responsible for maintaining these common features. As such, there is a high probability that this ongoing maintenance will occur as required and as stated in the organizational documents which were put in place when the community was established. It also makes a single entity accountable and simplifies the inspection process as well as streamlining the communications process (notices, code and standards updates, compliance, verification of maintenance).

Evacuees do not always leave when advised to do so. Some remain to protect their homes. Others do not see the danger or do not accept the idea that they are in danger or will be. Timely evacuation prior to the fire's arrival is key to safe egress. Those who wait to evacuate will be subject to the same impacts as the fire and law enforcement personnel who stay to protect the community. If conditions degrade quickly, everyone is moved to a "safety zone" or "area of refuge" to ride the fire front out. Fire crews identify these areas as the point that they will egress to when fire conditions are too severe to continue the active fire suppression. These areas are often parks, large parking lots (empty of most vehicles), sports fields, large structures made of noncombustible materials with adequate defensible space.

The building and fire codes, and some county and state wildland fire regulations are based on requirements for the land or building owner. As such, there is not necessarily an equal level of compliance at each and every structure, even if they were constructed at the same time, under the same requirements. In wildland fire safety, when structures are not separated by a large distance (30 feet or more), the risk to one structure can be caused by the risk to the adjacent structure even when the first owner has done everything right in terms of wildland fire protection. In planned communities, this is not the case. Common areas are managed as one entity and the HOA has the power to make each homeowner comply with the regulations adopted by the local fire authority as an obligation of its fiduciary function in keeping the entire community safe. This is why planned communities are significantly different in the ability to keep the community safe from wildland fires. This is why a "systems approach" is possible.

This "systems approach" begins with the community design. Larger, planned communities generally tend to use a defined interface rather than an intermix with respect to the wildland perimeter of the development.

Cluster development (higher density with more open space) with defined perimeter protection provides for a "protective bubble" around the development. By controlling the interior (vegetation, configuration and defensible space) and providing an adequate distance (fuel modification, greenbelts, selected agriculture crops (vineyards, certain types of orchards, row crops), fuel breaks and fire breaks) the combination of these elements creates a system for the protection of the community.

The current codes and standards coupled with the design of the current fuel modification zone requirements provides for a community in which fire is unlikely to burn through the community (Burn Through) when all portions of the system are in place and functioning as designed.

Required Wildland Fire Protection Measures

Wildland fire protection measures (including regulatory compliance measures) which were previously required or integrated into the Previously Approved Project and would likewise be required in the Creek Avoidance Alternative and Partial Creek Avoidance Alternative include:

a) All dwelling units will be protected with automatic fire sprinklers.

b) The Project Site has increasing housing density and used a consolidated design to reduce or eliminate, where possible, wildland fuels within the interior of the Project Site and keep the edge of the Project Site as an identifiable interface with appropriate fuel breaks, fire breaks and fuel modification zones.

c) The Project Site has been designed to avoid and minimize low-density urban development patterns or leapfrog-type developments (i.e., those with undeveloped wildland between developed areas).

d) Decreasing the extent and amount of "edge," or interface area, where development is adjacent to undeveloped wildlands.

e) The Project Site has/will create buffer zones and defensible space within and adjacent to the development, with particular attention to ensuring that vegetation will not touch structures or overhang roofs. The Project will establish the legal obligations within the CCR's to ensure that defensible space measures are retained over time.

f) Undergrounding of power lines will be accomplished in the entire Project Site with the exception of the SCE overhead transmission lines which bisect the site.

g) The Project Site design attempts to limit development along steep slopes and amidst rugged terrain, so as to decrease exposure to rapid fire spread and increase accessibility for firefighting. Only a few sites have wildland fuels below (lower than the project structures) the Project Site and these sites will have additional protections provided with radiant heat walls, increased built-in fire protection features and/or placement of the structure so that the impacts of "underslung fuels" are mitigated.

h) Fire hardening structures and homes in accordance with Chapter 7A of the Building Code, Section R337 of the Residential Code and the specific requirements of the fire department during the development review process for the site-specific locations.

i) On-site water supply/storage which is gravity fed to ensure fire flow during power outages for the required duration established in the Fire Code.

j) Siting structures and features to maximize the role of low-flammability landscape features and roadways that may buffer the development from fire spread.

k) The Project will expand existing fire resources in the region.

l) Placement of development within the existing or planned ingress/egress and designated evacuation routes to efficiently evacuate the project population and the existing

community population, consistent with evacuation plans, while simultaneously allowing emergency access.

Additional Measures or project design features which can be used to avoid or reduce wildfire impacts:

a) Provide roadside clearance of 50’ on both sides of all fire access roadways which transit wildland areas where the road is used for evacuation or emergency access.

b) Work with CalTrans for emergency access gates on Ridge Route Road to facilitate a more rapid evacuation process for the Project Site without impact to the existing communities or the Lake Hughes Road interchange.

c) Construction of “area if refuge” within the community for sheltering in the event that evacuation is not possible or practical. This would be possible at the community sports park, the school site and at some of the neighborhood parks.

d) Requiring fire-hardened communication to the Project Site including high-speed internet service.

e) Enhanced communication to the project population about emergency evacuation plans and evacuation zones through community education programs, electronic media avenues, physical signs on evacuation routes and fire risk status.

f) Sponsor twice annual clean up days to rid the community of excessive vegetation, trash, debris or accumulation of tree litter/dead plant materials that have accumulated on or near the structures.

g) Increase fire sprinkler coverage to small spaces and attic for structures protected by NFPA 13D sprinkler systems.

h) Provide increased water reserves levels beyond those required by the Fire Code for the minimum duration of fire flow.

i) Limit undesirable plant materials throughout the Project Site and not simply in the fuel modification and interface areas.

j) Design structures to eliminate concealed spaces by filling them with noncombustible insulation, finishing attic spaces so that attic venting is not necessary, providing positive pressure system to over-pressurize the areas of the structure which are normally susceptible to ember intrusion and/or the use of fire resistance building materials in the areas most at risk for wildland fire penetration (roof sheeting, eaves, decks, underfloor areas, etc.).

k) Creating additional roadside clearance from the Project Site to the Templin Highway interchange at I-5 to allow for greater use of Evac Point #3.

Additional Regional Enhancement

The Genasys Protect is an evacuation management tool that helps communities, and first responders, more effectively plan, communicate, and execute evacuations. It is a platform where residents can look up their addresses using the search bar and use the zone map to find evacuation information for their area.

Pre-established evacuation zones help fire, law, and emergency service agencies prepare for, streamline, and reduce confusion around the evacuation process so that roads are clear for those who need to evacuate quickly. Evacuating the most at-risk zones first, emergency personnel are able to manage the traffic flow and more easily prevent the traffic jams that occur when an entire town or city tries to evacuate all at the same time. The pre-established zones also provide a common reference system for all first responders and the community.

Evacuation routes are always incident-specific because the best route to take is always relative to the location and type of threat. When an emergency evacuation occurs, residents will be asked to check the county's alerts and open Genasys Protect application to review the status of their zone. When it's time to evacuate, residents will be asked to follow the direction of the law enforcement directing traffic.

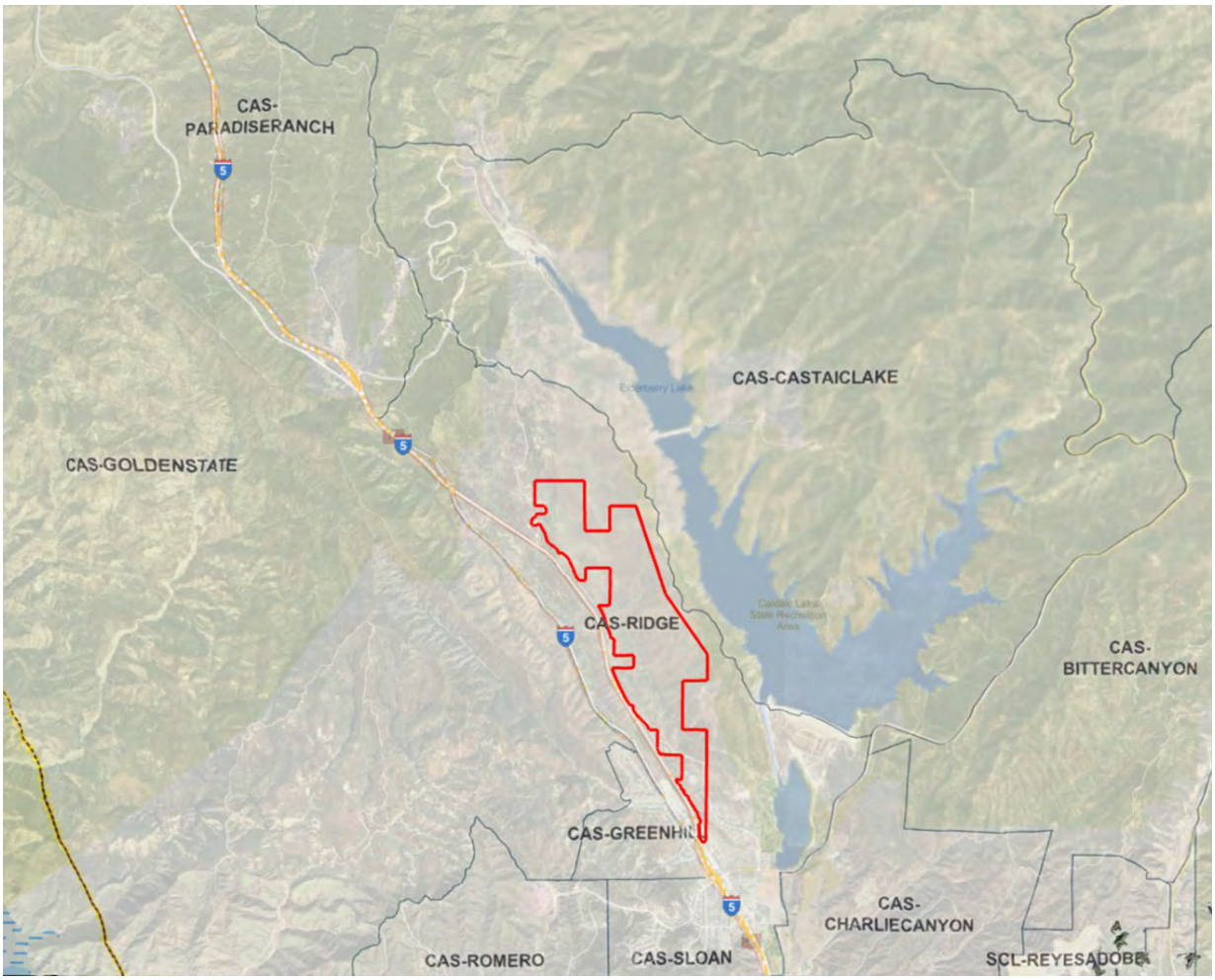
The Genasys Protect mobile app for Apple and Android contains all the same functions as the website, with the additional feature of being able to follow a zone to receive push notifications about status changes to that zone. It should be noted that the Genasys Protect is not a navigation tool like Google or Apple Maps, which means it cannot plot directions or receive evacuation directions.

All zones in Genasys Protect are published by the county and are authoritative. Genasys works directly with each county we serve and all information for a zone or county listed on the site has been approved by the county. The county worked directly with Genasys to add and approve all of the information for specific zones, and the appointed emergency response personnel update the statuses and information during emergencies.

The first three letters represent the city's name or if in an unincorporated area - the county, the E is short for Evacuation, and the last three numbers are the unique code that distinguishes the zone from the others in your area. This system is consistent across your county and makes it easy for first responders to plan and execute evacuations. The zone identifier system provides each zone with a globally unique ID so there is no confusion about which zone is being referred to.

During an incident, first responders may need to split your zone into multiple sections in order to evacuate community members or repopulate a zone in the most effective way. If a zone contains a letter on the end (example: E005-A, E005-B, E005-C), this means that the original zone (E005) was split up into smaller areas for better management of the evacuation.

The project site is with zone CAS-RIDGE, as shown below



Conclusions and Recommendations

A review of the expected fire behavior in the interface of the NorthLake development indicates that the fire behavior could produce extreme fire behavior and as such, mitigation will be necessary. Many of these mitigation measures are required by the State and Local fire/building regulations, fire department standards and guidelines, and by mitigations already considered and applied by the development review processes to the Previously Approved Project. Fire behavior modeling predicts that there will be several hours in which to evacuate the Project Site under fire scenarios where the fire is burning into the community from an adjacent area under each of the development scenarios considered, except with the Freeway Spots scenario, where all configurations will be able to use Ridge Route Road for the initial 30 minutes and then have a period of time where Ridge Route Road is impacts for 90 minutes or more and would require sheltering in place within the development for this period. Where fires are initialized within the Project Site or near its boundary, the fire incident command and control will have to determine if the population will be moved or “sheltered in place”.

The proposed community with its increased built-in fire protection features (defensible space, fuel modification, hardening of the structures and required maintenance), placement of the structures on the topography, overall orientation to the fuels, wind and slope and nested (safe center) configuration would be a candidate for a “shelter in place” decision. While “shelter in place” is never a first option, history shows us that moving populations, once the fire has arrived, has increased risk and should not be attempted when safe alternatives exist.

The configuration of the Project Site, the placement of the structures and features on the topography and the nature of the wildland fuels surrounding the project create conditions where the fire will travel at great speeds when wind, slope and fuel align but the three access points that empty onto Ridge Route Road are not impacted by fire at the same time.

The fire behavior modeling in this report with flame lengths of up to 65’ under the worst-case scenario would be protected by compliance with the LACFD fuel modification standards. Fuel modification is designed to reduce and change the fuel types as the combustible vegetation gets closer to the structure. As “rule of thumb” two times the maximum flame length is adequate protection from radiant heat in a hardened structure. This concept is shown in Figure 58.

These distances also protect from direct flame contact (distance greater than flame length by a factor of two) and convected heat (less impactful than the radiant heat distance as discussed previously). The structure hardening (including ember intrusion protection) protects from embers and brands which may travel long distances under worst-case conditions.

With respect to the defensible space distance for the perimeter structures, the LACFD requires distances up to 200 feet of fuel modification depending on the adjacent fire potential as measured by the slope, aspect, fuel characteristics, fire history and weather data (wind, temperature and relative humidity). While the distance required in the thinning zones may be allowed to be reduced based on the level of hazard present, the zones nearest the structures are rarely reduced.

Additionally, the implementation of the Zone 0 (first five feet from the structure) and LACFD’s decision to make the fuel modification zone on all sides of the structure and not just the wildland interface will only enhance the already robust level of protection for the Project Site.

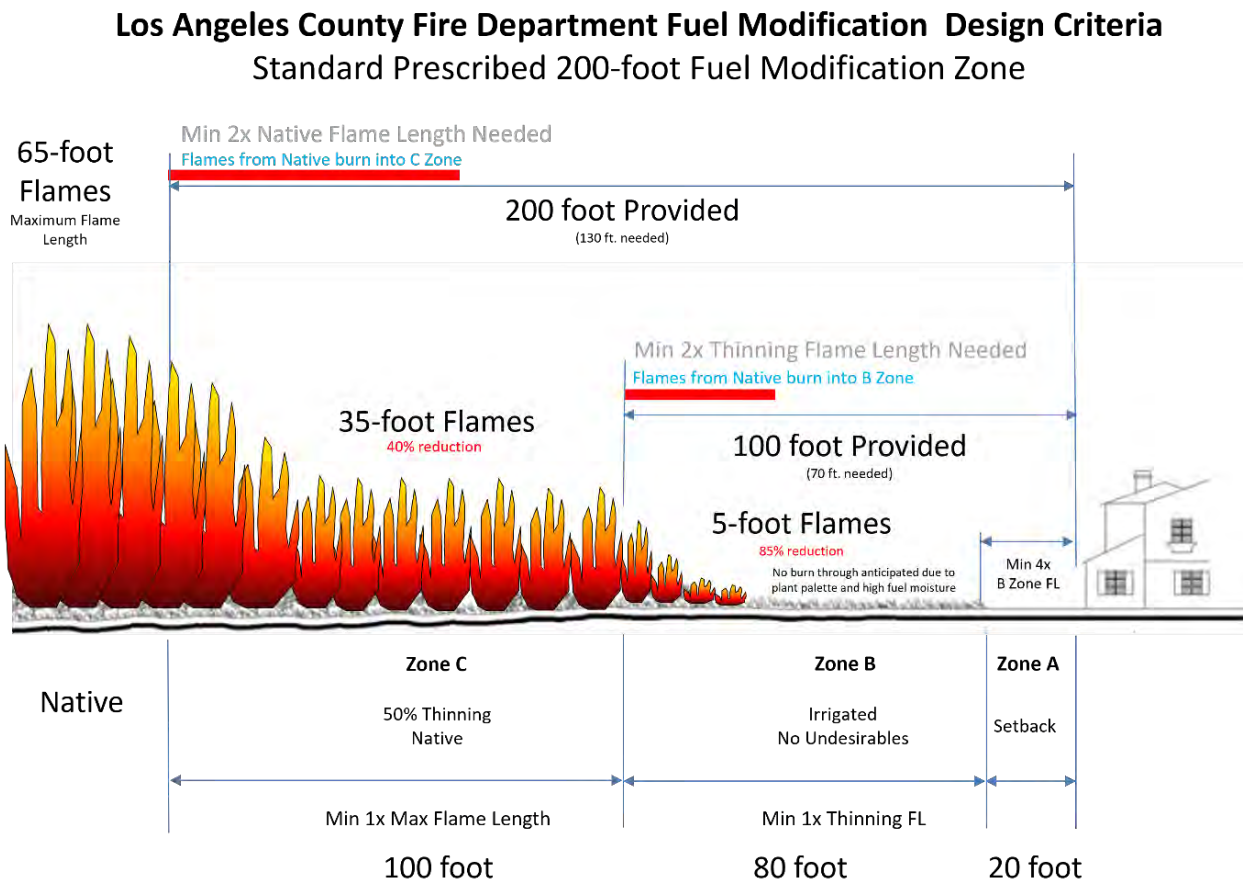


Figure 58 – Fuel Modification Zone Design Criteria

With respect to the tasks as outlined in the California Attorney General's "*Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act*" the report has the following conclusions:

1. **Determination if project impact will substantially impair an adopted emergency response plan or emergency evacuation plan;**

   The Project Site general area does not have an adopted emergency evacuation plan. The emergency response plan will be enhanced with the addition of the new fire station and improvements to the public roadways. The evacuation analysis for this Project will be the first formal process that can be found in a search of the available records. Previous evacuations in the area from several incidents over the past years have provided the emergency staff with experience that is helpful for future actions. One example is the closure of Interstate 5 due to an emergency. In previous closures, the action was to take traffic off the freeway at Lake Hughes Road which results in almost immediate gridlock. Shutting the freeway at Hasley Canyon Road or State Route 126 provides for better redirection of the freeway traffic and leaves the Castaic area more evacuation options.

   From a wildland fire perspective, the Project Site will not substantially impair an adopted emergency response plan or emergency evacuation plan. Project Site specific plans will

be completed as an integral part of Resident Information and Community Communications efforts by the Project Site sponsors, builders and the ultimate HOA's who will have the ongoing responsibility for this information.

2. **Determine the project-specific Wildland Fire Hazard and Wildland Fire Risk to quantify issues that may exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;**

   This report has examined the project specific Wildland Fire Hazards and the resulting Risks after the mitigations are in place and found that the level of Risk that results is no greater than similar communities in the area and generally better than projects constructed prior to the current Regulations. The Project Site has three egress points which are available for evacuation efforts should law enforcement deem it necessary. Additionally, the combination of fuel modification, hardened structures, the placement of the structures and features on the topography relative to the wildland fuels creates a community that is capable of "sheltering in place" if necessary. While never a first choice by emergency service providers, if moving the population is a greater risk, this community as designed and as it will be constructed is capable of a sheltering operation without undue risk to the residents.

   All fire scenarios that have been modeled have at least one Evac Point which is viable for 4 hours or more with the exception of the Freeway Spots scenario where only 30 minutes is available prior to a 60 to 90 minute impact where it would be necessary to shelter within the community until the fire passed this point and the egress route is reopened. It should be noted that, by the time the fire reaches the third evacuation point, the first point is available for use by traveling through the center of the development area. All of the fire scenarios are run under extreme conditions which have been recorded in previous fires or which are likely to occur in the future; they are worst-case scenarios.

   Evacuation reduces exposure to pollutant concentrations generated by a wildfire. The combined effects of the fuel modification, roadside clearance, wildland fire building code requirements and the design/placement of the structures on the topography work together to protect the community from a wildfire. The Project Site will, in fact, provide a buffer to some of the existing communities by removing or modifying the wildland fuels which are upwind from them.

   With the fuel modification and roadside clearance in place, the probability of a fire originating from the Project Site is lower than the adjacent communities without this protection. In order to access the wildlands, it will be necessary to traverse either the 200' fuel modification zone or the 50' roadside clearance zone. Ignitions from the normal sources associated with development will be much less likely to occur.

3. **Determine if the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment;**

   All of the improvements for the Project Site have been identified and analyzed for their impact on the environment in the CEQA process. None of the Project Site infrastructure will exacerbate the fire risk for the Project Site. In fact, the improved water supply for the general area, the placement of fuel modification zones and the establishment of a community which has the option to "shelter in place" if needed provides an alternative to the existing residents where this level of protection does not exist. If evacuation to the south is not possible, nearby communities would be safer in the Project Site development areas than they would be in some of the current neighborhoods due to the added protections provided in the Project Site.

4. **Determine if people or structures will be exposed to significant risks due to the completion of the project; and**

   The required wildland fire protection features identified in this report, will keep the residents and the structure of the Project Site protected from significant risk by the required Regulations, the manner in which the Project Site will be developed (clustered development with a definable interface vs an intermix community). The risk from wildland fires for the Project Site will be less than the surrounding communities as the Regulations under which the Project will be developed have significantly increased the level of protection required as a baseline for development projects. The protection measures listed in this report have reduced the hazards in the adjacent native vegetation to an acceptable level of risk under current Regulations.

5. **Consider whether a project will "expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires".**

   As proposed, the Project Site will not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death due to a wildland fire in the native areas adjacent to the Project Site due to the use of Fuel Modification, Defensible Space, Fire Sprinklers, placement of the structure on the Landscape/Topography, the width of the streets, the amount of fire protection water available and the placement of the fire hydrants are specified intervals, the hardening of the structures to comply with the current wildland interface Regulations and availability of firefighter resources within the Project Site and the regional assets available to combat a wildland fire by LACFD and the other associated agencies (CalFire, USFS, mutual aid fire resources, Call when needed fire resources) who routinely assist in the suppression of wildland fire in the region.

It has been determined that, with the implementation of the mitigation measures set forth in this report, the proposed development areas set forth as project configurations (Previously Approved Project, Creek Avoidance Alternative, Partial Creek Avoidance Alternative) will have a less than significant impact from the wildland fire related issues raised under the AG Guidelines, as well

as under CEQA Guidelines Appendix G, Section XX Wildfire. One modeled scenario (Freeway Spots) is a rapid developing event which does require sheltering within the community for a period of time but does not put the residents directly at risk from the fire during this period as the Project Site has been designed to provide for that scenario.

Appendix A
Site Photos Locations

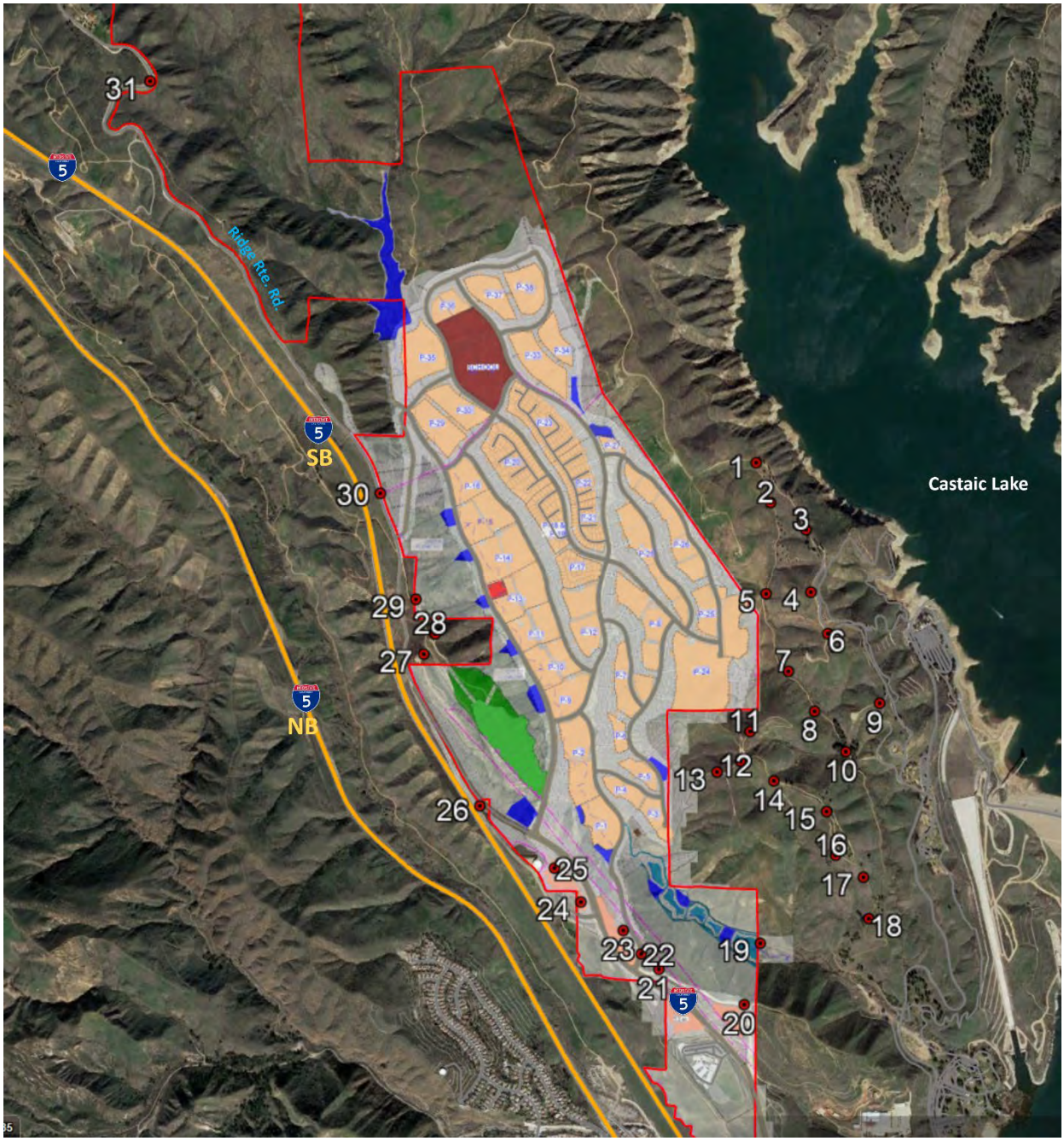


Photo locations are shown on the map above as reference points. Several photos were taken from each general location and are within a few feet of each other. For simplicity, these photo site have been grouped in the locations are shown above.

Photo Site 1 – Looking West



Looking South



Photo Site 2 – Looking West



Looking North



Photo Site 3 – Looking West



Looking Southwest



Photo Site 4 – Looking West



Looking Northwest



Photo Site 4(cont.) – Looking Southwest



Looking South



Photo Site 5 – Looking North Northwest



Looking Northwest from a few feet up the road



Photo Site 6 – Looking West



Looking South



Photo Site 7 – Looking West



Looking Northwest



Photo Site 8 –Looking Northwest



Looking West



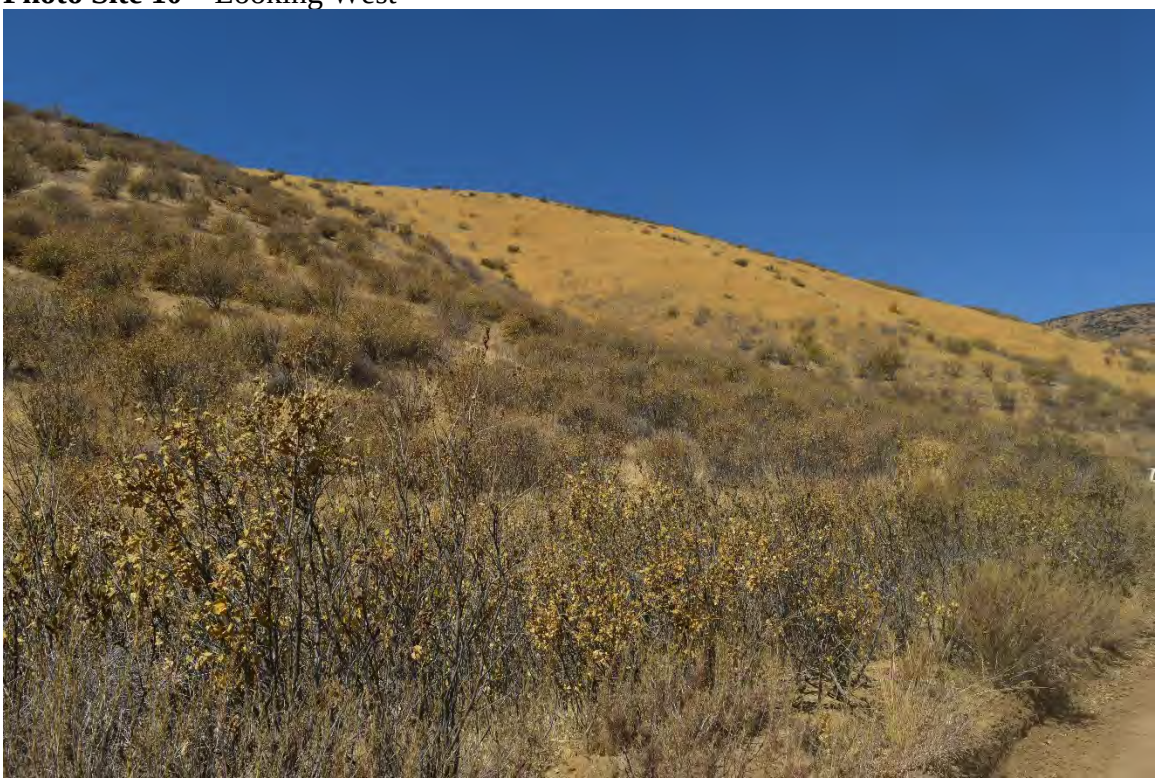
Photo Site 9 – Looking West Southwest



Looking Northwest



Photo Site 10 – Looking West



Looking North Northwest



Photo Site 11 – Looking North



Looking Northwest



Photo Site 12 – Looking Southeast



Looking Southwest



Photo Site 13 – Looking South



Looking Northwest



Photo Site 14 – Looking Southeast



Looking South



Photo Site 15 – Looking Southwest



Looking North



Photo Site 16 – Looking West



Looking North



Photo Site 17 – Looking West



Looking Northwest



Photo Site 18 –Looking Northwest



Looking North Northwest

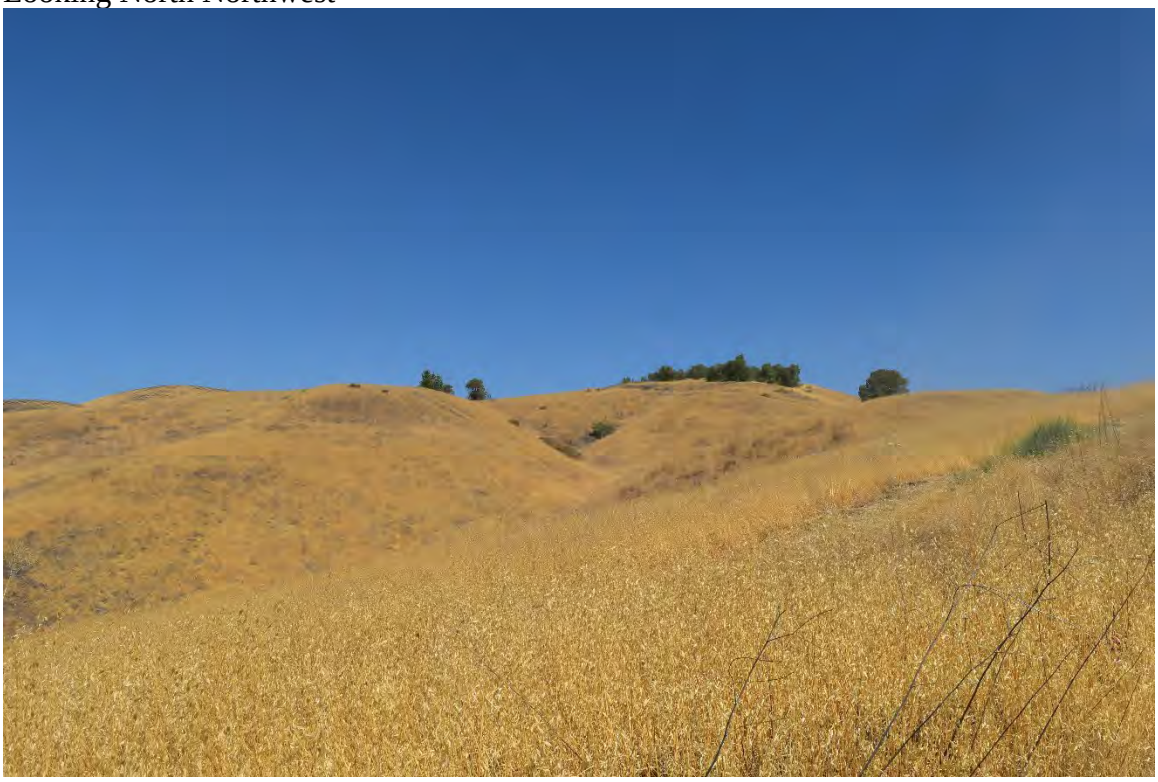


Photo Site 19 – Looking Southwest



Looking Northwest



Photo Site 20 – Looking North



Looking Northwest



Photo Site 21 – Looking East



Looking Northwest



Photo Site 22 – Looking East



Looking North



Photo Site 23 – Looking North



Looking North Northwest



Photo Site 24 – Looking Southeast



Looking North



Photo Site 24 (cont) – Looking Northeast



Looking North Northwest



Photo Site 25 – Looking North



Looking North Northwest



Photo Site 26 – Looking East Northeast



Looking Southeast



Photo Site 27– Looking South Southeast



Looking South Southeast from under powerlines



Photo Site 28 – Looking North Northeast



Looking East



Photo Site 29 – Looking North



Looking Southeast



Photo Site 30 – Looking East



Looking South



Photo Site 31 – Looking Southeast



Same as above zoomed in

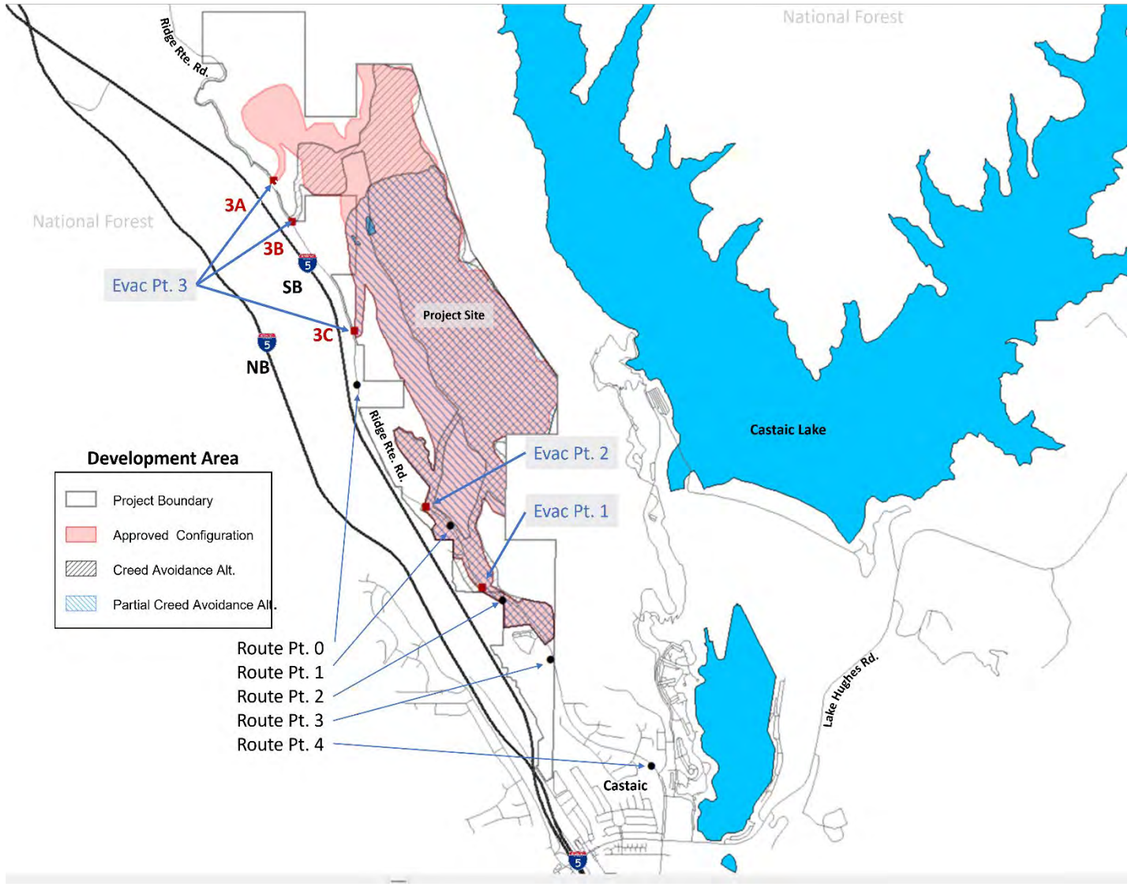


Appendix B - Fire Behavior Analysis Outcomes for Evacuation Modeling

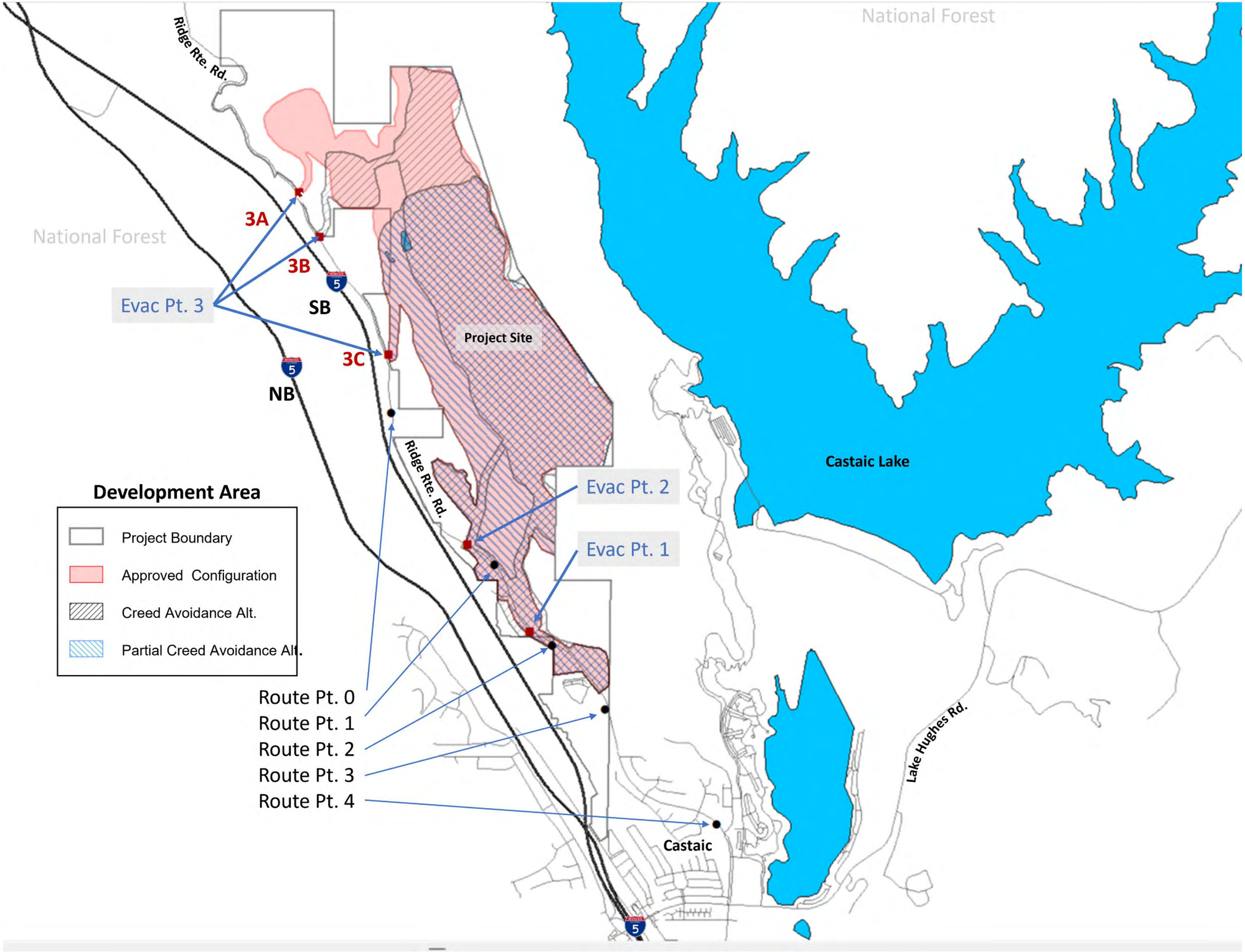
The attached outputs from the FlamMap fire behavior modeling at for the MTT (Minimum Travel Time) module. Every scenario has been completed with each of the three project configurations (Approved, Creek Avoidance and Partial Creek Avoidance configurations). Assumptions on spotting and timeframes are shown on each output. Minutes are used up to 90 minutes and hours are used for longer periods.

Evacuation Points 1 and 2 are identical for all three configurations Evacuation Point 3A is for the Previously Approved Development Configuration, Point 3B is for the Creek Avoidance Configuration and Point 3C is for the Partial Creek Avoidance Configuration as shown on the map below. Route Points are the same for all scenarios.

Each Evacuation Point and Route Point is provided with which when it will be open or closed in 15-minute increments as shown in the sample matrix below. One is provided for each scenario.



Route Fire Sim 25 mph Approved		Evacuation to the South									
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Closed	Open	n/a	n/a	Closed	Open	Open	Open	Open
75	1:15	Open	Closed	Open	n/a	n/a	Closed	Open	Open	Open	Open
90	1:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
105	1:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
120	2:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
135	2:15	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
150	2:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
165	2:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
180	3:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
195	3:15	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
210	3:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
225	3:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
240	4:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
255	4:15	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
270	4:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
285	4:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
300	5:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
315	5:15	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
330	5:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
345	5:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
360	6:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
375	6:15	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
390	6:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
405	6:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
420	7:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open


National Forest
Ridge Rte. Rd.
National Forest
3A
3B
Evac Pt. 3
SB
3C
NB
Project Site
Ridge Rte. Rd.
Castaic Lake
Evac Pt. 2
Evac Pt. 1
Development Area
Project Boundary
Approved Configuration
Creed Avoidance Alt.
Partial Creed Avoidance Alt.
Route Pt. 0
Route Pt. 1
Route Pt. 2
Route Pt. 3
Route Pt. 4
Castaic
Lake Hughes Rd.

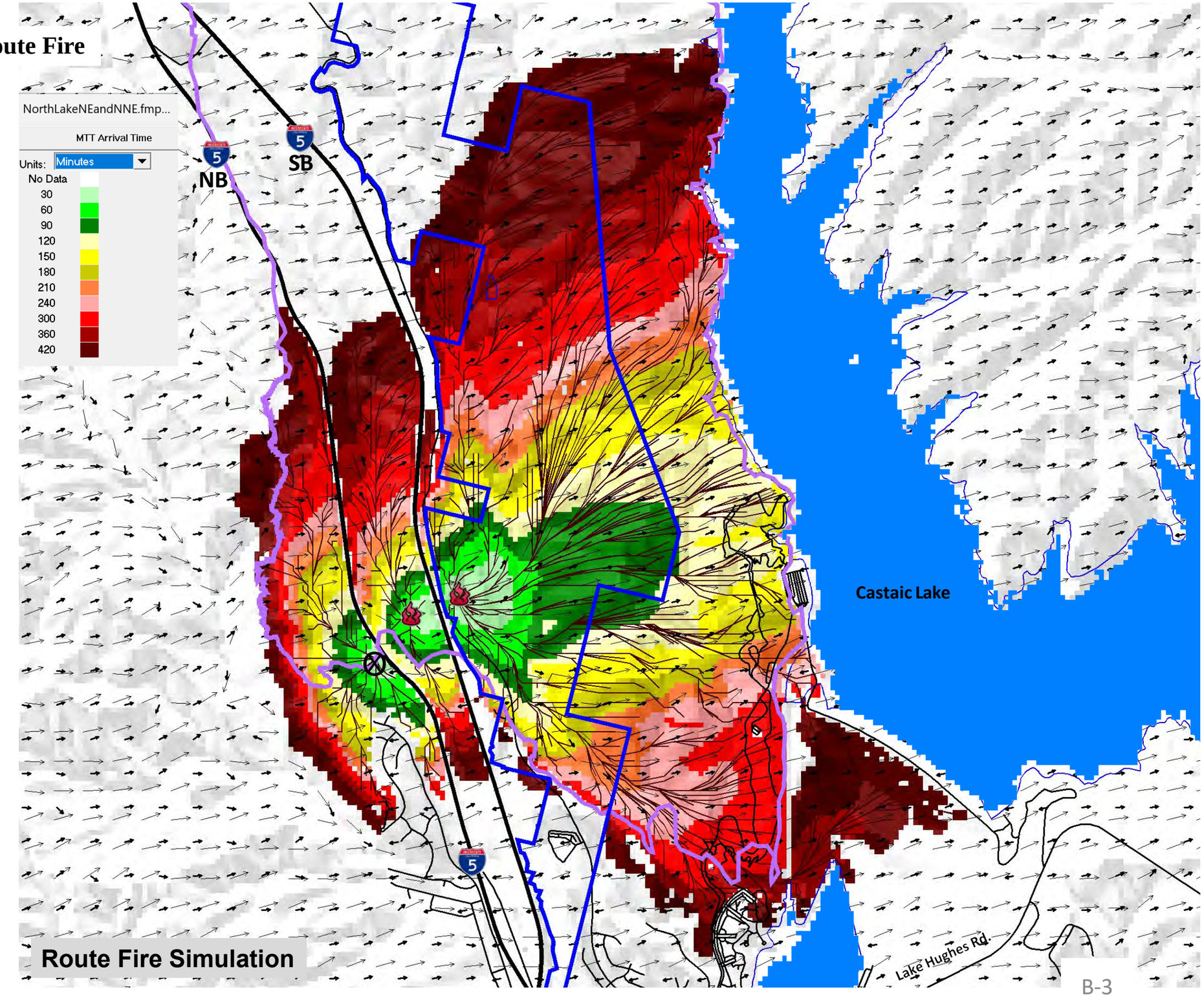
Existing Conditions prior to the Route Fire

This is the Route Fire with 25mph winds (sustained). The fire was made to spot over the freeways and start again.

Purple line is actual fire perimeter (final). Modeling is for the first eight hours of the fire.

- Streets
- Project Boundary
- Freeway
- Development Area
- Route Fire Perimeter
- Wind Direction
- Spread Direction
- Fire Flow Path
- Origin of the Fire
- Spot Fire

WSW wind at 25

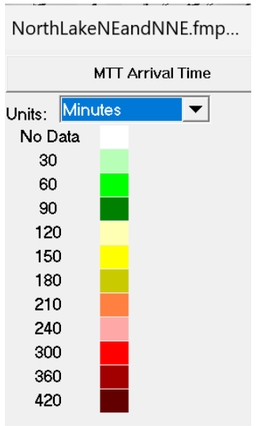


Route Fire Simulation

Existing Conditions prior to the Route Fire
Previously Approved Development Added

This is the Route Fire with 25mph winds (sustained). The fire was made to spot over the freeways and start again.

Development is modeled as a barrier (no burn through due to fuel modification, plant pallet restriction and structure hardening)



- Streets
- Project Boundary
- Freeway
- Development Area
- Route Fire Perimeter
- Wind Direction
- Spread Direction
- Fire Flow Path
- Origin of the Fire
- Spot Fire
- Evacuation Point
- Route Point
- Area of Population at Immediate Risk

Origin to first spot 30 min.
First spot to second spot 30 min.

WSW wind at 25

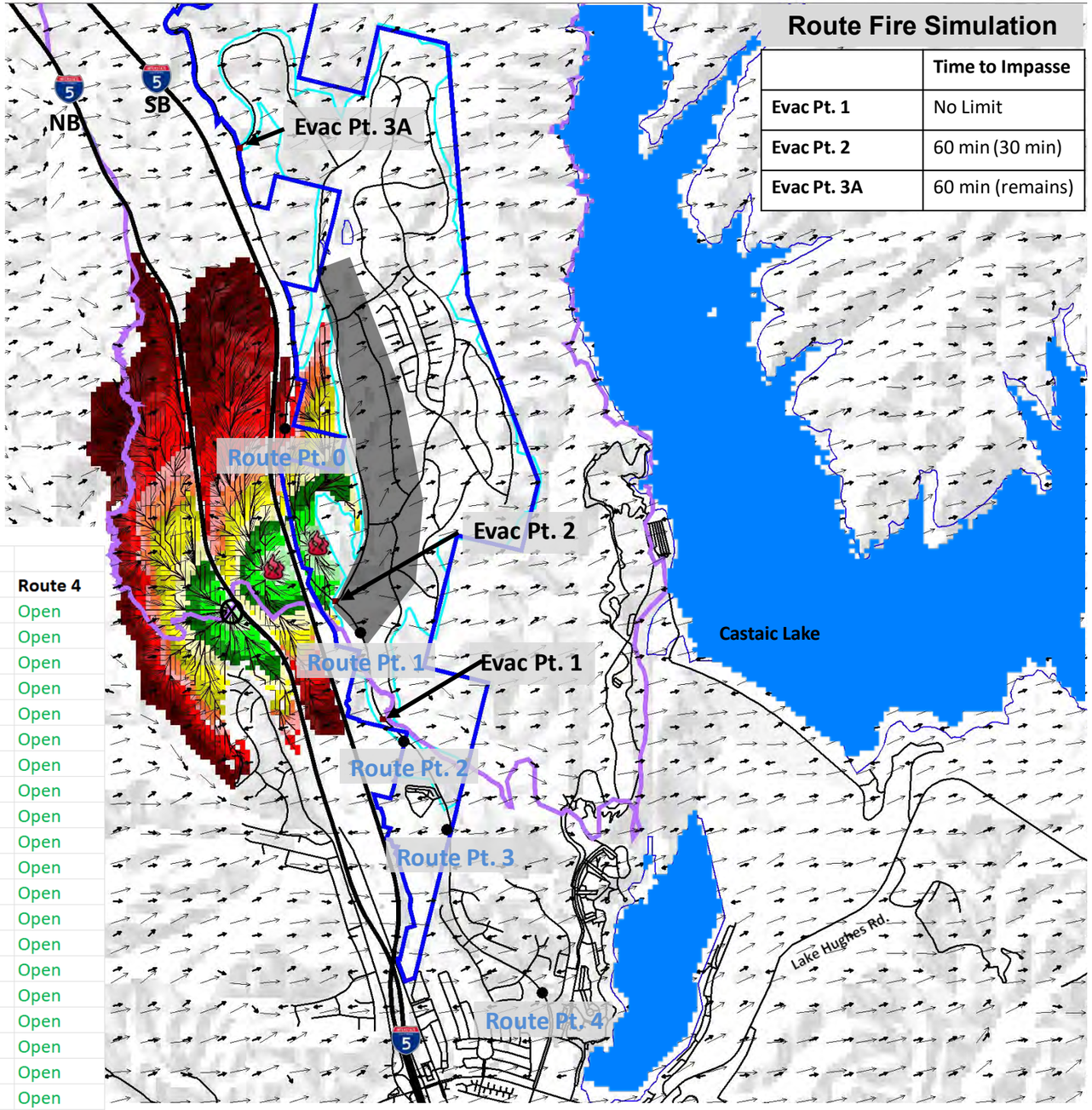
Route Fire Simulation

	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	60 min (30 min)
Evac Pt. 3A	60 min (remains)

Existing Conditions prior to the Route Fire
Previously Approved Development Added

Narrative: Fire begins as spot fires west of the northbound I-5 under a WSW Wind at 25 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn ENE And spots over the SB I-5 impacting Ridge Route and Evac Point 2 at 60 min (elapsed time) and continues to burn to the north to the north and south along the Project Site.

Route Fire Sim 25 mph Approved				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Closed	Open	n/a	n/a	Closed	Open	Open	Open	Open
75	1:15	Open	Closed	Open	n/a	n/a	Closed	Open	Open	Open	Open
90	1:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
105	1:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
120	2:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
135	2:15	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
150	2:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
165	2:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
180	3:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
195	3:15	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
210	3:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
225	3:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
240	4:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
255	4:15	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
270	4:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
285	4:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
300	5:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
315	5:15	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
330	5:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
345	5:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
360	6:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
375	6:15	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
390	6:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
405	6:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
420	7:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open



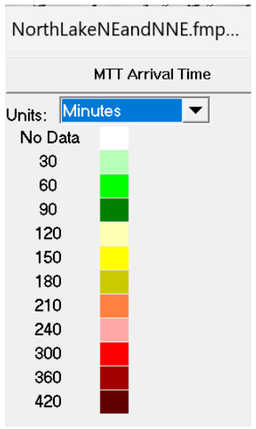
Route Fire Simulation

	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	60 min (30 min)
Evac Pt. 3A	60 min (remains)

Existing Conditions prior to the Route Fire Creek Avoidance Development Added

This is the Route Fire with 25mph winds (sustained). The fire was made to spot over the freeways and start again.

Development is modeled as a barrier (no burn through due to fuel modification, plant pallet restriction and structure hardening)



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Wind Direction

Spread Direction

Fire Flow Path

Origin of the Fire

Spot Fire

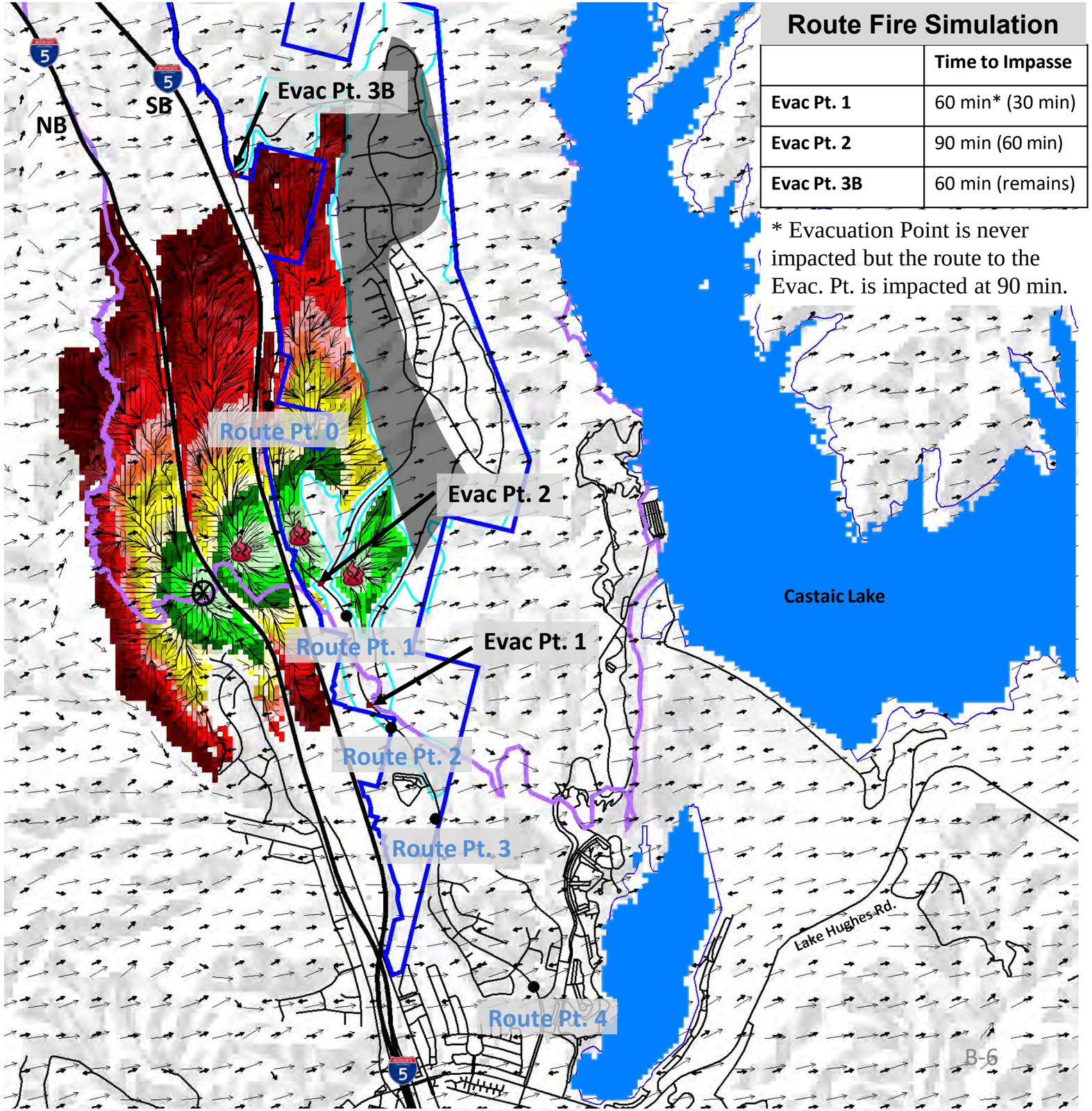
Evacuation Point

Route Point

Area of Population at Immediate Risk

Origin to first spot 30 min.
First spot to second spot 30 min.
Second spot to third spot 30 min

WSW wind at 25



Route Fire Simulation

	Time to Impasse
Evac Pt. 1	60 min* (30 min)
Evac Pt. 2	90 min (60 min)
Evac Pt. 3B	60 min (remains)

* Evacuation Point is never impacted but the route to the Evac. Pt. is impacted at 90 min.

Existing Conditions prior to the Route Fire Creek Avoidance Development Added

Narrative: Fire begins as spot fires west of the northbound I-5 under a WSW Wind at 25 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn ENE And spots over the SB I-5 impacting Ridge Route and Evac Point 2 at 60 min (elapsed time) and continues to burn to the north to the north and south along the Project Site spotting over Evac Point 2 at .

Route Fire Sim 25 mph Avoid				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Closed	n/a	Closed	n/a	Closed	Open	Open	Open	Open
75	1:15	Open	Closed	n/a	Closed	n/a	Closed	Open	Open	Open	Open
90	1:30	Closed	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
105	1:45	Closed	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
120	2:00	Closed	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
135	2:15	Closed	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
150	2:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
165	2:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
180	3:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
195	3:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
210	3:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
225	3:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
240	4:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
255	4:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
270	4:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
285	4:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
300	5:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
315	5:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
330	5:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
345	5:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
360	6:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
375	6:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
390	6:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
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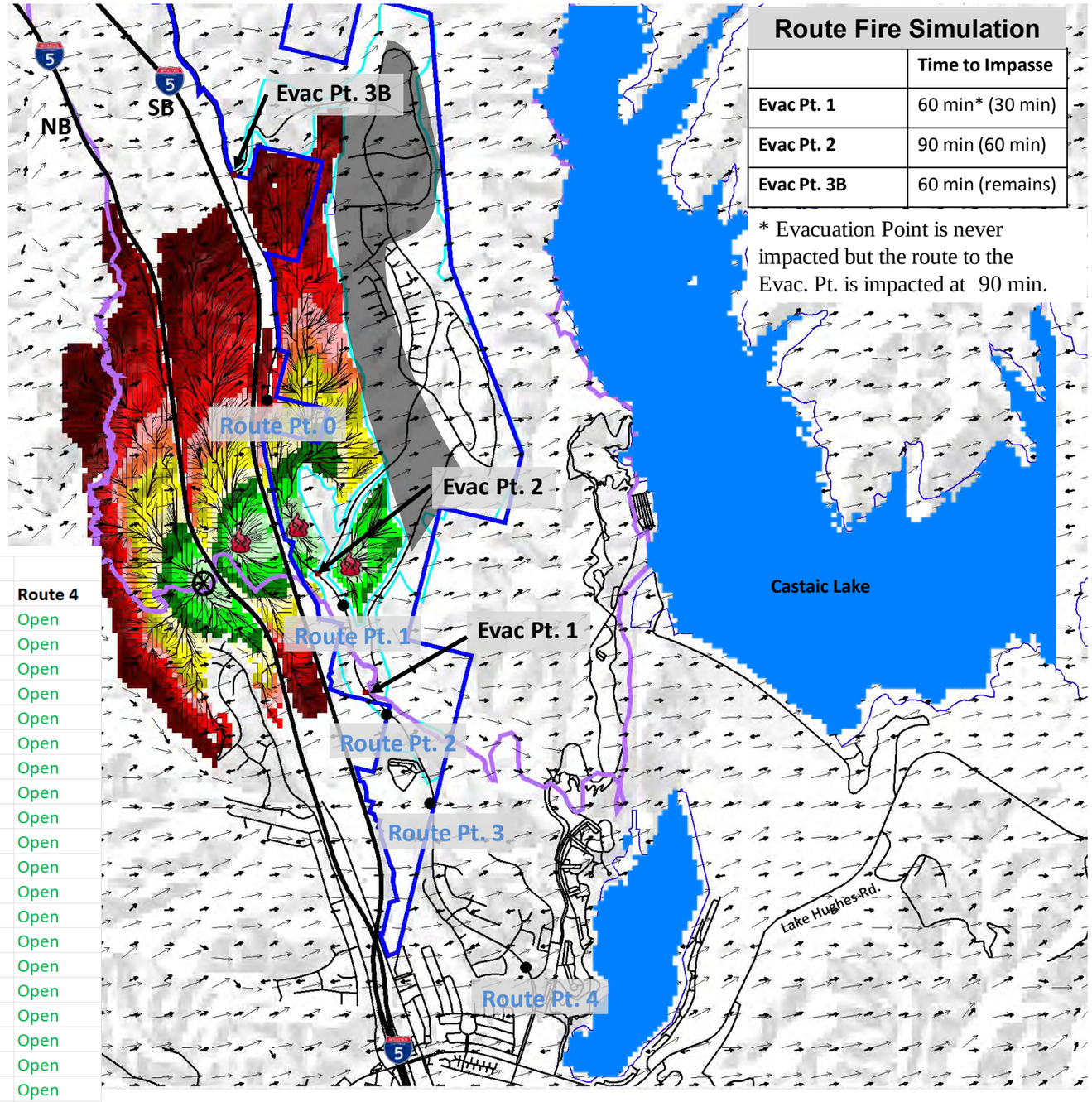
420	7:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open



Route Fire Simulation

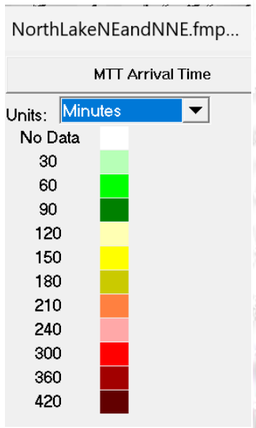
	Time to Impasse
Evac Pt. 1	60 min* (30 min)
Evac Pt. 2	90 min (60 min)
Evac Pt. 3B	60 min (remains)

* Evacuation Point is never impacted but the route to the Evac. Pt. is impacted at 90 min.

Existing Conditions prior to the Route Fire Partial Creek Avoidance Development Added

This is the Route Fire with 25mph winds (sustained). The fire was made to spot over the freeways and start again.

Development is modeled as a barrier (no burn through due fuel modification, plant pallet restriction and structure hardening)



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Wind Direction

Spread Direction

Fire Flow Path

Origin of the Fire

Spot Fire

Evacuation Point

Route Point

Area of Population at Immediate Risk

Origin to first spot 30 min.
First spot to second spot 30 min.

WSW wind at 25

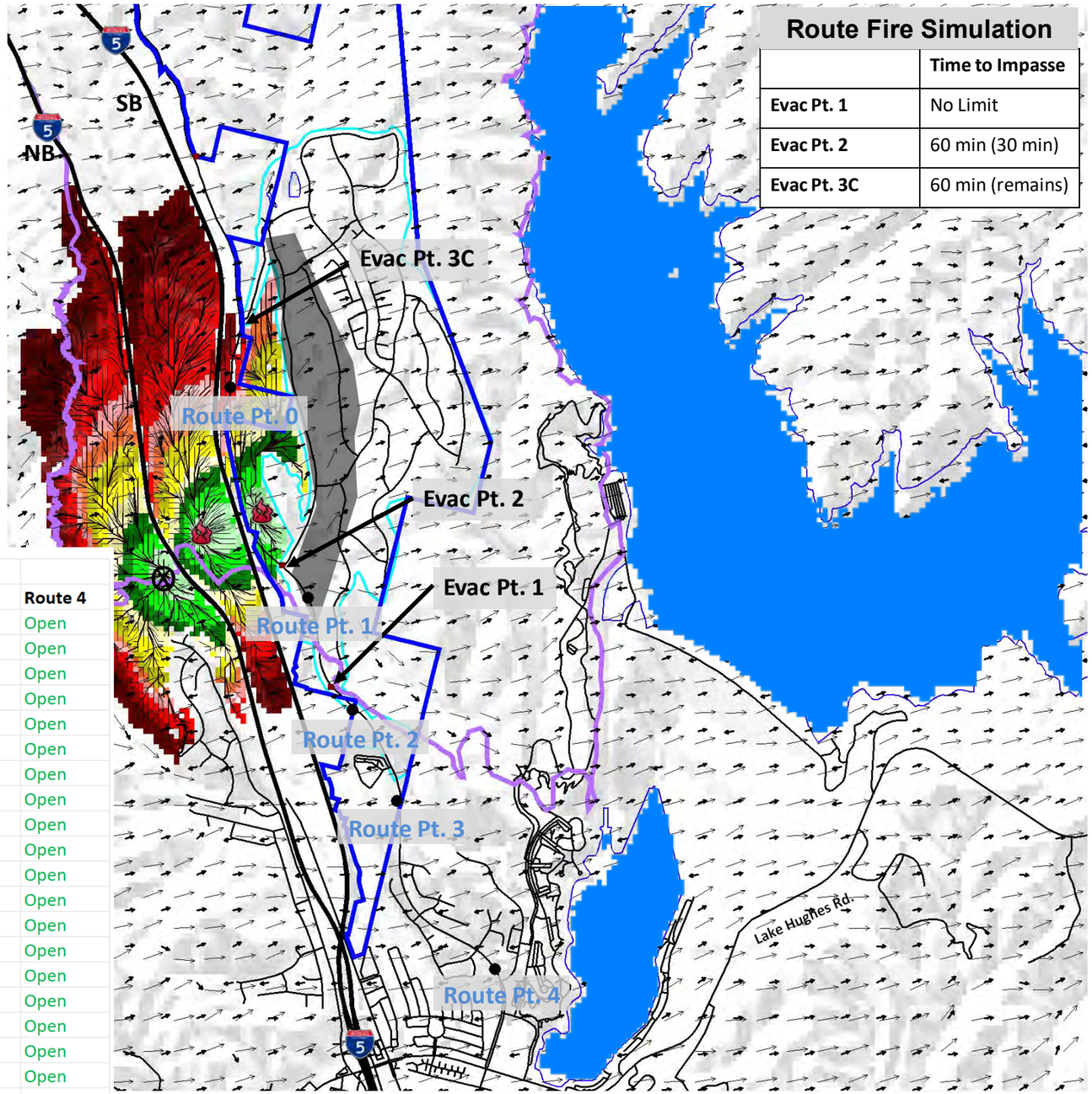
Route Fire Simulation

	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	60 min (30 min)
Evac Pt. 3C	60 min (remains)

Existing Conditions prior to the Route Fire
Partial Creek Avoidance Development Added

Narrative: Fire begins as spot fires west of the northbound I-5 under a WSW Wind at 25 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn ENE And spots over the SB I-5 impacting Ridge Route and Evac Point 2 at 60 min (elapsed time) and continues to burn to the north to the north and south along the Project Site.

Route Fire Sim 25 mph Partial Avoid				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	**0:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
30	**0:30**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
45	**0:45**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
60	**1:00**	Open	**Closed**	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
75	**1:15**	Open	**Closed**	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
90	**1:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
105	**1:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
120	**2:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
135	**2:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
150	**2:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
165	**2:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
180	**3:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
195	**3:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
210	**3:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
225	**3:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
240	**4:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
255	**4:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
270	**4:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
285	**4:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
300	**5:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
315	**5:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
330	**5:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
345	**5:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
360	**6:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
375	**6:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
390	**6:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
405	**6:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
420	**7:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open



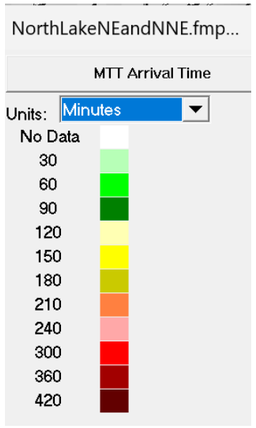
Route Fire Simulation

	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	60 min (30 min)
Evac Pt. 3C	60 min (remains)

Increased Wind Speed (SSW direction)
Previously Approved Development Added

This is the Route Fire with 40 mph winds (sustained). The fire was made to spot over the freeways and start again.

Development shown as modified wildland fuels due to fuel modification, plant pallet restriction and structure hardening



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

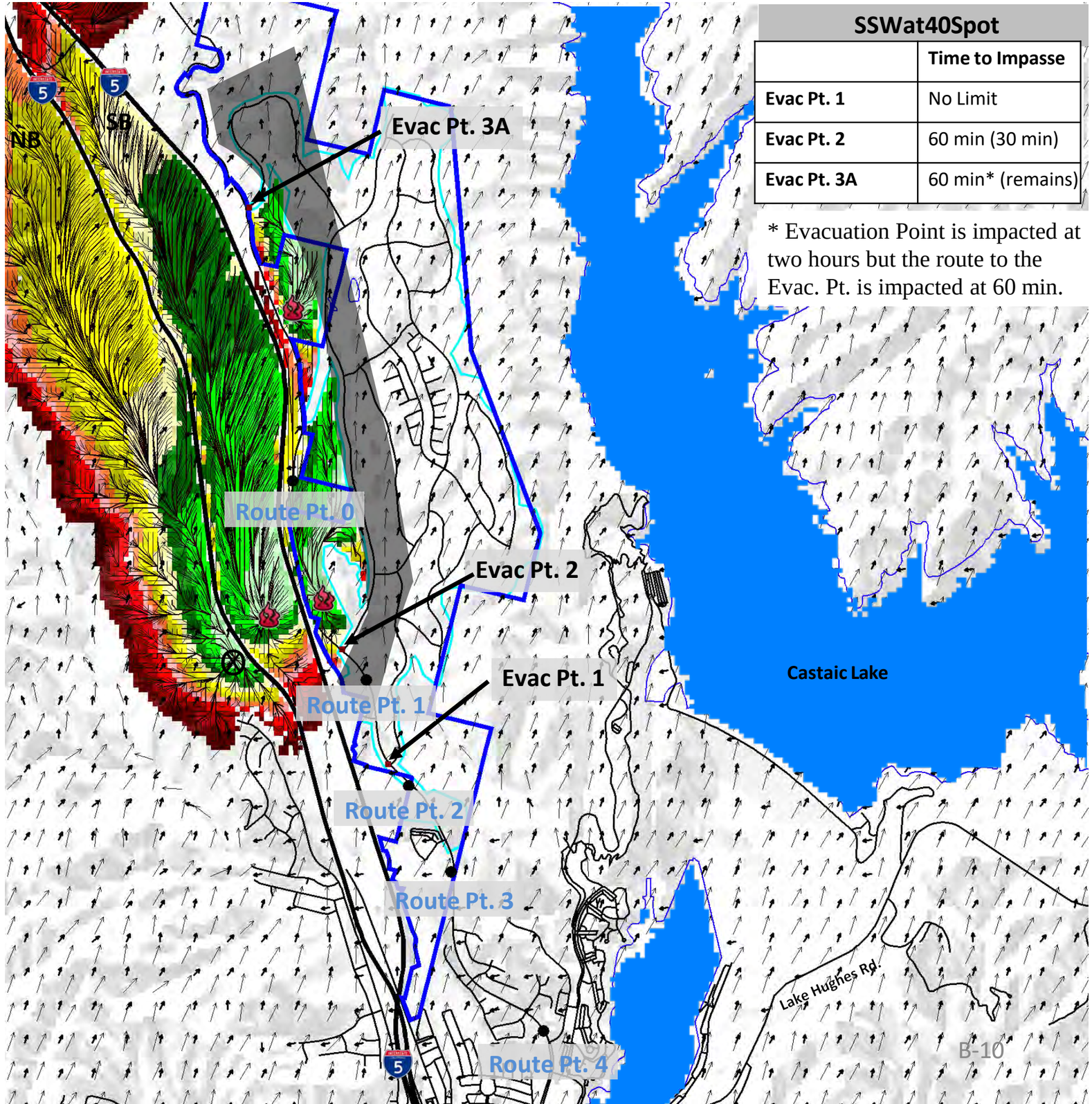
Spread Direction

Fire Flow Path

Origin of the Fire

Spot Fire

Origin to first spot 30 min.
First spot to second spot 30 min.
Third spot 60 min.
SSW wind at 40 Spot



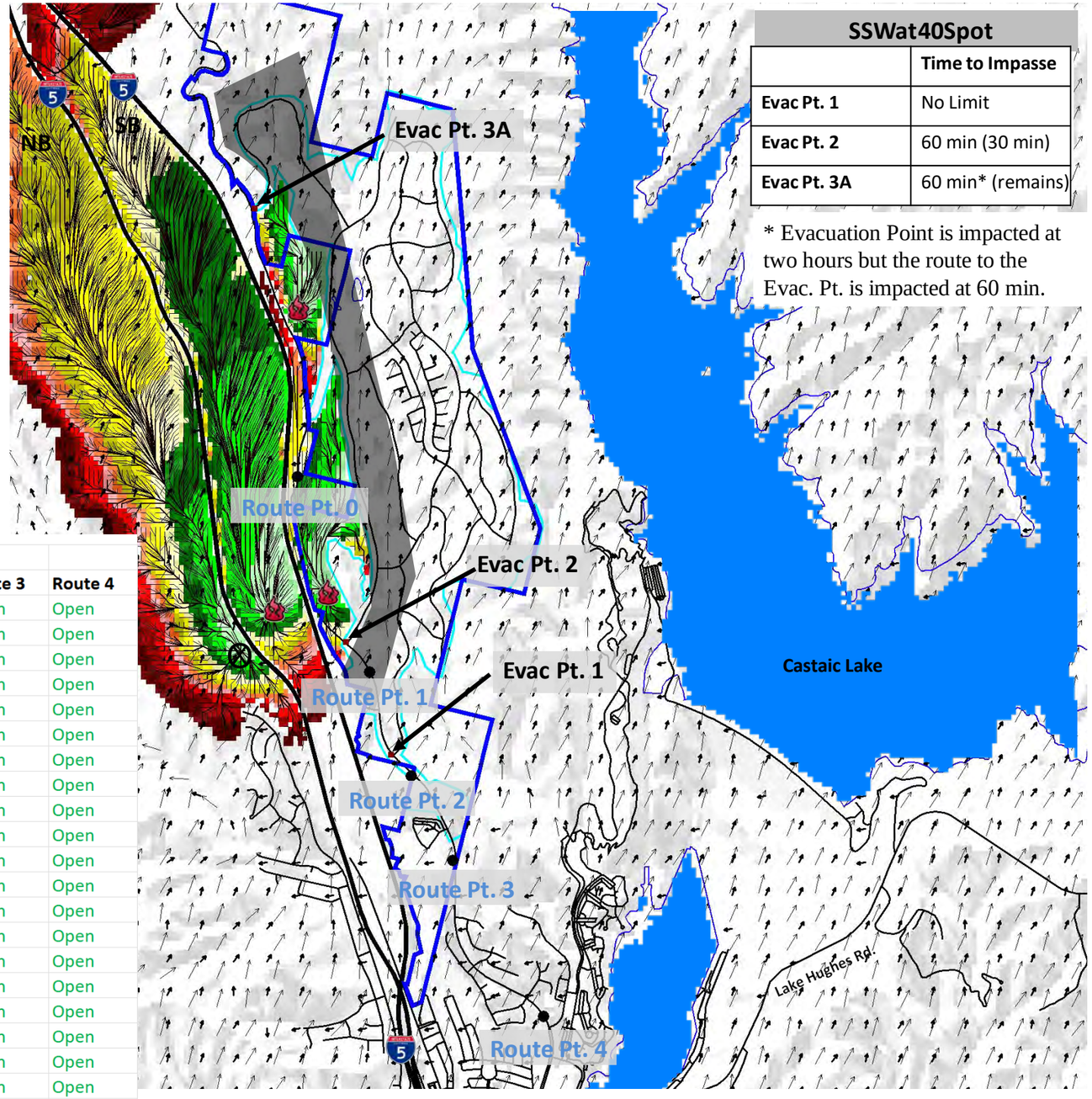
SSWat40Spot	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	60 min (30 min)
Evac Pt. 3A	60 min* (remains)

* Evacuation Point is impacted at two hours but the route to the Evac. Pt. is impacted at 60 min.

Increased Wind Speed (SSW direction)
Previously Approved Development Added

Narrative: Fire begins as spot fires west of the northbound I-5 under a SSW Wind at 40 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn NNE and spots over the SB I-5 impacting Ridge Route north of Evac Point 2 at 60 min (elapsed time). The fire spots over the SB I-5 south of Evac Point 3A at 90 min (elapsed time) continues to burn to the north to the north and south along the west side of the Project Site.

SSW Spot at 40 mph Approved				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	**0:15**	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
30	**0:30**	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
45	**0:45**	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
60	**1:00**	Open	**Closed**	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
75	**1:15**	Open	**Closed**	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
90	**1:30**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
105	**1:45**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
120	**2:00**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
135	**2:15**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
150	**2:30**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
165	**2:45**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
180	**3:00**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
195	**3:15**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
210	**3:30**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
225	**3:45**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
240	**4:00**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
255	**4:15**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
270	**4:30**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
285	**4:45**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
300	**5:00**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
315	**5:15**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
330	**5:30**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
345	**5:45**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
360	**6:00**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
375	**6:15**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
390	**6:30**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
405	**6:45**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open
420	**7:00**	Open	Open	**Closed**	n/a	n/a	**Closed**	Open	Open	Open	Open



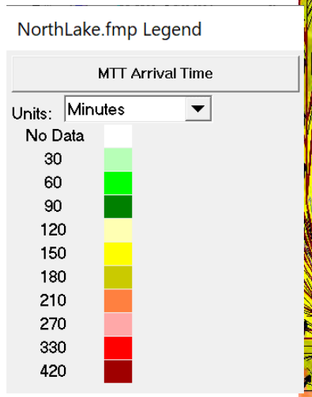
SSWat40Spot	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	60 min (30 min)
Evac Pt. 3A	60 min* (remains)

* Evacuation Point is impacted at two hours but the route to the Evac. Pt. is impacted at 60 min.

Increased Wind Speed (SSW direction)
Creek Avoidance Development Added

This is the Route Fire with 40 mph winds (sustained). The fire was made to spot over the freeways and start again.

Development shown as modified wildland fuels due to fuel modification, plant pallet restriction and structure hardening



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Wind Direction

Spread Direction

Fire Flow Path

Origin of the Fire

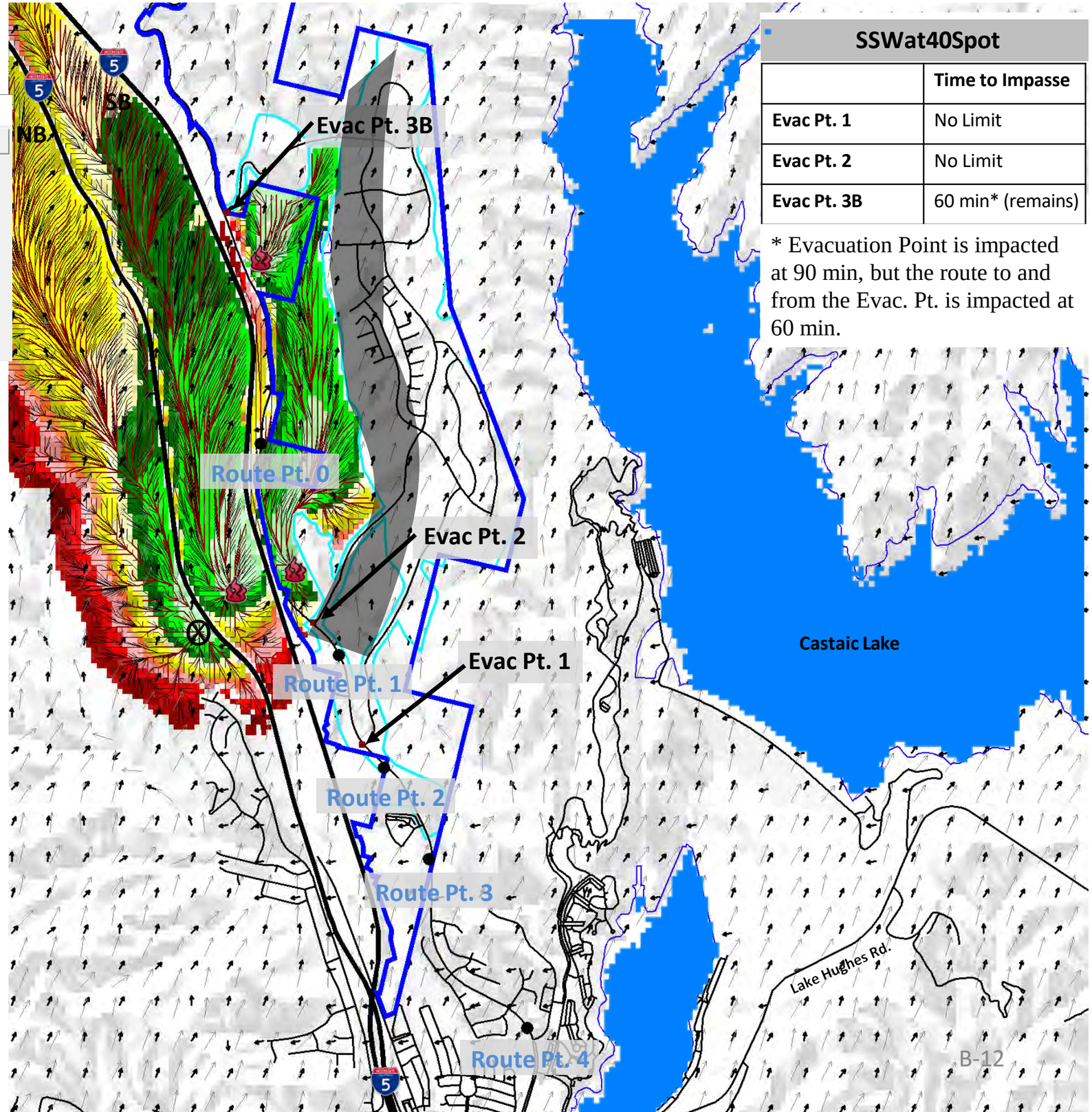
Spot Fire

Evacuation Point

Route Point

Area of Population at Immediate Risk

Origin to first spot 30 min.
First spot to second spot 30 min.
First spot to Third spot 60 min.
SSW wind at 40 Spot



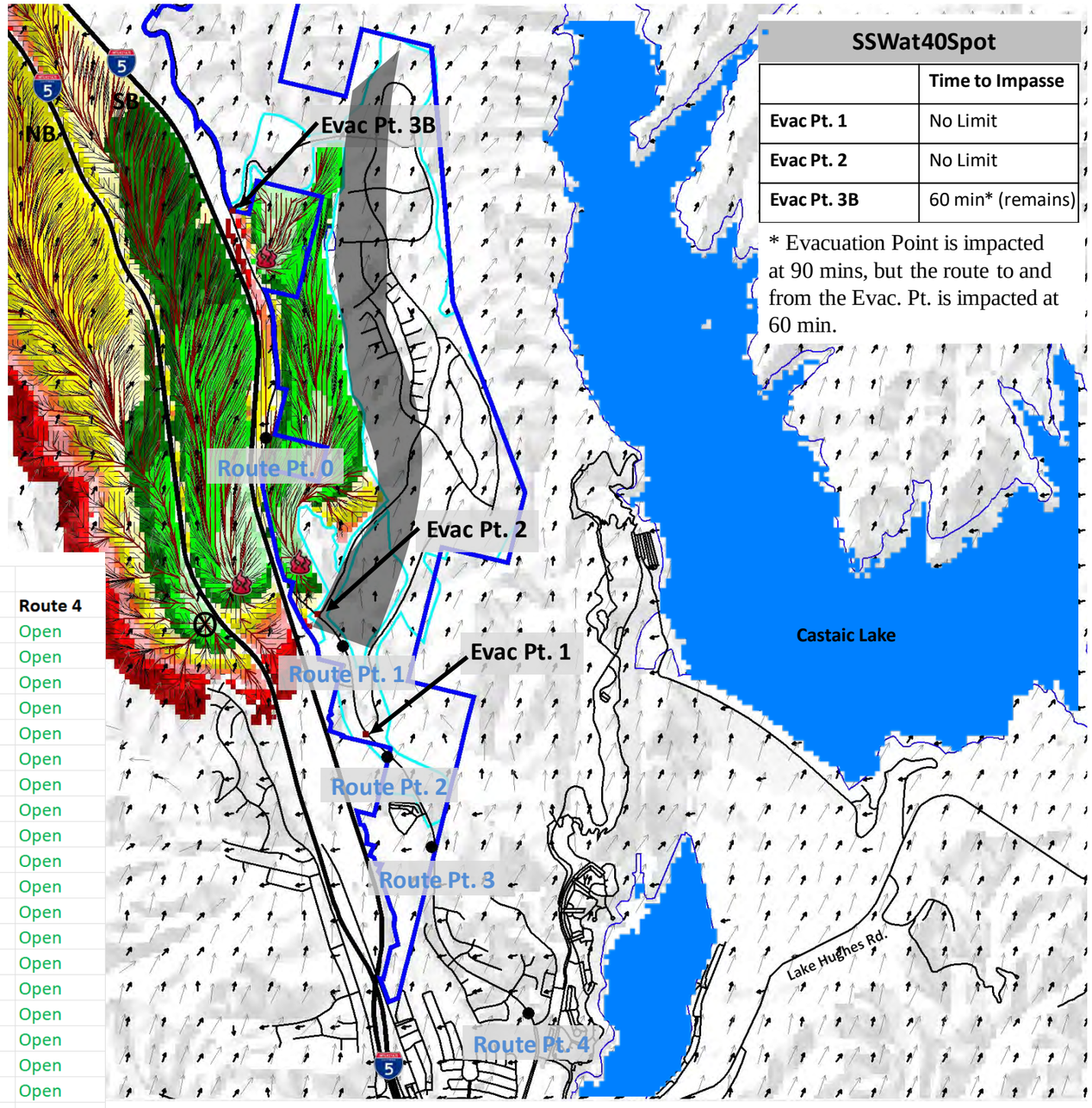
SSWat40Spot	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3B	60 min* (remains)

* Evacuation Point is impacted at 90 min, but the route to and from the Evac. Pt. is impacted at 60 min.

Increased Wind Speed (SSW direction)
Creek Avoidance Development Added

Narrative: Fire begins as spot fires west of the northbound I-5 under a SSW Wind at 40 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn NNE and spots over the SB I-5 impacting Ridge Route north of Evac Point 2 at 60 min (elapsed time). The fire spots over the SB I-5 south of Evac Point 3A at 90 min (elapsed time) continues to burn to the north to the north and south along the west side of the Project Site.

SSW Spot at 40 mph Avoid				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	**0:15**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
30	**0:30**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
45	**0:45**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
60	**1:00**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
75	**1:15**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
90	**1:30**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
105	**1:45**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
120	**2:00**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
135	**2:15**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
150	**2:30**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
165	**2:45**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
180	**3:00**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
195	**3:15**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
210	**3:30**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
225	**3:45**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
240	**4:00**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
255	**4:15**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
270	**4:30**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
285	**4:45**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
300	**5:00**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
315	**5:15**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
330	**5:30**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
345	**5:45**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
360	**6:00**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
375	**6:15**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
390	**6:30**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
405	**6:45**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
420	**7:00**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open



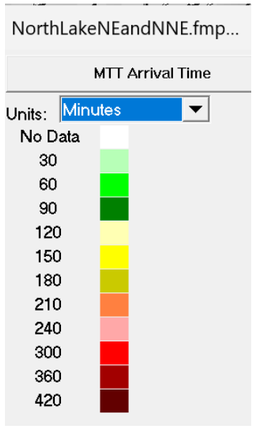
SSWat40Spot	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3B	60 min* (remains)

* Evacuation Point is impacted at 90 mins, but the route to and from the Evac. Pt. is impacted at 60 min.

Increased Wind Speed (SSW direction)
Partial Creek Avoidance Development Added

This is the Route Fire with 40 mph winds (sustained). The fire was made to spot over the freeways and start again.

Development shown as modified wildland fuels due to fuel modification, plant palleted restriction and structure hardening



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

Spread Direction

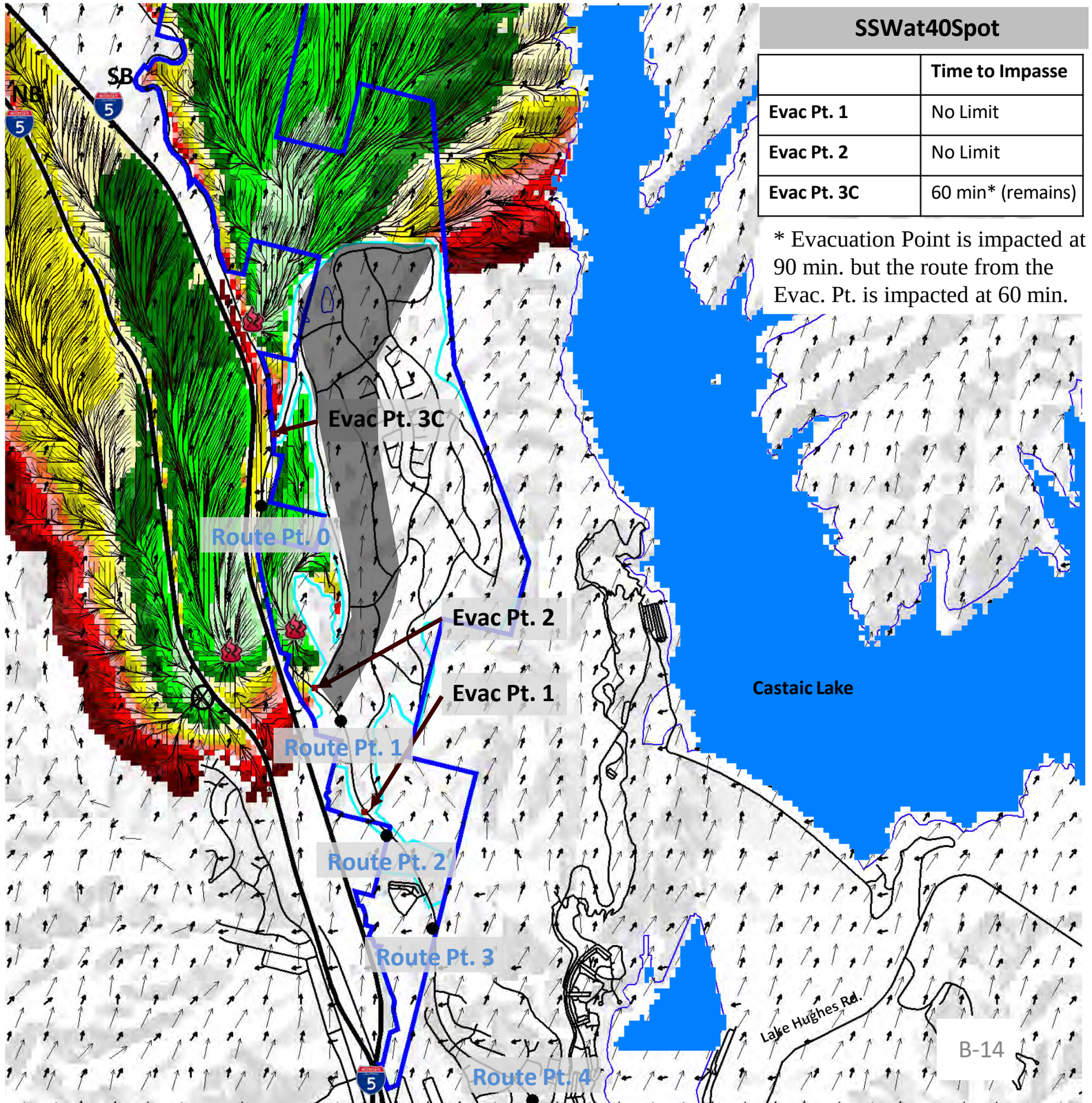
Fire Flow Path

Origin of the Fire

Spot Fire

Origin to first spot 30 min.
First spot to second spot 30 min.
Third spot 60 min.

SSW wind at 40 Spot



SSWat40Spot

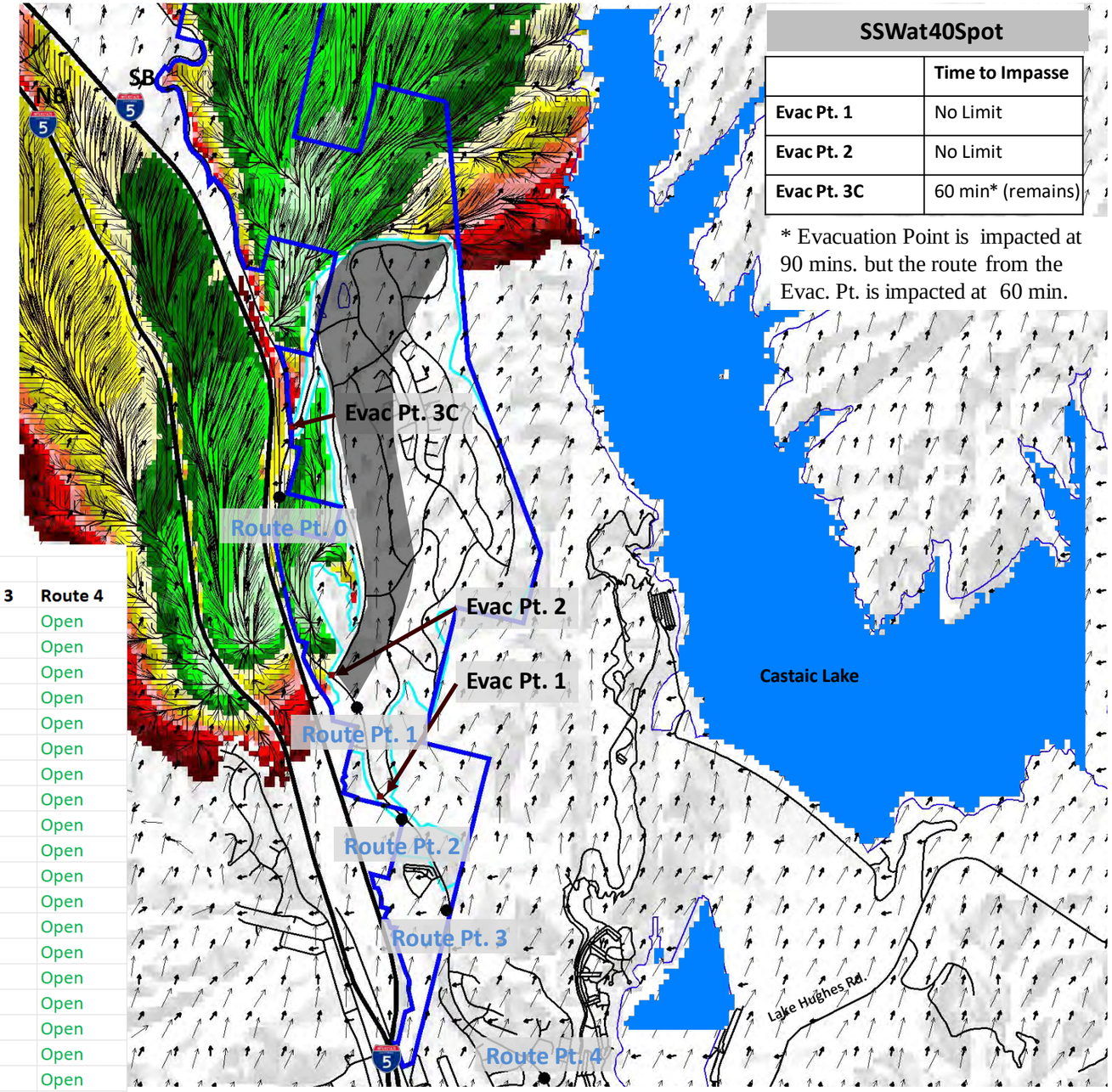
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3C	60 min* (remains)

* Evacuation Point is impacted at 90 min. but the route from the Evac. Pt. is impacted at 60 min.

Increased Wind Speed (SSW direction)
Partial Creek Avoidance Development Added

Narrative: Fire begins as spot fires west of the northbound I-5 under a SSW Wind at 40 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn NNE and spots over the SB I-5 impacting Ridge Route north of Evac Point 2 at 60 min (elapsed time). The fire spots over the SB I-5 south of Evac Point 3A at 90 min (elapsed time) continues to burn to the north to the north and south along the west side of the Project Site.

SSW Spot at 40 mph Partial Avoid				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	**0:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
30	**0:30**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
45	**0:45**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
60	**1:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
75	**1:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
90	**1:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
105	**1:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
120	**2:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
135	**2:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
150	**2:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
165	**2:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
180	**3:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
195	**3:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
210	**3:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
225	**3:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
240	**4:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
255	**4:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
270	**4:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
285	**4:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
300	**5:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
315	**5:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
330	**5:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
345	**5:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
360	**6:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
375	**6:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
390	**6:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
405	**6:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
420	**7:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open



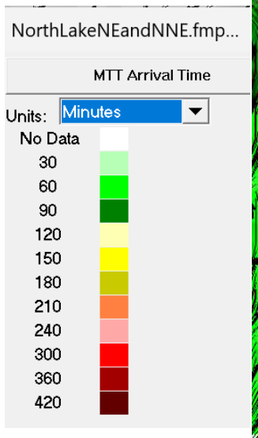
SSWat40Spot	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3C	60 min* (remains)

* Evacuation Point is impacted at 90 mins. but the route from the Evac. Pt. is impacted at 60 min.

Increased Wind Speed (SSW direction) Line of Fire with Previously Approved Development

This fire with 40 mph winds (sustained) starts from an established line of fire to the SW.

The fire was made to spot over the freeways and start again.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

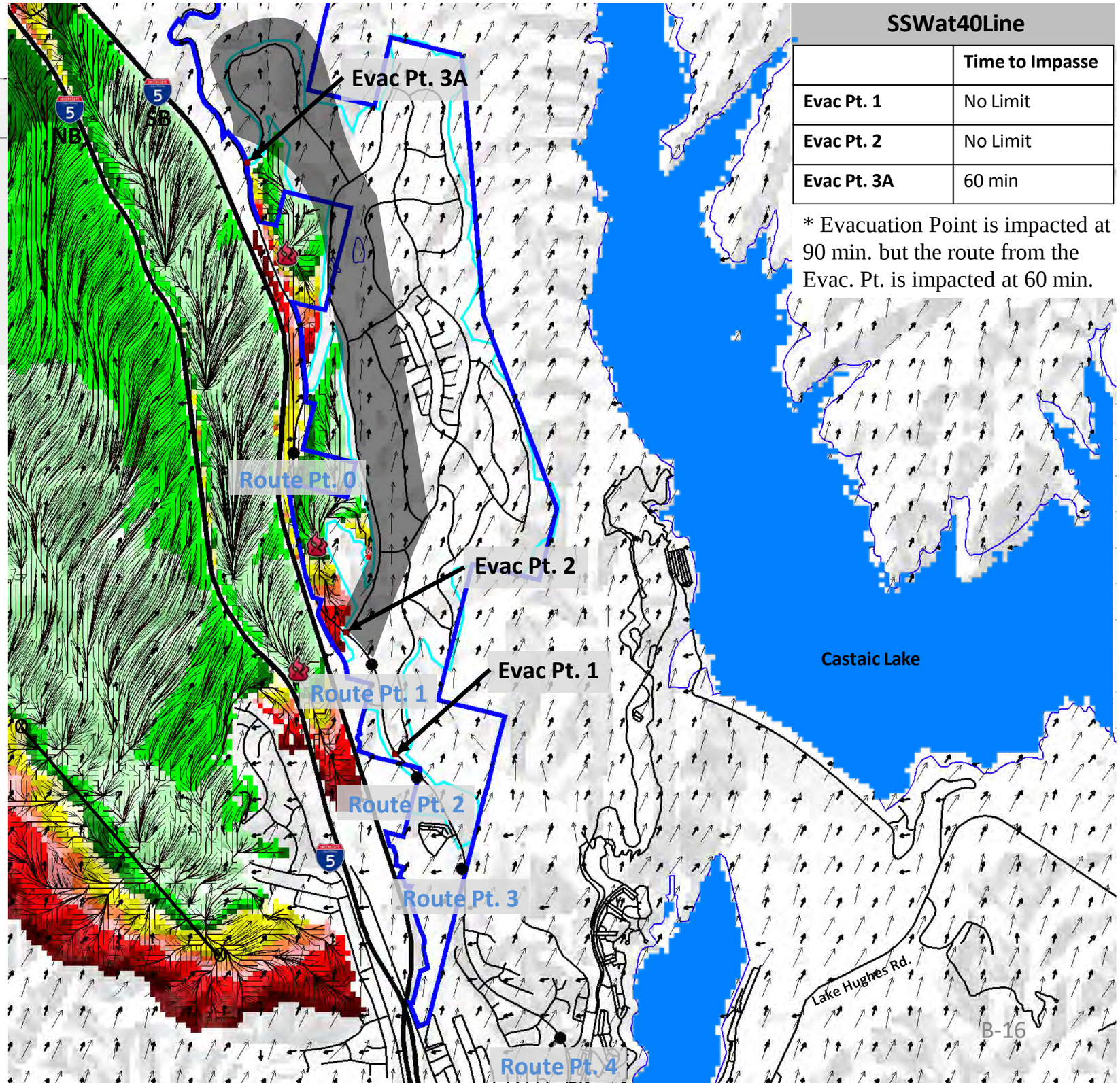
Spread Direction

Fire Flow Path

Origin of the Fire

Spot Fire

Origin to first spot 30 min.
First spot to second spot 30 min.
Third spot 30 min.
SSW wind at 40 Line



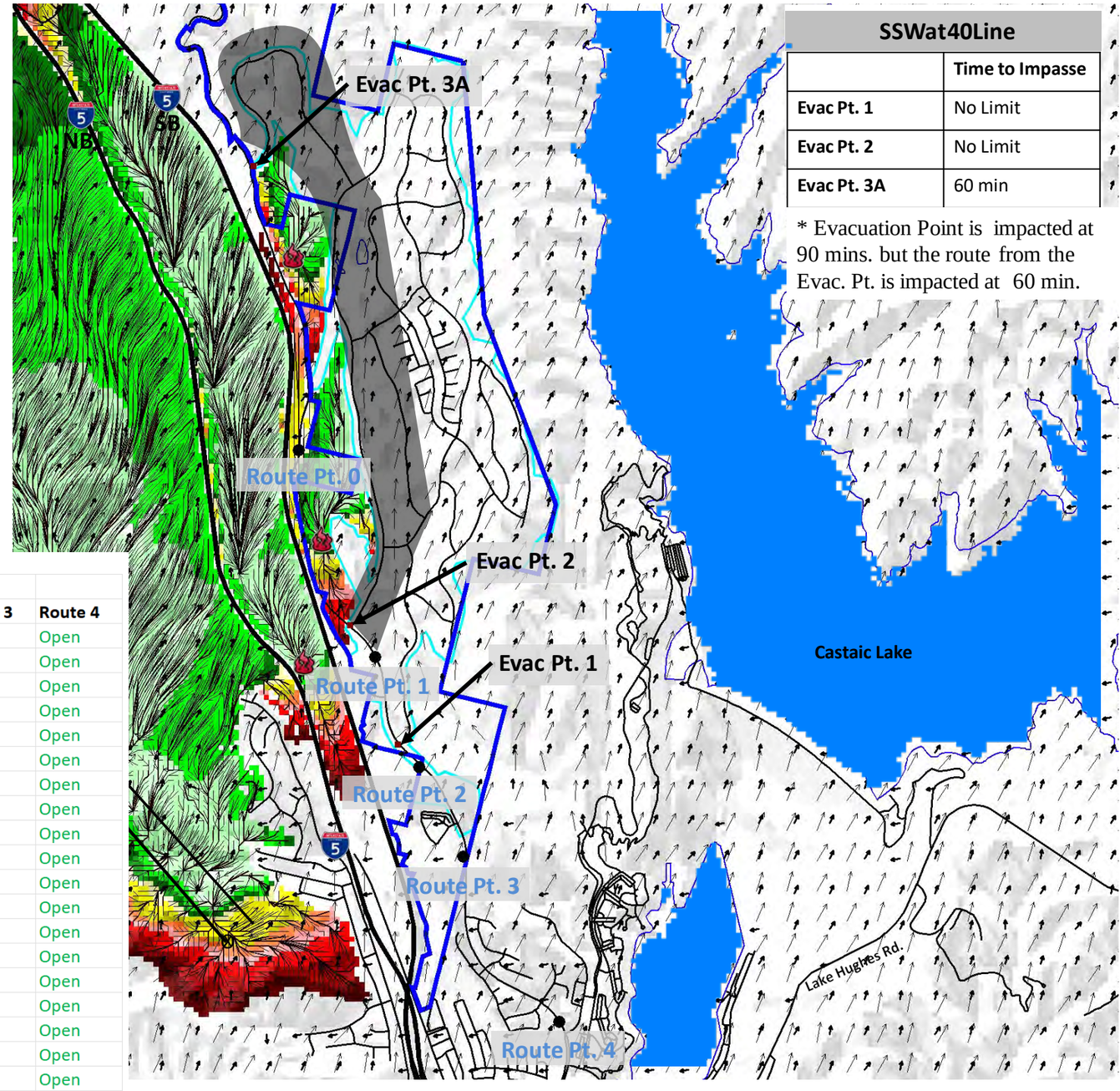
SSWat40Line	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3A	60 min

* Evacuation Point is impacted at 90 min. but the route from the Evac. Pt. is impacted at 60 min.

Increased Wind Speed (SSW direction) Line of Fire with Previously Approved Development

Narrative: Fire as a line of fire west of the northbound I-5 under a SSW Wind at 40 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn NNE and spots over the SB I-5 impacting Ridge Route north of Evac Point 2 at 60 min (elapsed time). The fire spots over the SB I-5 south of Evac Point 3A at 90 min (elapsed time) continues to burn to the north to the north and south along the west side of the Project Site.

SSW Line at 40 mph Approved				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
75	1:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
90	1:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
105	1:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
120	2:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
135	2:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
150	2:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
165	2:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
180	3:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
195	3:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
210	3:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
225	3:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
240	4:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
255	4:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
270	4:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
285	4:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
300	5:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
315	5:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
330	5:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
345	5:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
360	6:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
375	6:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
390	6:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
405	6:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
420	7:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open



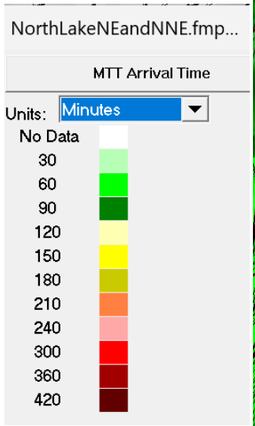
SSWat40Line	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3A	60 min

* Evacuation Point is impacted at 90 mins. but the route from the Evac. Pt. is impacted at 60 min.

Increased Wind Speed (SSW direction)
Line of Fire with Creek Avoidance Development

This fire with 40 mph winds (sustained) starts from an established line of fire to the SW.

The fire was made to spot over the freeways and start again.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

Spread Direction

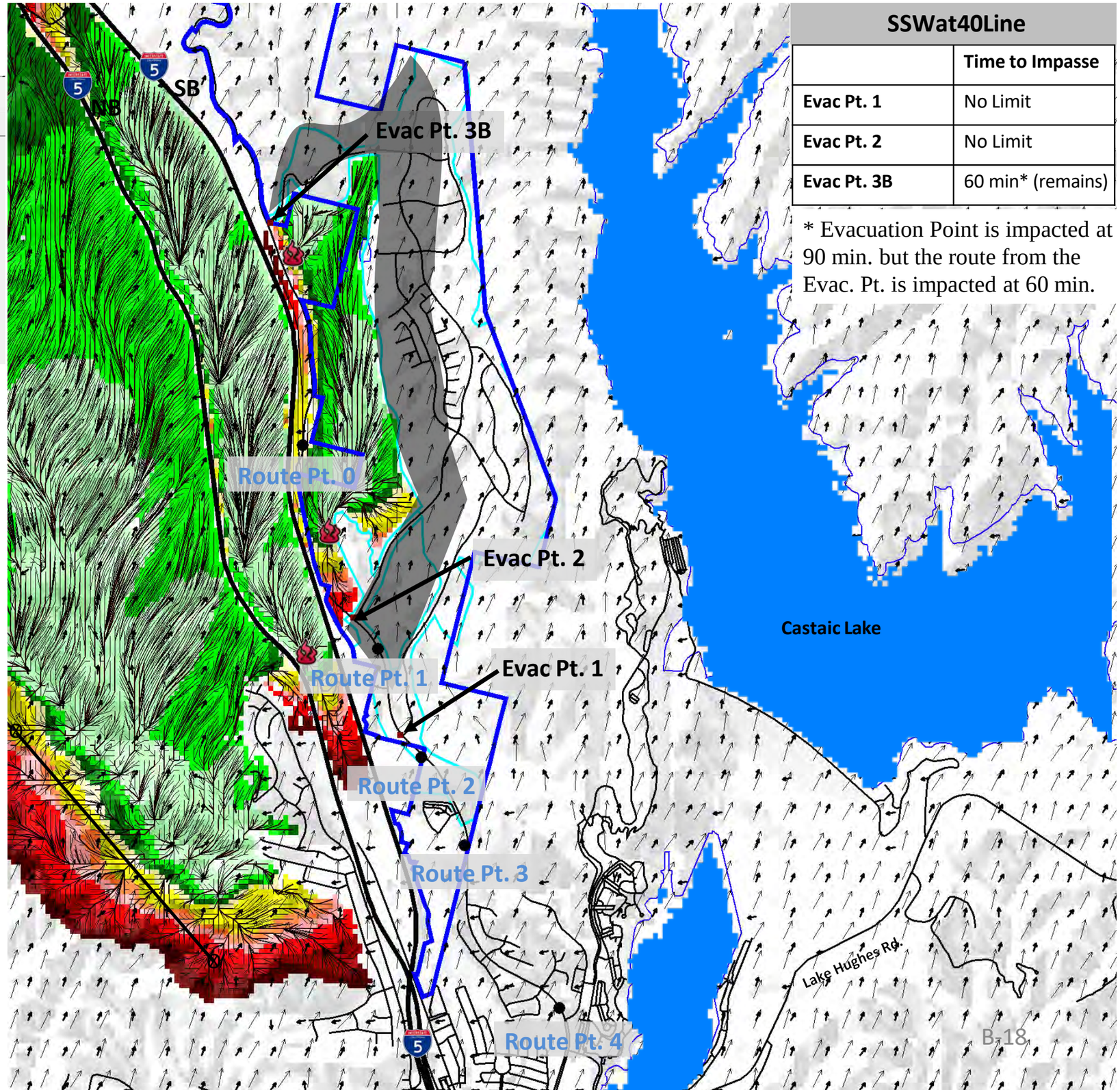
Fire Flow Path

Origin of the Fire

Spot Fire

Origin to first spot 30 min.
First spot to second spot 30 min.
Third spot 30 min.

SSW wind at 40 Line



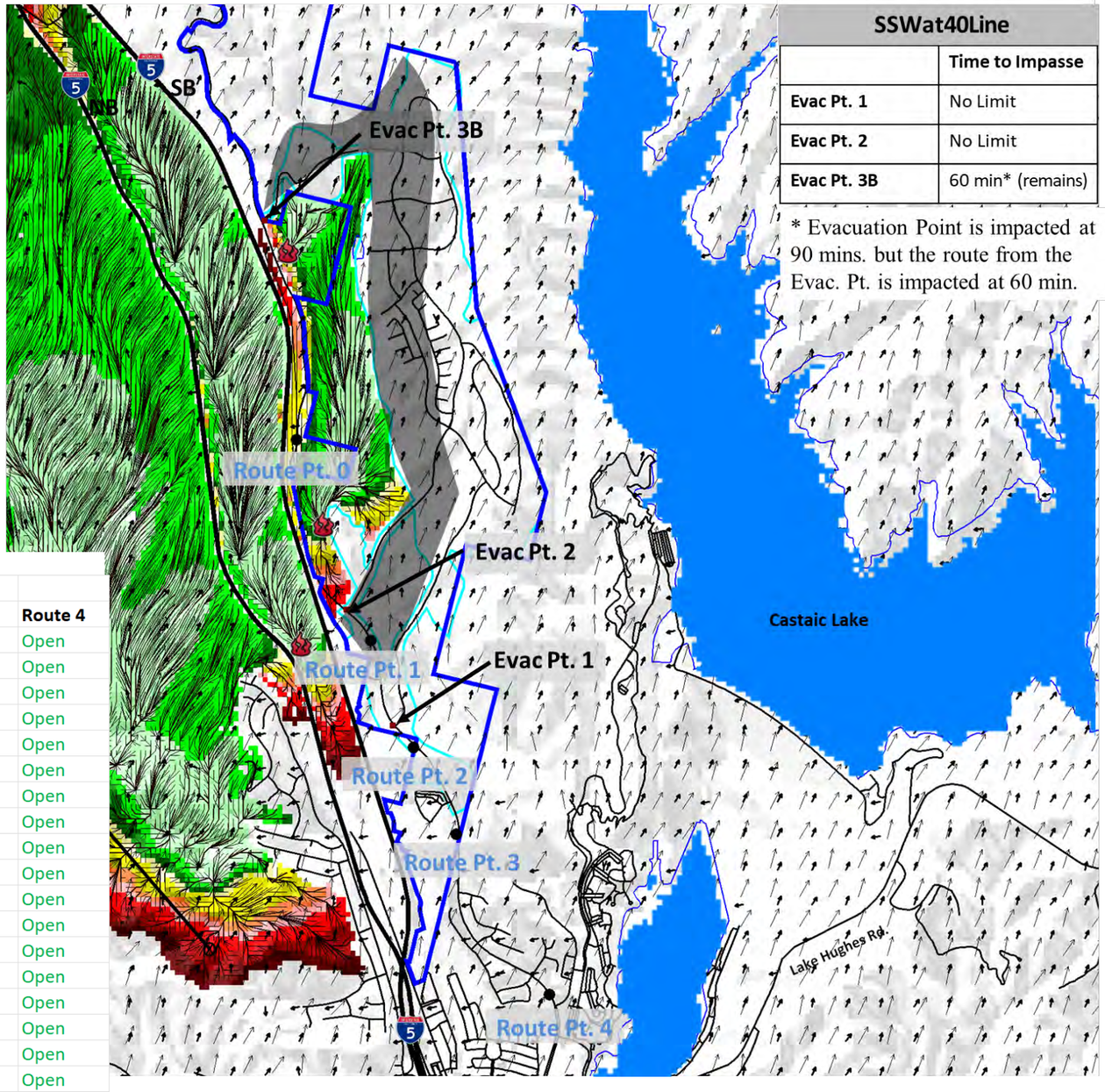
SSWat40Line	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3B	60 min* (remains)

* Evacuation Point is impacted at 90 min. but the route from the Evac. Pt. is impacted at 60 min.

Increased Wind Speed (SSW direction)
Line of Fire with Creek Avoidance Development

Narrative: Fire as a line of fire west of the northbound I-5 under a SSW Wind at 40 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn NNE and spots over the SB I-5 impacting Ridge Route north of Evac Point 2 at 60 min (elapsed time). The fire spots over the SB I-5 south of Evac Point 3A at 90 min (elapsed time) continues to burn to the north to the north and south along the west side of the Project Site.

SSW LIne at 40 mph Avoid				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	**0:15**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
30	**0:30**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
45	**0:45**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
60	**1:00**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
75	**1:15**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
90	**1:30**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
105	**1:45**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
120	**2:00**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
135	**2:15**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
150	**2:30**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
165	**2:45**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
180	**3:00**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
195	**3:15**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
210	**3:30**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
225	**3:45**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
240	**4:00**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
255	**4:15**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
270	**4:30**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
285	**4:45**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
300	**5:00**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
315	**5:15**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
330	**5:30**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
345	**5:45**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
360	**6:00**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
375	**6:15**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
390	**6:30**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
405	**6:45**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
420	**7:00**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open



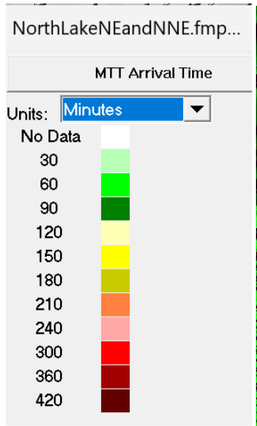
SSWat40Line	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3B	60 min* (remains)

* Evacuation Point is impacted at 90 mins. but the route from the Evac. Pt. is impacted at 60 min.

Increased Wind Speed (SSW direction)
Line of Fire with Partial Creek Avoidance Development

This fire with 40 mph winds (sustained) starts from an established line of fire to the SW.

The fire was made to spot over the freeways and start again.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

Spread Direction

Fire Flow Path

Origin of the Fire

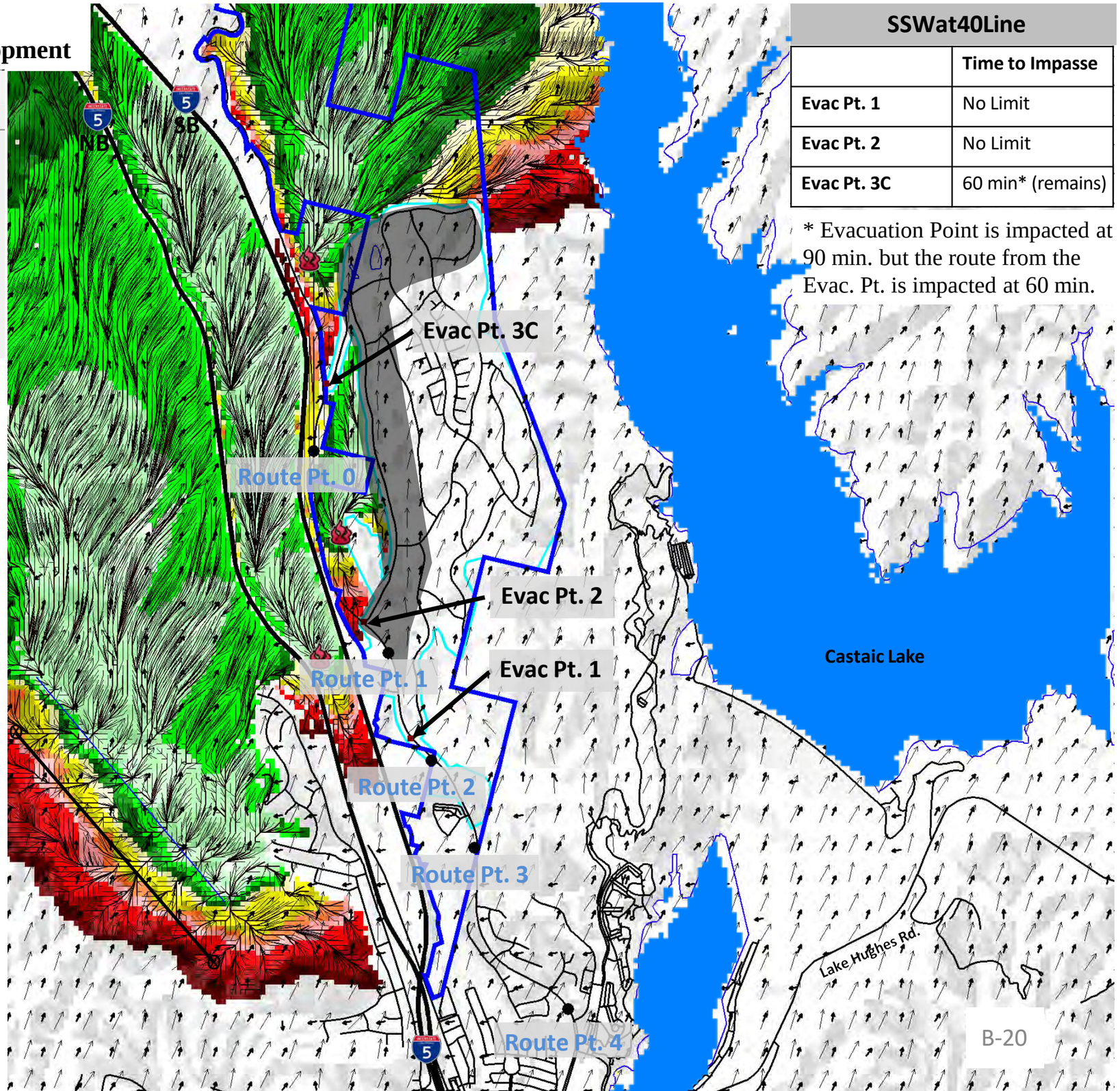
Spot Fire

Origin to first spot 30 min.
First spot to second spot 30 min.
Third spot 30 min.

SSW wind at 40 Line

SSWat40Line	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3C	60 min* (remains)

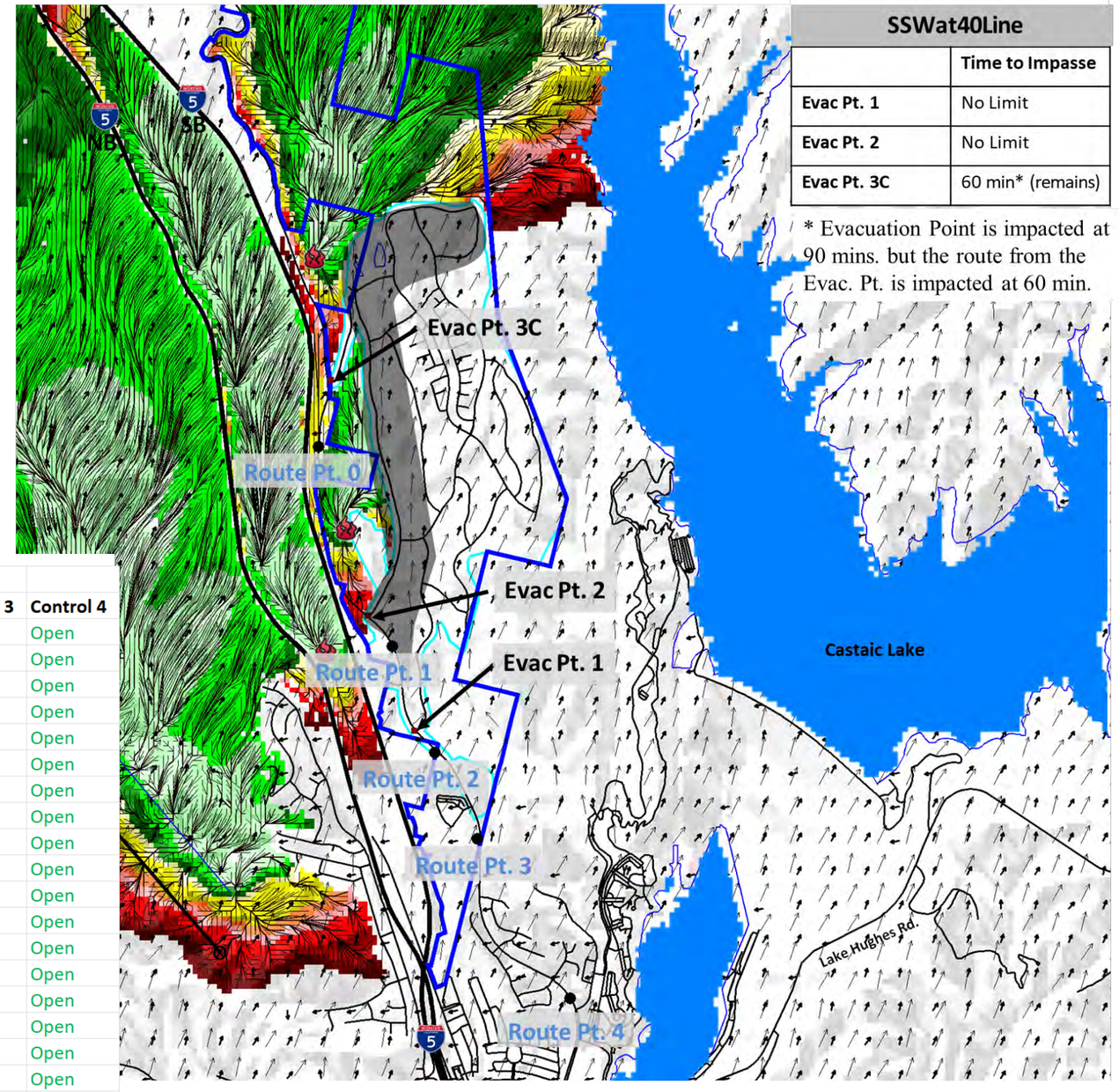
* Evacuation Point is impacted at 90 min. but the route from the Evac. Pt. is impacted at 60 min.



Increased Wind Speed (SSW direction)
Line of Fire with Partial Creek Avoidance Development

Narrative: Fire as a line of fire west of the northbound I-5 under a SSW Wind at 40 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn NNE and spots over the SB I-5 impacting Ridge Route north of Evac Point 2 at 60 min (elapsed time). The fire spots over the SB I-5 south of Evac Point 3A at 90 min (elapsed time) continues to burn to the north to the north and south along the west side and moves to the east at the top of the Project Site.

SSW Line at 40 mph Partial Avoid				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Control 0	Control 1	Control 2	Control 3	Control 4
15	**0:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
30	**0:30**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
45	**0:45**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
60	**1:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
75	**1:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
90	**1:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
105	**1:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
120	**2:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
135	**2:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
150	**2:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
165	**2:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
180	**3:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
195	**3:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
210	**3:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
225	**3:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
240	**4:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
255	**4:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
270	**4:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
285	**4:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
300	**5:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
315	**5:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
330	**5:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
345	**5:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
360	**6:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
375	**6:15**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
390	**6:30**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
405	**6:45**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
420	**7:00**	Open	Open	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open



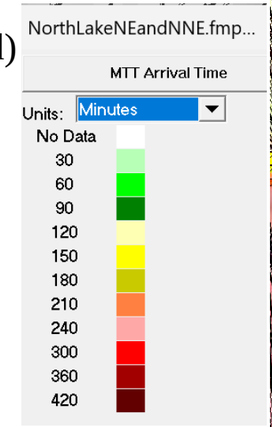
SSWat40Line	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3C	60 min* (remains)

* Evacuation Point is impacted at 90 mins. but the route from the Evac. Pt. is impacted at 60 min.

Wind Speed 40 mph (S direction) with Previously Approved Development

This fire with 40 mph winds (sustained) starts from a larger established line of fire to the South.

The fire was not made to spot over the freeways and start again as the wind direction will not take the fire in the direction of the development.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

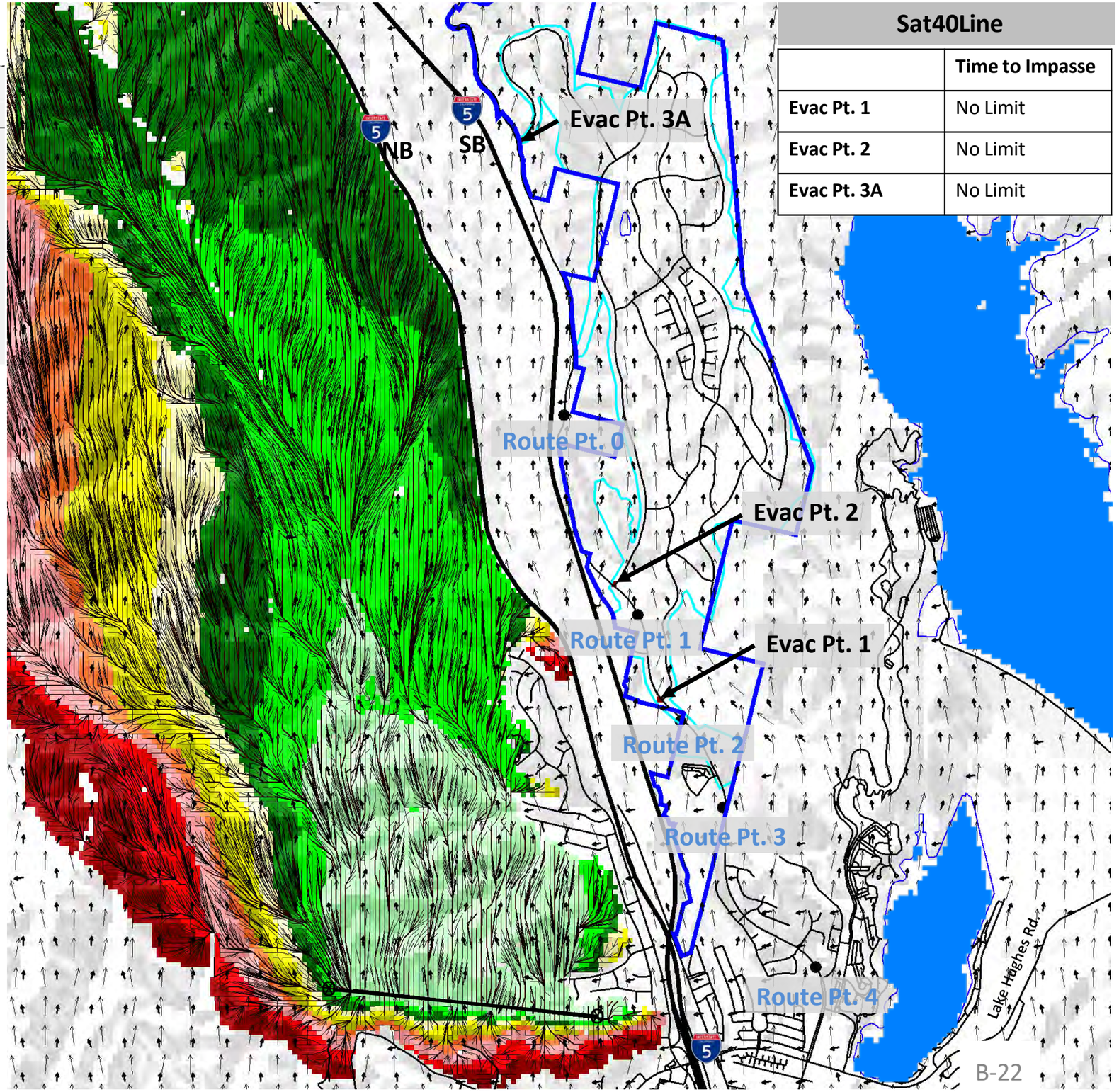
Spread Direction

Fire Flow Path

Origin of the Fire

Spot Fire

S wind at 40 Line

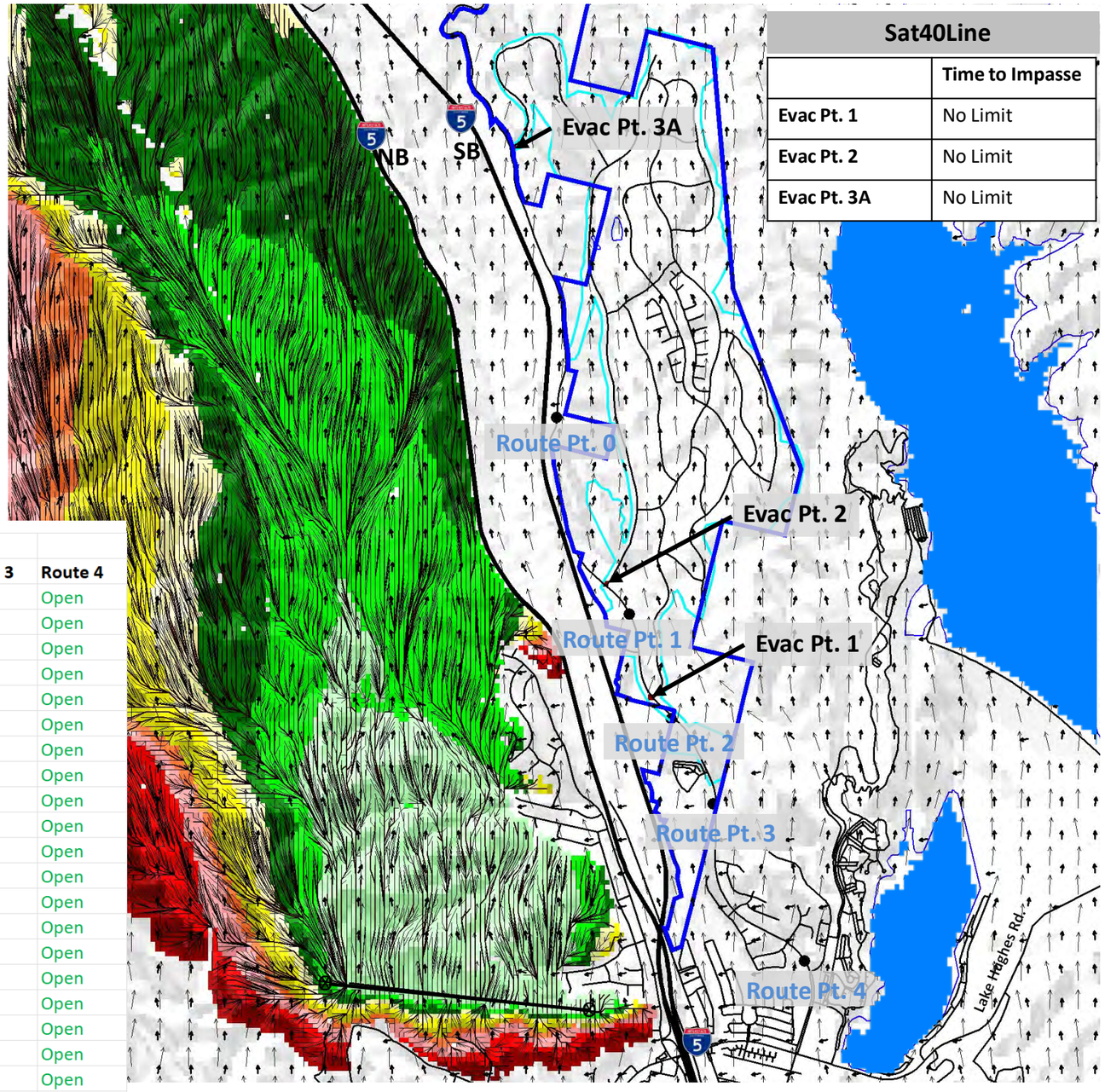


Sat40Line	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3A	No Limit

Wind Speed 40 mph (S direction) with Previously Approved Development

Narrative: Fire as a line of fire west of the northbound I-5 under a South Wind at 40 mph with the head fire moving to the north (branching to the west but holding at the freeway on the east). The wind direction and location of the fire does not have a high probability of spotting over the freeway in the vicinity of the Project Site. The program did not provide spots and they were not added manually.

South LIne at 40 mph Approved				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
75	1:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
90	1:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
135	2:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
150	2:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
255	4:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
270	4:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open

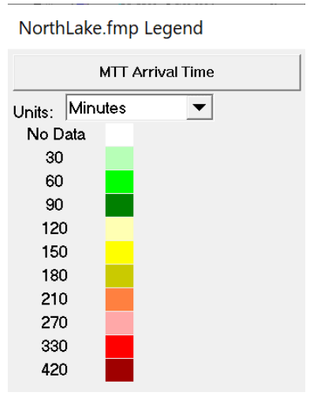


Sat40Line	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3A	No Limit

Wind Speed 40 mph (S direction) with Creek Avoidance Development

This fire with 40 mph winds (sustained) starts from a larger established line of fire to the South.

The fire was not made to spot over the freeways and start again as the wind direction will not take the fire in the direction of the development.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

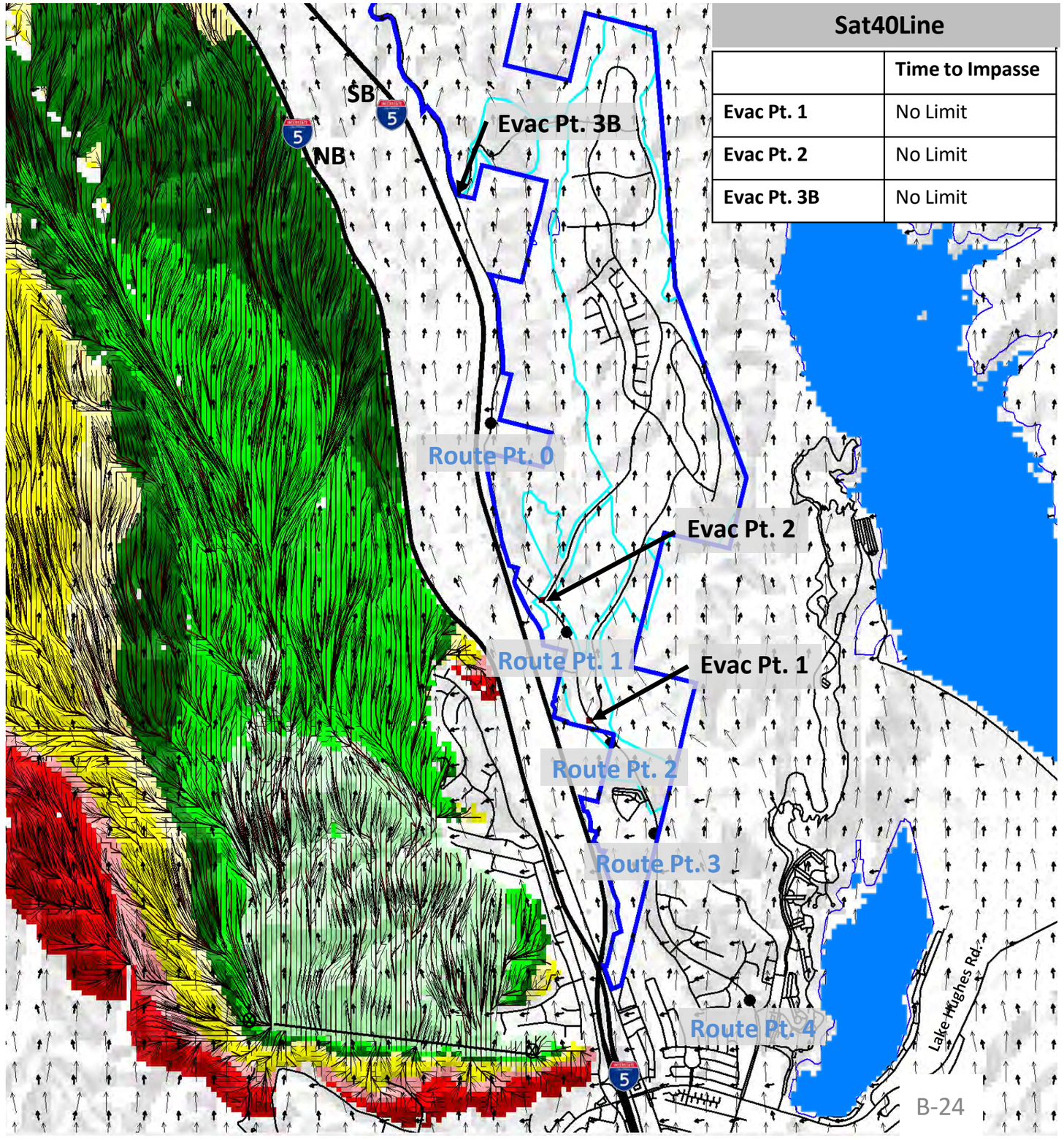
Spread Direction

Fire Flow Path

Origin of the Fire

Spot Fire

S wind at 40 Line



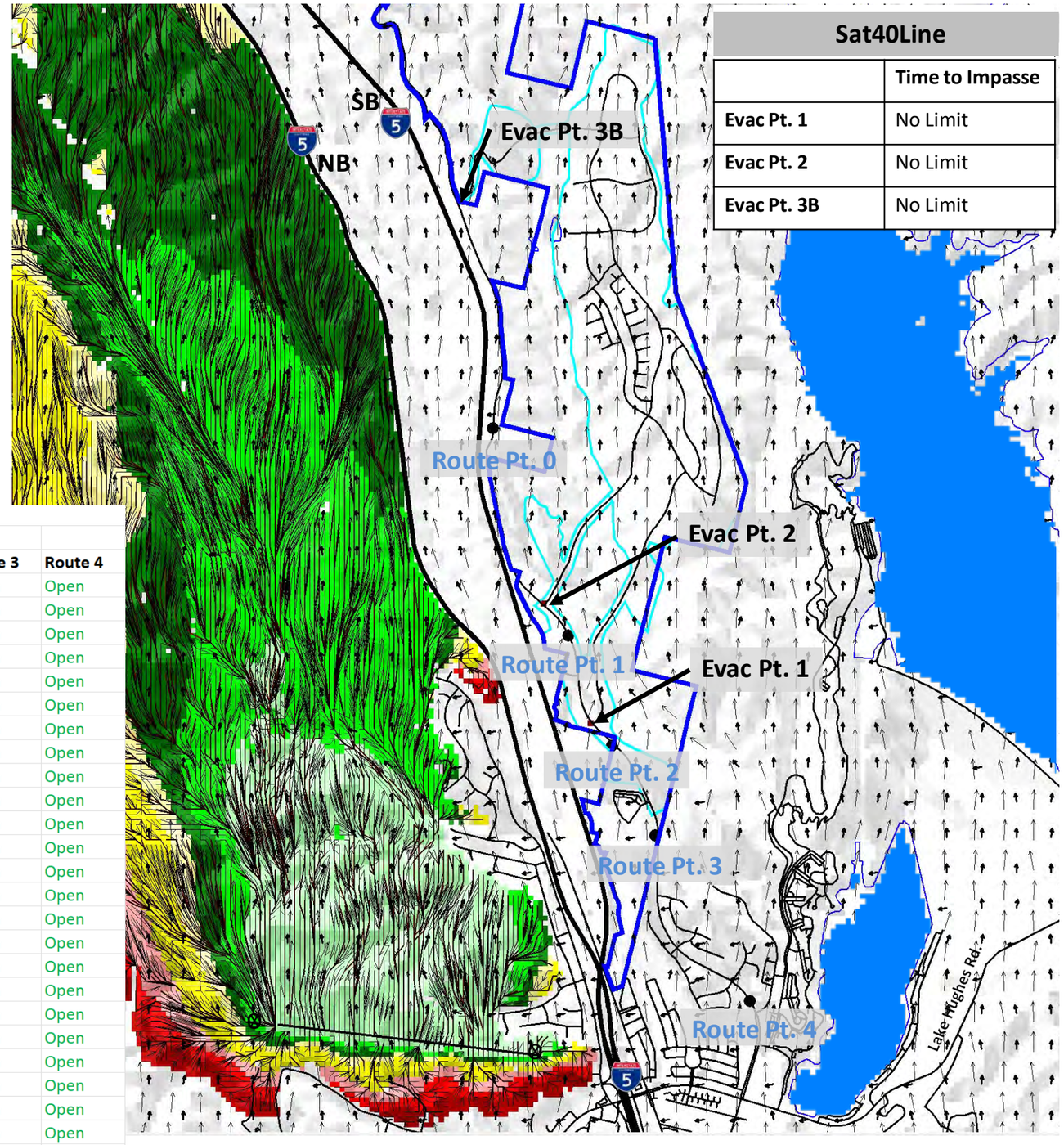
Sat40Line

	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3B	No Limit

Wind Speed 40 mph (S direction) with Creek Avoidance Development

Narrative: Fire as a line of fire west of the northbound I-5 under a South Wind at 40 mph with the head fire moving to the north (branching to the west but holding at the freeway on the east). The wind direction and location of the fire does not have a high probability of spotting over the freeway in the vicinity of the Project Site. The program did not provide spots and they were not added manually.

South LIne at 40 mph Avoid				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	**0:15**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
30	**0:30**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
45	**0:45**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
60	**1:00**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
75	**1:15**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
90	**1:30**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
105	**1:45**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
120	**2:00**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
135	**2:15**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
150	**2:30**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
165	**2:45**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
180	**3:00**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
195	**3:15**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
210	**3:30**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
225	**3:45**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
240	**4:00**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
255	**4:15**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
270	**4:30**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
285	**4:45**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
300	**5:00**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
315	**5:15**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
330	**5:30**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
345	**5:45**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
360	**6:00**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
375	**6:15**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
390	**6:30**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
405	**6:45**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
420	**7:00**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open

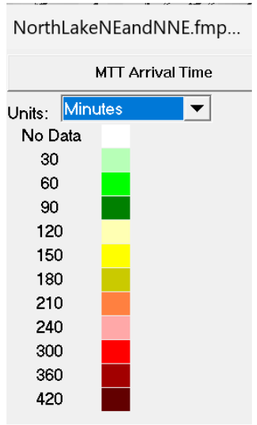


Sat40Line	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3B	No Limit

Wind Speed 40 mph (S direction) with Partial Creek Avoidance Development

This fire with 40 mph winds (sustained) starts from a larger established line of fire to the South.

The fire was not made to spot over the freeways and start again as the wind direction will not take the fire in the direction of the development.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

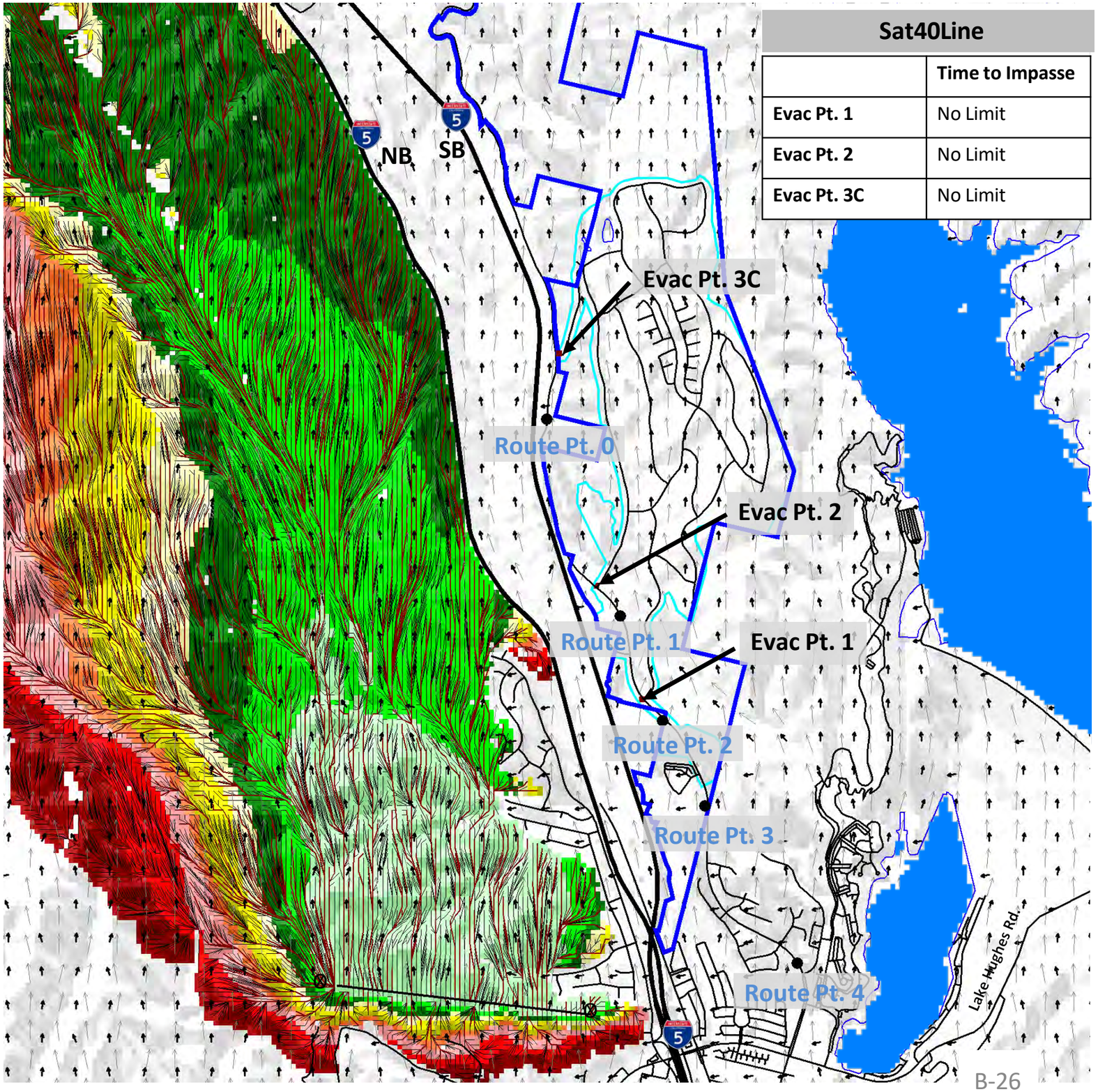
Spread Direction

Fire Flow Path

Origin of the Fire

Spot Fire

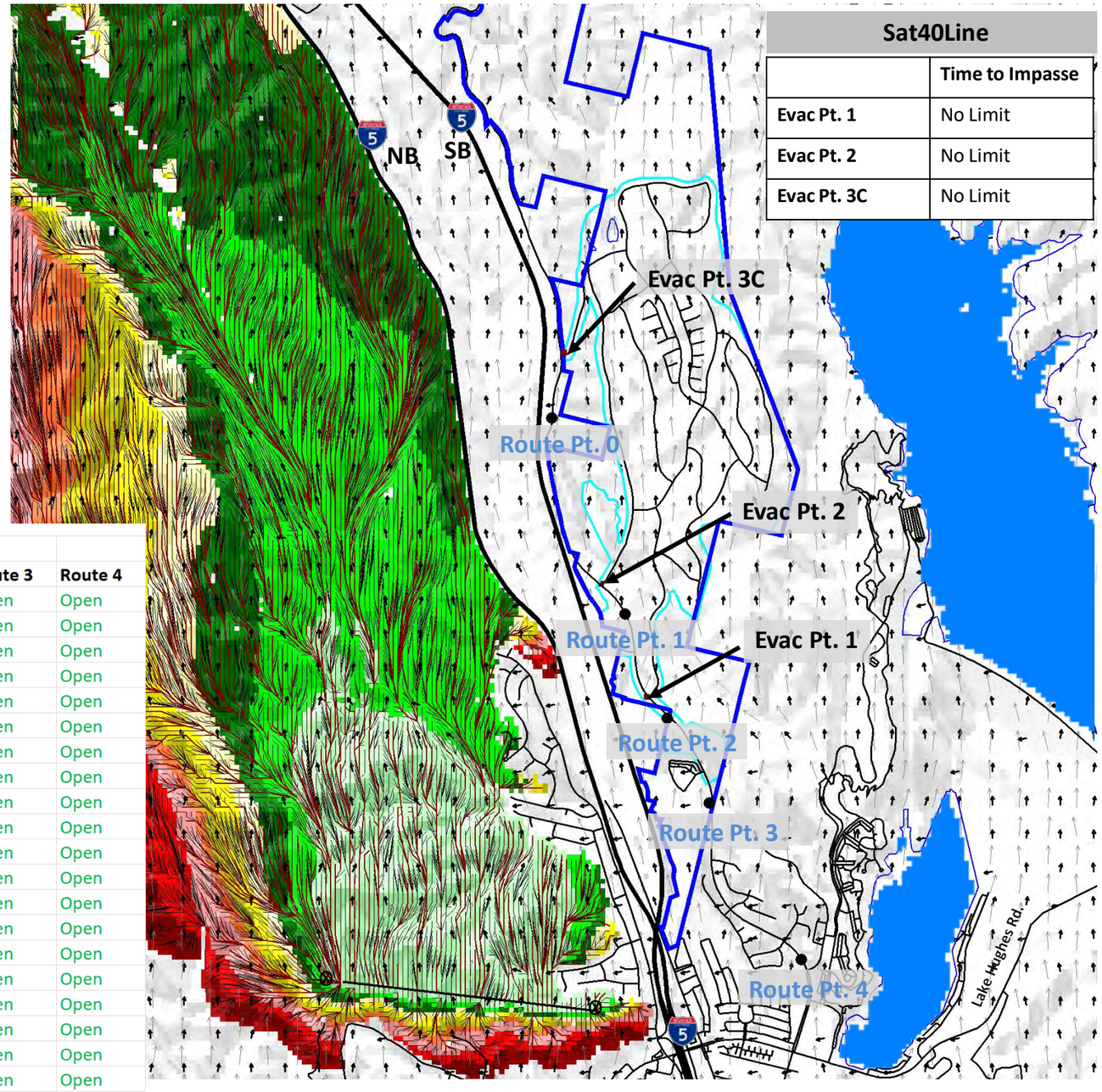
Sat40Line	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3C	No Limit



S wind at 40 Line

Wind Speed 40 mph (S direction) with Partial Creek Avoidance Development

Narrative: Fire as a line of fire west of the northbound I-5 under a South Wind at 40 mph with the head fire moving to the north (branching to the west but holding at the freeway on the east). The wind direction and location of the fire does not have a high probability of spotting over the freeway in the vicinity of the Project Site. The program did not provide spots and they were not added manually.

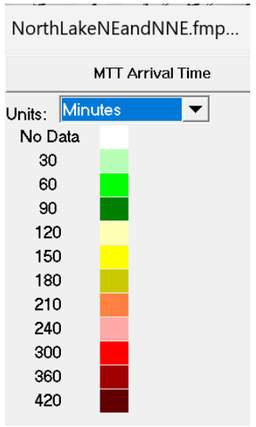


South Line at 40 mph Partial Avoid				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	**0:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
30	**0:30**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
45	**0:45**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
60	**1:00**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
75	**1:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
90	**1:30**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
105	**1:45**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
120	**2:00**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
135	**2:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
150	**2:30**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
165	**2:45**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
180	**3:00**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
195	**3:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
210	**3:30**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
225	**3:45**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
240	**4:00**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
255	**4:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
270	**4:30**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
285	**4:45**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
300	**5:00**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
315	**5:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
330	**5:30**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
345	**5:45**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
360	**6:00**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
375	**6:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
390	**6:30**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
405	**6:45**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
420	**7:00**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open

Spot Fire off Freeway NB (Wind S direction @ 40 mph) with Previously Approved Development

This fire with 40 mph winds (sustained) starts spot fires along side the I-5 NB at the side of the road.

The fire was made to spot to the north where wildland fuels are present within the ember cast.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

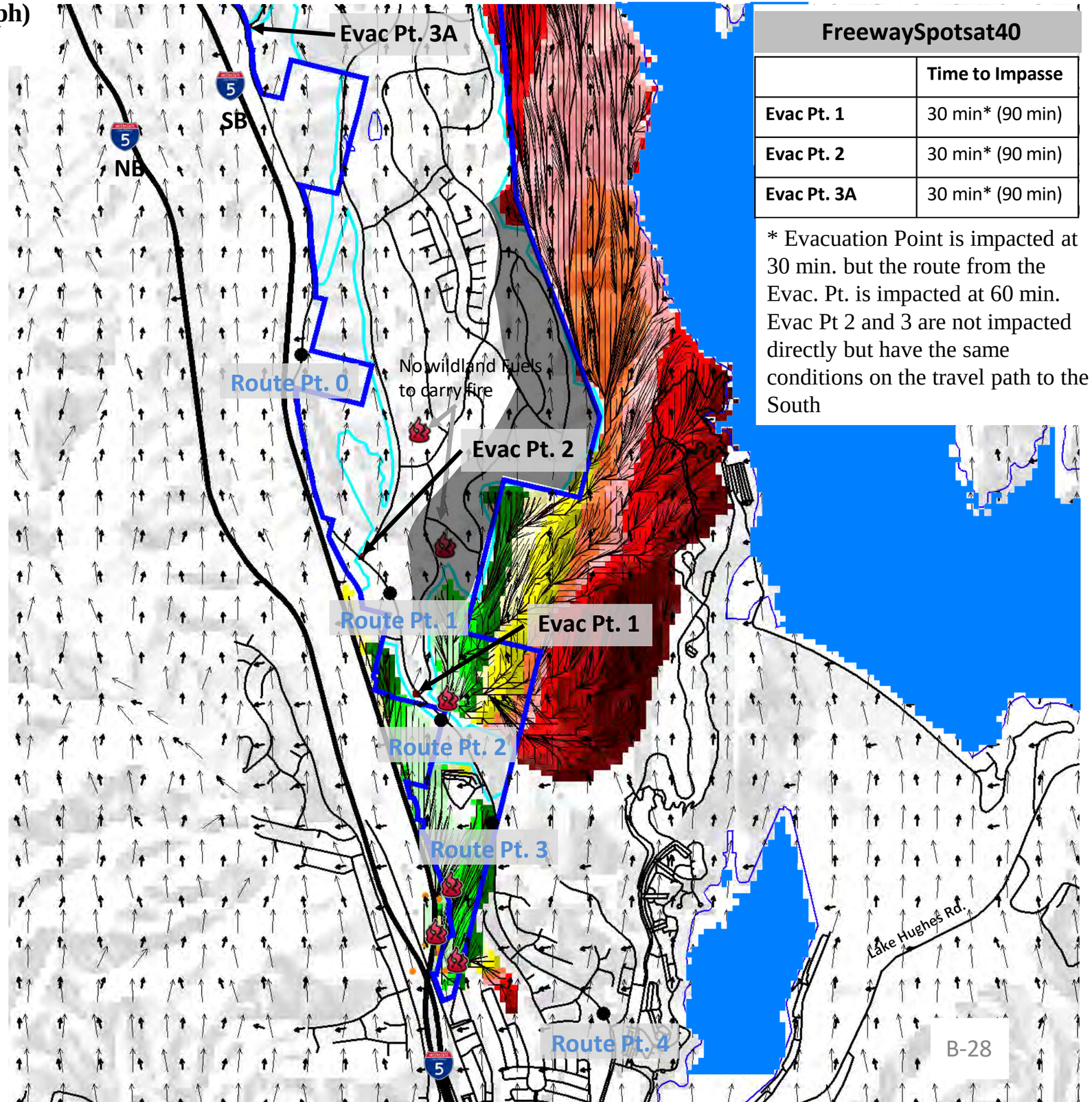
Spread Direction

Fire Flow Path

Origins of the Fire (spots)

Origin(first three spots)
Fourth spot 30 additional min.
Fifth spot 30 additional min.
Sixth spot 30 more

S wind at 40 Spots



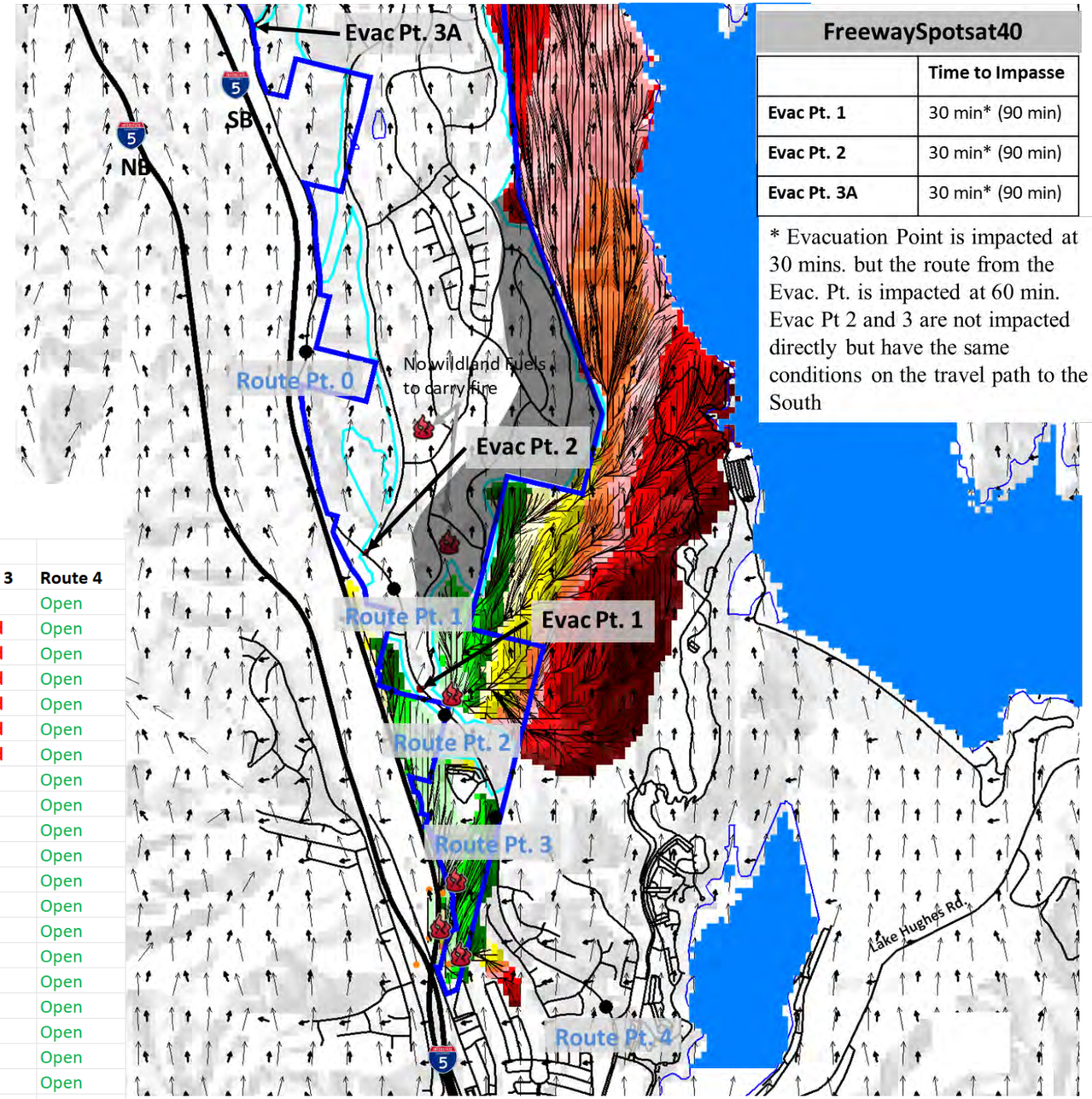
FreewaySpotsat40	
	Time to Impasse
Evac Pt. 1	30 min* (90 min)
Evac Pt. 2	30 min* (90 min)
Evac Pt. 3A	30 min* (90 min)

* Evacuation Point is impacted at 30 min. but the route from the Evac. Pt. is impacted at 60 min. Evac Pt 2 and 3 are not impacted directly but have the same conditions on the travel path to the South

Spot Fire off Freeway NB (Wind S direction @ 40 mph) with Previously Approved Development

Narrative: Fire begins as a series of spot fires on the SB I-5 north of the NB/SB crossover. The fires is driven by a South wind at 40 mph. The fire was made to spot over Ridge Route in 30 min. It was made to spot again in another 30 min (60 min. elapsed time) to the north and a final time in another 30 min. (90 min. elapsed time). No flame propagation within the development area occurs. Ridge Route will be impacted for approximately 90 minutes for all Evac Points beginning 30 min into the scenario. Once the fire has passed this impact points, all Evac Points will reopen and remain open.

Freeway Spot at 40 mph Approved		Evacuation to the South									
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Closed	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Open
45	0:45	Closed	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Open
60	1:00	Closed	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Open
75	1:15	Closed	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Open
90	1:30	Closed	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Open
105	1:45	Closed	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Open
120	2:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
135	2:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
150	2:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
255	4:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
270	4:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open



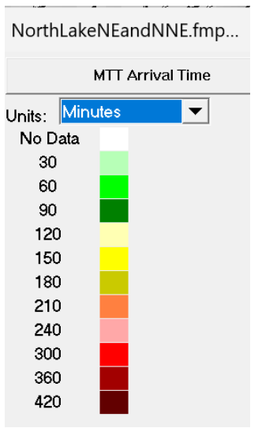
FreewaySpotsat40	
	Time to Impasse
Evac Pt. 1	30 min* (90 min)
Evac Pt. 2	30 min* (90 min)
Evac Pt. 3A	30 min* (90 min)

* Evacuation Point is impacted at 30 mins. but the route from the Evac. Pt. is impacted at 60 min. Evac Pt 2 and 3 are not impacted directly but have the same conditions on the travel path to the South

Spot Fire off Freeway NB (Wind S direction @ 40 mph) with Creek Avoidance Development

This fire with 40 mph winds (sustained) starts spot fires along side the I-5 NB at the side of the road.

The fire was made to spot to the north where wildland fuels are present within the ember cast.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

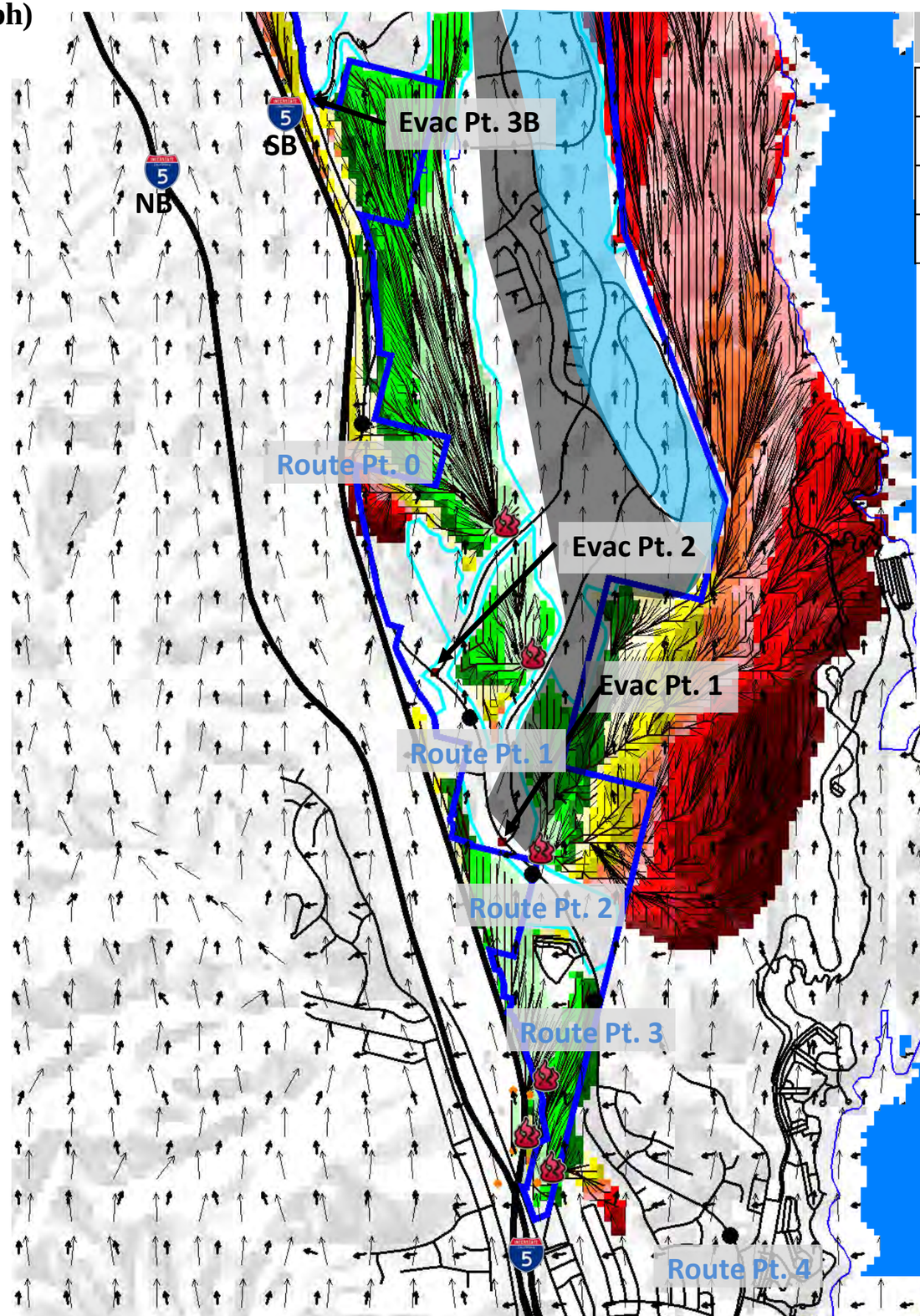
Spread Direction

Fire Flow Path

Origins of the Fire (spots)

Origin(first three spots)
Fourth spot 30 additional min.
Fifth spot 30 additional min.
Sixth spot 30 more

S wind at 40 Spots



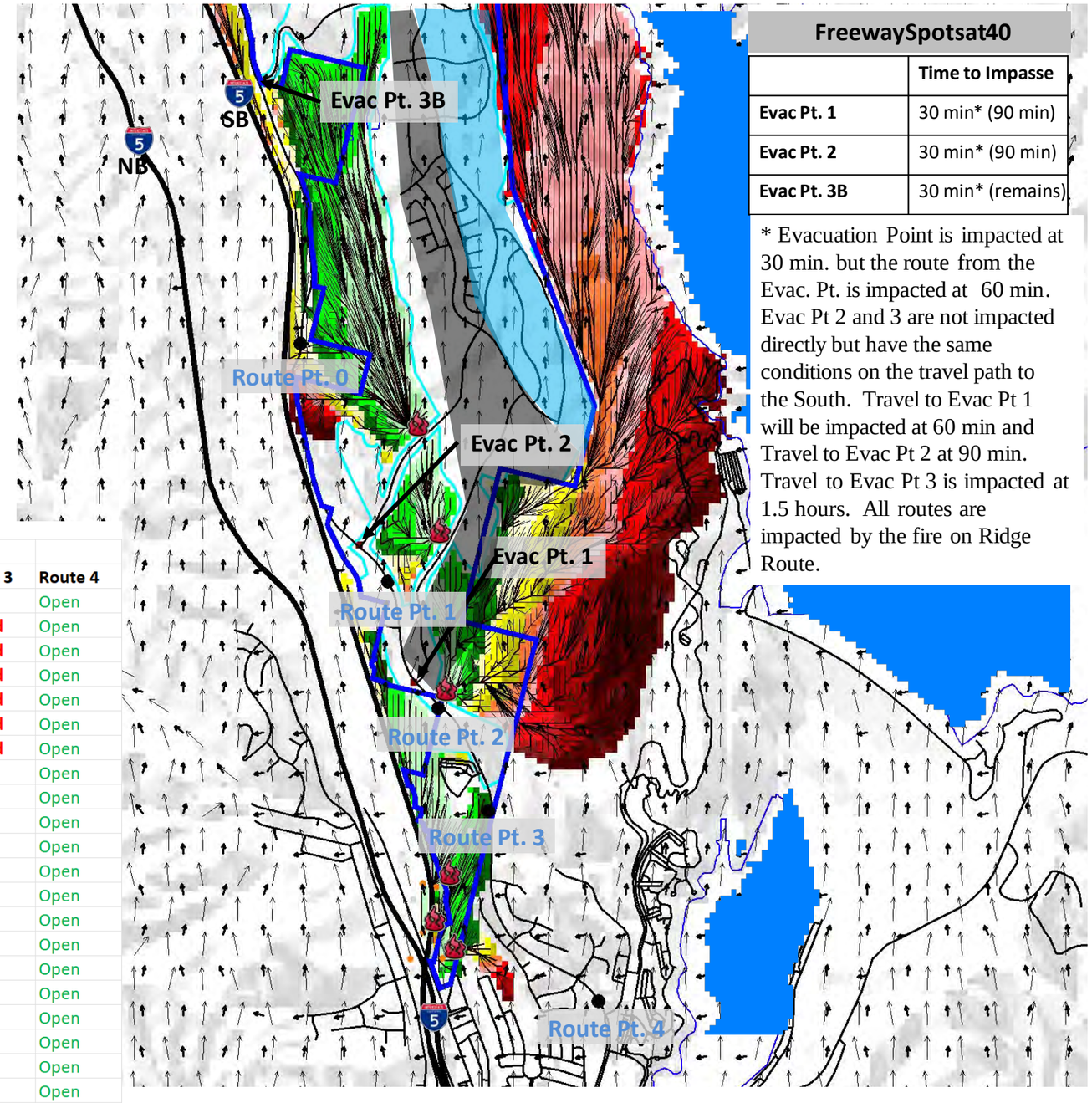
FreewaySpotsat40	
	Time to Impasse
Evac Pt. 1	30 min* (90 min)
Evac Pt. 2	30 min* (90 min)
Evac Pt. 3B	30 min* (remains)

* Evacuation Point is impacted at 30 min. but the route from the Evac. Pt. is impacted at 60 min. Evac Pt 2 and 3 are not impacted directly but have the same conditions on the travel path to the South. Travel to Evac Pt 1 will be impacted at 60 min and Travel to Evac Pt 2 at 90 min. Travel to Evac Pt 3 is impacted at 1.5 hours. All routes are impacted by the fire on Ridge Route.

Spot Fire off Freeway NB (Wind S direction @ 40 mph) with Creek Avoidance Development

Narrative: Fire begins as a series of spot fires on the SB I-5 north of the NB/SB crossover. The fires is driven by a South wind at 40 mph. The fire was made to spot over Ridge Route in 30 min. It was made to spot again in another 30 min (60 min. elapsed time) to the north and a final time in another 30 min. (90 min. elapsed time). Ridge Route will be impacted for approximately 90 minutes for all Evac Points beginning 30 min into the scenario. Once the fire has passed this impact points, all Evac Points will reopen and remain open.

Freeway Spot at 40 mph Avoid				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
30	0:30	Closed	Closed	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
45	0:45	Closed	Closed	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
60	1:00	Closed	Closed	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
75	1:15	Closed	Closed	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
90	1:30	Closed	Closed	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
105	1:45	Closed	Closed	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
120	2:00	Open	Closed	n/a	Closed	n/a	Closed	Open	Open	Open	Open
135	2:15	Open	Closed	n/a	Closed	n/a	Closed	Open	Open	Open	Open
150	2:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
165	2:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
180	3:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
195	3:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
210	3:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
225	3:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
240	4:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
255	4:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
270	4:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
285	4:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
300	5:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
315	5:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
330	5:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
345	5:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
360	6:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
375	6:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
390	6:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
405	6:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
420	7:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open



FreewaySpotsat40	
	Time to Impasse
Evac Pt. 1	30 min* (90 min)
Evac Pt. 2	30 min* (90 min)
Evac Pt. 3B	30 min* (remains)

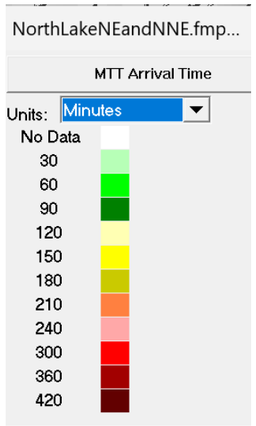
* Evacuation Point is impacted at 30 min. but the route from the Evac. Pt. is impacted at 60 min. Evac Pt 2 and 3 are not impacted directly but have the same conditions on the travel path to the South. Travel to Evac Pt 1 will be impacted at 60 min and Travel to Evac Pt 2 at 90 min. Travel to Evac Pt 3 is impacted at 1.5 hours. All routes are impacted by the fire on Ridge Route.

An early shelter in place order is likely with evacuation after the fire front has cleared Evac Pt. 1 and Route Pts 2 and 3.

Spot Fire off Freeway NB (Wind S direction @ 40 mph) with Partial Creek Avoidance Development

This fire with 40 mph winds (sustained) starts spot fires along side the I-5 NB at the side of the road.

The fire was made to spot to the north where wildland fuels are present within the ember cast.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

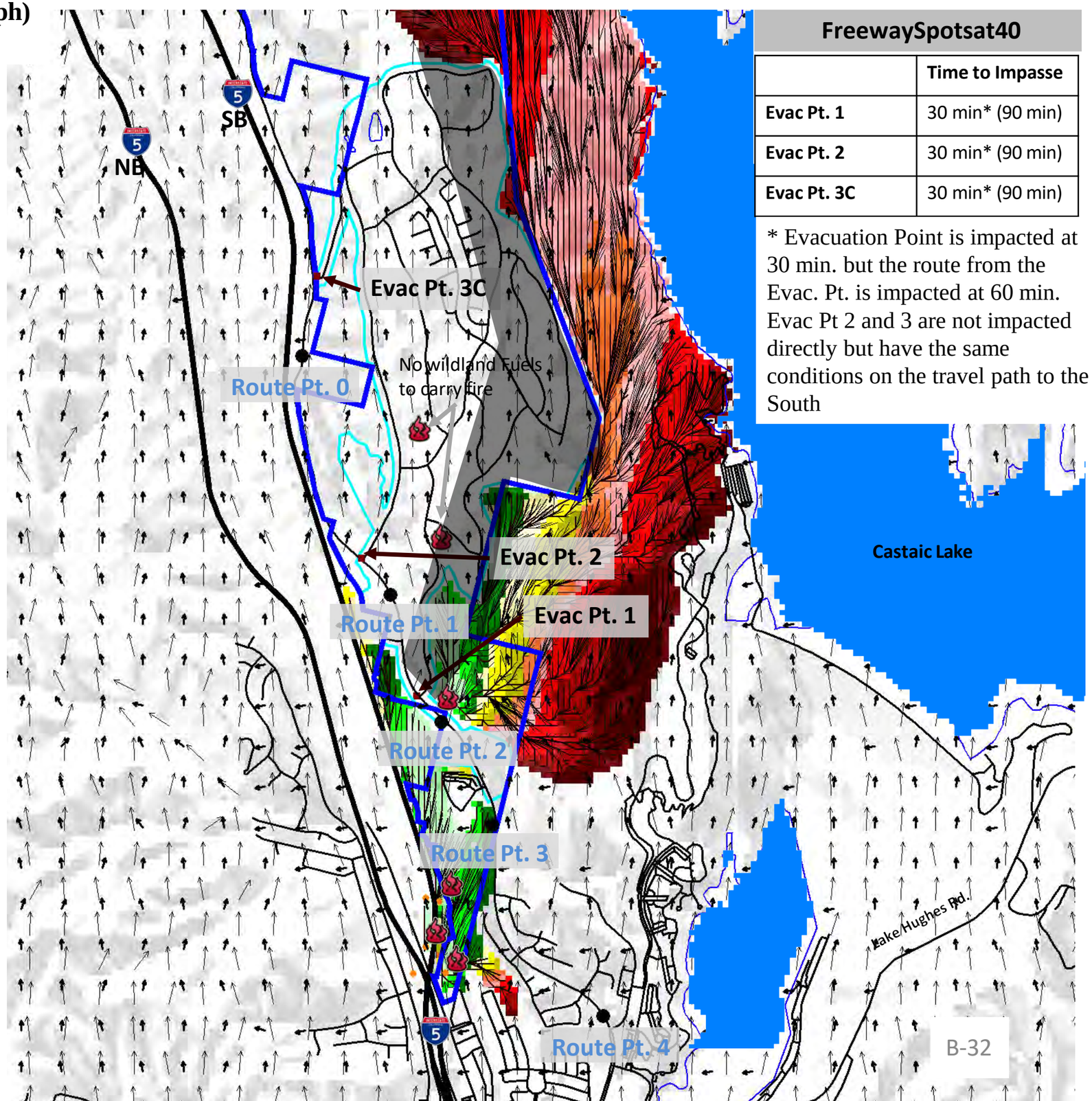
Spread Direction

Fire Flow Path

Origins of the Fire (spots)

Origin(first three spots)
Fourth spot 30 additional min.
Fifth spot 30 additional min.
Sixth spot 30 more

S wind at 40 Spots



FreewaySpotsat40

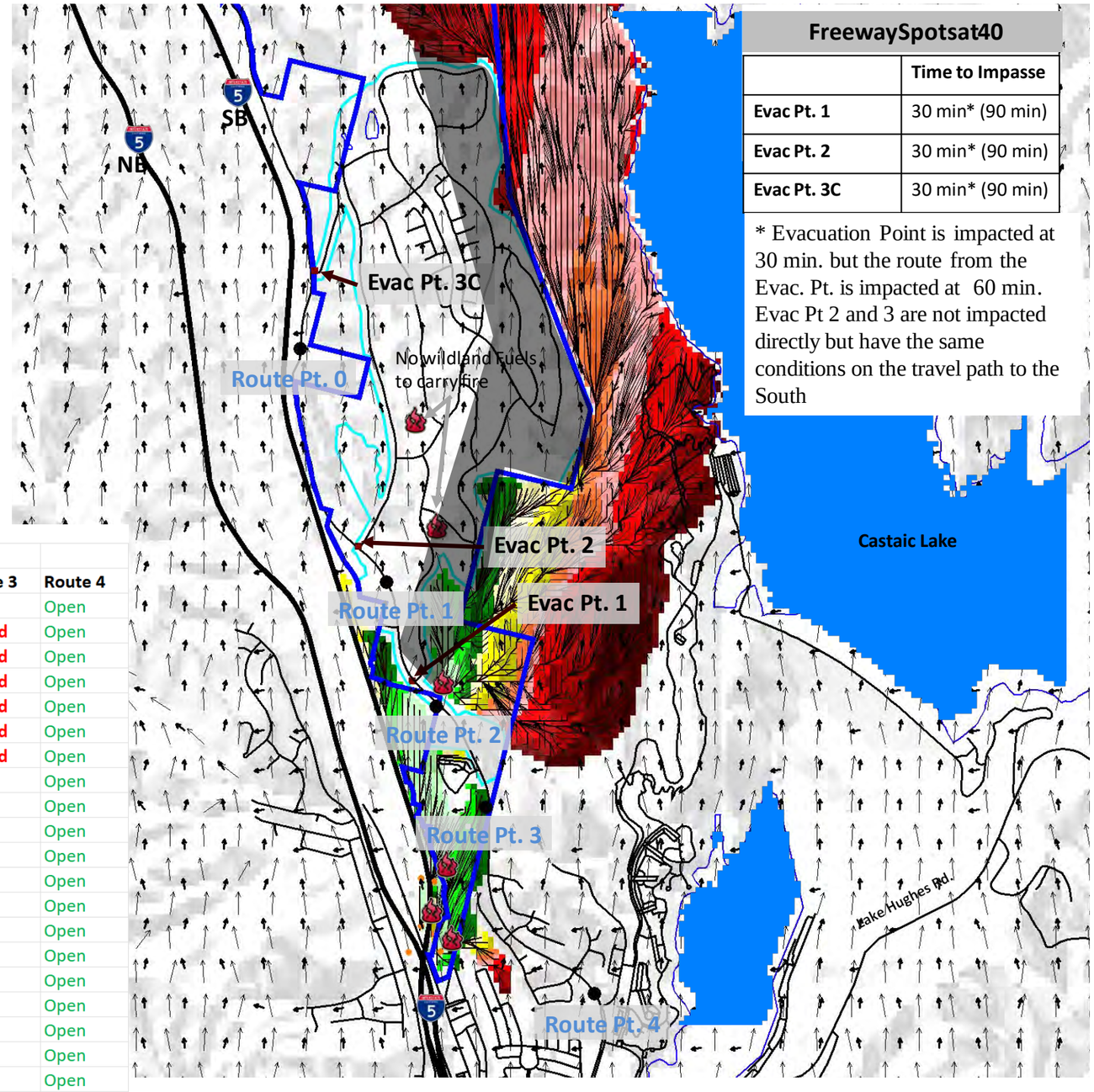
	Time to Impasse
Evac Pt. 1	30 min* (90 min)
Evac Pt. 2	30 min* (90 min)
Evac Pt. 3C	30 min* (90 min)

* Evacuation Point is impacted at 30 min. but the route from the Evac. Pt. is impacted at 60 min. Evac Pt 2 and 3 are not impacted directly but have the same conditions on the travel path to the South

Spot Fire off Freeway NB (Wind S direction @ 40 mph) with Partial Creek Avoidance Development

Narrative: Fire begins as a series of spot fires on the SB I-5 north of the NB/SB crossover. The fires is driven by a South wind at 40 mph. The fire was made to spot over Ridge Route in 30 min. It was made to spot again in another 30 min (60 min. elapsed time) to the north and a final time in another 30 min. (90 min. elapsed time). No flame propagation within the development area occurs. Ridge Route will be impacted for approximately 90 minutes for all Evac Points beginning 30 min into the scenario. Once the fire has passed this impact points, all Evac Points will reopen and remain open.

Freeway Spot at 40 mph Partial Avoid				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	**0:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
30	**0:30**	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Closed	Open
45	**0:45**	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Closed	Open
60	**1:00**	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Closed	Open
75	**1:15**	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Closed	Open
90	**1:30**	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Closed	Open
105	**1:45**	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Closed	Open
120	**2:00**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
135	**2:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
150	**2:30**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
165	**2:45**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
180	**3:00**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
195	**3:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
210	**3:30**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
225	**3:45**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
240	**4:00**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
255	**4:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
270	**4:30**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
285	**4:45**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
300	**5:00**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
315	**5:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
330	**5:30**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
345	**5:45**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
360	**6:00**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
375	**6:15**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
390	**6:30**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
405	**6:45**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
420	**7:00**	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open



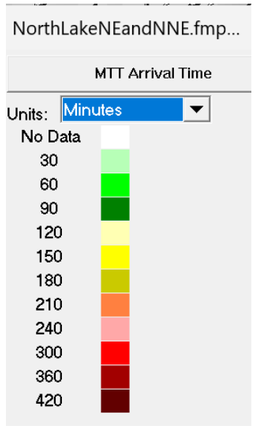
FreewaySpotsat40	
	Time to Impasse
Evac Pt. 1	30 min* (90 min)
Evac Pt. 2	30 min* (90 min)
Evac Pt. 3C	30 min* (90 min)

* Evacuation Point is impacted at 30 min. but the route from the Evac. Pt. is impacted at 60 min. Evac Pt 2 and 3 are not impacted directly but have the same conditions on the travel path to the South

Origin with the County Recreation Area (Wind S direction @ 40 mph) with Previously Approved Development

This fire with 40 mph winds (sustained) starts from single source within the County Recreation Area.

The fire progress is rapid in the areas of alignment (wind, fuel, topography).



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Wind Direction

Spread Direction

Fire Flow Path

Origins of the Fire

Spot Fire

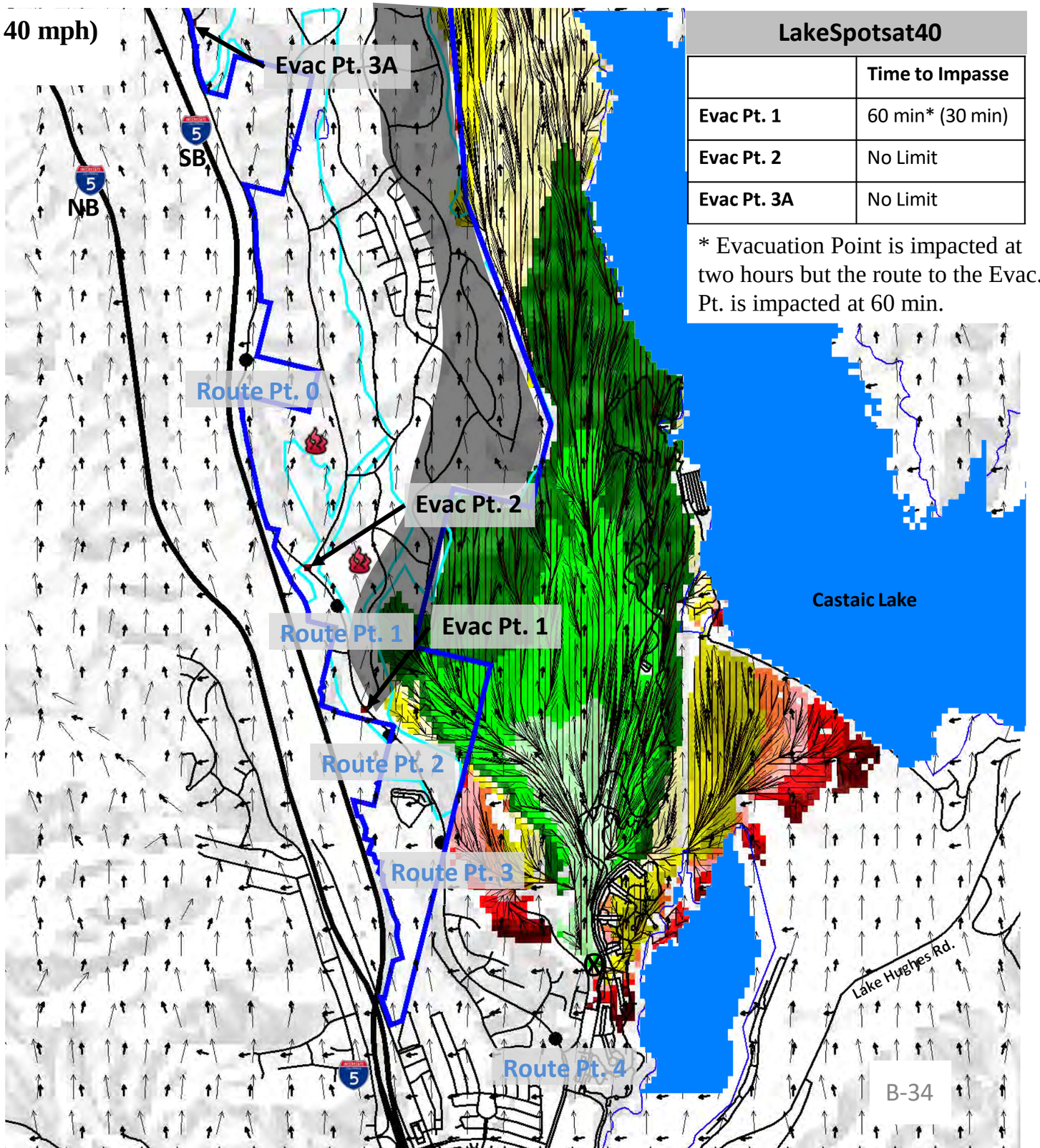
Evacuation Point

Route Point

Area of Population at Immediate Risk

Origin to first spot 90 min.
First spot to second spot 30 min.

S wind at 40 Spots

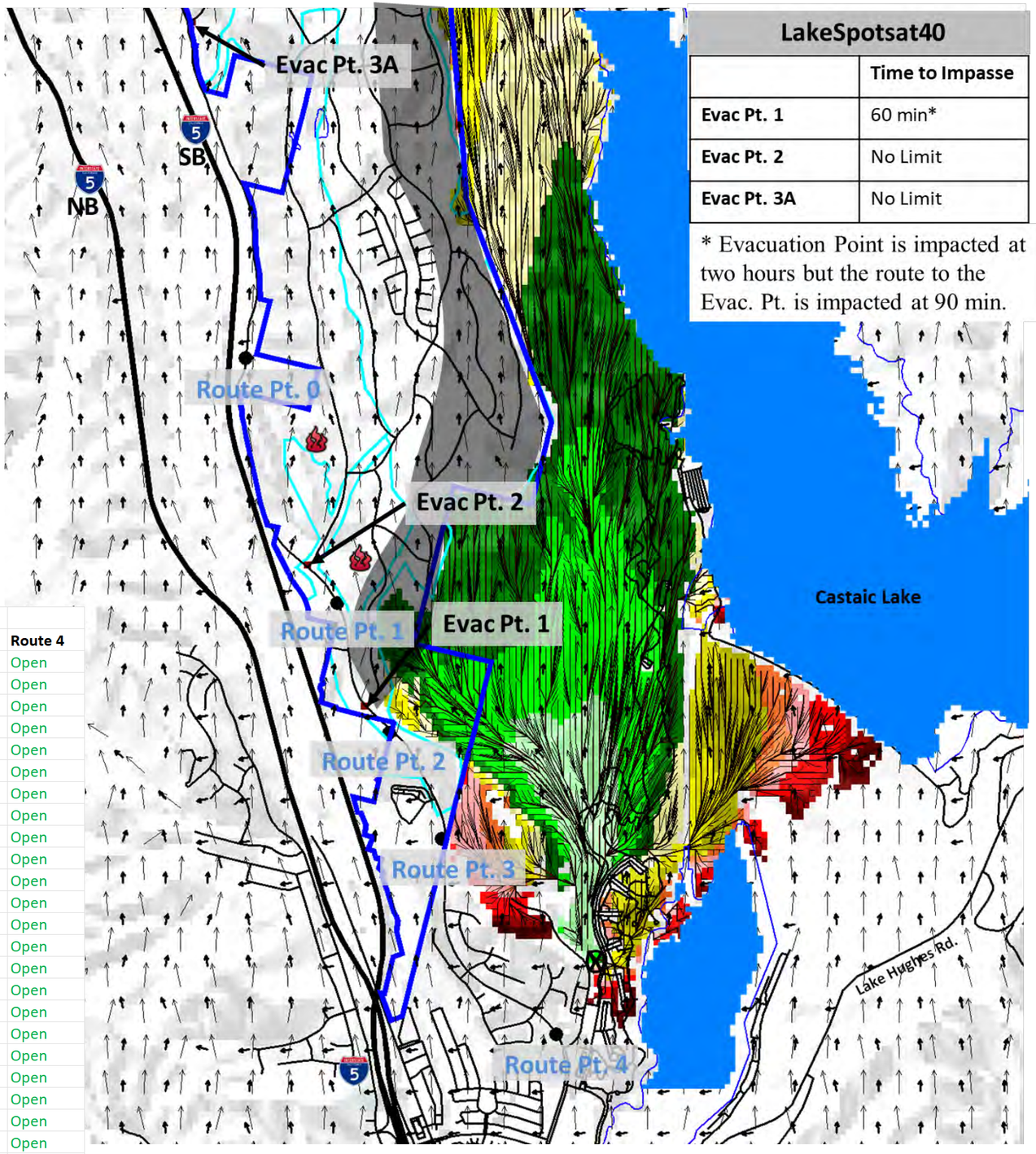


LakeSpotsat40	
	Time to Impasse
Evac Pt. 1	60 min* (30 min)
Evac Pt. 2	No Limit
Evac Pt. 3A	No Limit

* Evacuation Point is impacted at two hours but the route to the Evac. Pt. is impacted at 60 min.

Origin with the County Recreation Area (Wind S direction @ 40 mph) with Previously Approved Development

Narrative: Fire begins as spot fires in the Recreation Area under a South Wind at 40 mph with the head fire moving to the north (branching to the east and west). Fire does not spot over roadways on the west side due to development. Fire continues to burn to the north on the east side of the Project Site.



LakeSpotsat40	
	Time to Impasse
Evac Pt. 1	60 min*
Evac Pt. 2	No Limit
Evac Pt. 3A	No Limit

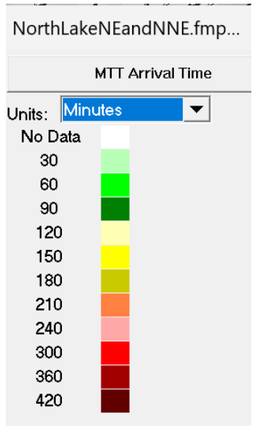
* Evacuation Point is impacted at two hours but the route to the Evac. Pt. is impacted at 90 min.

Lake Spots at 40 mph Approved				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Closed	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
75	1:15	Closed	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
90	1:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
135	2:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
150	2:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	Open	n/a	n/a	Open	Closed	Closed	Closed	Open
255	4:15	Open	Open	Open	n/a	n/a	Open	Closed	Closed	Closed	Open
270	4:30	Open	Open	Open	n/a	n/a	Open	Closed	Closed	Closed	Open
285	4:45	Open	Open	Open	n/a	n/a	Open	Closed	Closed	Closed	Open
300	5:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open

Origin with the County Recreation Area (Wind S direction @ 40 mph) with Creek Avoidance Development

This fire with 40 mph winds (sustained) starts from single source within the County Recreation Area.

The fire progress is rapid in the areas of alignment (wind, fuel, topography).



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

Spread Direction

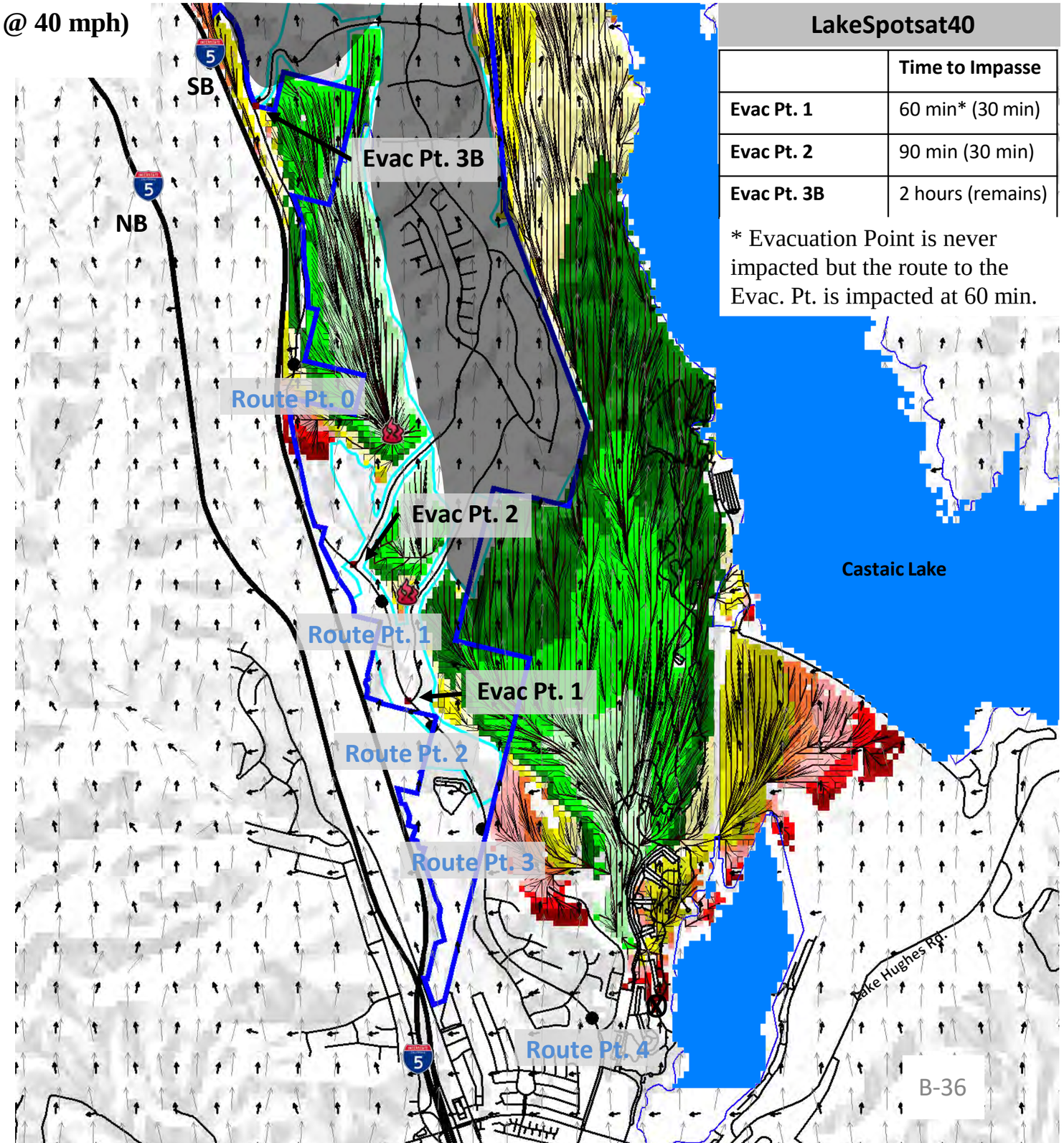
Fire Flow Path

Origins of the Fire

Spot Fire

Origin to first spot 60 min.
First spot to second spot 30 min.

S wind at 40 Spots



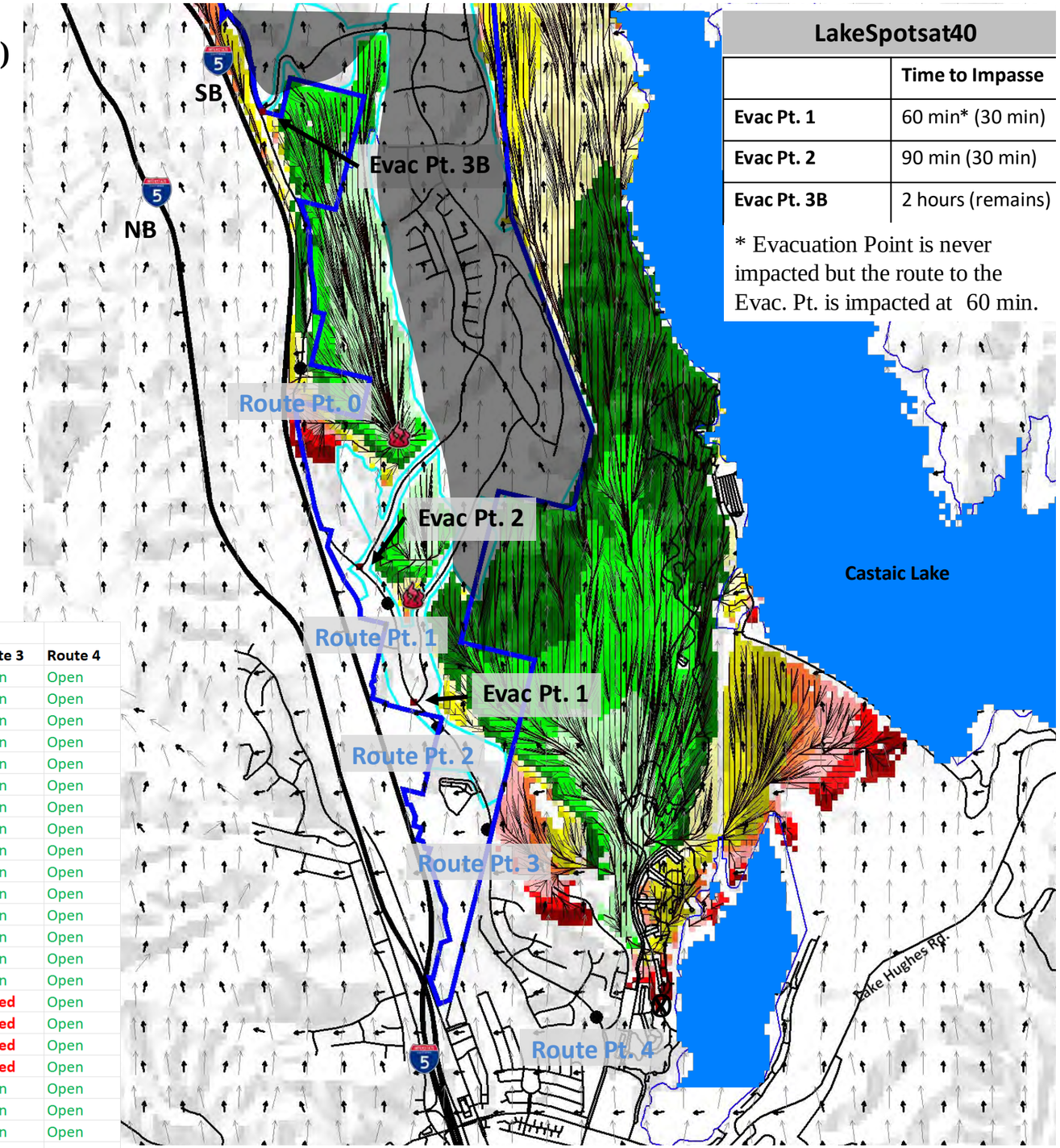
LakeSpotsat40

	Time to Impasse
Evac Pt. 1	60 min* (30 min)
Evac Pt. 2	90 min (30 min)
Evac Pt. 3B	2 hours (remains)

* Evacuation Point is never impacted but the route to the Evac. Pt. is impacted at 60 min.

Origin with the County Recreation Area (Wind S direction @ 40 mph) with Creek Avoidance Development

Narrative: Fire begins as spot fires in the Recreation Area under a South Wind at 40 mph with the head fire moving to the north (branching to the east and west). At 60 min (elapsed time) fire spots over the access road to Evac Point 1, closing the access for 30 minutes. The fire on the west continues to burn north and spots over the access to Evac Point 2 at 90 min (elapsed time) and continues to burn to the north on both sides of the Project Site.



LakeSpotsat40	
	Time to Impasse
Evac Pt. 1	60 min* (30 min)
Evac Pt. 2	90 min (30 min)
Evac Pt. 3B	2 hours (remains)

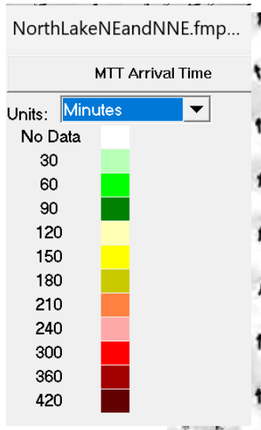
* Evacuation Point is never impacted but the route to the Evac. Pt. is impacted at 60 min.

Lake Spots at 40 mph Creek Avoidance				Evacuation to the South							
		Evac Pt 1	**Evac Pt 2**	**Evac Pt. 3A**	**Evac Pt. 3B**	**Evac Pt. 3C**	**Route 0**	**Route 1**	**Route 2**	**Route 3**	**Route 4**
15	**0:15**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
30	**0:30**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
45	**0:45**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
60	**1:00**	**Closed**	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
75	**1:15**	**Closed**	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
90	**1:30**	Open	**Closed**	n/a	Open	n/a	Open	Open	Open	Open	Open
105	**1:45**	Open	**Closed**	n/a	Open	n/a	Open	Open	Open	Open	Open
120	**2:00**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
135	**2:15**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
150	**2:30**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
165	**2:45**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
180	**3:00**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
195	**3:15**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
210	**3:30**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
225	**3:45**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
240	**4:00**	Open	Open	n/a	**Closed**	n/a	**Closed**	**Closed**	**Closed**	**Closed**	Open
255	**4:15**	Open	Open	n/a	**Closed**	n/a	**Closed**	**Closed**	**Closed**	**Closed**	Open
270	**4:30**	Open	Open	n/a	**Closed**	n/a	**Closed**	**Closed**	**Closed**	**Closed**	Open
285	**4:45**	Open	Open	n/a	**Closed**	n/a	**Closed**	**Closed**	**Closed**	**Closed**	Open
300	**5:00**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
315	**5:15**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
330	**5:30**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
345	**5:45**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
360	**6:00**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
375	**6:15**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
390	**6:30**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
405	**6:45**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open
420	**7:00**	Open	Open	n/a	**Closed**	n/a	**Closed**	Open	Open	Open	Open

Origin with the County Recreation Area (Wind S direction @ 40 mph) with Partial Creek Avoidance Development

This fire with 40 mph winds (sustained) starts from single source within the County Recreation Area.

The fire progress is rapid in the areas of alignment (wind, fuel, topography).



LakeSpotsat40	
	Time to Impasse
Evac Pt. 1	60 min* (30 min)
Evac Pt. 2	No Limit
Evac Pt. 3C	No Limit

* Evacuation Point is impacted at two hours but the route to the Evac. Pt. is impacted at 60 min.

Streets
Project Boundary
Freeway
Development Area
Route Fire Perimeter

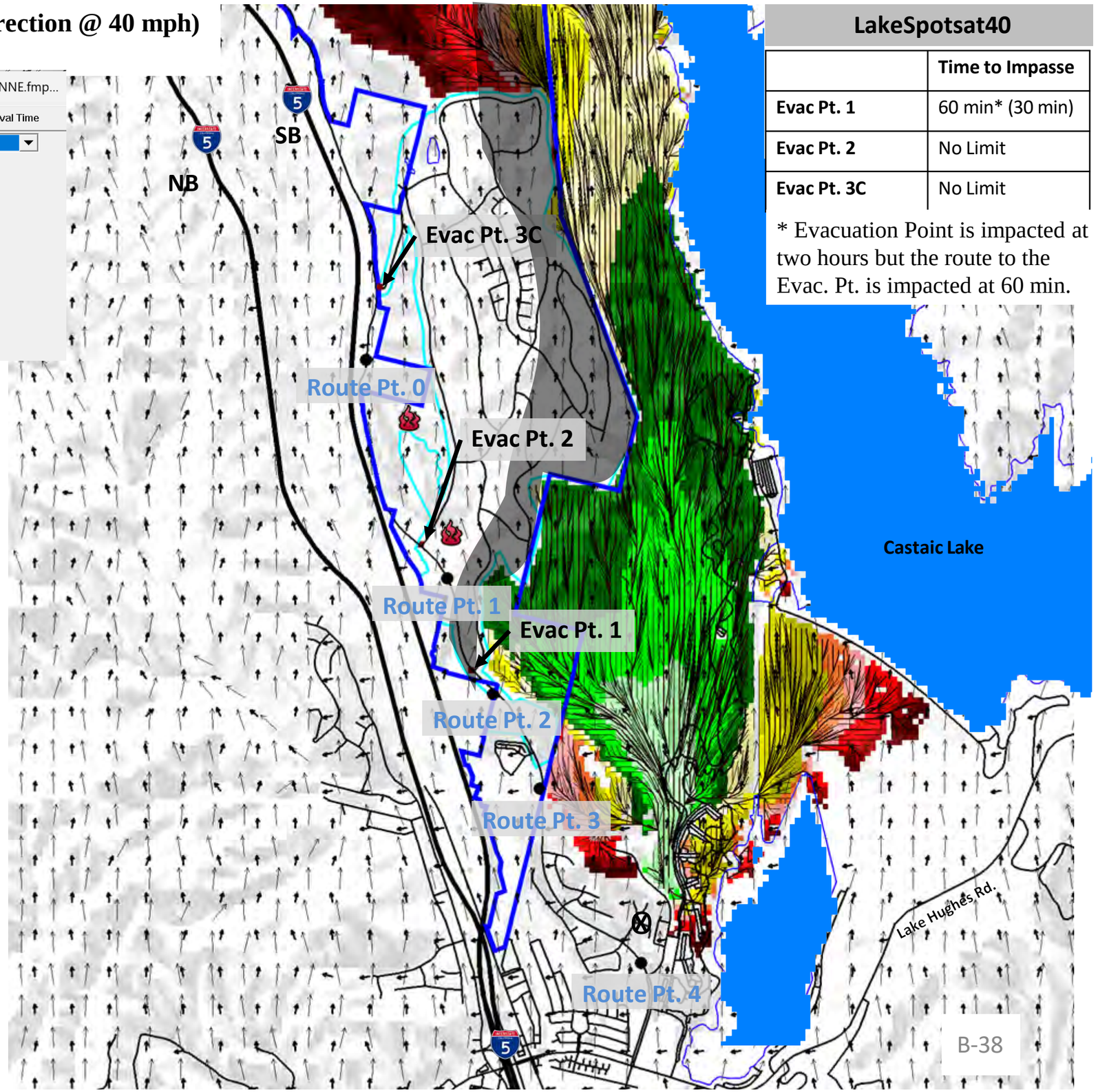
Evacuation Point
Route Point
Area of Population at Immediate Risk

Wind Direction
Spread Direction
Fire Flow Path

Origins of the Fire
Spot Fire

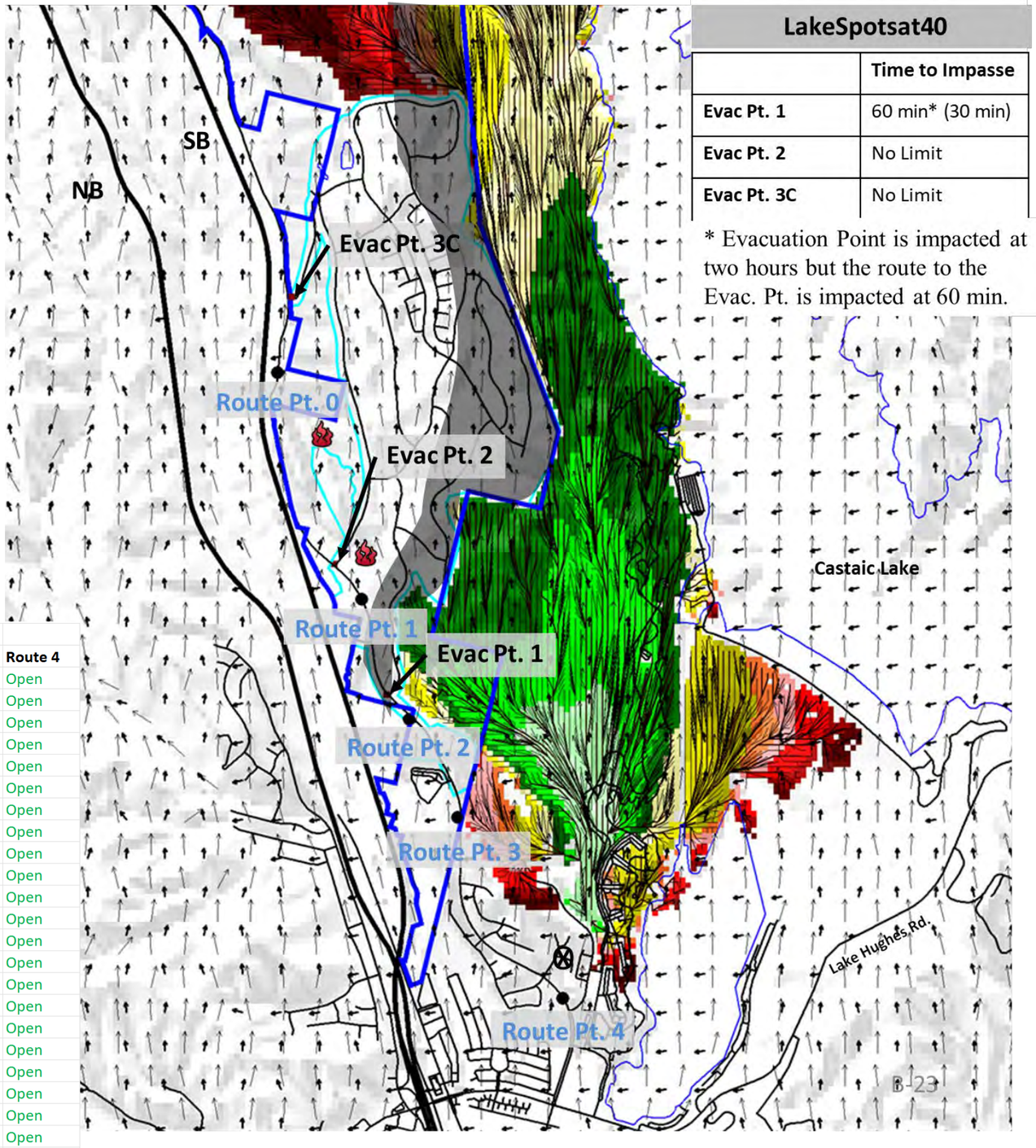
Fire does not spot over evacuation roads due to development areas

S wind at 40 Spots



Origin with the County Recreation Area (Wind S direction @ 40 mph) with Partial Creek Avoidance Development

Narrative: Fire begins as spot fires in the Recreation Area under a South Wind at 40 mph with the head fire moving to the north (branching to the east and west). Fire does not spot over roadways on the west side due to development. Fire continues to burn to the north on the east side of the Project Site.



LakeSpotsat40	
	Time to Impasse
Evac Pt. 1	60 min* (30 min)
Evac Pt. 2	No Limit
Evac Pt. 3C	No Limit

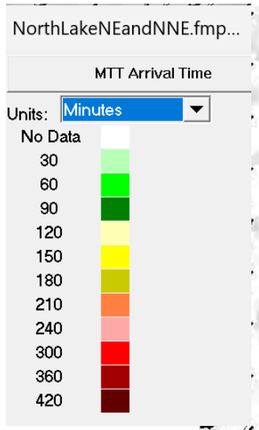
* Evacuation Point is impacted at two hours but the route to the Evac. Pt. is impacted at 60 min.

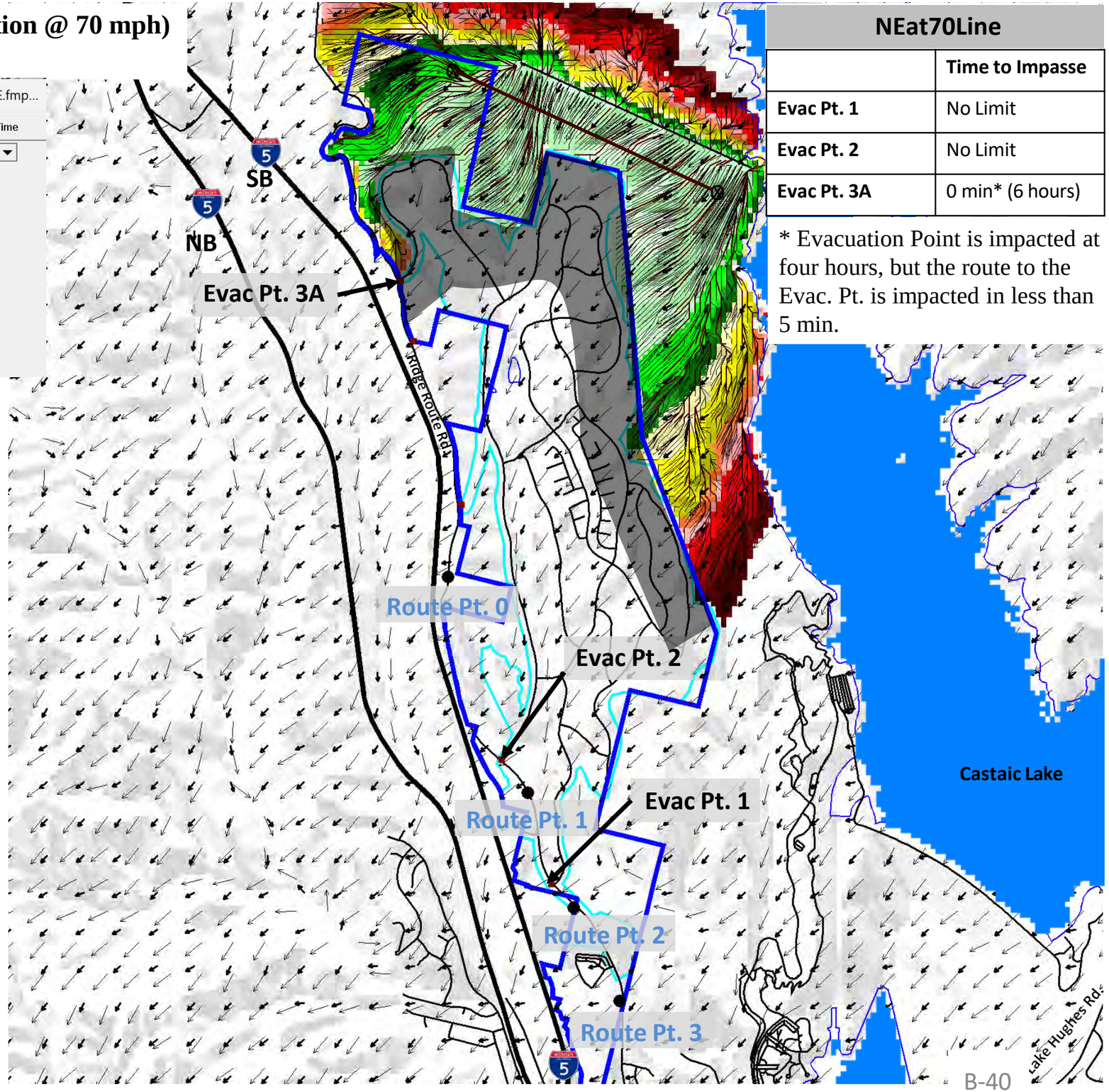
Lake Spots at 40 mph	Parital Creek Avoidance	Evacuation to the South									
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
60	1:00	Closed	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
75	1:15	Closed	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
90	1:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
105	1:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
120	2:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
135	2:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
150	2:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
165	2:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
180	3:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
195	3:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
210	3:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
225	3:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
240	4:00	Open	Open	n/a	n/a	Open	Open	Closed	Closed	Closed	Open
255	4:15	Open	Open	n/a	n/a	Open	Open	Closed	Closed	Closed	Open
270	4:30	Open	Open	n/a	n/a	Open	Open	Closed	Closed	Closed	Open
285	4:45	Open	Open	n/a	n/a	Open	Open	Closed	Closed	Closed	Open
300	5:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
315	5:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
330	5:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
345	5:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
360	6:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
375	6:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
390	6:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
405	6:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
420	7:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open

Wind Driven Fire at North Interface (Wind NE direction @ 70 mph) with Previously Approved Development

This fire with 70 mph winds (sustained) shows the timing from the fire as it interfaces with the proposed community.

The fire was not made to spot over the freeways and start again as the wind direction will not take the fire in the direction of the development.





NEat70Line	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3A	0 min* (6 hours)

* Evacuation Point is impacted at four hours, but the route to the Evac. Pt. is impacted in less than 5 min.

Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

Spread Direction

Fire Flow Path

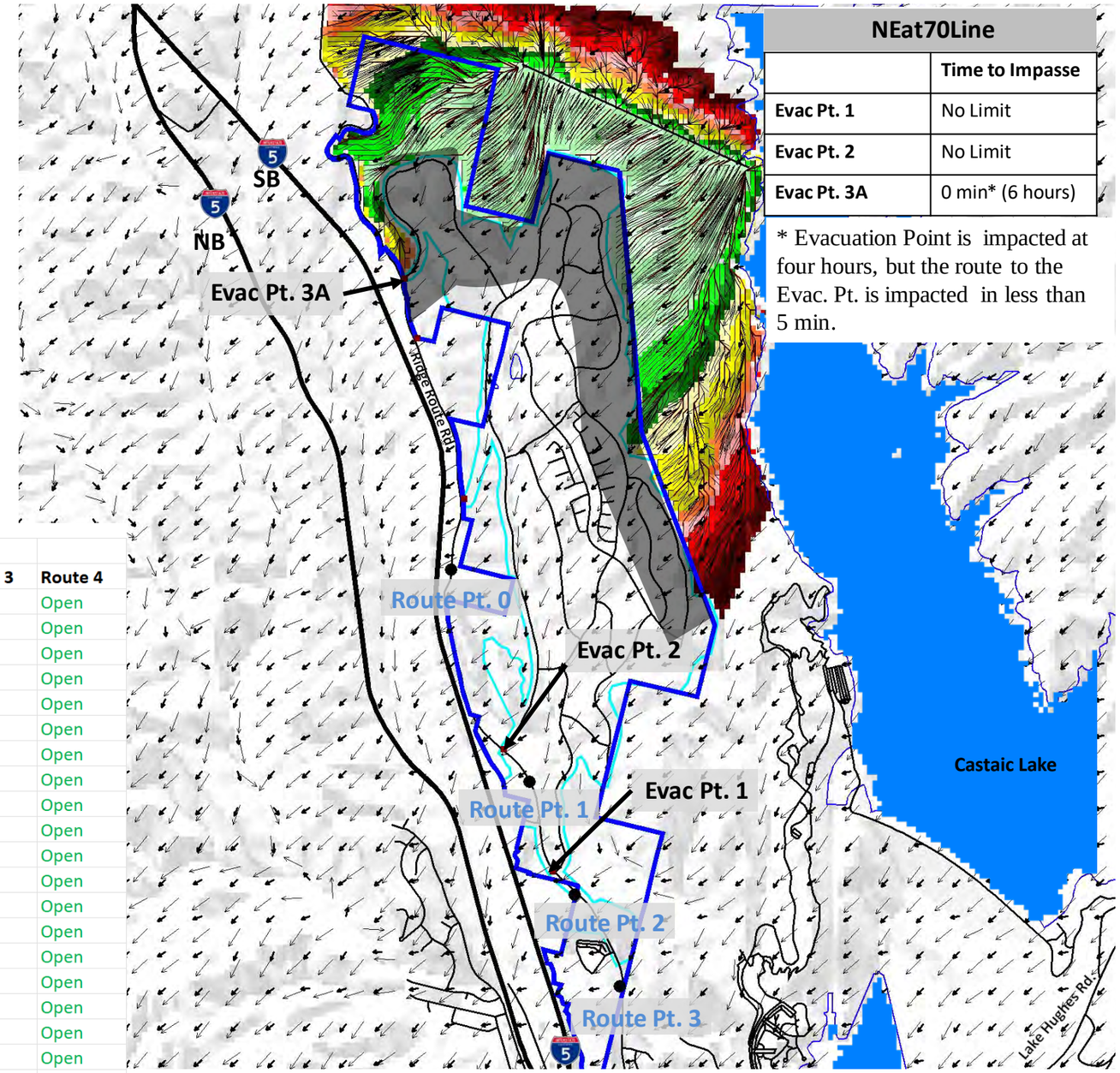
Origin of the Fire

Spot Fire

NE wind at 70 Line

Wind Driven Fire at North Interface (Wind NE direction @ 70 mph) with Previously Approved Development

Narrative: Fire is modeled from an existing line of fire to the NE of the Project Site. Wind is from the NE at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled.



NEat70Line	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3A	0 min* (6 hours)

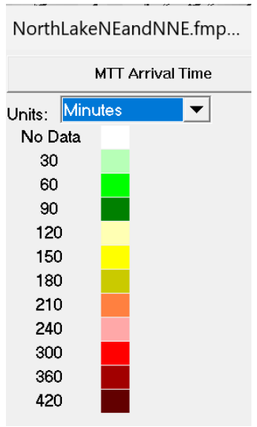
* Evacuation Point is impacted at four hours, but the route to the Evac. Pt. is impacted in less than 5 min.

NE at 70 mph Approved				Evacuation to the South							
		Evac Pt 1	**Evac Pt 2**	**Evac Pt. 3A**	**Evac Pt. 3B**	**Evac Pt. 3C**	**Route 0**	**Route 1**	**Route 2**	**Route 3**	**Route 4**
15	**0:15**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
30	**0:30**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
45	**0:45**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
60	**1:00**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
75	**1:15**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
90	**1:30**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
105	**1:45**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
120	**2:00**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
135	**2:15**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
150	**2:30**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
165	**2:45**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
180	**3:00**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
195	**3:15**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
210	**3:30**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
225	**3:45**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
240	**4:00**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
255	**4:15**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
270	**4:30**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
285	**4:45**	Open	Open	**Closed**	n/a	n/a	Open	Open	Open	Open	Open
300	**5:00**	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
315	**5:15**	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
330	**5:30**	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
345	**5:45**	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
360	**6:00**	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
375	**6:15**	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
390	**6:30**	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
405	**6:45**	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
420	**7:00**	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open

Wind Driven Fire at North Interface (Wind NE direction @ 70 mph) with Creek Avoidance Development

This fire with 70 mph winds (sustained) shows the timing from the fire as it interfaces with the proposed community.

The fire was not made to spot over the freeways and start again as the wind direction will not take the fire in the direction of the development.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

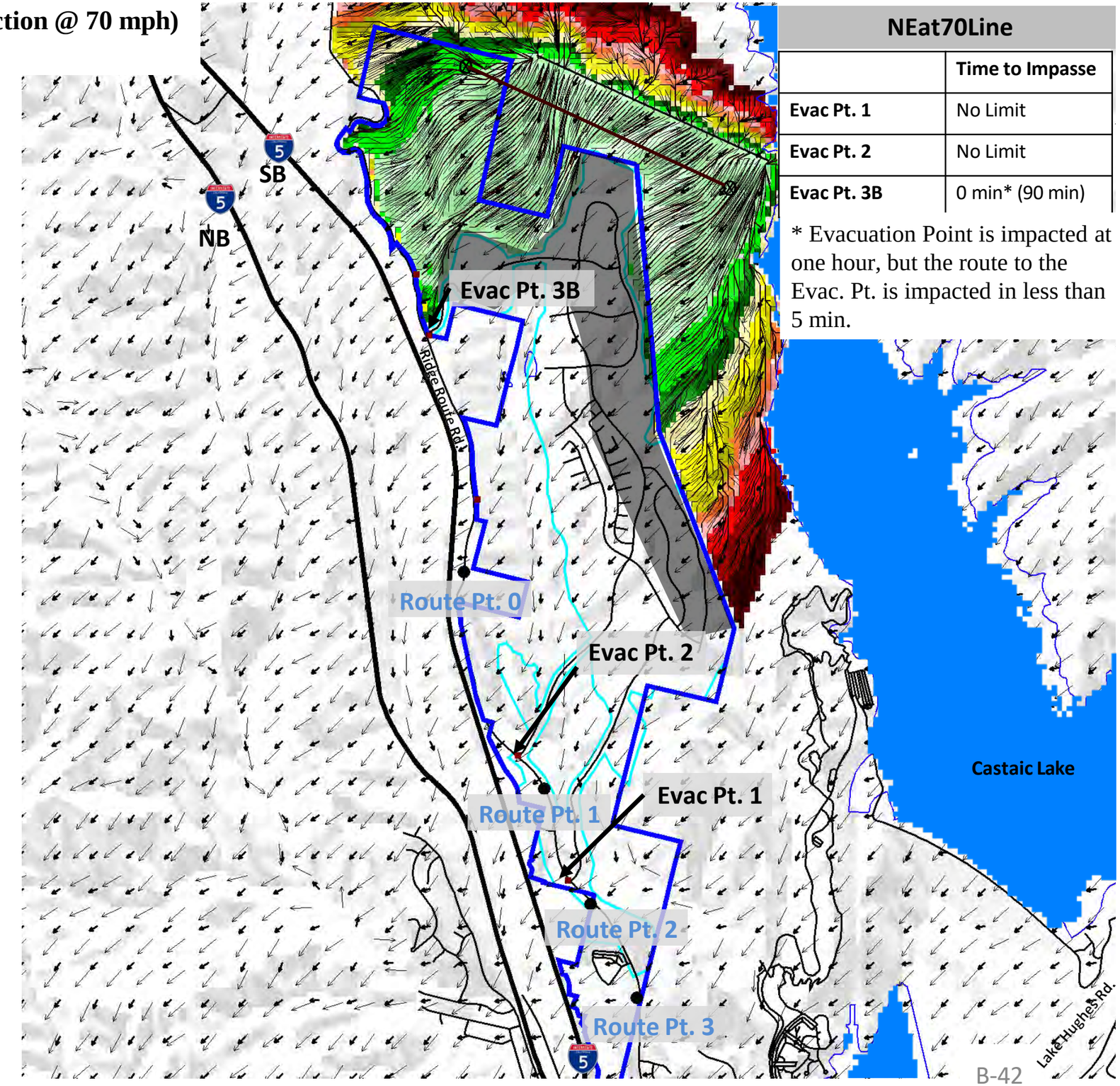
Spread Direction

Fire Flow Path

Origin of the Fire

Spot Fire

NE wind at 70 Line



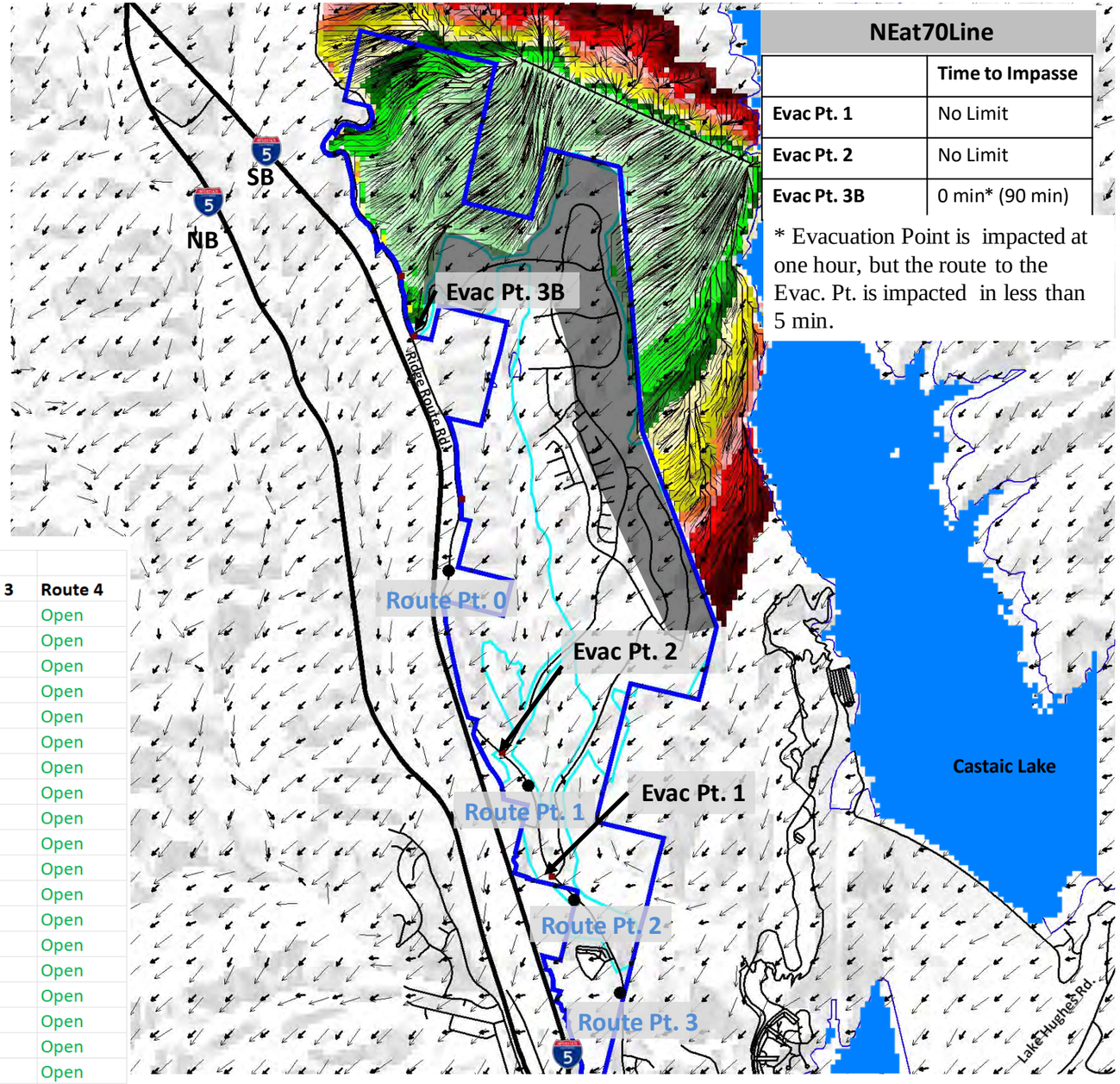
NEat70Line

	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3B	0 min* (90 min)

* Evacuation Point is impacted at one hour, but the route to the Evac. Pt. is impacted in less than 5 min.

Wind Driven Fire at North Interface (Wind NE direction @ 70 mph) with Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the NE of the Project Site. Wind is from the NE at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled.

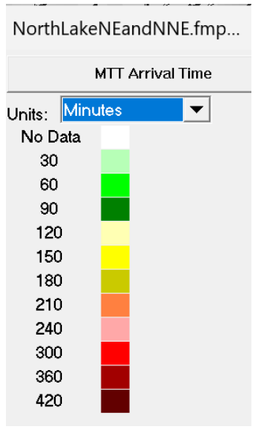


NE at 70 mph Creek Avoidance				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
75	1:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
90	1:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
135	2:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
150	2:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
255	4:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
270	4:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open

Wind Driven Fire at North Interface (Wind NE direction @ 70 mph) with Partial Creek Avoidance Development

This fire with 70 mph winds (sustained) shows the timing from the fire as it interfaces with the proposed community.

The fire was not made to spot over the freeways and start again as the wind direction will not take the fire in the direction of the development.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

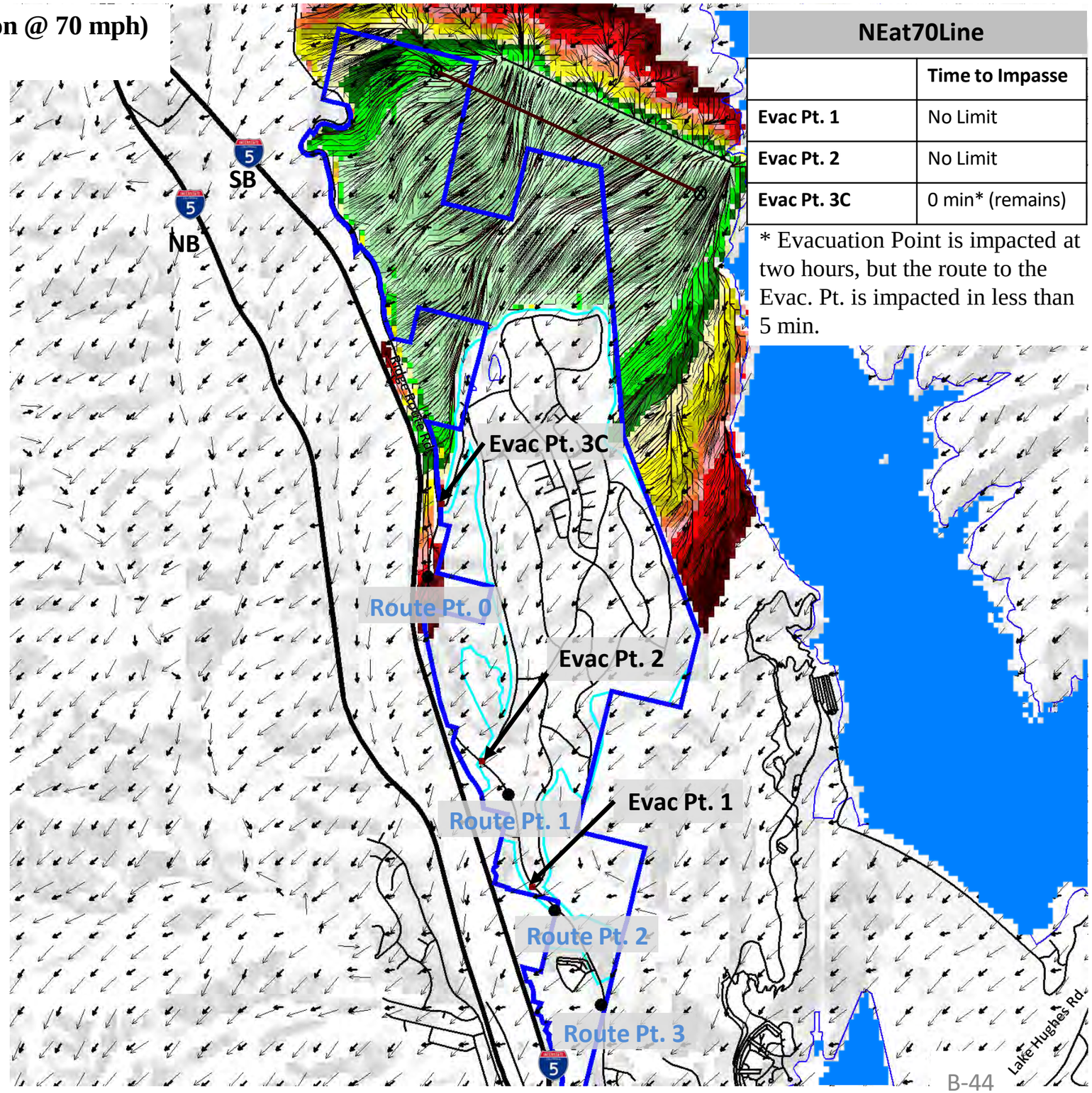
Spread Direction

Fire Flow Path

Origin of the Fire

Spot Fire

NE wind at 70 Line



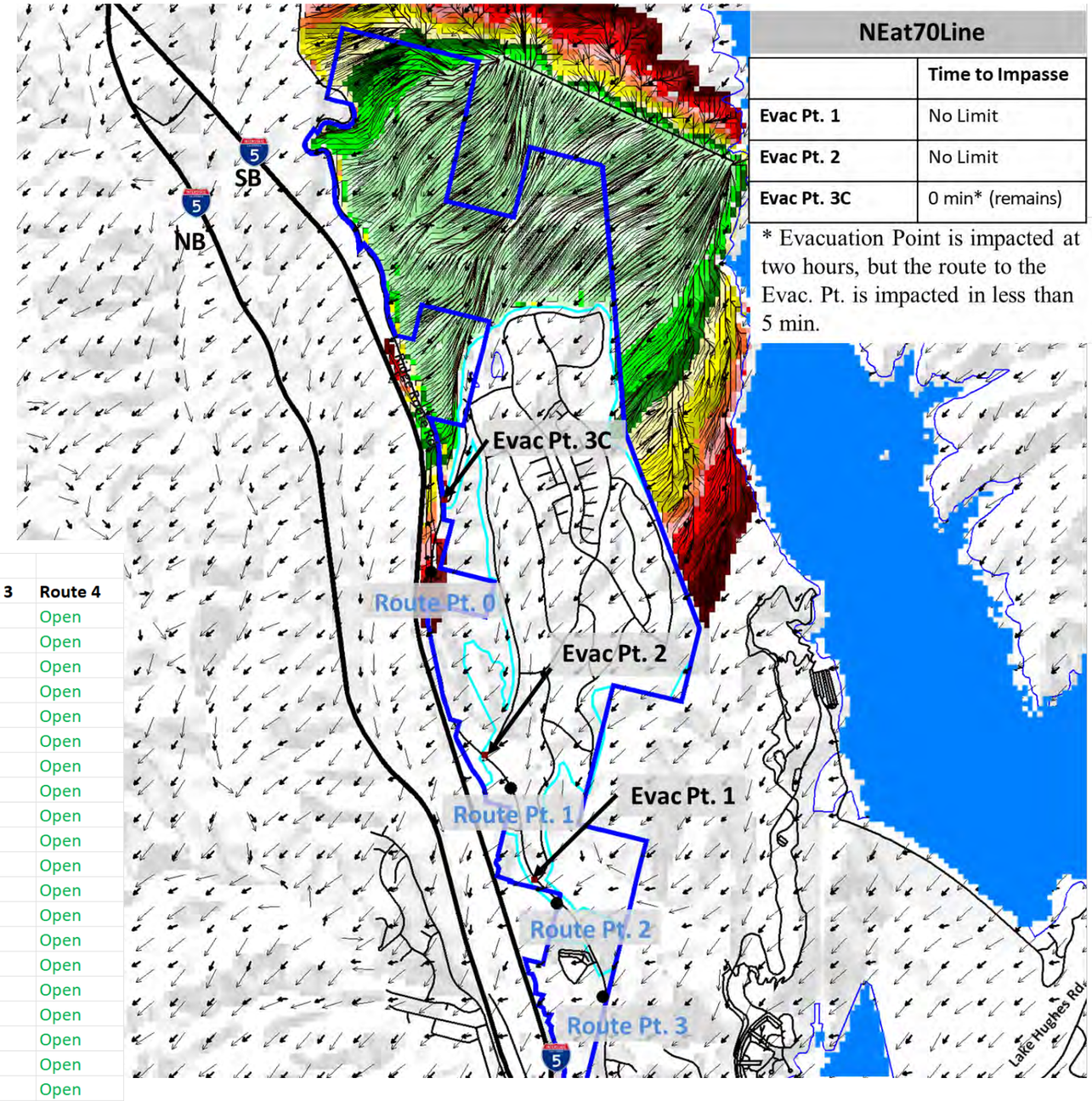
NEat70Line	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3C	0 min* (remains)

* Evacuation Point is impacted at two hours, but the route to the Evac. Pt. is impacted in less than 5 min.

Wind Driven Fire at North Interface (Wind NE direction @ 70 mph) with Partial Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the NE of the Project Site. Wind is from the NE at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site (out of alignment) for the balance of the modeling timeframe.

NE at 70 mph	Parital Creek Avoidance			Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
60	1:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
75	1:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
90	1:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
105	1:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
120	2:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
135	2:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
150	2:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
165	2:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
180	3:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
195	3:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
210	3:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
225	3:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
240	4:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
255	4:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
270	4:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
285	4:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
300	5:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
315	5:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
330	5:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
345	5:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
360	6:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
375	6:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
390	6:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
405	6:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
420	7:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open



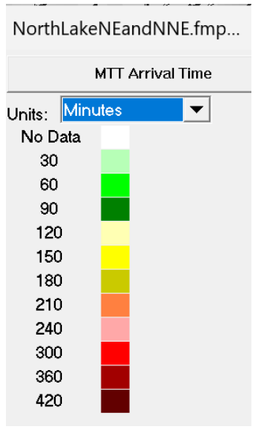
NEat70Line	
	Time to Impasse
Evac Pt. 1	No Limit
Evac Pt. 2	No Limit
Evac Pt. 3C	0 min* (remains)

* Evacuation Point is impacted at two hours, but the route to the Evac. Pt. is impacted in less than 5 min.

Wind Driven Fire at North Interface (Wind NNE direction @ 70 mph) with Previously Approved Development

This fire with 70 mph winds (sustained) shows the timing from the fire as it interfaces with the proposed community.

The change in alignment allows the fire to move more quickly on the east flank.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

Spread Direction

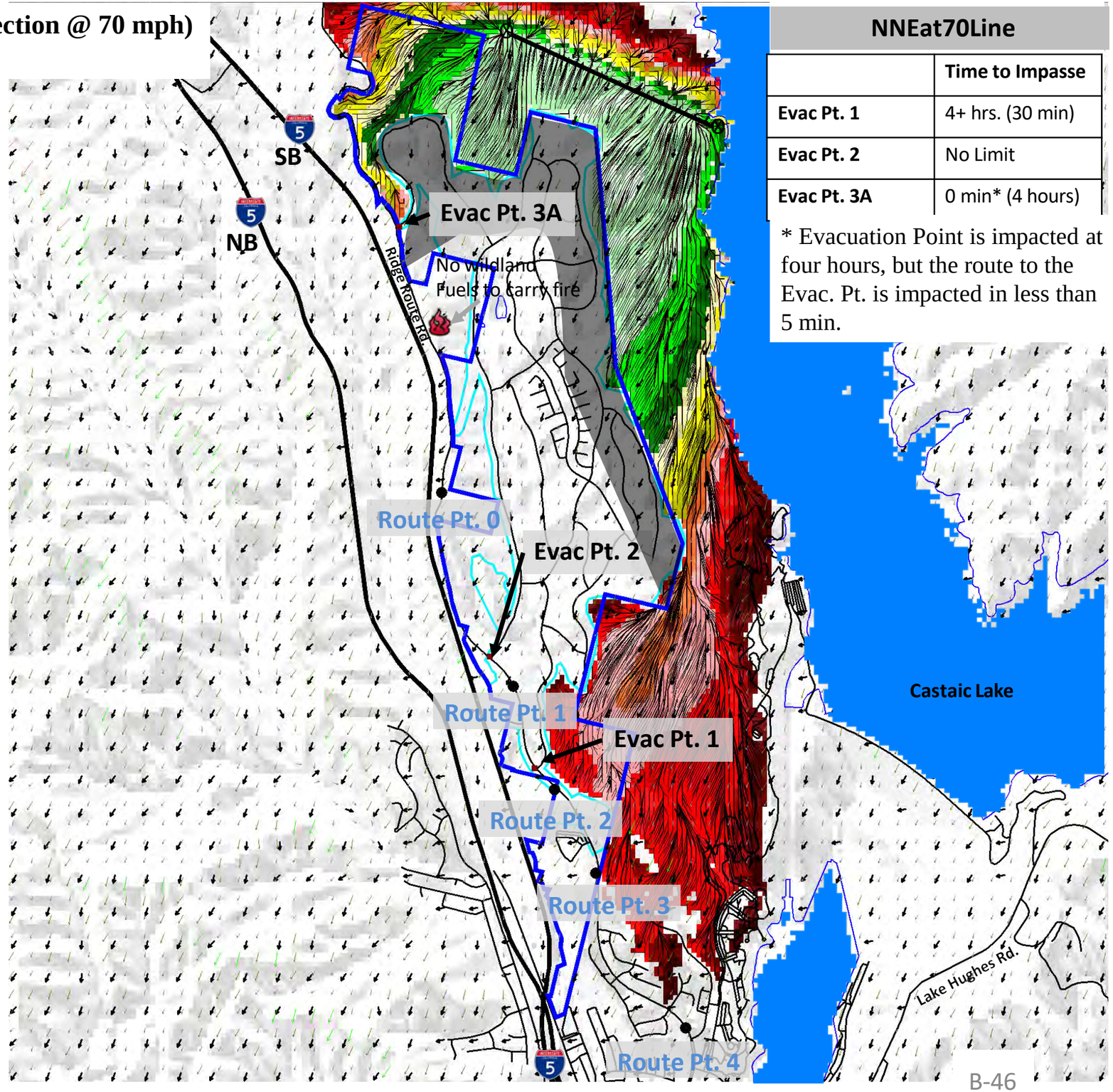
Fire Flow Path

Origin of the Fire

Spot Fire

Origin to first spot 30 min.

NNE wind at 70 Line



NNEat70Line

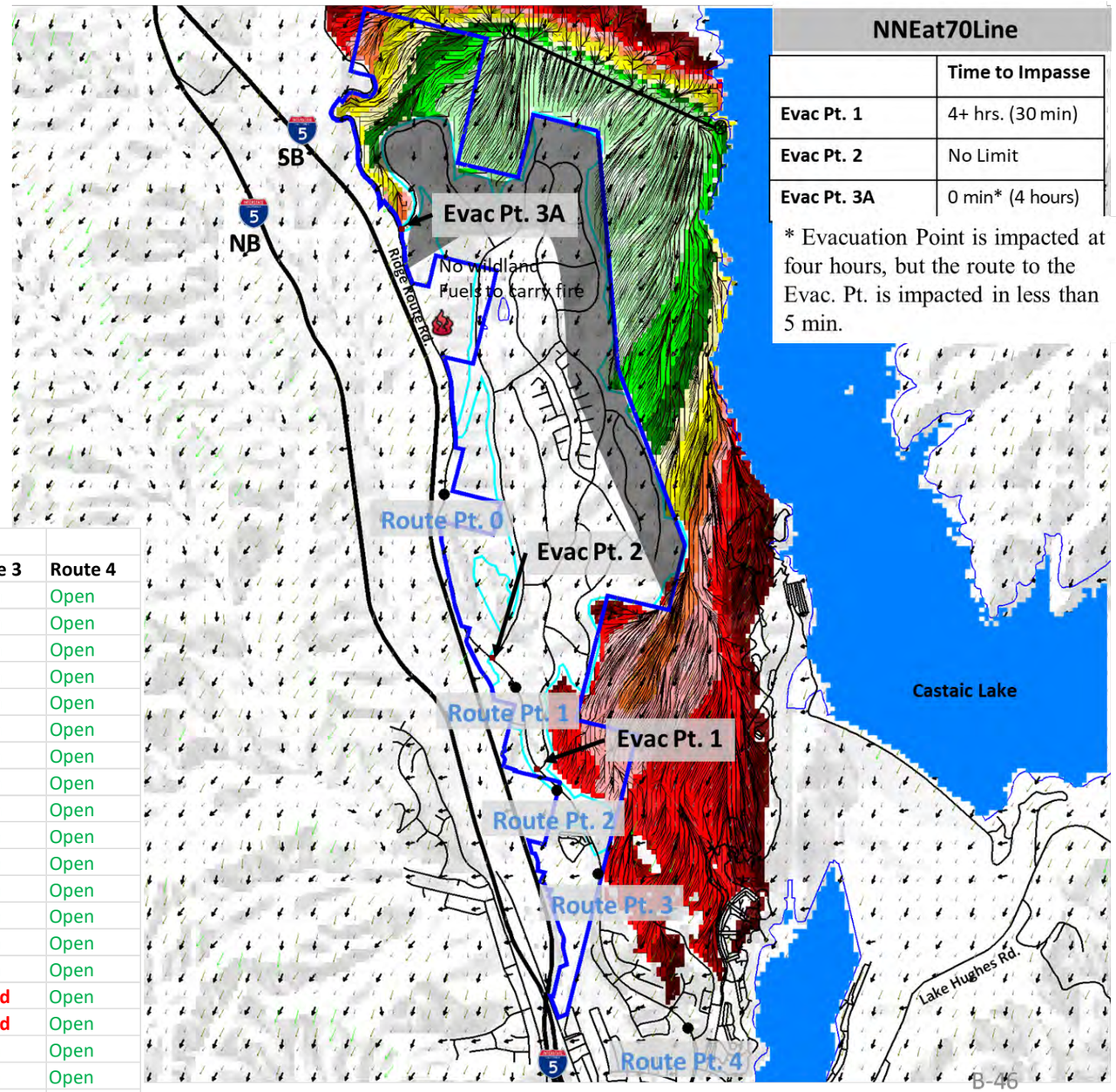
	Time to Impasse
Evac Pt. 1	4+ hrs. (30 min)
Evac Pt. 2	No Limit
Evac Pt. 3A	0 min* (4 hours)

* Evacuation Point is impacted at four hours, but the route to the Evac. Pt. is impacted in less than 5 min.

Wind Driven Fire at North Interface (Wind NNE direction @ 70 mph) with Previously Approved Development

Narrative: Fire is modeled from an existing line of fire to the NE of the Project Site. Wind is from the NNE at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately four hours into the simulated event.

NNE at 70 mph Approved				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
75	1:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
90	1:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
135	2:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
150	2:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
240	4:00	Closed	Open	Closed	n/a	n/a	Open	Open	Closed	Closed	Open
255	4:15	Closed	Open	Open	n/a	n/a	Open	Open	Closed	Closed	Open
270	4:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open



NNEat70Line

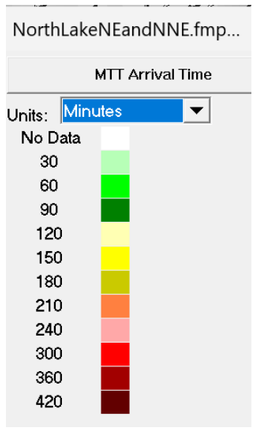
	Time to Impasse
Evac Pt. 1	4+ hrs. (30 min)
Evac Pt. 2	No Limit
Evac Pt. 3A	0 min* (4 hours)

* Evacuation Point is impacted at four hours, but the route to the Evac. Pt. is impacted in less than 5 min.

Wind Driven Fire at North Interface (Wind NNE direction @ 70 mph) with Creek Avoidance Development

This fire with 70 mph winds (sustained) shows the timing from the fire as it interfaces with the proposed community.

The change in alignment allows the fire to move more quickly on the east flank.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

Spread Direction

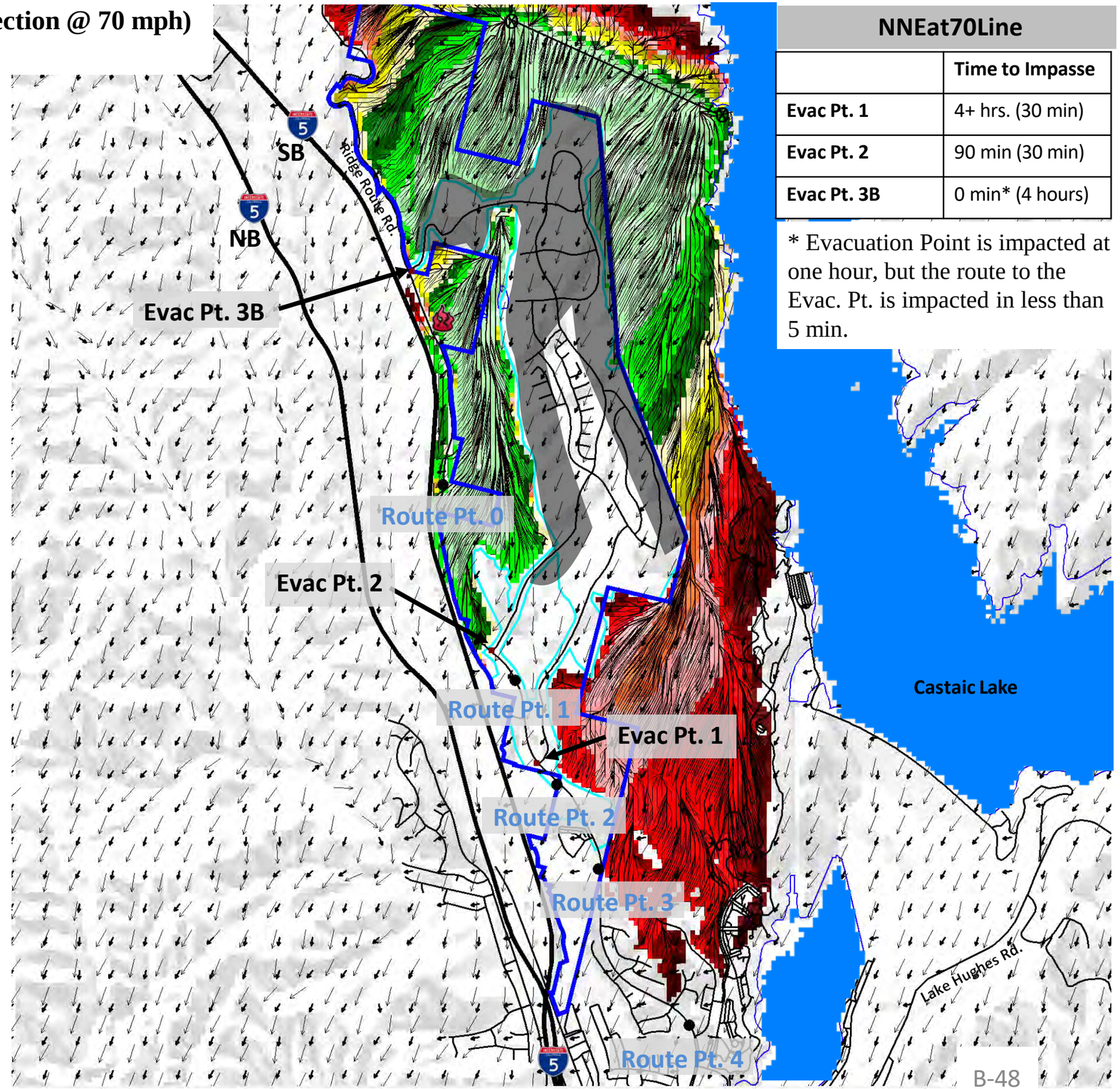
Fire Flow Path

Origin of the Fire

Spot Fire

Origin to first spot 30 min.

NNE wind at 70 Line



NNEat70Line

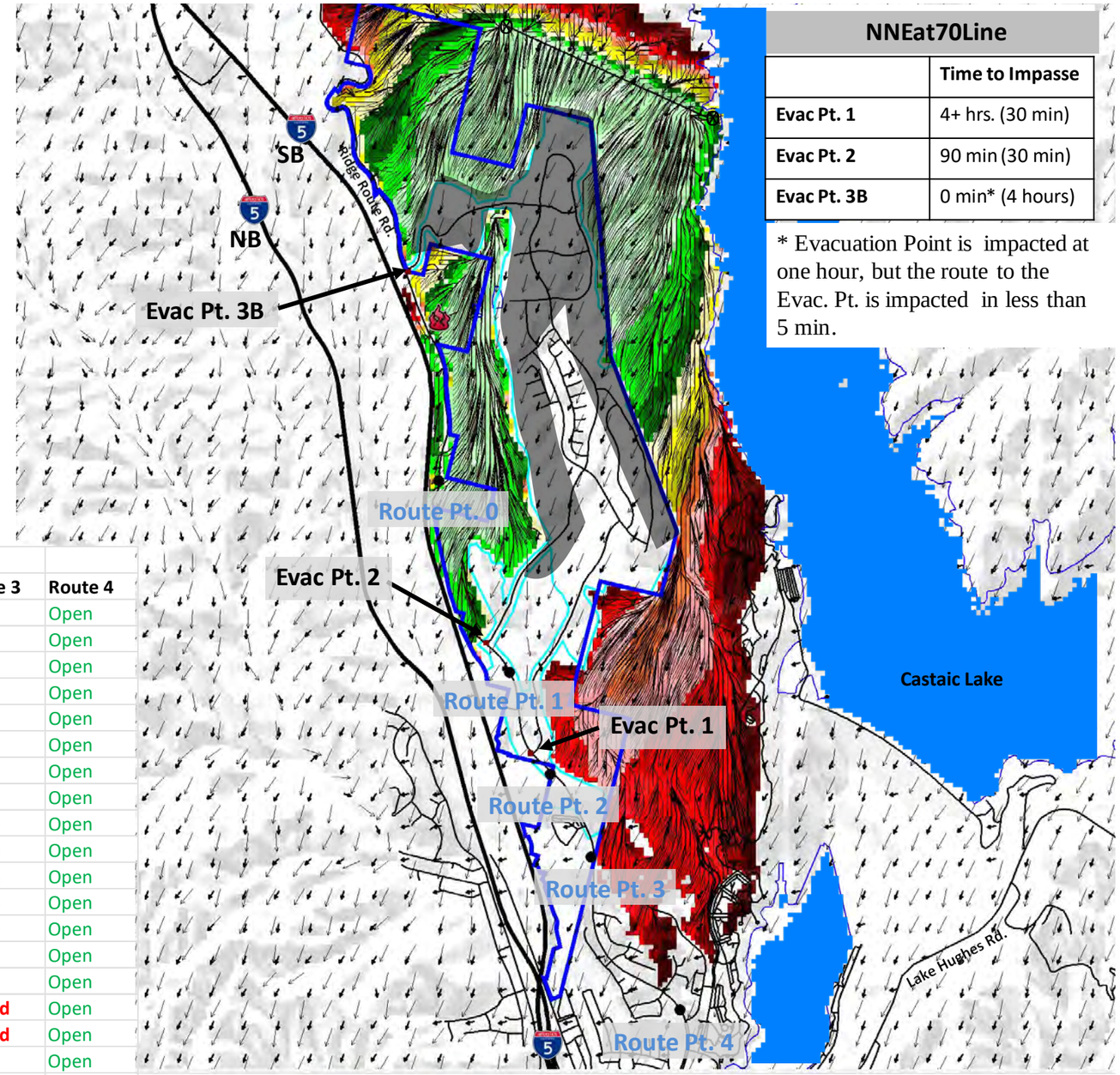
	Time to Impasse
Evac Pt. 1	4+ hrs. (30 min)
Evac Pt. 2	90 min (30 min)
Evac Pt. 3B	0 min* (4 hours)

* Evacuation Point is impacted at one hour, but the route to the Evac. Pt. is impacted in less than 5 min.

Wind Driven Fire at North Interface (Wind NNE direction @ 70 mph) with Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the NE of the Project Site. Wind is from the NNE at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 2. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately four hours into the simulated event.

NNE at 70 mph Creek Avoidance				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	**0:15**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
30	**0:30**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
45	**0:45**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
60	**1:00**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
75	**1:15**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
90	**1:30**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
105	**1:45**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
120	**2:00**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
135	**2:15**	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
150	**2:30**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
165	**2:45**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
180	**3:00**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
195	**3:15**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
210	**3:30**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
225	**3:45**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
240	**4:00**	Closed	Open	n/a	Closed	n/a	Open	Open	Closed	Closed	Open
255	**4:15**	Closed	Open	n/a	Open	n/a	Open	Open	Closed	Closed	Open
270	**4:30**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
285	**4:45**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
300	**5:00**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
315	**5:15**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
330	**5:30**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
345	**5:45**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
360	**6:00**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
375	**6:15**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
390	**6:30**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
405	**6:45**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
420	**7:00**	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open



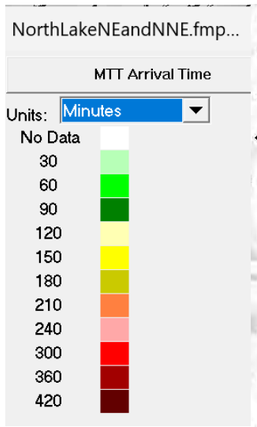
NNEat70Line	
	Time to Impasse
Evac Pt. 1	4+ hrs. (30 min)
Evac Pt. 2	90 min (30 min)
Evac Pt. 3B	0 min* (4 hours)

* Evacuation Point is impacted at one hour, but the route to the Evac. Pt. is impacted in less than 5 min.

Wind Driven Fire at North Interface (Wind NNE direction @ 70 mph) with Partial Creek Avoidance Development

This fire with 70 mph winds (sustained) shows the timing from the fire as it interfaces with the proposed community.

The change in alignment allows the fire to move more quickly on the east flank.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

Spread Direction

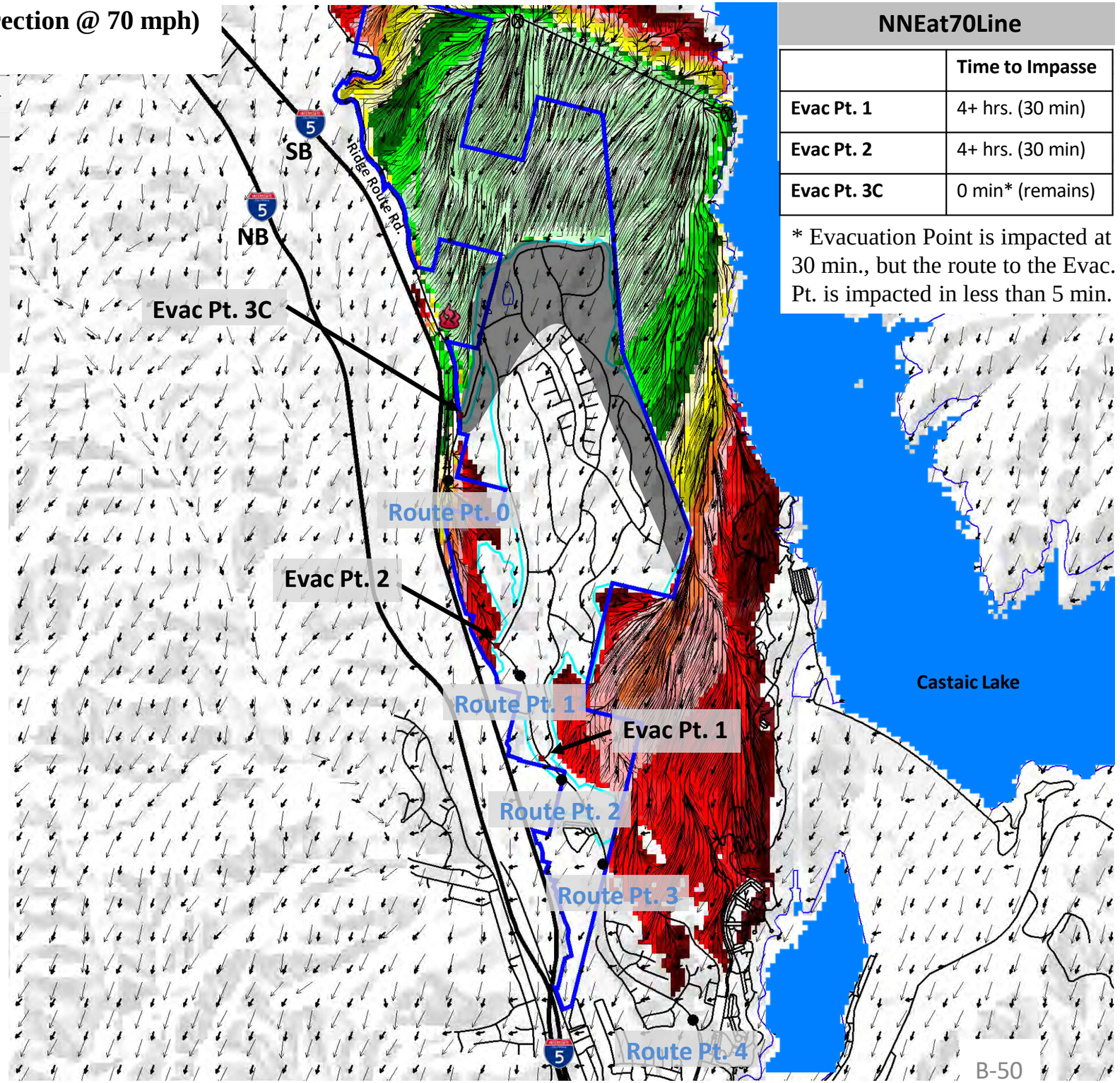
Fire Flow Path

Origin of the Fire

Spot Fire

Origin to first spot 30 min.

NNE wind at 70 Line



NNEat70Line

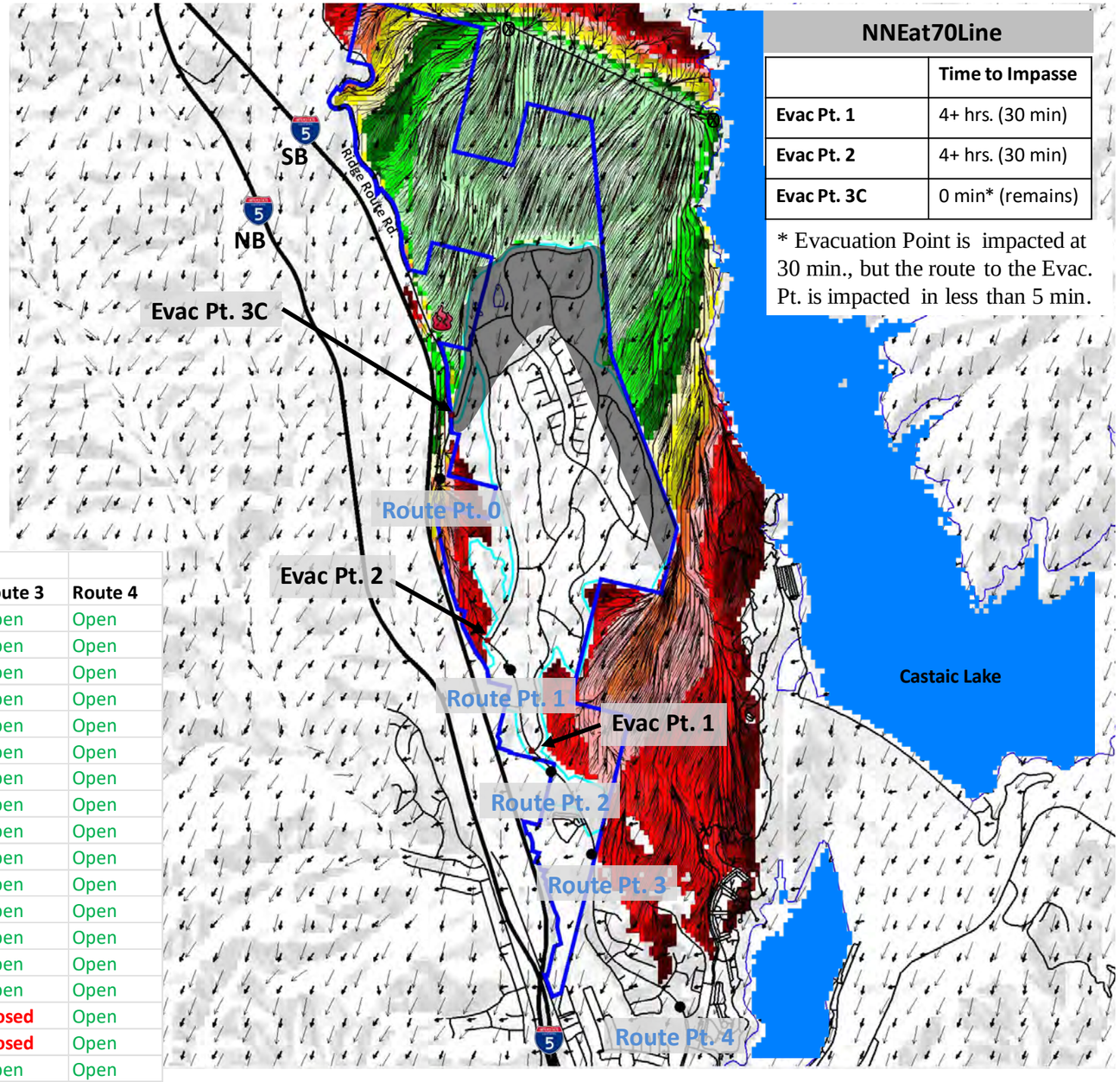
	Time to Impasse
Evac Pt. 1	4+ hrs. (30 min)
Evac Pt. 2	4+ hrs. (30 min)
Evac Pt. 3C	0 min* (remains)

* Evacuation Point is impacted at 30 min., but the route to the Evac. Pt. is impacted in less than 5 min.

Wind Driven Fire at North Interface (Wind NNE direction @ 70 mph) with Partial Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the NE of the Project Site. Wind is from the NNE at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 2. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately four hours into the simulated event.

NNE at 70 mph	Parital Creek Avoidance			Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
60	1:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
75	1:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
90	1:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
105	1:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
120	2:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
135	2:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
150	2:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
165	2:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
180	3:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
195	3:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
210	3:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
225	3:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
240	4:00	Closed	Open	n/a	n/a	Closed	Open	Open	Closed	Closed	Open
255	4:15	Closed	Open	n/a	n/a	Closed	Open	Open	Closed	Closed	Open
270	4:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
285	4:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
300	5:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
315	5:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
330	5:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
345	5:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
360	6:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
375	6:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
390	6:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
405	6:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
420	7:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open



NNEat70Line

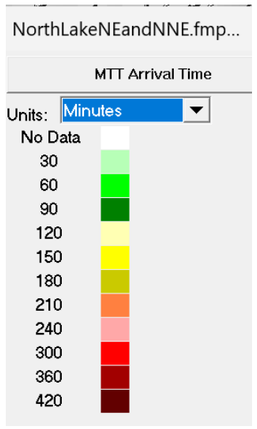
	Time to Impasse
Evac Pt. 1	4+ hrs. (30 min)
Evac Pt. 2	4+ hrs. (30 min)
Evac Pt. 3C	0 min* (remains)

* Evacuation Point is impacted at 30 min., but the route to the Evac. Pt. is impacted in less than 5 min.

Wind Driven Fire at North Interface (Wind N direction @ 70 mph) with Previously Approved Development

This fire with 70 mph winds (sustained) shows the timing from the fire as it interfaces with the proposed community.

The change in alignment allows the fire to run dramatically on the west and east flanks.



Streets

Project Boundary

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Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

Spread Direction

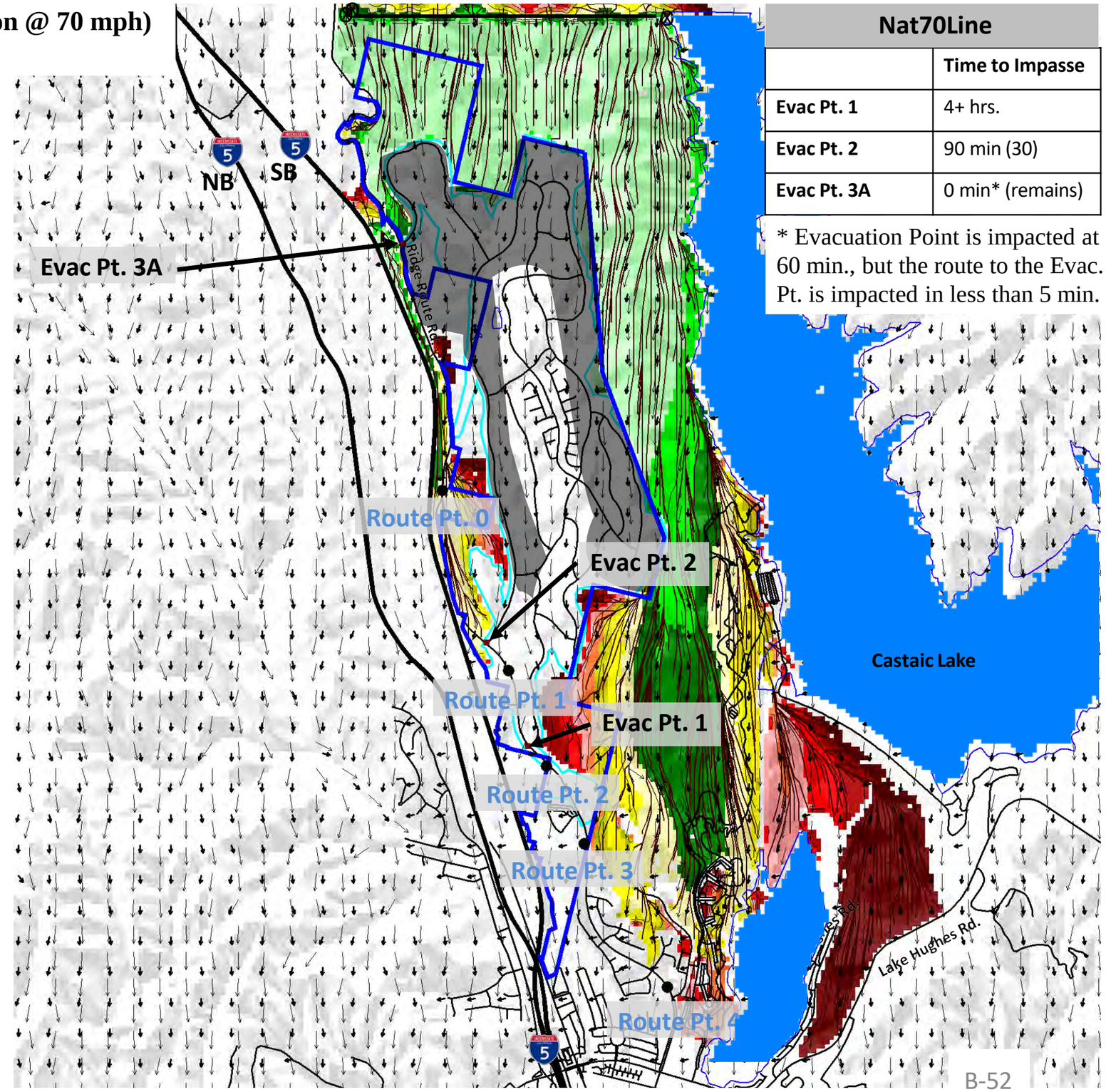
Fire Flow Path

Origin of the Fire

Spot Fire

Origin to first spot 30 min.
First spot to second spot 30 min

N wind at 70 Line



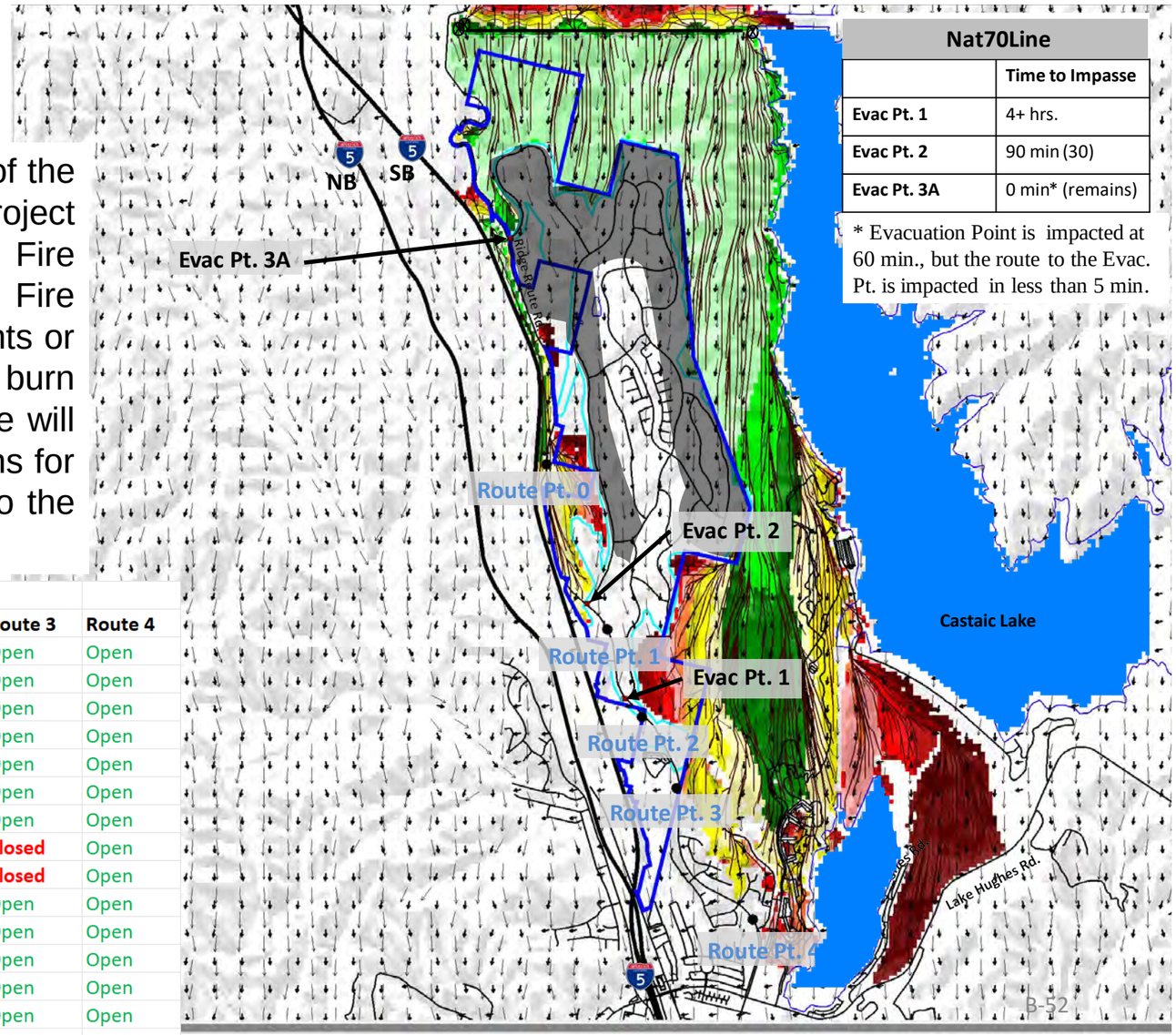
Nat70Line	
	Time to Impasse
Evac Pt. 1	4+ hrs.
Evac Pt. 2	90 min (30)
Evac Pt. 3A	0 min* (remains)

* Evacuation Point is impacted at 60 min., but the route to the Evac. Pt. is impacted in less than 5 min.

Wind Driven Fire at North Interface (Wind N direction @ 70 mph) with Previously Approved Development

Narrative: Fire is modeled from an existing line of fire to the North of the Project Site. Wind is from the North at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 2. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately two hours into the simulated event and again at approximately four hours.

N at 70 mph Approved				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
75	1:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
90	1:30	Open	Closed	Closed	n/a	n/a	Closed	Open	Open	Open	Open
105	1:45	Open	Closed	Closed	n/a	n/a	Closed	Open	Open	Open	Open
120	2:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Closed	Open
135	2:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Closed	Open
150	2:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
240	4:00	Closed	Open	Closed	n/a	n/a	Open	Open	Closed	Open	Closed
255	4:15	Closed	Open	Closed	n/a	n/a	Open	Open	Closed	Open	Closed
270	4:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open



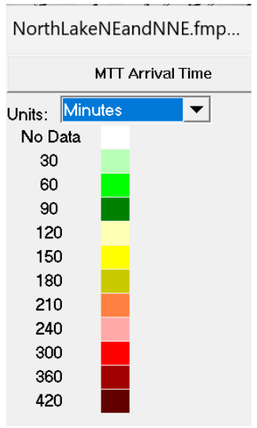
Nat70Line	
	Time to Impasse
Evac Pt. 1	4+ hrs.
Evac Pt. 2	90 min (30)
Evac Pt. 3A	0 min* (remains)

* Evacuation Point is impacted at 60 min., but the route to the Evac. Pt. is impacted in less than 5 min.

Wind Driven Fire at North Interface (Wind N direction @ 70 mph) with Creek Avoidance Development

This fire with 70 mph winds (sustained) shows the timing from the fire as it interfaces with the proposed community.

The change in alignment allows the fire to run dramatically on the west and east flanks.



Streets

Project Boundary

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Route Point

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Wind Direction

Spread Direction

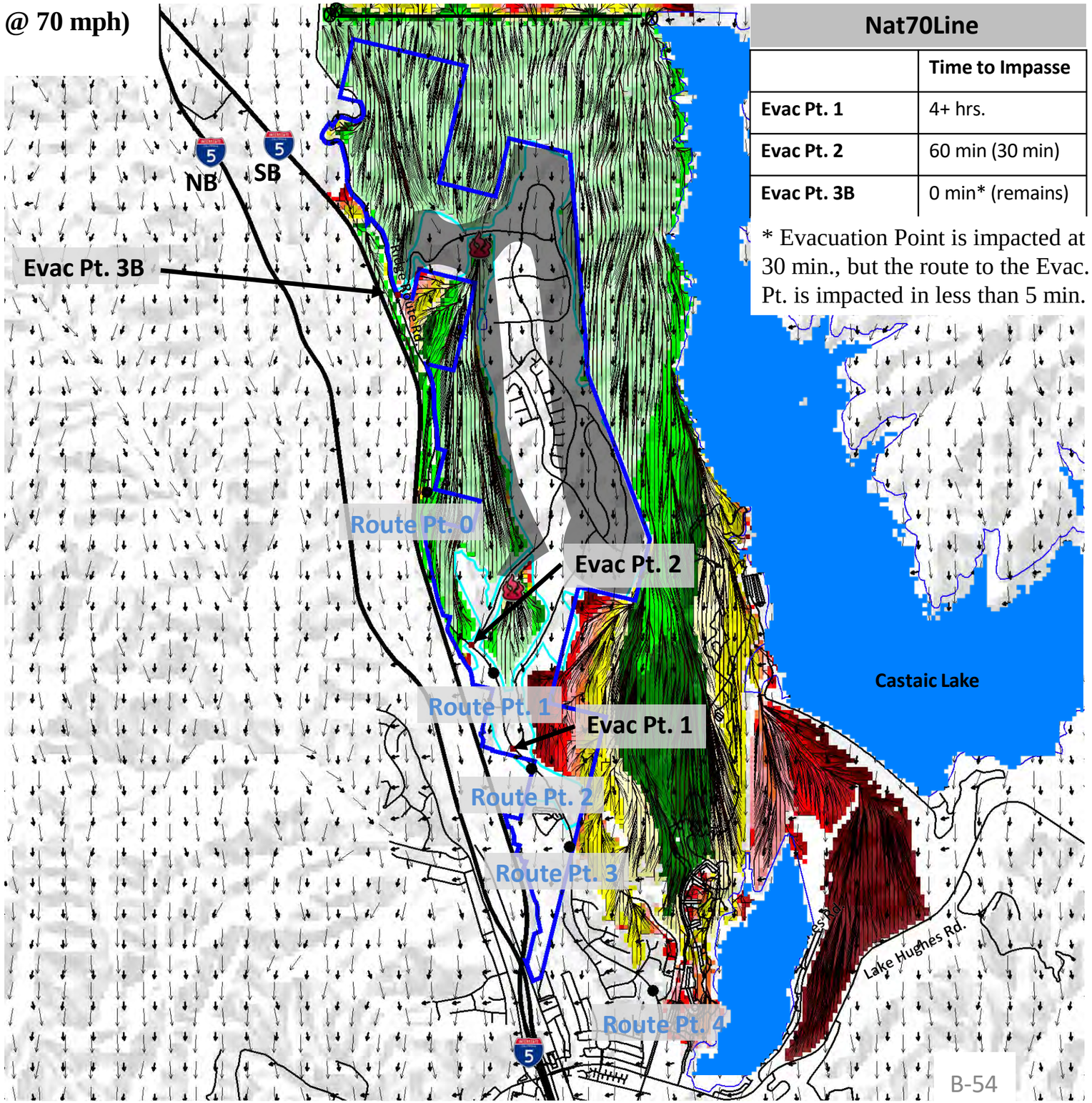
Fire Flow Path

Origin of the Fire

Spot Fire

Origin to first spot 30 min.
First spot to second spot 30 min

N wind at 70 Line



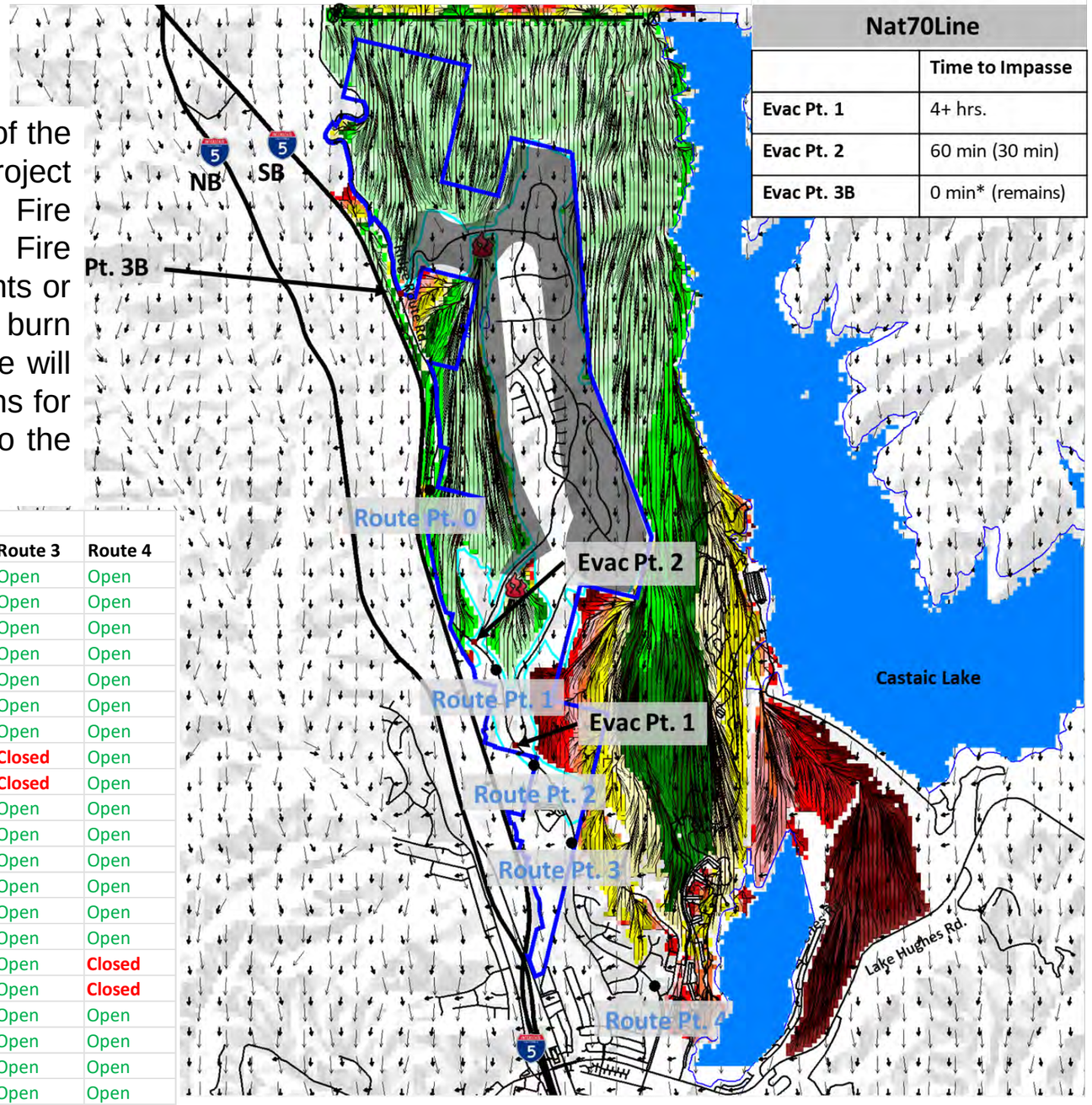
Nat70Line	
	Time to Impasse
Evac Pt. 1	4+ hrs.
Evac Pt. 2	60 min (30 min)
Evac Pt. 3B	0 min* (remains)

* Evacuation Point is impacted at 30 min., but the route to the Evac. Pt. is impacted in less than 5 min.

Wind Driven Fire at North Interface (Wind N direction @ 70 mph) with Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the North of the Project Site. Wind is from the North at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 2. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately two hours into the simulated event and again at approximately four hours.

N at 70 mph Creek Avoidance				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Closed	n/a	Closed	n/a	Closed	Closed	Open	Open	Open
75	1:15	Open	Closed	n/a	Closed	n/a	Closed	Closed	Open	Open	Open
90	1:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Closed	Open
135	2:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Closed	Open
150	2:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
240	4:00	Closed	Open	n/a	Closed	n/a	Open	Open	Closed	Open	Closed
255	4:15	Closed	Open	n/a	Closed	n/a	Open	Open	Closed	Open	Closed
270	4:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open

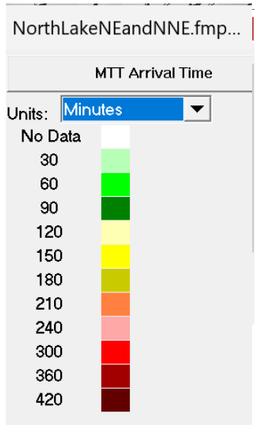


Nat70Line	
	Time to Impasse
Evac Pt. 1	4+ hrs.
Evac Pt. 2	60 min (30 min)
Evac Pt. 3B	0 min* (remains)

Wind Driven Fire at North Interface (Wind N direction @ 70 mph) with Partial Creek Avoidance Development

This fire with 70 mph winds (sustained) shows the timing from the fire as it interfaces with the proposed community.

The change in alignment allows the fire to run dramatically on the west and east flanks.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Wind Direction

Spread Direction

Fire Flow Path

Origin of the Fire

Spot Fire

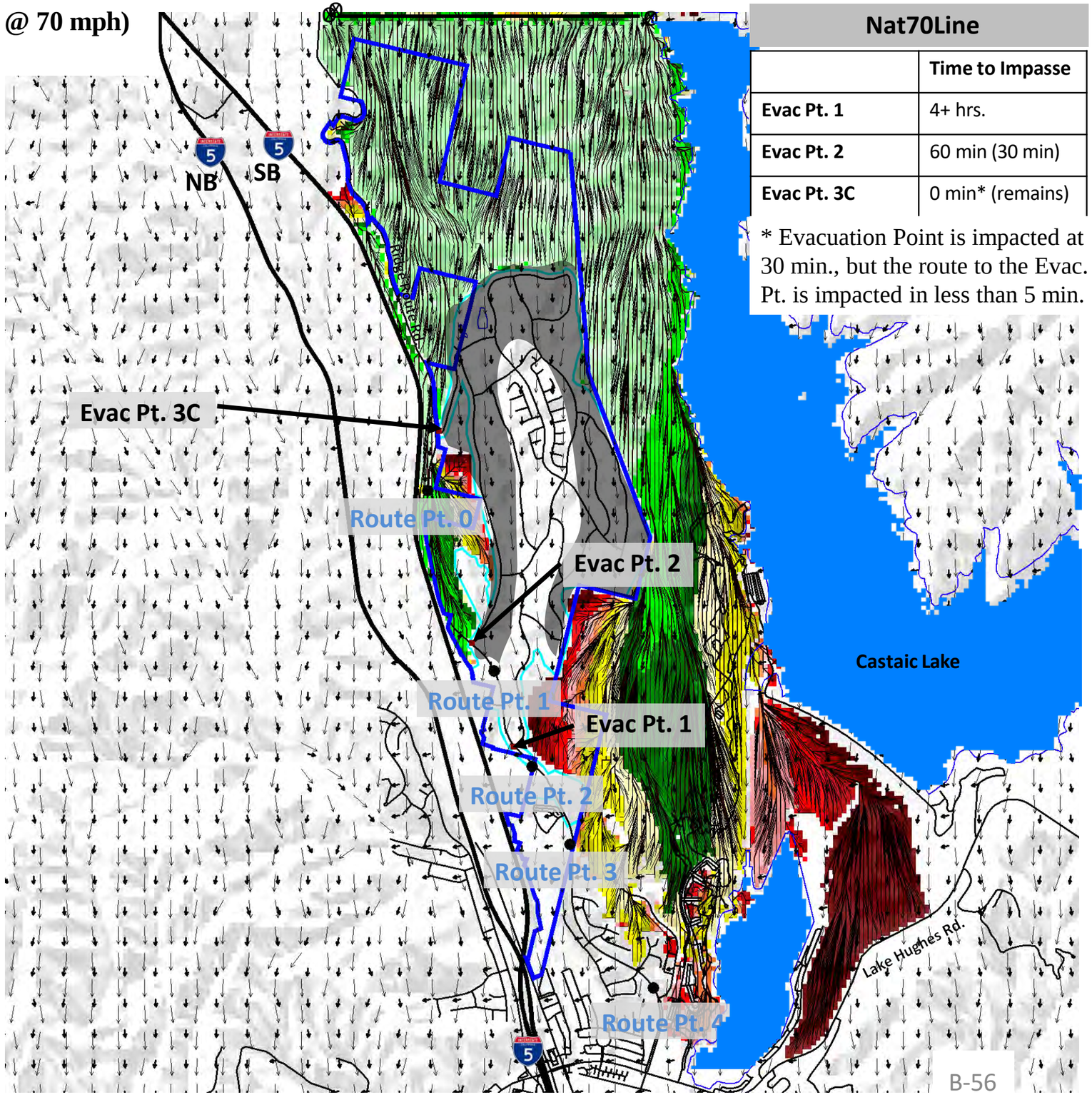
Evacuation Point

Route Point

Area of Population at Immediate Risk

Origin to first spot 30 min.
First spot to second spot 30 min

N wind at 70 Line



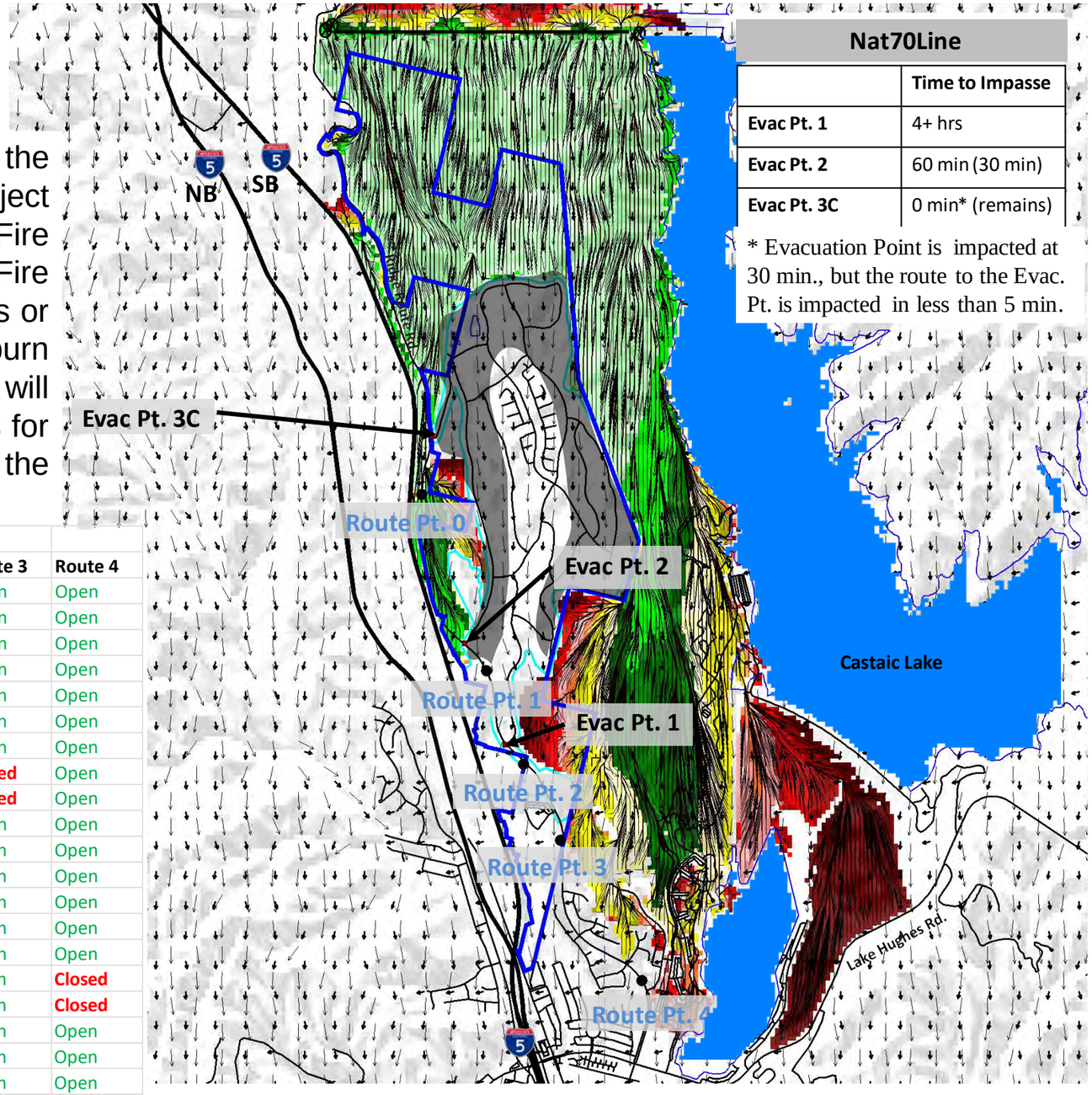
Nat70Line	
	Time to Impasse
Evac Pt. 1	4+ hrs.
Evac Pt. 2	60 min (30 min)
Evac Pt. 3C	0 min* (remains)

* Evacuation Point is impacted at 30 min., but the route to the Evac. Pt. is impacted in less than 5 min.

Wind Driven Fire at North Interface (Wind N direction @ 70 mph) with Partial Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the North of the Project Site. Wind is from the North at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 2. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately two hours into the simulated event and again at approximately four hours.

N at 70 mph	Parital Creek Avoidance			Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	**0:15**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
30	**0:30**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
45	**0:45**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
60	**1:00**	Open	**Closed**	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
75	**1:15**	Open	**Closed**	n/a	n/a	**Closed**	**Closed**	Open	Open	Open	Open
90	**1:30**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
105	**1:45**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
120	**2:00**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	**Closed**	Open
135	**2:15**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	**Closed**	Open
150	**2:30**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
165	**2:45**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
180	**3:00**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
195	**3:15**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
210	**3:30**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
225	**3:45**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
240	**4:00**	**Closed**	Open	n/a	n/a	**Closed**	Open	Open	**Closed**	Open	**Closed**
255	**4:15**	**Closed**	Open	n/a	n/a	**Closed**	Open	Open	**Closed**	Open	**Closed**
270	**4:30**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
285	**4:45**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
300	**5:00**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
315	**5:15**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
330	**5:30**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
345	**5:45**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
360	**6:00**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
375	**6:15**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
390	**6:30**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
405	**6:45**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open
420	**7:00**	Open	Open	n/a	n/a	**Closed**	Open	Open	Open	Open	Open



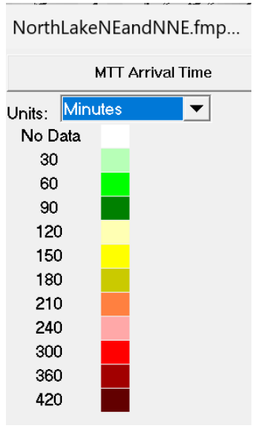
Nat70Line

	Time to Impasse
Evac Pt. 1	4+ hrs
Evac Pt. 2	60 min (30 min)
Evac Pt. 3C	0 min* (remains)

* Evacuation Point is impacted at 30 min., but the route to the Evac. Pt. is impacted in less than 5 min.

Templin Highway and Ridge Route Road Trigger Point
Previously Approved Development

Fire does not impact the southern evacuation routes for over 3 hours. By this time, the fire front has pasted the balance of the project site. A fire of this size in this direction is not within the current fire history database in this area.



Streets

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Wind Direction

Spread Direction

Fire Flow Path

Origin of the Fire

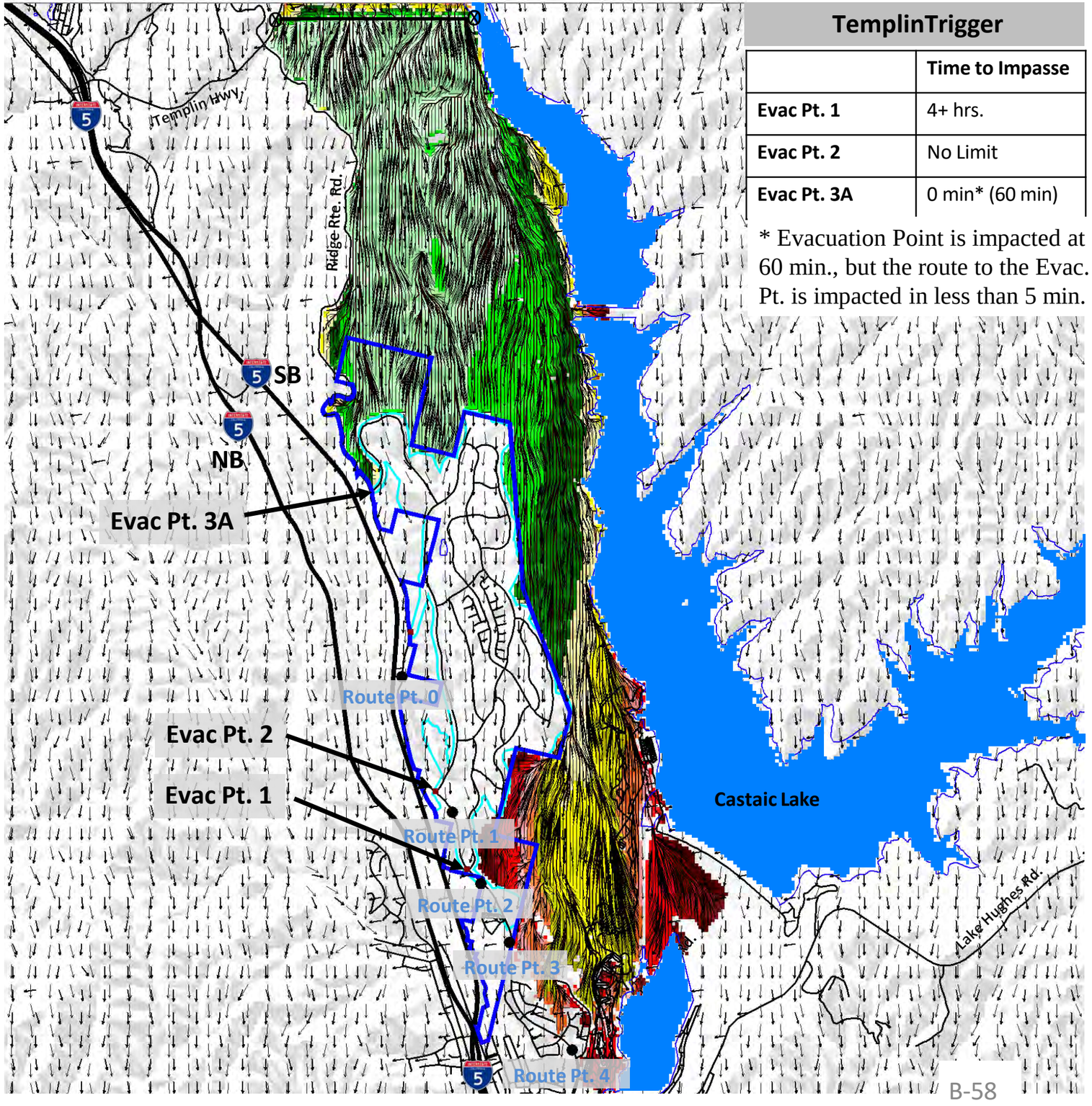
Spot Fire

Evacuation Point

Route Point

Area of Population at Immediate Risk

N wind at 70 Line



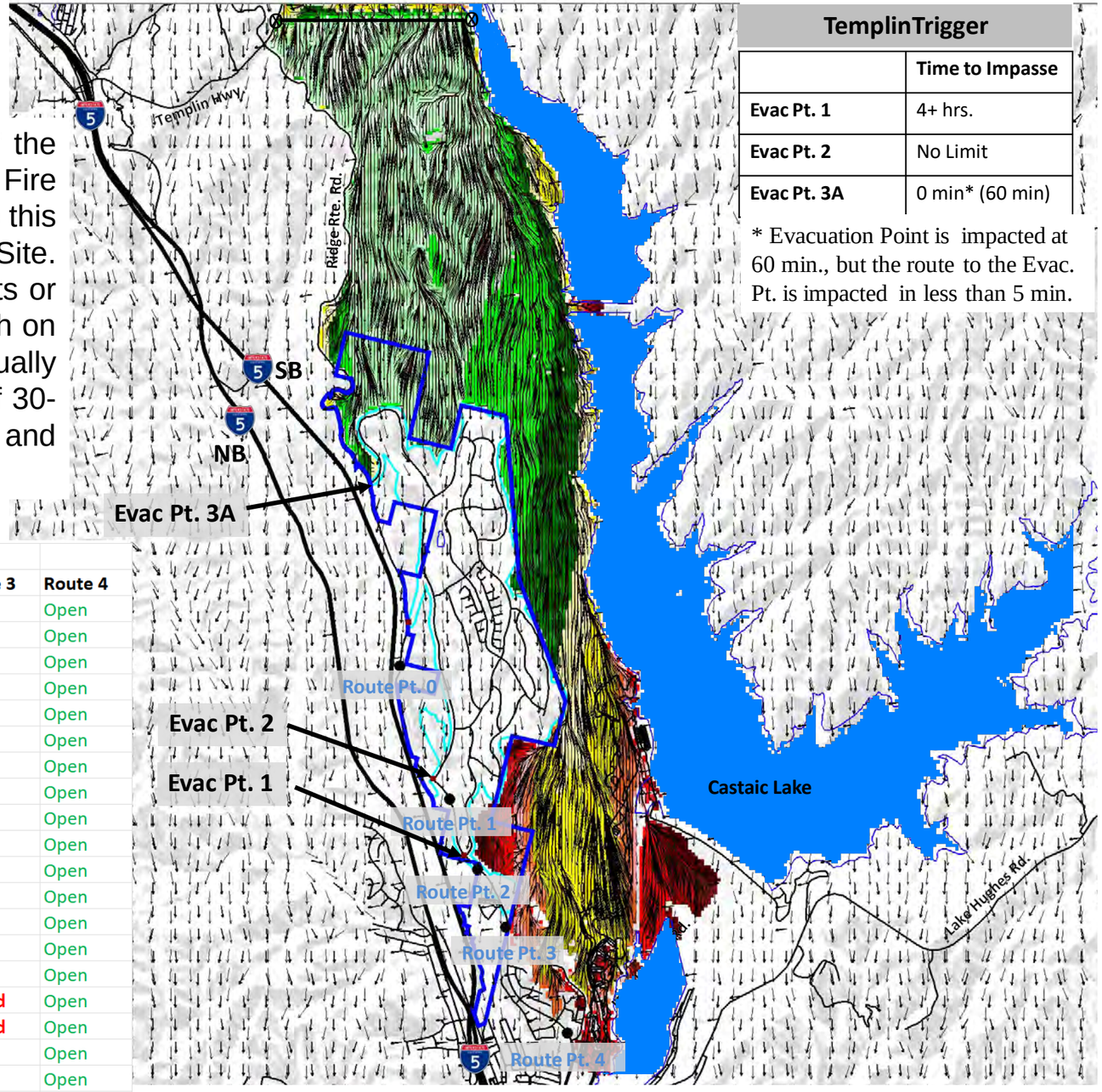
TemplinTrigger	
	Time to Impasse
Evac Pt. 1	4+ hrs.
Evac Pt. 2	No Limit
Evac Pt. 3A	0 min* (60 min)

* Evacuation Point is impacted at 60 min., but the route to the Evac. Pt. is impacted in less than 5 min.

Templin Highway and Ridge Route Road Trigger Point
Previously Approved Development

Narrative: Fire is modeled from an existing line of fire to the North of the Project Site at Templin Highway. Wind is from the North at 70 mph. Fire impact the Project Site in less than 10 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 3A. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately two hours into the simulated event and again at approximately four hours and again at five hours.

Templin at 70 mph Approved				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
75	1:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
90	1:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
135	2:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
150	2:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
240	4:00	Closed	Open	Open	n/a	n/a	Open	Open	Open	Closed	Open
255	4:15	Closed	Open	Open	n/a	n/a	Open	Open	Open	Closed	Open
270	4:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	Open	n/a	n/a	Open	Open	Closed	Open	Closed
315	5:15	Open	Open	Open	n/a	n/a	Open	Open	Closed	Open	Closed
330	5:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open



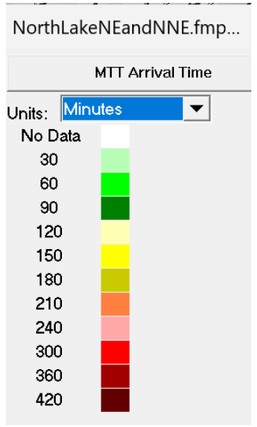
TemplinTrigger	
	Time to Impasse
Evac Pt. 1	4+ hrs.
Evac Pt. 2	No Limit
Evac Pt. 3A	0 min* (60 min)

* Evacuation Point is impacted at 60 min., but the route to the Evac. Pt. is impacted in less than 5 min.

Templin Highway and Ridge Route Road Trigger Point Creek Avoidance Development

Fire does not impact the southern evacuation routes for over 3 hours. By this time, the fire front has pasted the balance of the project site. A fire of this size in this direction is not within the current fire history database in this area.

Origin to first spot 30 min.
First spot to second spot 30 min



Streets
Project Boundary
Freeway
Development Area
Route Fire Perimeter

Wind Direction
Spread Direction
Fire Flow Path

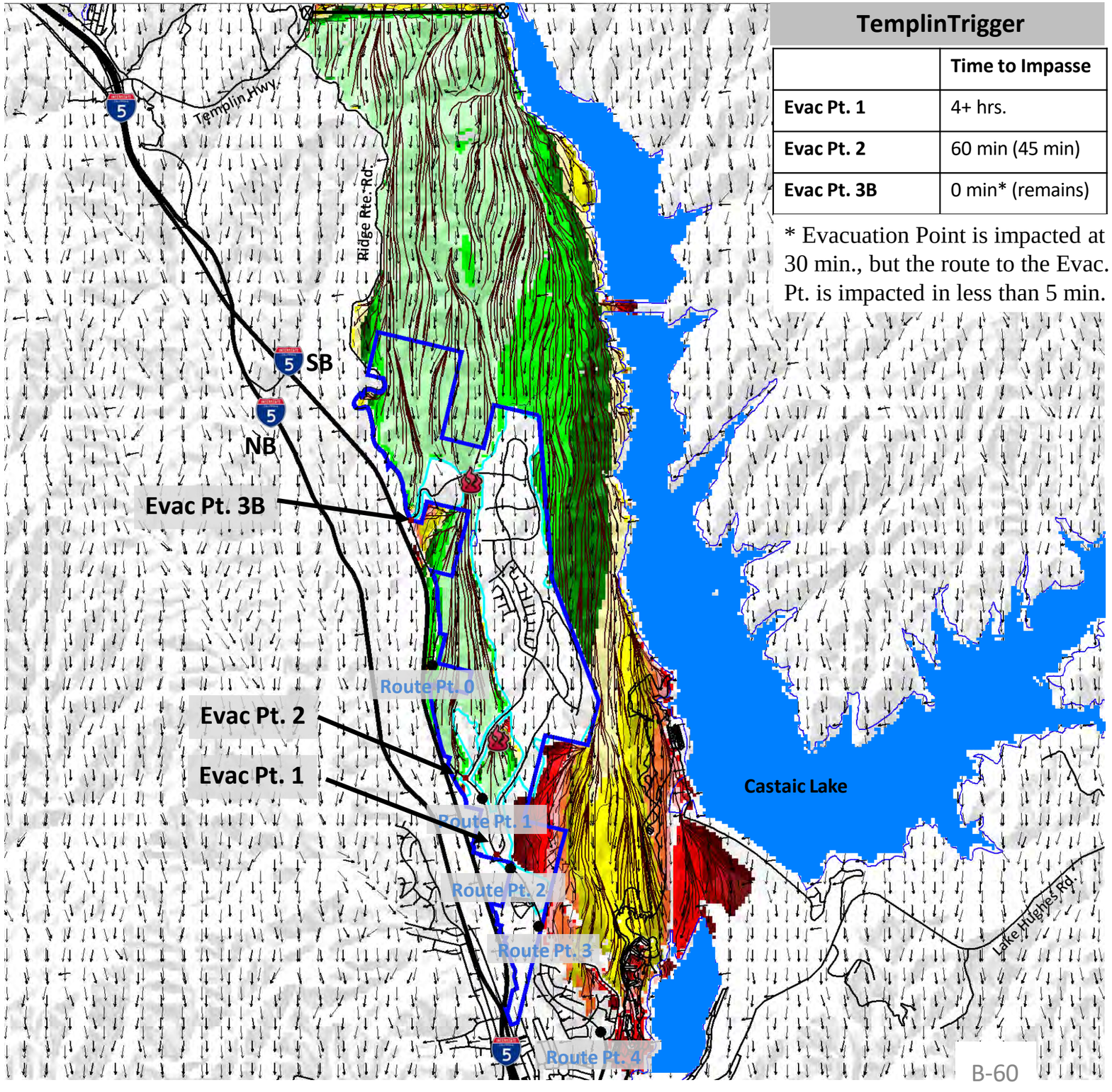
Origin of the Fire
Spot Fire

Evacuation Point
Route Point
Area of Population at Immediate Risk

N wind at 70 Line

TemplinTrigger	
	Time to Impasse
Evac Pt. 1	4+ hrs.
Evac Pt. 2	60 min (45 min)
Evac Pt. 3B	0 min* (remains)

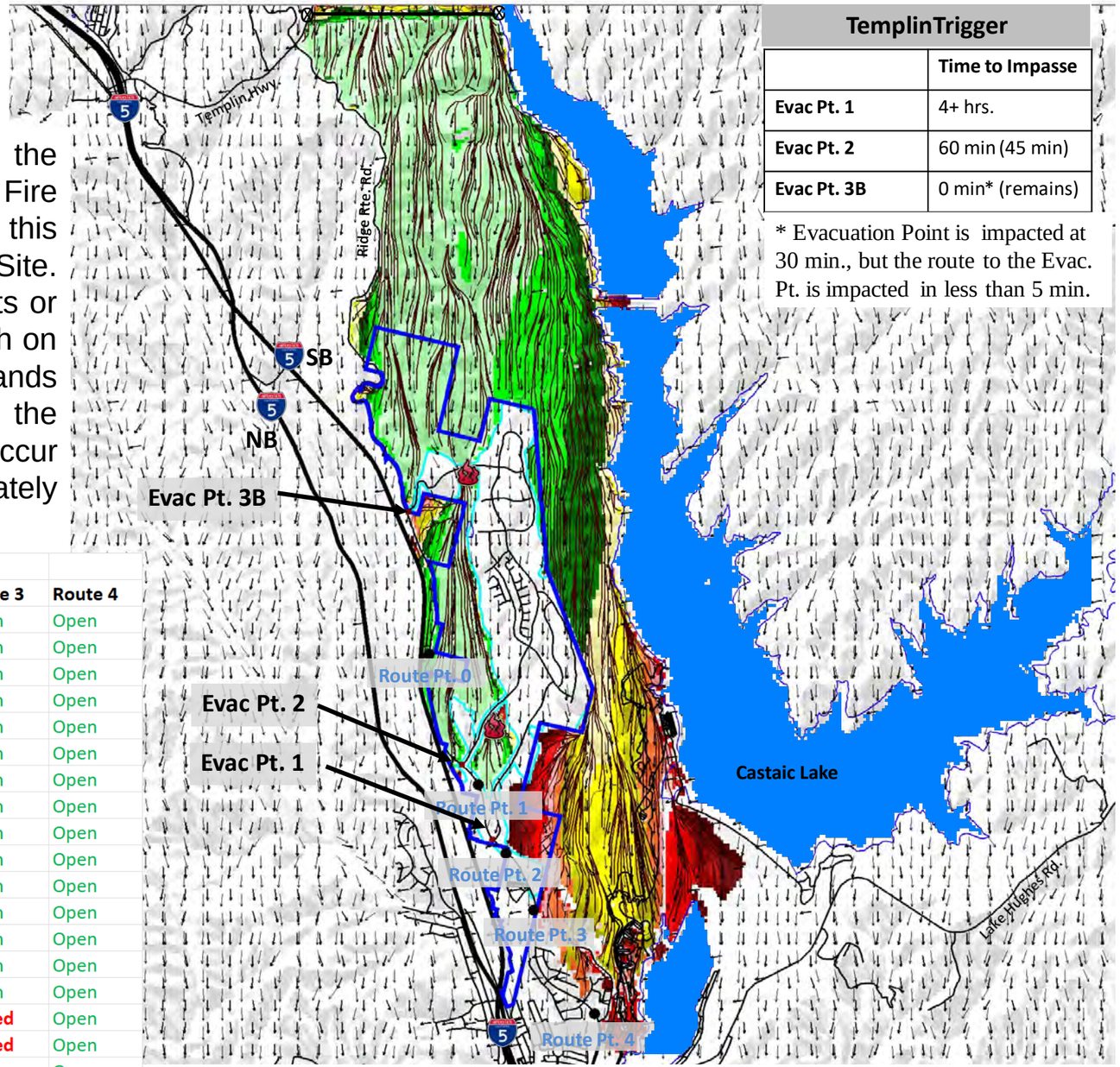
* Evacuation Point is impacted at 30 min., but the route to the Evac. Pt. is impacted in less than 5 min.



Templin Highway and Ridge Route Road Trigger Point Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the North of the Project Site at Templin Highway. Wind is from the North at 70 mph. Fire impact the Project Site in less than 10 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 1 due to the fuel islands between the access roads. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately two hours into the simulated event and again at approximately four hours and again at five hours.

Templin at 70 mph Creek Avoidance		Evacuation to the South									
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	**0:15**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
30	**0:30**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
45	**0:45**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
60	**1:00**	Open	Closed	n/a	Closed	n/a	Closed	Closed	Open	Open	Open
75	**1:15**	Open	Closed	n/a	Closed	n/a	Closed	Closed	Open	Open	Open
90	**1:30**	Open	Closed	n/a	Closed	n/a	Open	Open	Open	Open	Open
105	**1:45**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
120	**2:00**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
135	**2:15**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
150	**2:30**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
165	**2:45**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
180	**3:00**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
195	**3:15**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
210	**3:30**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
225	**3:45**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
240	**4:00**	Closed	Open	n/a	Closed	n/a	Open	Open	Open	Closed	Open
255	**4:15**	Closed	Open	n/a	Closed	n/a	Open	Open	Open	Closed	Open
270	**4:30**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
285	**4:45**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
300	**5:00**	Open	Open	n/a	Closed	n/a	Open	Open	Closed	Open	Closed
315	**5:15**	Open	Open	n/a	Closed	n/a	Open	Open	Closed	Open	Closed
330	**5:30**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
345	**5:45**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
360	**6:00**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
375	**6:15**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
390	**6:30**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
405	**6:45**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
420	**7:00**	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open

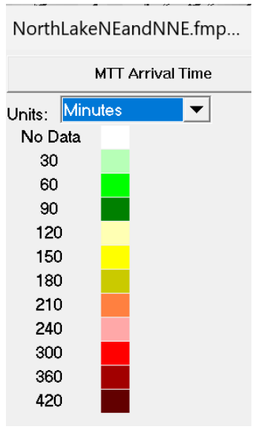


TemplinTrigger	
	Time to Impasse
Evac Pt. 1	4+ hrs.
Evac Pt. 2	60 min (45 min)
Evac Pt. 3B	0 min* (remains)

* Evacuation Point is impacted at 30 min., but the route to the Evac. Pt. is impacted in less than 5 min.

Templin Highway and Ridge Route Road Trigger Point Partial Creek Avoidance Development

Fire does not impact the southern evacuation routes for over 3 hours. By this time, the fire front has pasted the balance of the project site. A fire of this size in this direction is not within the current fire history database in this area.



Streets

Project Boundary

Freeway

Development Area

Route Fire Perimeter

Evacuation Point

Route Point

Area of Population at Immediate Risk

Wind Direction

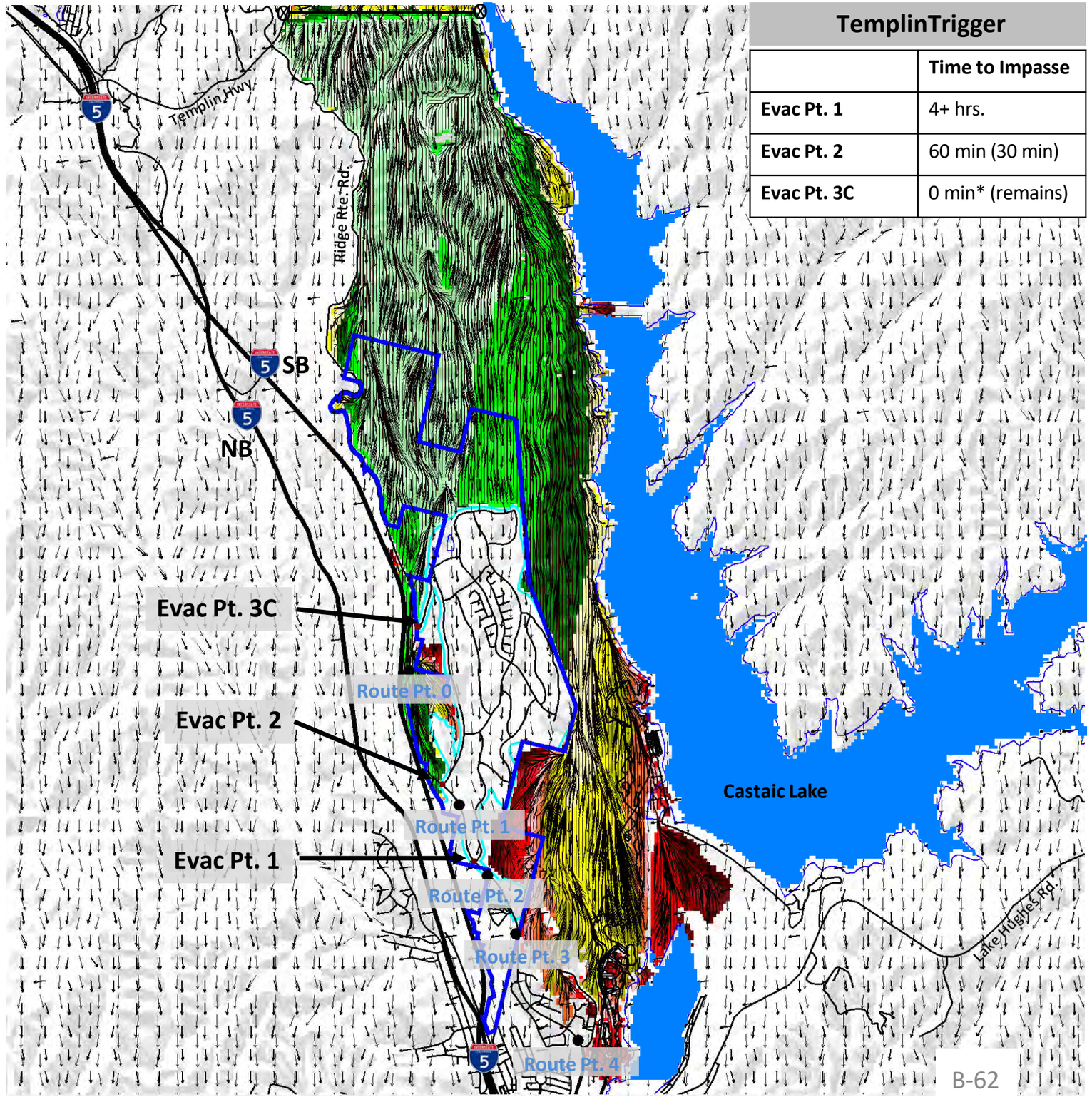
Spread Direction

Fire Flow Path

Origin of the Fire

Spot Fire

N wind at 70 Line

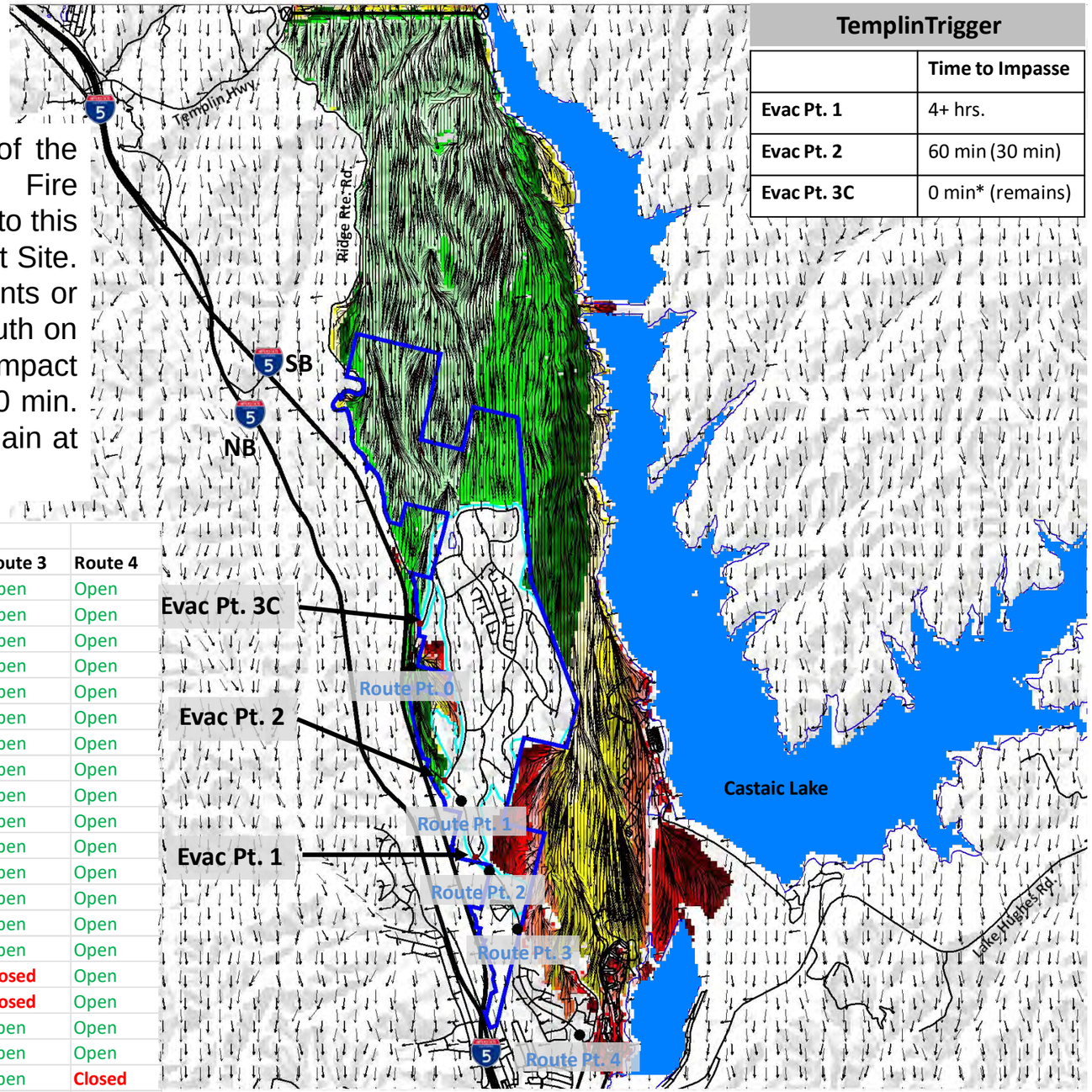


TemplinTrigger	
	Time to Impasse
Evac Pt. 1	4+ hrs.
Evac Pt. 2	60 min (30 min)
Evac Pt. 3C	0 min* (remains)

Templin Highway and Ridge Route Road Trigger Point
Partial Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the North of the Project Site at Templin Highway. Wind is from the North at 70 mph. Fire impact the Project Site in less than 10 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 2. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately two hours into the simulated event and again at approximately four hours and again at five hours.

Templin at 70 mph	Parital Creek Avoidance	Evacuation to the South									
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	**0:15**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
30	**0:30**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
45	**0:45**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
60	**1:00**	Open	Closed	n/a	n/a	Closed	Closed	Open	Open	Open	Open
75	**1:15**	Open	Closed	n/a	n/a	Closed	Closed	Open	Open	Open	Open
90	**1:30**	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open	Open
105	**1:45**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
120	**2:00**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
135	**2:15**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
150	**2:30**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
165	**2:45**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
180	**3:00**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
195	**3:15**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
210	**3:30**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
225	**3:45**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
240	**4:00**	Closed	Open	n/a	n/a	Closed	Open	Open	Open	Closed	Open
255	**4:15**	Closed	Open	n/a	n/a	Closed	Open	Open	Open	Closed	Open
270	**4:30**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
285	**4:45**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
300	**5:00**	Open	Open	n/a	n/a	Closed	Open	Open	Closed	Open	Closed
315	**5:15**	Open	Open	n/a	n/a	Closed	Open	Open	Closed	Open	Closed
330	**5:30**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
345	**5:45**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
360	**6:00**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
375	**6:15**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
390	**6:30**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
405	**6:45**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
420	**7:00**	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open



TemplinTrigger	
	Time to Impasse
Evac Pt. 1	4+ hrs.
Evac Pt. 2	60 min (30 min)
Evac Pt. 3C	0 min* (remains)

Inputs: SURFACE

Description		Dry Climate Fuels - NorthLake

Fuel/Vegetation, Surface/Understory

Fuel Model		gr1, gr2, gs1, gs2, sh1, sh2, tu5, S

Fuel Moisture

1-h Fuel Moisture	%	3
10-h Fuel Moisture	%	4
100-h Fuel Moisture	%	5
Live Herbaceous Fuel Moisture	%	30
Live Woody Fuel Moisture	%	50

Weather

20-ft Wind Speed	mi/h	0, 25, 45, 65, 80
Wind Adjustment Factor		0.5
Wind Direction (from north)	deg	45

Terrain

Slope Steepness	%	100
Site Aspect	deg	45

Run Option Notes

Maximum effective wind speed limit IS imposed [SURFACE].

Fire spread is in the HEADING direction only [SURFACE].

Wind is in specified directions [SURFACE].

Wind and spread directions are degrees clockwise from north [SURFACE].

Wind direction is the direction from which the wind is blowing [SURFACE].

Output Variables

Surface Fire Rate of Spread (ft/min) [SURFACE]

Surface Fireline Intensity (kW/m) [SURFACE]

Surface Fire Flame Length (ft) [SURFACE]

Flame Residence Time (min) [SURFACE]

Total Dead Fuel Load (ton/ac) [SURFACE]

(continued on next page)

Input Worksheet (continued)

Notes

Fuel model parameters

Fuel Model Code	Fuel Model Number	Climate	Fuel load (t/ac) 1-hr	10-hr	100-hr	Live herb	Live woody	Fuel model type[a]	SAV ratio (1/ft)[b] Dead 1-hr	Live herb	Live woody	Fuel bed depth (ft)	Dead fuel extinction moisture (percent)	Heat content BTU/lb[c]	Fuel Model Code	Dead Component Calculation 100% Transfer Dead	Herb	Dead load	Total Load	Percentage Component
GR1	101	Dry	0.10	0.00	0.00	0.30	0.00	dynamic	2200	2000	9999	0.4	15	8000	GR1	0.10	0.30	0.19	0.40	48%
GR2	102	Dry	0.10	0.00	0.00	1.00	0.00	dynamic	2000	1800	9999	1.0	15	8000	GR2	0.10	1.00	1.10	1.10	100%
GS1	121	Dry	0.20	0.00	0.00	0.50	0.65	dynamic	2000	1800	1800	0.9	15	8000	GS1	0.20	0.50	0.45	1.35	33%
GS2	122	Dry	0.50	0.50	0.00	0.60	1.00	dynamic	2000	1800	1800	1.5	15	8000	GS2	1.00	0.60	1.36	2.60	52%
SH1	141	Dry	0.25	0.25	0.00	0.15	1.30	dynamic	2000	1800	1600	1.0	15	8000	SH1	0.50	0.15	0.52	1.95	27%
SH2	142	Dry	1.35	2.40	0.75	0.00	3.85	static	2000	9999	1600	1.0	15	8000	SH2	4.50	no transfer	4.50	8.35	54%
TU5	165	Dry	4.00	4.00	3.00	0.00	3.00	static	1500	9999	750	1.0	25	8000	TU5	11.00	no transfer	11.00	14.00	79%
SCAL14	N/A	N/A	3.00	4.50	1.05	1.45	5.00	static	350	1500	250	3.0	15	9211	SCAL14	8.55	no transfer	8.55	15.00	57%
SCAL15	N/A	N/A	2.00	3.00	1.00	0.50	2.00	static	640	220	640	3.0	13	10000	SCAL15	6.00	no transfer	6.00	8.50	71%
SCAL17	N/A	N/A	1.30	1.00	1.00	2.00	2.00	static	640	2200	640	4.0	20	8000	SCAL17	3.30	no transfer	3.30	7.30	45%
SCAL18	N/A	N/A	5.50	0.80	0.10	0.75	2.50	static	640	1500	640	3.0	25	9200	SCAL18	6.40	no transfer	6.40	9.65	66%
SH5	145	Dry	3.60	2.10	0.00	0.00	2.90	static	750	9999	1600	6.0	15	8000	SH5	5.70	no transfer	5.70	8.60	66%
SH7	147	Dry	3.50	5.30	2.20	0.00	3.40	static	750	9999	1600	6.0	15	8000	SH7	11.00	no transfer	11.00	14.40	76%
SCAL16	N/A	N/A	2.25	4.80	1.80	3.00	2.85	static	500	1500	500	6.0	15	8000	SCAL16	8.85	no transfer	8.85	14.70	60%
Reference Only																				
Model 4	4	N/A	5.01	4.01	2.00	0.00	5.01	static	2000	1500	1500	6.0	20	8000	Model 4	11.02	no transfer	11.02	16.03	69%
Model 6	6	N/A	1.50	2.50	2.00	0.00	0.00	static	1750	1500	1500	2.5	25	8000	Model 6	6.00	no transfer	6.00	6.00	100%

[a] Fuel model type does not apply to fuel models without live herbaceous load.
[b] The value 9999 was assigned in cases where there is no load in a particular fuel class or category
[c] The same heat content value was applied to both live and dead fuel categories.
Note: Dynamic fuels calculated at 100% herbaceous live fuel load transfer due to extreme low fuel moisture in the worse case scenario

Dry Climate Fuels - NorthLake

Head Fire

Surface Fire Rate of Spread (ft/min)

Fuel Model	20-ft Wind Speed mi/h				
	0	25	45	65	80
gr1	30.0	30.0	30.0	30.0	30.0
gr2	108.9	268.7	268.7	268.7	268.7
gs1	54.0	181.3	203.3	203.3	203.3
gs2	75.1	249.7	486.6	565.2	565.2
sh1	31.7	102.1	120.2	120.2	120.2
sh2	23.9	69.6	127.4	196.4	254.2
tu5	29.1	71.6	113.8	159.5	195.5
SCAL14	45.4	117.9	170.9	222.3	260.1
SCAL15	52.8	151.3	236.8	325.0	392.3
SCAL17	84.7	273.9	511.7	795.3	907.0
SCAL18	81.2	225.6	329.8	430.4	504.3
sh5	150.6	477.4	807.9	1168.3	1453.3
sh7	106.0	316.5	526.9	755.4	935.6
SCAL16	78.8	231.0	367.3	509.2	618.3

Dry Climate Fuels - NorthLake

Head Fire

Surface Fireline Intensity (kW/m)

Fuel Model	20-ft Wind Speed mi/h				
	0	25	45	65	80
gr1	151	151	151	151	151
gr2	1636	4037	4037	4037	4037
gs1	1095	3675	4122	4122	4122
gs2	2483	8262	16100	18700	18700
sh1	747	2412	2838	2838	2838
sh2	2045	5955	10895	16798	21733
tu5	5120	12593	20022	28070	34406
SCAL14	10036	26051	37756	49107	57462
SCAL15	5289	15161	23740	32575	39321
SCAL17	4275	13831	25840	40159	45799
SCAL18	19164	53264	77865	101620	119060
sh5	16779	53199	90025	130182	161930
sh7	15952	47643	79330	113730	140854
SCAL16	9854	28906	45959	63713	77359

Dry Climate Fuels - NorthLake

Head Fire

Surface Fire Flame Length (ft)

Fuel Model	20-ft Wind Speed mi/h				
	0	25	45	65	80
gr1	2.6	2.6	2.6	2.6	2.6
gr2	7.6	11.6	11.6	11.6	11.6
gs1	6.4	11.1	11.7	11.7	11.7
gs2	9.3	16.1	21.9	23.4	23.4
sh1	5.3	9.1	9.8	9.8	9.8
sh2	8.5	13.8	18.3	22.3	25.1
tu5	12.9	19.5	24.2	28.3	31.0
SCAL14	17.6	27.3	32.4	36.6	39.3
SCAL15	13.1	21.3	26.2	30.3	33.0
SCAL17	11.9	20.4	27.2	33.3	35.4
SCAL18	23.7	37.9	45.2	51.1	54.9
sh5	22.3	37.9	48.3	57.2	63.3
sh7	21.8	36.0	45.6	53.8	59.4
SCAL16	17.5	28.6	35.5	41.2	45.1

Dry Climate Fuels - NorthLake

Head Fire

Flame Residence Time (min)

Fuel Model	20-ft Wind Speed mi/h				
	0	25	45	65	80
gr1	0.19	0.19	0.19	0.19	0.19
gr2	0.21	0.21	0.21	0.21	0.21
gs1	0.21	0.21	0.21	0.21	0.21
gs2	0.21	0.21	0.21	0.21	0.21
sh1	0.23	0.23	0.23	0.23	0.23
sh2	0.23	0.23	0.23	0.23	0.23
tu5	0.31	0.31	0.31	0.31	0.31
SCAL14	0.48	0.48	0.48	0.48	0.48
SCAL15	0.38	0.38	0.38	0.38	0.38
SCAL17	0.23	0.23	0.23	0.23	0.23
SCAL18	0.49	0.49	0.49	0.49	0.49
sh5	0.31	0.31	0.31	0.31	0.31
sh7	0.31	0.31	0.31	0.31	0.31
SCAL16	0.36	0.36	0.36	0.36	0.36

Dry Climate Fuels - NorthLake

Head Fire

Total Dead Fuel Load (ton/ac)

Fuel Model	20-ft Wind Speed mi/h				
	0	25	45	65	80
gr1	0.400	0.400	0.400	0.400	0.400
gr2	1.100	1.100	1.100	1.100	1.100
gs1	0.700	0.700	0.700	0.700	0.700
gs2	1.600	1.600	1.600	1.600	1.600
sh1	0.650	0.650	0.650	0.650	0.650
sh2	4.500	4.500	4.500	4.500	4.500
tu5	11.000	11.000	11.000	11.000	11.000
SCAL14	8.550	8.550	8.550	8.550	8.550
SCAL15	6.000	6.000	6.000	6.000	6.000
SCAL17	3.300	3.300	3.300	3.300	3.300
SCAL18	6.400	6.400	6.400	6.400	6.400
sh5	5.700	5.700	5.700	5.700	5.700
sh7	11.000	11.000	11.000	11.000	11.000
SCAL16	8.850	8.850	8.850	8.850	8.850

Discrete Variable Codes Used
Dry Climate Fuels - NorthLake

Fuel Model		
101	gr1	Short, sparse, dry climate grass (D)
102	gr2	Low load, dry climate grass (D)
121	gs1	Low load, dry climate grass-shrub (D)
122	gs2	Moderate load, dry climate grass-shrub (D)
141	sh1	Low load, dry climate shrub (D)
142	sh2	Moderate load, dry climate shrub (S)
165	tu5	Very high load, dry climate timber-shrub (S)
14	SCAL14	Manzanita
15	SCAL15	Chamise 1
17	SCAL17	Chamise 2
18	SCAL18	Sage / Buckwheat
145	sh5	High load, dry climate shrub (S)
147	sh7	Very high load, dry climate shrub (S)
16	SCAL16	North Slope Ceanothus

Inputs: SURFACE

Description		Climate Fuels - NorthLake Slope

Fuel/Vegetation, Surface/Understory

Fuel Model		SCAL18

Fuel Moisture

1-h Fuel Moisture	%	3
10-h Fuel Moisture	%	4
100-h Fuel Moisture	%	5
Live Herbaceous Fuel Moisture	%	30
Live Woody Fuel Moisture	%	50

Weather

20-ft Wind Speed	mi/h	0, 25, 45, 65, 80
Wind Adjustment Factor		0.5
Wind Direction (from north)	deg	45

Terrain

Slope Steepness	%	0, 10, 20, 30, 40, 50, 60, 70, 80, 9
Site Aspect	deg	45

Run Option Notes

Maximum effective wind speed limit IS imposed [SURFACE].

Fire spread is in the HEADING direction only [SURFACE].

Wind is in specified directions [SURFACE].

Wind and spread directions are degrees clockwise from north [SURFACE].

Wind direction is the direction from which the wind is blowing [SURFACE].

Output Variables

Surface Fire Rate of Spread (ft/min) [SURFACE]

Surface Fireline Intensity (kW/m) [SURFACE]

Surface Fire Flame Length (ft) [SURFACE]

Flame Residence Time (min) [SURFACE]

(continued on next page)

Input Worksheet (continued)

Notes

Climate Fuels - NorthLake Slope

Head Fire

Surface Fire Rate of Spread (ft/min)

Slope	20-ft Wind Speed mi/h				
%	0	25	45	65	80
0	3.0	147.4	251.6	352.2	426.1
10	3.7	148.2	252.4	353.0	426.9
20	6.1	150.5	254.7	355.3	429.2
30	10.0	154.4	258.6	359.3	433.1
40	15.5	159.9	264.1	364.7	438.6
50	22.5	166.9	271.2	371.8	445.6
60	31.1	175.6	279.8	380.4	454.2
70	41.3	185.7	289.9	390.5	464.4
80	53.0	197.5	301.7	402.3	476.1
90	66.3	210.8	315.0	415.6	489.4
100	81.2	225.6	329.8	430.4	504.3

Climate Fuels - NorthLake Slope

Head Fire

Surface Fireline Intensity (kW/m)

Slope	20-ft Wind Speed mi/h				
%	0	25	45	65	80
0	697	34798	59399	83153	100594
10	882	34983	59583	83338	100778
20	1436	35537	60137	83892	101332
30	2359	36460	61061	84815	102255
40	3652	37753	62353	86108	103548
50	5314	39415	64015	87770	105210
60	7345	41446	66047	89801	107241
70	9746	43846	68447	92202	109642
80	12516	46616	71217	94972	112412
90	15655	49756	74357	98111	115551
100	19164	53264	77865	101620	119060

Climate Fuels - NorthLake Slope

Head Fire

Surface Fire Flame Length (ft)

Slope	20-ft Wind Speed mi/h				
%	0	25	45	65	80
0	5.2	31.2	39.9	46.6	50.8
10	5.8	31.3	40.0	46.6	50.9
20	7.2	31.5	40.1	46.8	51.0
30	9.0	31.9	40.4	47.0	51.2
40	11.1	32.4	40.8	47.3	51.5
50	13.1	33.0	41.3	47.7	51.9
60	15.3	33.8	41.9	48.3	52.4
70	17.4	34.7	42.6	48.8	52.9
80	19.5	35.7	43.4	49.5	53.5
90	21.6	36.8	44.2	50.3	54.2
100	23.7	37.9	45.2	51.1	54.9

Climate Fuels - NorthLake Slope

Head Fire

Flame Residence Time (min)

Slope	20-ft Wind Speed mi/h				
%	0	25	45	65	80
0	0.49	0.49	0.49	0.49	0.49
10	0.49	0.49	0.49	0.49	0.49
20	0.49	0.49	0.49	0.49	0.49
30	0.49	0.49	0.49	0.49	0.49
40	0.49	0.49	0.49	0.49	0.49
50	0.49	0.49	0.49	0.49	0.49
60	0.49	0.49	0.49	0.49	0.49
70	0.49	0.49	0.49	0.49	0.49
80	0.49	0.49	0.49	0.49	0.49
90	0.49	0.49	0.49	0.49	0.49
100	0.49	0.49	0.49	0.49	0.49

Discrete Variable Codes Used
Climate Fuels - NorthLake Slope

Fuel Model

18	SCAL18	Sage / Buckwheat

Inputs: SURFACE

Description		Dry Climate Fuels - NorthLake Chaparral

Fuel/Vegetation, Surface/Understory

Chaparral Fuel Type		Chamise, MixedBrush
Chaparral Fuel Bed Depth	ft	10
Chaparral Dead Load Fraction	%	64

Fuel Moisture

1-h Fuel Moisture	%	3
10-h Fuel Moisture	%	4
100-h Fuel Moisture	%	5
Live Herbaceous Fuel Moisture	%	30
Live Woody Fuel Moisture	%	50

Weather

20-ft Wind Speed	mi/h	0, 25, 45, 65, 80
Wind Adjustment Factor		0.5
Wind Direction (from north)	deg	45

Terrain

Slope Steepness	%	100
Site Aspect	deg	45

Run Option Notes

Maximum effective wind speed limit IS imposed [SURFACE].

A special case fuel model is used: chaparral (Rothermel and Philpot 1973) [SURFACE].

Fire spread is in the HEADING direction only [SURFACE].

Wind is in specified directions [SURFACE].

Wind and spread directions are degrees clockwise from north [SURFACE].

Wind direction is the direction from which the wind is blowing [SURFACE].

Output Variables

Surface Fire Rate of Spread (ft/min) [SURFACE]

Surface Fireline Intensity (kW/m) [SURFACE]

Surface Fire Flame Length (ft) [SURFACE]

Surface Fire Dir of Max Spread (from north) (deg) [SURFACE]

Flame Residence Time (min) [SURFACE]

(continued on next page)

Input Worksheet (continued)

Chaparral Total Fuel Load (ton/ac) [SURFACE]

Chaparral Total Dead Fuel Load (ton/ac) [SURFACE]

Chaparral Total Live Fuel Load (ton/ac) [SURFACE]

Notes

Dry Climate Fuels - NorthLake Chaparral

Head Fire

Surface Fire Rate of Spread (ft/min)

20-ft Wind Speed	Chaparral Fuel Type	
mi/h	Chamise	MixedBrush
0	46.3	66.2
25	155.3	194.5
45	163.9	265.0
65	163.9	327.6
80	163.9	371.3

Dry Climate Fuels - NorthLake Chaparral

Head Fire

Surface Fireline Intensity (kW/m)

20-ft Wind Speed	Chaparral Fuel Type	
mi/h	Chamise	MixedBrush
0	4089	18438
25	13705	54223
45	14470	73858
65	14470	91302
80	14470	103478

Dry Climate Fuels - NorthLake Chaparral

Head Fire

Surface Fire Flame Length (ft)

20-ft Wind Speed	Chaparral Fuel Type	
mi/h	Chamise	MixedBrush
0	11.7	23.3
25	20.3	38.3
45	20.8	44.1
65	20.8	48.6
80	20.8	51.5

Dry Climate Fuels - NorthLake Chaparral

Head Fire

Surface Fire Dir of Max Spread (from north) (deg)

20-ft Wind Speed	Chaparral Fuel Type	
mi/h	Chamise	MixedBrush
0	225	225
25	225	225
45	225	225
65	225	225
80	225	225

Dry Climate Fuels - NorthLake Chaparral

Head Fire

Flame Residence Time (min)

20-ft Wind Speed	Chaparral Fuel Type	
mi/h	Chamise	MixedBrush
0	0.73	0.73
25	0.73	0.73
45	0.73	0.73
65	0.73	0.73
80	0.73	0.73

Dry Climate Fuels - NorthLake Chaparral

Head Fire

Chaparral Total Fuel Load (ton/ac)

20-ft Wind Speed	Chaparral Fuel Type	
mi/h	Chamise	MixedBrush
0	19.807	37.456
25	19.807	37.456
45	19.807	37.456
65	19.807	37.456
80	19.807	37.456

Dry Climate Fuels - NorthLake Chaparral

Head Fire

Chaparral Total Dead Fuel Load (ton/ac)

20-ft Wind Speed	Chaparral Fuel Type	
mi/h	Chamise	MixedBrush
0	12.676	23.972
25	12.676	23.972
45	12.676	23.972
65	12.676	23.972
80	12.676	23.972

Dry Climate Fuels - NorthLake Chaparral

Head Fire

Chaparral Total Live Fuel Load (ton/ac)

20-ft Wind Speed	Chaparral Fuel Type	
mi/h	Chamise	MixedBrush
0	7.130	13.484
25	7.130	13.484
45	7.130	13.484
65	7.130	13.484
80	7.130	13.484

Discrete Variable Codes Used
Dry Climate Fuels - NorthLake Chaparral

Chaparral Fuel Type

`Chamise`	Chamise
`MixedBrush`	MixedBrush

APPENDIX D-2

NORTHLAKE SPECIFIC PLAN WILDLAND FIRE EVACUATION SCENARIOS – EVACUATION TIME ESTIMATES MEMORANDUM

Stantec

Memo

To:	Damon Mamalakis Armbruster Goldsmith & Delve LLP	From:	Maria Morris and Daryl Zerfass Stantec
Project/File:	2042648800	Date:	August 9, 2024

Reference: Northlake Specific Plan Wildland Fire Evacuation Scenarios – Evacuation Time Estimates

This memorandum summarizes evacuation time estimates based on various wildland fire evacuation scenarios for the Northlake Specific Plan Development (Project). The Project is located east of the Interstate 5 (I-5) freeway and north of Lake Hughes Road in unincorporated Los Angeles County. The Project location is illustrated in **Figure 1**.

Firesafe Planning Solutions prepared a Wildland Fire Risk Report[1] for the Project. The Wildland Fire Risk Report provides an assessment of wildland fire risks to assess wildland fire intensity approaching the Project site. Information from the Wildland Fire Risk Report, such as time estimates for when a simulated wildland fire would reach certain locations within the Project site, was used to estimate the approximate time needed to evacuate the Project site under various wildland fire scenarios.

Assumptions

The following assumptions related to land use, vehicles/traffic volumes, roadway network, on-site evacuation routes, and Wildland Risk Report Alternatives, were used to estimate evacuation times.

The focus of this analysis is on Ridge Route Road within the Specific Plan area and south to Lake Hughes Road where Ridge Route Road enters the existing Castaic community. Conditions on Lake Hughes Road and on Ridge Route Road south of Lake Hughes Road can affect the overall capacity of vehicles passing through the Ridge Route Road/Lake Hughes Road intersection, For this analysis of the Specific Plan area, it is assumed that these downstream conditions are being actively managed by County emergency management personnel and that sufficient capacity is available to receive and/or stage the evacuating residents.

Land use

Evacuation times are estimated for three land use scenarios:

- Previously Approved Project
- Creek Avoidance Alternative (CAA)
- Partial Creek Avoidance Alternative (PCAA)

The analysis is based on a worst-case scenario in which all residents of dwelling units under evacuation are assumed to be at home and would attempt to evacuate using all available vehicles for each household. The

[1] Wildland Fire Risk Report Northlake Project, Firesafe Planning Solutions, April 2023.

analysis also considers the existing residential neighborhoods just south of the Project (i.e., Northlake Hills and Wildwood), which also rely on Ridge Route Road for evacuation.

Table 1 summarizes the total residential units that would be constructed with each alternative. The number of dwelling units that would evacuate under a fire varies by scenario and is discussed later in this report.

Table 1 Northlake Specific Plan Residential Units by Alternative

	Previously Approved Project	CAA	PCAA
Residential	3,150 DU (including 321 affordable housing units)	1,815 DU (including 165 affordable housing units)	3,150 DU (including 315 affordable housing units and 6 live-work market rate units)
DU = dwelling units; CAA = Creek Avoidance Alternative, PCAA = Partial Creek Avoidance Alternative			

Vehicles/Traffic Volume

The number of residential units and the average vehicle ownership per household in the Castaic community was used to estimate the potential number of Northlake vehicles that would need to be evacuated during a wildland fire event. According to the 2021 American Community Survey (shown in **Table 2**), approximately 42% of Castaic households own two vehicles, 20% own 3 vehicles, and 18% own 4 or more vehicles. In total, households in the Castaic community own an average of 2.34 vehicles per household.

Table 2 Vehicles Per Household in Castaic Community – American Community Survey

Number of Vehicles Available in Household	Households	% of Total
0	148	3%
1	953	17%
2	2,401	42%
3	1,144	20%
4+	1,010	18%
Total households in Castaic	5,656	100%
Total with 2 or more	4,555	80%
Weighted average per household	2.34	
Source: 2021 American Community Survey		

The Appendix B of the Wildland Fire Risk Report illustrates fire behavior modeling under 30 scenarios. With each scenario, the number of people at risk determines the number of dwelling units that would be a priority to evacuate (hereby referred to as priority area), which is estimated based on the area of impact as determined in the Wildland Fire Risk Report and is summarized in **Table 3.** The priority area is shown as a dark gray shaded area in the Wildland Fire Risk Report illustrations. In some instances, the entire Project area is in the priority area. The boundaries of the shaded area in the Wildland Fire Risk Report illustrations were overlayed on the Project's tract maps and the number of dwelling units within the dark gray shaded area was estimated. After the priority area has evacuated, the remainder of the Project area would

evacuate. **Table 4** summarizes the number of vehicles evacuating, which is based on a worst-case assumption of residents using all available vehicles to evacuate.

Table 3 Estimated Number of Evacuating Dwelling Units in the Priority Area per Alternative

Scenario		Previously Approved Project	CAA	PCAA
1	Route Fire Sim	1,108	651	927
2	SSWat40Spot	1,286	483	1,370
3	SSWat40Line	1,383	1,134	1,485
4	Sat40Line	0	0	0
5	FreewaySpotsat40	822	910	1,132
6	LakeSpotsat40	898	1,650	1,056
7	Neat70Line	570	826	0
8	NNEat70Line	842	767	963
9	Nat70Line	1,687	940	1,702
10	Templin Trigger	3,150	1,815	3,150

Table 4 Estimated Number of Evacuating Vehicles from the Priority Area per Alternative

Scenario		Previously Approved Project	CAA	PCAA
1	Route Fire Sim	2,593	1,524	2,169
2	SSWat40Spot	3,009	1,129	3,206
3	SSWat40Line	3,236	2,653	3,475
4	Sat40Line	0	0	0
5	FreewaySpotsat40	1,924	2,129	2,649
6	LakeSpotsat40	2,101	3,861	2,471
7	NEat70Line	1,334	1,932	0
8	NNEat70Line	1,970	1,795	2,253
9	Nat70Line	3,948	2,198	3,983
10	Templin Trigger	7,371	4,247	7,371
Dwelling Units x average vehicles per household (2.34) = total vehicles				

Reference: Northlake Specific Plan Wildland Fire Evacuation Scenarios – Evacuation Time Estimates

Roadway Network

An illustration of the on-site roadway network for the Previously Approved Project, CAA, and PCAA is shown in **Figure 2**. **Table 5** provides a description of the main on-site roadways that would be used during a wildland fire evacuation and the roadways' capacities. **Figure 3** illustrates the Approved Project's on-site roadway classifications for reference.

Table 5 Roadway Network and Roadway Capacity Summary

Name	Roadway	Classification/Number of Lanes[1]	Capacity per Direction (Free Flow Conditions[2])	Capacity per Direction (Congested Conditions[3])
Ridge Route Point 0	Existing Ridge Route Road from north of Northlake Boulevard to northerly project limits	Secondary Highway 2-lanes (1 in each direction)	VPHPL = 1,600 Total VPH = 1,600	VPHPL = 500 Total VPH = 500
Ridge Route Point 1	Ridge Route Road between Northlake Boulevard and "B" Street	Secondary Highway 4-lanes (2 in each direction)	VPHPL = 1,600 Total VPH = 3,200	VPHPL = 500 Total VPH = 1,000
Ridge Route Point 2	Ridge Route Road between "B" Street and existing school site	Secondary Highway 4-lanes (2 in each direction)	VPHPL = 1,600 Total VPH = 3,200	VPHPL = 500 Total VPH = 1,000
Ridge Route Point 3	Existing Ridge Route Road between existing school site to Pine Crest Place	Secondary Highway 4-lanes (2 in each direction)	VPHPL = 1,600 Total VPH = 3,200	VPHPL = 500 Total VPH = 1,000
Ridge Route Point 4	Existing Ridge Route Road between Pine Crest Place to Castaic Lake Drive	Secondary Highway 4-lanes (2 in each direction)	VPHPL = 1,600 Total VPH = 3,200	VPHPL = 500 Total VPH = 1,000
Evacuation Point 1	"B" Street	Local Collector 2-lanes (1 in each direction)	VPHPL = 1,600 Total VPH = 1,600	VPHPL = 500 Total VPH = 500
Evacuation Point 2	Northlake Boulevard	Modified Industrial Collector 4-lanes (2 in each direction)	VPHPL = 1,600 Total VPH = 3,200	VPHPL = 500 Total VPH = 1,000
Evacuation Point 3	"A" Street	Local Collector 2-lanes (1 in each direction)	VPHPL = 1,600 Total VPH = 1,600	VPHPL = 500 Total VPH = 500

VPHPL = vehicles per hour per lane; VPH = vehicles per hour

[1] Northlake Design Guidebook, April 2018.

[2] The County of Los Angeles typically uses a VPHPL of 1,600 in ideal conditions.

[3] 500 VPHPL under congested conditions would equate to vehicles travelling at 2-3 miles per hour on average.

As shown in **Table 5**, a conservative roadway capacity estimate of 500 vehicles per hour per lane (VPHPL) is used in this analysis to represent extreme congested conditions under a worst-case evacuation scenario. 500 VPHPL is based on the following parameters:

- 30-foot average headways
- average speeds between 2-3 miles per hour

On-Site Evacuation Routes

The Wildland Fire Risk Report identifies the following evacuation points within the on-site roadway network (see **Figure 4** for illustration):

- Evacuation Point 1: Ridge Route Road at B Street intersection.
- Evacuation Point 2: Ridge Route Road at Northlake Boulevard intersection.
- Evacuation Point 3: Existing Ridge Route Road at northernmost emergency access point/local collector road (since the specific location of this intersection varies between the Previously. Approved Specific Plan, CAA, and PCAA, the intersection is referred to as 3A, 3B, and 3C, respectively)

Traffic from the three evacuation points would proceed south along Ridge Route Road towards the Lake Hughes Road intersection. For a worst-case condition, this analysis assumes that no vehicles would be evacuated to the north towards Templin Highway.

Wildland Fire Risk Report Alternatives

The Wildland Fire Risk Report shows the expected path of fire scenarios across the landscape (wildland) and provides rough time limits for the arrival of the fire front at key locations surrounding the Project site. **Table 6** summarizes data from the Wildland Fire Risk Report for 30 unique scenarios showing the estimated allowable time limits for when locations are viable. The allowable time limit is based on the time an evacuation point closes (i.e., becomes impassable), and in some instances reopens, as shown in Appendix B of the Wildland Fire Risk Report. The allowable time limits are used to estimate how many vehicles can pass through various evacuation points and onto Ridge Route Road to exit the Project site. Detailed timetables are located in Appendix B of the Wildland Fire Risk Report and in the attached worksheets.

The Wildland Risk Report reports that Scenario 4 would not result in any impacts to the three evacuation points. All other scenarios would result in an unusable evacuation point within a certain amount of time.

Methodology

The estimated evacuation time is calculated based on factors including the population of the Project area, the average number of vehicles owned by each household, the relative location of households in relation to the roadway network, and the available roadway capacity. As described above, Appendix B of the Wildland Fire Risk Report illustrates fire behavior modeling for 30 scenarios and identifies priority areas required to evacuate under that particular scenario. The procedure used for calculating evacuation times is provided in the attached worksheets.

Reference: Northlake Specific Plan Wildland Fire Evacuation Scenarios – Evacuation Time Estimates

Table 6 Allowable Time Limits from Wildland Fire Risk Report

Scenario	Evac Pt 1	Evac Pt 2	Evac Pt 3A	Evac Pt 3B	Evac Pt 3C
1. Route Fire Sim	Prev. Approved Plan – No time constraints CAA – Closes in 90 min* (reopens after 60 min) PCAA – No time constraints	Prev. Approved Plan – 60 min (reopens after 30 min) CAA – 60 min (reopens after 30 min) PCAA – 60 min (reopens after 30 min)	Prev. Approved Plan – No time constraints CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 60 min* (remains closed) PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – 60 min* (remains closed)
2. SSWat40Spot	Prev. Approved Plan – No time constraints CAA – No time constraints PCAA – No time constraints	Prev. Approved Plan – 60 min (reopens after 30 min) CAA – No time constraints PCAA – No time constraints	Prev. Approved Plan – 60 min* (remains closed) CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 60 min* (remains closed) PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – 60 min* (remains closed)
3. SSWat40Line	Prev. Approved Plan – No time constraints CAA – No time constraints PCAA – No time constraints	Prev. Approved Plan – No time constraints CAA – No time constraints PCAA – No time constraints	Prev. Approved Plan – 60 min* (remains closed) CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 60 min* (remains closed) PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – 60 min* (remains closed)
4. Sat40Line	Prev. Approved Plan – No time constraints CAA – No time constraints PCAA – No time constraints	Prev. Approved Plan – No time constraints CAA – No time constraints PCAA – No time constraints	Prev. Approved Plan – No time constraints CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – No time constraints PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – No time constraints
5. FreewaySpotsat 40	Prev. Approved Plan –30 min (reopens after 90 min) CAA – 30 min (reopens after 90 min) PCAA – 30 min (reopens after 90 min)	Prev. Approved Plan –30 min (reopens after 90 min) CAA – 30 min (reopens after 60 min) PCAA – 30 min (reopens after 90 min)	Prev. Approved Plan – 30 min* (reopens after 90 min) CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 30 min* (remains closed) PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – 30 min* (reopens after 90 min)
6. LakeSpotsat40	Prev. Approved Plan –60 min* (reopens after 30 min) CAA – 60 min* (reopens after 30 min) PCAA – 60 min* (reopens after 30 min)	Prev. Approved Plan – No time constraints CAA – 90 min*(reopens after 30 min) PCAA – No time constraints	Prev. Approved Plan – No time constraints CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 120 min* (remains closed) PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – No time constraints
7. NEat70Line	Prev. Approved Plan – No time constraints	Prev. Approved Plan – No time constraints	Prev. Approved Plan – 0 min (closed for the first 4.75 hours of the fire)	Prev. Approved Plan – N/A CAA – 0 min (closed for the first 90 min of the fire)	Prev. Approved Plan – N/A CAA – N/A

Reference: Northlake Specific Plan Wildland Fire Evacuation Scenarios – Evacuation Time Estimates

	CAA – No time constraints PCAA – No time constraints	CAA – No time constraints PCAA – No time constraints	CAA – N/A PCAA – N/A	PCAA – N/A	PCAA – 0 min (remains closed for the entire duration of the fire)
8. NNEat70Line	Prev. Approved Plan – No time constraint for 4+ hours* (reopens after 30 min) CAA – No time constraint for 4+ hours* (reopens after 30 min) PCAA – No time constraint for 4+ hours* (reopens after 30 min)	Prev. Approved Plan – No time constraints CAA – 90 min (reopens after 30 min) PCAA – No time constraint for 4+ hours* (reopens after 30 min)	Prev. Approved Plan – 0 min* (closed for the first 4 hours of the fire) CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 0 min* (closed for the first 4 hours of the fire) PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – 0 min* (remains closed for the entire duration of the fire)
9. Nat70Line	Prev. Approved Plan – No time constraint for 4+ hours* (reopens after 30 min) CAA – No time constraint for 4+ hours* (reopens after 30 min) PCAA – No time constraint for 4+ hours* (reopens after 30 min)	Prev. Approved Plan –60 min (reopens after 30 min) CAA – 60 min (reopens after 30 min) PCAA – 60 min (reopens after 30 min)	Prev. Approved Plan – 0 min* (remains closed for the entire duration of the fire) CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 0 min* (remains closed for the entire duration of the fire) PCAA – N/A	Prev. Approved Plan – N/A CAA – N/A PCAA – 0 min* (remains closed for the entire duration of the fire)
10. Templin Trigger	Prev. Approved Plan – No time constraint for 4+ hours* (reopens after 30 min) CAA – No time constraint for 4+ hours* (reopens after 30 min) PCAA – No time constraint for 4+ hours* (reopens after 30 min)	Prev. Approved Plan – No time constraints CAA – 60 min (reopens after 45 min) PCAA – 60 min (reopens after 45 min)	Prev. Approved Plan – 0 min (closed for the first 6 min of the fire) CAA – N/A PCAA – N/A	Prev. Approved Plan – N/A CAA – 0 min* (remains closed for the entire duration of the fire) PCAA – N/A	Prev. Approved Plan – N/A CAA – 0 min* (remains closed for the entire duration of the fire) PCAA – N/A

* Evac Point is not Limited at this point but the travel path for ingress/egress is Limited, such as closures on Ridge Route Road.

Green highlight indicates that the exit point will be viable for four hours or more before it is Limited by the fire. Time in Parentheses () is the time period for this the exit is limited.

N/A = not applicable

Source: Wildland Fire Risk Report for the NorthLake Project, 2023

With each alternative, Evacuation Point 1 would have one egress lane (500 vehicles per hour under congested conditions), Evacuation Point 2 would have two egress lanes (1,000 vehicles per hour under congested conditions), and Evacuation Point 3 would have one egress lane (500 vehicles per hour under congested conditions). The available capacity for each evacuation point is calculated in 15-minute intervals and an incremental assignment of Project vehicles is applied at each evacuation point until all vehicle demand has been satisfied. The total of the 15-minute intervals is the estimated evacuation time.

Regarding Ridge Route Road, the vehicle arrival rate at key points along Ridge Route Road is also calculated in 15-minute intervals. **Figure 4** shows the four key points on Ridge Route Road that a vehicle would need to pass through to exit the Project site. Ridge Route Point 1 is located just south of Northlake Boulevard and only vehicles from Evacuation Points 2 and 3 would pass through this point. Ridge Route Point 4 would have the greatest number of vehicles passing through as all vehicles from Evacuation Points 1, 2, and 3, as well as the existing Northlake Hills and Wildwood community would pass through this point.

Vehicles will utilize an evacuation point based on the location of the dwelling unit and the relative distance to the evacuation point. For example, units at the northern end of the Project would most likely use Evacuation Point 3, whereas the units located in the center of the Project would likely use Evacuation Points 1 or 2 to get to Ridge Route. Refinements to vehicle assignment consider the available roadway capacity for each scenario.

In certain scenarios, the Wildland Risk Fire Report indicates where certain evacuation points become unusable after a duration of time (i.e., 15 min, 30 min, 60 min, 90 min, 2 hours, etc.), and when the points reopen. In those instances, vehicles are rerouted to the next feasible evacuation point with available roadway capacity. For example, if the northerly Evacuation Point 3 is impassable after 60 minutes, all vehicles will reroute to use Evacuation Point 2. In general, when an evacuation point becomes impassable, the evacuation point would reopen once the fire passes that point.

There are instances where Ridge Route Road would be impassable and evacuation would close for a period. The Wildland Risk Fire Report describes that residents would “shelter in place” if necessary and the community with its built-in fire protection (defensible space, fuel modification, hardening of the structures, and required maintenance), placement of the structures on the topography, overall orientation to the fuels, wind, and slope, and nested (safe center) configuration would facilitate a “shelter in place” decision. The Wildland Risk Fire Report also states that while “shelter in place” is never a first option, history shows that moving populations once the fire has arrived has increased risk and “shelter in place” should be attempted when safe alternative exists.

Evacuation Estimates

Based on the assumptions and methodology described above, evacuation times were estimated for the 30 scenarios and are summarized in **Table 7**.

For example, the following discussion describes how the evacuation time was calculated for the Route Fire Simulation based on the Partial Creek Avoidance Alternative:

1. The number of dwelling units and vehicles in the priority area are estimated. The PCAA Density Exhibit (Sikand, 2022) is used to identify the total number of units under this alternative, the location of each planning area, and the number of dwelling units in each planning area. Phase 2 land use

was estimated using an average 12.5 units per acre for each planning area. Under the PCAA, a total of 3,150 residential units would be developed.

In Appendix B of the Wildland Risk Fire Report, a dark gray shaded area is shown in the model output summary sheets, which represents the area of people at risk (priority area). The priority area would be first to evacuate their homes. The dark gray shaded area was overlayed on the PCAA Density Exhibit and the number of dwelling units in the priority area is estimated. The number of dwelling units in the priority area is then converted to the number of vehicles that would evacuate. In this scenario, approximately 927 units are in the priority area and approximately 2,169 vehicles would evacuate based on the average vehicle ownership factor for the Castaic area of 2.34 vehicles per household (927 units x 2.34 vehicles/unit = 2,169 vehicles). A full evacuation of the Project site would include 3,150 units and approximately 7,371 vehicles.

2. Next, viable evacuation points are identified based on allowable time limits. With the PCAA Alternative, there are three evacuation points leading onto Ridge Route Road, which is the Project site's primary egress route. For a worst-case analysis, it is assumed that roadway capacity for a single lane under an evacuation is reduced to 125 vehicles per 15 minutes (maximum of 500 VPHPL) due to potential factors such as traffic congestion or vehicles driving at lower speeds due to the environment (e.g., smoke, wind, debris, watching the fire). Allowable time limits for each of the three evacuation points are taken from Appendix B of the Wildland Fire Risk Report, with evacuations beginning approximately 15 minutes after the fire is spotted at a critical location.

   In this scenario, Evacuation Point 1 ("B" Street) is not impacted by the fire and would remain a viable exit route to access Ridge Route Road. As the fire spots over the southbound I-5 at 60 minutes, Evacuation Point 2 (Northlake Boulevard), Evacuation Point 3C ("A" Street), and Ridge Route Point 0 (Ridge Route Road north of Northlake Boulevard) are impacted by the fire and become impassable. In other words, for the first hour vehicles from the priority area can use any of the three evacuation points. When Evacuation Point 2 and Evacuation Point 3C close, vehicles would reroute to Evacuation Point 1 only. When Evacuation Point 2 reopens (approximately 30 minutes after closure), vehicles would reroute to use Evacuation Point 2 and Evacuation Point 1 to access Ridge Route Road until remaining vehicles from the priority area evacuate. Evacuation Point 3C does not reopen in this scenario. The remainder of the Project evacuates after the priority area in the event a mandatory evacuation order is activated for the entire Project site. Methods to reroute vehicles due to closures could be included in an evacuation plan for the Project.

3. Vehicles are distributed to evacuation points. The number of vehicles distributed to an evacuation point is based on the time limitations described above, available roadway capacity, and distance from the residential unit to the evacuation point.

   In this scenario, most of the priority area is adjacent to Northlake Boulevard. More vehicles would use Northlake Boulevard to evacuate as it is a 2-lane lane roadway that could accommodate twice as many vehicles as "B" Street (Evacuation Point 1) and "A" Street (Evacuation Point 3C). Northlake Boulevard could accommodate approximately 250 vehicles per 15 minutes compared to "B" Street and "A" Street, where the one-lane egress could accommodate approximately 125 vehicles per 15 minutes. However, if vehicles from the priority area are leaving at the same time, drivers may make the choice to use an alternate route from Northlake Boulevard. This analysis assumes that vehicles from the most northerly homes in the priority area chose to use Evacuation

Point 3C ("A" Street) because it would have fewer vehicles using that route and would bypass downstream traffic on Northlake Boulevard. Similarly, some vehicles from the middle section of the priority area could choose to use Evacuation Point 1 to bypass traffic originating from the southerly portion of the priority area. An evacuation plan for the community could have emergency personnel directing vehicles to different evacuation points to evenly distribute traffic and prevent a bottleneck on Ridge Route Road at Northlake Boulevard.

As shown in the attached worksheets, the available capacity for each evacuation point is calculated in 15-minute intervals and an incremental assignment of Project vehicles is applied at each evacuation point until all vehicle demand has been satisfied. The total of the 15-minute intervals is the estimated evacuation time. In this instance, it would take approximately 1.75 hours (105 minutes) to evacuate 927 DU (2,169 vehicles) from the priority area of the Project and 4.5 hours (270 minutes) to evacuate the entire Project of 3,150 DU (7,371 vehicles).

Table 7 summarizes the estimated evacuation times (see attached summary table and worksheets for detailed assumptions and calculations) and the number of vehicles estimated to evacuate within the allowable time limits**.**

Table 7 Estimated Evacuation Time Summary

Scenario	Previously Approved Project	CAA	PCAA
1. Route Fire Sim	2 hours to evacuate 1,108 DU (2,593 vehicles) from the priority evacuation area of the Project. 4.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles).	1 hour to evacuate 651 DU (1,524 vehicles) from the priority evacuation area of the Project. 3 hours to evacuate entire Project 1,815 DU (4,247 vehicles).	1.75 hours to evacuate 927 DU (2,169 vehicles) from the priority evacuation area of the Project. 4.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles).
2. SSWat40Spot	2.25 hours to evacuate 1,286 DU (3,009 vehicles) from the priority evacuation area of the Project. 4.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles).	45 minutes to evacuate 483 DU (1,129 vehicles) from the priority evacuation area of the Project. 2.5 hours to evacuate entire Project 1,815 DU (4,247 vehicles).	2 hours to evacuate 1,370 DU 3,206 vehicles) from the priority evacuation area of the Project. 4.25 hours to evacuate entire Project 3,150 DU (7,371 vehicles).
3. SSWat40Line	2 hours to evacuate 1,383 DU (3,236 vehicles) from the priority evacuation area of the Project. 4.25 hours to evacuate entire Project 3,150 DU (7,371 vehicles).	1.5 hour to evacuate 1,134 DU (2,653 vehicles) from the priority evacuation area of the Project. 2.5 hours to evacuate entire Project 1,815 DU (4,247 vehicles).	2.25 hours to evacuate 1,485 DU (3,475 vehicles) from the priority evacuation area of the Project. 4.25 hours to evacuate entire Project 3,150 DU (7,371 vehicles).
4. Sat40Line	No priority area, total evacuation shown for information purposes:	No priority area, total evacuation shown for information purposes:	No priority area, total evacuation shown for information purposes:

Reference: Northlake Specific Plan Wildland Fire Evacuation Scenarios – Evacuation Time Estimates

	3.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles).	2 hours to evacuate entire Project 1,815 DU (4,247 vehicles).	3.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles).
5. FreewaySpotsat40	2.5 hours to evacuate 822 DU (1,924 vehicles) from the priority evacuation area of the Project. 5 hours to evacuate entire Project 3,150 DU (7,371 vehicles).	3.25 hours to evacuate 910 DU (2,129 vehicles) from the priority evacuation area of the Project. 4.5 hours to evacuate entire Project 1,815 DU (4,247 vehicles).	2.75 hours to evacuate 1,132 DU (2,649 vehicles) from the priority evacuation area of the Project. 5 hours to evacuate entire Project 3,150 DU (7,371 vehicles).
6. LakeSpotat40	1.25 hours to evacuate 898 DU (2,101 vehicles) from the priority evacuation area of the Project. 3.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles).	2.5 hours to evacuate 1,650 DU (3,861 vehicles) from the priority evacuation area of the Project. 2.5 hours to evacuate entire Project 1,815 DU (4,247 vehicles).	1.5 hours to evacuate 1,056 DU (2,471 vehicles) from the priority evacuation area of the Project. 3.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles).
7. Neat70Line	1 hour to evacuate 570 DU (1,334 vehicles) from the priority evacuation area of the Project. 4.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles).	1.5 hours to evacuate 826 DU (1,932 vehicles) from the priority evacuation area of the Project. 2.5 hours to evacuate entire Project 1,815 DU (4,247 vehicles).	No priority area, total evacuation shown for information purposes: 4.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles).
8. NNEat70Line	1.5 hour to evacuate 842 DU (1,970 vehicles) from the priority evacuation area of the Project. 4.75 hours to evacuate entire Project 3,150 DU (7,371 vehicles).	1.25 hours to evacuate 767 DU (1,795 vehicles) from the priority evacuation area of the Project. 2.75 hours to evacuate entire Project 1,815 DU (4,247 vehicles).	1.75 minutes to evacuate 963 DU (2,253 vehicles) from the priority evacuation area of the Project. 4.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles).
9. Nat70Line	3.5 hours to evacuate 1,687 DU (3,948 vehicles) from the priority evacuation area of the Project. 5.75 hours to evacuate entire Project 3,150 DU (7,371 vehicles).	2.5 hours to evacuate 940 DU (2,198 vehicles) from the priority evacuation area of the Project. 3.5 hours to evacuate entire Project 1,815 DU (4,247 vehicles).	3.5 hours to evacuate 1,702 DU (3,983 vehicles) from the priority evacuation area of the Project. 5.25 hours to evacuate entire Project 3,150 DU (7,371 vehicles).
10. Templin Trigger	3.75 hours to evacuate entire Project 3,150 DU (7,371 vehicles).	3.25 hours to evacuate entire Project 1,815 DU (4,247 vehicles).	5.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles).
DU = dwelling units			

Reference: Northlake Specific Plan Wildland Fire Evacuation Scenarios – Evacuation Time Estimates

Evacuation Estimate Conclusions

1. Route Fire Sim Scenario

Under the Previously Approved Project, Evacuation Point 1 has no closure limit and Evacuation Point 2 closes at 60 minutes and reopens at 90 minutes (from the start of the fire). Evacuation Point 3A ("B" Street") has no limit, however, Ridge Route Road in between "B" Street and Northlake Boulevard (Route Point 0) closes at 60 minutes and does not reopen. Therefore, Evacuation Point 3A would be unusable because of no access to Ridge Route. It would take approximately 2 hours to evacuate the priority area (approximately 2,593 vehicles) and approximately 4.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 2 and the closure of Evacuation Point 3A as Evacuation Point 1 never closes and Evacuation Point 2 reopens after 90 minutes.

Under the CAA, Evacuation Point 1 closes at 90 minutes and reopens at 150 minutes (from the start of the fire) and Evacuation Point 2 closes at 60 minutes and reopens at 90 minutes (from the start of the fire). Evacuation Point 3B closes at 60 minutes and does not reopen. It would take approximately 1 hour to evacuate the priority area (approximately 1,524 vehicles) and approximately 3 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 1 and Evacuation Point 2 and the closure of Evacuation Point 3B as Evacuation Point 1 reopens after 150 minutes and Evacuation Point 2 reopens after 90 minutes.

Under the PCAA, Evacuation Point 1 has no closure limit and Evacuation Point 2 closes at 60 minutes and reopens at 90 minutes (from the start of the fire). Evacuation Point 3C closes at 60 minutes and does not reopen. It would take approximately 1.75 hours to evacuate the priority area (approximately 2,169 vehicles) and approximately 4.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 2 and the closure of Evacuation Point 3C as Evacuation Point 1 never closes and Evacuation Point 2 reopens after 90 minutes.

2. SSWat40Spot Scenario

Under the Previously Approved Project, Evacuation Point 1 has no closure limit and Evacuation Point 2 closes at 60 minutes and reopens at 90 minutes (from the start of the fire). Evacuation Point 3A closes at 60 minutes and does not reopen. It would take approximately 2.25 hours to evacuate the priority area (approximately 3,009 vehicles) and approximately 4.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 2 and the closure of Evacuation Point 3A as Evacuation Point 1 never closes and Evacuation Point 2 reopens after 90 minutes.

Under the CAA, Evacuation Point 1 and Evacuation Point 2 have no closure limits. Evacuation Point 3B closes at 60 minutes and does not reopen. It would take approximately 45 minutes to evacuate the priority area (approximately 1,129 vehicles) and approximately 2.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 3B as Evacuation Point 1 and Evacuation Point 2 never closes.

Under the PCAA, Evacuation Point 1 and Evacuation Point 2 have no closure limits. Evacuation Point 3C closes at 60 minutes and does not reopen. It would take approximately 2 hours to evacuate the priority area (approximately 3,206 vehicles) and approximately 4.25 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 3C as Evacuation Point 1 and Evacuation Point 2 never close.

3. SSWat40Line Scenario

Under the Previously Approved Project, Evacuation Point 1 and Evacuation 2 Point have no closure limit and Evacuation Point 3A closes at 60 minutes and does not reopen. It would take approximately 2 hours to evacuate the priority area (approximately 3,236 vehicles) and approximately 4.25 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the closure of Evacuation Point 3A as Evacuation Point 1 and Evacuation Point 2 never close.

Under the CAA, Evacuation Point 1 and Evacuation Point 2 have no closure limits. Evacuation Point 3B closes at 60 minutes and does not reopen. It would take approximately 1.5 hours to evacuate the priority area (approximately 2,653 vehicles) and approximately 2.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 3B as Evacuation Point 1 and Evacuation Point 2 never close.

Under the PCAA, Evacuation Point 1 and Evacuation Point 2 have no closure limits. Evacuation Point 3C closes at 60 minutes and does not reopen. It would take approximately 2.25 hours to evacuate the priority area (approximately 3,475 vehicles) and approximately 4.25 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 3C as Evacuation Point 1 and Evacuation Point 2 never close.

4. Sat40Line Scenario

Under the Previously Approved Project, all evacuation points have no closure limit. It would take approximately 3.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given all evacuation points never close.

Under the CAA, all evacuation points have no closure limit. It would take approximately 2 hours to evacuate the entire community. Thus, full evacuation can successfully take place given all evacuation points never close.

Under the PCAA, all evacuation points have no closure limit. It would take approximately 3.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given all evacuation points never close.

5. FreewaySpotsat40 Scenario

Under the Previously Approved Project, all evacuation points close at 30 minutes and reopen at 120 minutes (from the start of the fire). In addition, Ridge Route Point 0, 1, 2, and 3 all close at 30 minutes and reopen at 120 minutes (from the start of the fire). During the closure, those at risk in the priority area may need to move to an area of refuge if a shelter in place decision has not been made by emergency personnel. When the closures have been lifted at 120 minutes, evacuation may resume. It would take approximately 2.5 hours to evacuate the priority area (approximately 1,924 vehicles) and approximately 5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of all evacuation points and Ridge Route Road closures as they all reopen after 120 minutes.

Under the CAA, all evacuation points close at 30 minutes. Evacuation Point 1 reopens at 120 minutes (from the start of the fire) and Evacuation Point 2 reopens at 150 minutes (from the start of the fire). Evacuation Point 3B does not reopen. In addition, Ridge Route Points 1, 2, and 3 all close at 30 minutes and reopen at

120 minutes (from the start of the fire). During the closure, those at risk in the priority area may need to move to an area of refuge if a shelter in place decision has not been made by emergency personnel. When the Ridge Route Road closures have been lifted at 120 minutes, evacuation may resume. It would take approximately 3.25 hours to evacuate the priority area (approximately 2,129 vehicles) and approximately 4.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of all evacuation points and Ridge Route Road closures as Ridge Route Points 1, 2, and 3 reopen at 120 minutes and Evacuation Point 2 reopens at 150 minutes.

Under the PCAA, all evacuation points close at 30 minutes and reopen at 120 minutes (from the start of the fire). In addition, Ridge Route Point 0, 1, 2, and 3 all close at 30 minutes and reopen at 120 minutes (from the start of the fire). During the closure, those at risk in the priority area may need to move to an area of refuge if a shelter in place decision has not been made by emergency personnel. When the closures have been lifted at 120 minutes, evacuation may resume. It would take approximately 2.75 hours to evacuate the priority area (approximately 2,649 vehicles) and approximately 5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of all evacuation points and Ridge Route Road closures as they all reopen after 120 minutes.

6. LakeSpotat40 Scenario

Under the Previously Approved Project, Evacuation Point 1 closes at 60 minutes and reopens at 90 minutes (from the start of the fire). Evacuation Point 2 and Evacuation Point 3A have no closure limits. Ridge Route Points 1, 2, and 3 close at 4 hours and reopen at 5 hours (from the start of the fire). During the Ridge Route closures, those at risk may need to move to an area of refuge if a shelter in place decision has not been made by emergency personnel. It would take approximately 1.25 hours to evacuate the priority area (approximately 2,101 vehicles) and approximately 3.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the closure of Evacuation Point 1 as it reopens after 90 minutes.

Under the CAA, Evacuation Point 1 closes at 60 minutes and reopens at 90 minutes. Evacuation Point 2 closes at 90 minutes and reopens at 120 minutes. Evacuation Point 3B closes at 120 minutes and does not reopen. Ridge Route Points 1, 2, and 3 close at 4 hours and reopen at 5 hours (from the start of the fire). During the Ridge Route closures, those at risk may need to move to an area of refuge if a shelter in place decision has not been made by emergency personnel. It would take approximately 2.5 hours to evacuate the priority area (approximately 3,861 vehicles) and the entire community. Thus, full evacuation can successfully take place given the limitation of closures at all evacuation points as Evacuation Point 1 reopens at 90 minutes and Evacuation Point 2 reopen at 120 minutes.

Under the PCAA, Evacuation Point 1 closes at 60 minutes and reopens at 90 minutes (from the start of the fire). Evacuation Point 2 and Evacuation Point 3C have no closure limits. Ridge Route Points 1, 2, and 3 close at 4 hours and reopen at 5 hours (from the start of the fire). During the Ridge Route closures, those at risk may need to move to an area of refuge if a shelter in place decision has not been made by emergency personnel. It would take approximately 1.5 hours to evacuate the priority area (approximately 2,471 vehicles) and approximately 3.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the closure of Evacuation Point 1 as it reopens after 90 minutes.

7. NEat70Line Scenario

Under the Previously Approved Project, Evacuation Point 1 and Evacuation Point 2 have no closure limits. Evacuation Point 3A is closed from the start of the fire and would not reopen until 5 hours (from the start of the fire). It would take approximately 1 hour to evacuate the priority area (approximately 1,334 vehicles) and approximately 4.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 3A as Evacuation Point 1 and Evacuation Point 2 never close.

Under the CAA, Evacuation Point 1 and Evacuation Point 2 have no closure limits. Evacuation Point 3B is closed from the start of the fire and would not reopen until 105 minutes (from the start of the fire). It would take approximately 1.5 hours to evacuate the priority area (approximately 1,932 vehicles) and approximately 2.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 3A as Evacuation Point 1 and Evacuation Point 2 never close.

Under the PCAA, Evacuation Point 1 and Evacuation Point 2 have no closure limits. Evacuation Point 3C would be closed for the duration of the fire and Ridge Route Point 0 closes after 45 minutes and would be closed for the duration of the fire. It would take approximately 4.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 3C and Ridge Route Point 0 as Evacuation Point 1 and Evacuation Point 2 never close.

8. NNEat70Line Scenario

Under the Previously Approved Project, Evacuation Point 1 and Evacuation Point 2 have no closure limits. Evacuation Point 3A is closed from the start of the fire and would not reopen until 4.25 hours (from the start of the fire). Ridge Route Points 2 and 3 would close at 4 hours and reopen at 4.5 hours. During the Ridge Route closures those at risk may need to move to an area of refuge if a shelter in place decision has not been made by emergency personnel. It would take approximately 1.5 hours to evacuate the priority area (approximately 1,970 vehicles) and approximately 4.75 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 3A as Evacuation Point 1 and Evacuation Point 2 never closes.

Under the CAA, Evacuation Point 1 and Evacuation Point 2 have no closure limits. Evacuation Point 3B is closed from the start of the fire and would not reopen until 4.25 hours (from the start of the fire). Ridge Route Points 2 and 3 would close at 4 hours and reopen at 4.5 hours. During the Ridge Route closures, those at risk may need to move to an area of refuge if a shelter in place decision has not been made by emergency personnel. It would take approximately 1.25 hours to evacuate the priority area (approximately 1,795 vehicles) and approximately 2.75 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 3A as Evacuation Point 1 and Evacuation Point 2 never close.

Under the PCAA, Evacuation Point 1 and Evacuation Point 2 have no closure limits. Evacuation Point 3C would be closed for the duration of the fire. Ridge Route Points 2 and 3 would close at 4 hours and reopen at 4.5 hours. During the Ridge Route closures, those at risk may need to move to an area of refuge if a shelter in place decision has not been made by emergency personnel. It would take approximately 1.75 hours to evacuate the priority area (approximately 2,253 vehicles) and approximately 4.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 3C as Evacuation Point 1 and Evacuation Point 2 never close.

9. Nat70Line Scenario

Under the Previously Approved Project, Evacuation Point 1 has no closure limit. Evacuation Point 2 closes at 90 minutes and reopens at 120 minutes (from the start of the fire). Evacuation Point 3A would be closed for the duration of the fire. Ridge Route Point 1 has no closure limits and Ridge Route Point 3 would be closed at 120 minutes and reopen at 150 minutes (from the start of the fire). Ridge Route Points 2 and 4 would close at 4 hours and reopen at 4.5 hours. During the closure of Ridge Route Road, those at risk in the priority area may need to move to an area of refuge if a shelter in place decision has not been made by emergency personnel. When the closures have been lifted at 150 minutes and again at 4.5 hours, evacuation may resume. It would take approximately 3.5 hours to evacuate the priority area (approximately 3,948 vehicles) and approximately 5.75 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the closure of Evacuation Point 2 as it reopens after 120 minutes and closures of Ridge Route Road, as it reopens after 150 minutes.

Under the CAA, Evacuation Point 1 has no closure limit. Evacuation Point 2 closes at 60 minutes and reopens at 90 minutes (from the start of the fire). Evacuation Point 3B would be closed for the duration of the fire. Ridge Route Point 1 would close at 60 minutes and reopen at 90 minutes and Ridge Route Point 3 would be closed at 120 minutes and reopen at 150 minutes (from the start of the fire). Ridge Route Points 2 and 4 would close at 4 hours and reopen at 4.5 hours. During the closure of Ridge Route Road, those at risk in the priority area may need to move to an area of refuge if a shelter in place decision has not been made by emergency personnel. When the closures have been lifted at 90 minutes and again at 150 minutes, evacuation may resume. It would take approximately 2.5 hours to evacuate the priority area (approximately 2,198 vehicles) and approximately 3.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the closure of Evacuation Point 2 as it reopens after 90 minutes and closures of Ridge Route Road, as it reopens after 90 minutes and 150 minutes.

Under the PCAA, Evacuation Point 1 has no closure limit. Evacuation Point 2 closes at 60 minutes and reopens at 90 minutes (from the start of the fire). Evacuation Point 3C would be closed for the duration of the fire. Ridge Route Point 1 has no closure limit and Ridge Route Point 3 would be closed at 120 minutes and reopen at 150 minutes (from the start of the fire). Ridge Route Points 2 and 4 would close at 4 hours and reopen at 4.5 hours. During the closure of Ridge Route Road, those at risk in the priority area may need to move to an area of refuge if a shelter in place decision has not been made by emergency personnel. When the closures have been lifted at 150 minutes and again at 4.5 hours, evacuation may resume. It would take approximately 3.5 hours to evacuate the priority area (approximately 3,983 vehicles) and approximately 5.25 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the closure of Evacuation Point 2 as it reopens after 120 minutes and closures of Ridge Route Road, as it reopens after 150 minutes.

These scenarios result in the longest evacuation times due to a larger number of dwelling units within the priority area and all three evacuation points as well as segments on Ridge Route Road becoming impassible at one point in time (reopening at a later time).

10. Templin Trigger Scenario

Under the Previously Approved Project, Evacuation Point 1 and Evacuation Point 2 have no closure limits. Evacuation Point 3A would be closed from the start of the fire and open at 75 minutes. Ridge Route Point 1 has no closure limit and Ridge Route Point 3 would be closed at 4 hours and reopen at 4.5 hours (from the

start of the fire). Ridge Route Points 2 and 4 would close at 5 hours and reopen at 5.5 hours. During the closure of Ridge Route Road Point 2, 3, and 4, those at risk in the priority area may need to move to an area of refuge if a shelter in place decision has not been made by emergency personnel. When the closures have been lifted at 4.5 hours and again at 5.5 hours, evacuation may resume. It would take approximately 3.75 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 3A and closures of Ridge Route Road, as full evacuation of the community could occur before their closures.

Under the CAA, Evacuation Point 1 has no closure limits and Evacuation Point 2 would close at 60 minutes and reopen at 90 minutes. Evacuation Point 3B would be closed for the duration of the fire. Ridge Route Point 1 would be closed at 60 minutes and reopen at 90 minutes and Ridge Route Point 3 would be closed at 4 hours and reopen at 4.5 hours (from the start of the fire). Ridge Route Points 2 and 4 would close at 5 hours and reopen at 5.5 hours. During the closure of Ridge Route Road Point 2, 3, and 4, those at risk in the priority area may need to move to an area of refuge if a shelter in place decision has not been made by emergency personnel. When the closures have been lifted for Ridge Route Point 2, 3, 4, evacuation may resume. It would take approximately 3.25 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 3B and Evacuation Point 2, and closures of Ridge Route Road as they would reopen.

Under the PCAA, Evacuation Point 1 has no closure limit and Evacuation Point 2 would close at 60 minutes and reopen at 105 minutes. Evacuation Point 3C would be closed for the duration of the fire. Ridge Route Point 1 would be closed at 60 minutes and reopen at 90 minutes and Ridge Route Point 3 would be closed at 4 hours and reopen at 4.5 hours (from the start of the fire). Ridge Route Points 2 and 4 would close at 5 hours and reopen at 5.5 hours. During the closure of Ridge Route Road Point 2, 3, and 4, those at risk in the priority area may need to move to an area of refuge if a shelter in place decision has not been made by emergency personnel. When the closures have been lifted for Ridge Route Point 2, 3, 4, evacuation may resume. It would take approximately 5.5 hours to evacuate the entire community. Thus, full evacuation can successfully take place given the limitation of Evacuation Point 3C and Evacuation Point 2, and closures of Ridge Route Road as they would reopen.

As demonstrated above, in some scenarios southerly segments of Ridge Route Road become impassible after a certain amount of time and would reopen after a certain amount of time. This analysis assumes that evacuation would pause/close when Ridge Route is impassable. Although Ridge Route Road may be impassable, other areas of the Project are not affected. In this instance, an evacuation route directly onto the I-5 freeway from Ridge Route Road may be a feasible approach to provide an alternative to Ridge Route Road.

Cumulative Conditions

Information provided by the Los Angeles County Department of Regional Planning[2] indicates that there is only one cumulative project in the vicinity of the Project, the Centennial Specific Plan. This project will not utilize Ridge Route Road for access; therefore, traffic generation from this project would not affect the findings of the evacuation analysis presented above.

[2] Communication from Jodie Sackett, LA County DRP.

Off-site Recommendations

Evacuation of the Project and adjacent communities of Northlake Hills and Wildwood is dependent on having adequate traffic conditions within the existing Castaic community just south of the Project area. One potential constraint is the existing intersection of Ridge Route Road at Lake Hughes Road, through which all Northlake, Northlake Hills, and Wildwood traffic needs to pass through. The Ridge Route Road/Lake Hughes Road is currently configured as an all-way stop but will be upgraded to a traffic signal with development of the Project. During an evacuation, traffic flow through the intersection should be directly managed by emergency personnel to ensure a continual flow of traffic from the areas being evacuated.

Closure of the I-5 freeway during emergency situations will often result in freeway traffic being routed onto the roadways within the Castaic community. During an evacuation, this could impede the flow of traffic from the areas being evacuated. To avoid congestion caused by freeway diversion, freeway traffic should instead be rerouted further south, such as at the State Route 126 interchange, where roadways have greater capacity than the Castaic roadways.

Conclusion

Evacuation times for the proposed Project were estimated for 3 land use alternatives (Previously Approved Project, CAA, and PCAA) and 10 scenarios from the Wildland Fire Risk Report. The following summarizes key findings:

- All modeled scenarios would allow all vehicles to evacuate within the allowable time limit. This assumes that an evacuation point would only temporarily close (approximately one hour at most) and would reopen after the fire is no longer a threat to that area.
- One of the 10 modeled scenarios would not require any evacuation of the Project site (Scenario 4 Previously Approved Plan, CAA, and PCAA).
- The closure of the southerly segments of Ridge Route Road would result in a temporary pause on evacuations. Since Ridge Route Road is the only egress route, a “shelter in place” recommendation may be made in an event where Ridge Route Road cannot reopen.
- An evacuation route directly onto the I-5 freeway from Ridge Route Road would provide an alternative to Ridge Route Road but would require a substantial amount of evaluation and coordination with Caltrans to implement.
- During an evacuation, emergency personnel should directly manage the intersection of Ridge Route Road at Lake Hughes Road to ensure a continual flow of traffic from the areas being evacuated.
- To minimize the impact resulting from closure of the I-5 freeway during emergency situations, freeway traffic should be rerouted south of the Castaic community, such as at the State Route 126 interchange, where roadways have greater capacity than the Castaic roadways.

Please reach out to us if you would like to discuss this memorandum.

Reference: Northlake Specific Plan Wildland Fire Evacuation Scenarios – Evacuation Time Estimates

Sincerely,

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Attachments: Figure 1 Project Location Map
Figure 2 Land Use Alternatives
Figure 3 Previously Approved Project Mobility Plan
Figure 4 Evacuation Points
Estimated Evacuation Time Worksheets
Northlake Specific Plan Evacuation Route Assumptions and Estimated Evacuation Time Summary
Previously Approved TM Density Exhibit, Sikand
Creek Avoidance Density Exhibit, Sikand
Partial Creek Avoidance Density Exhibit, Sikand

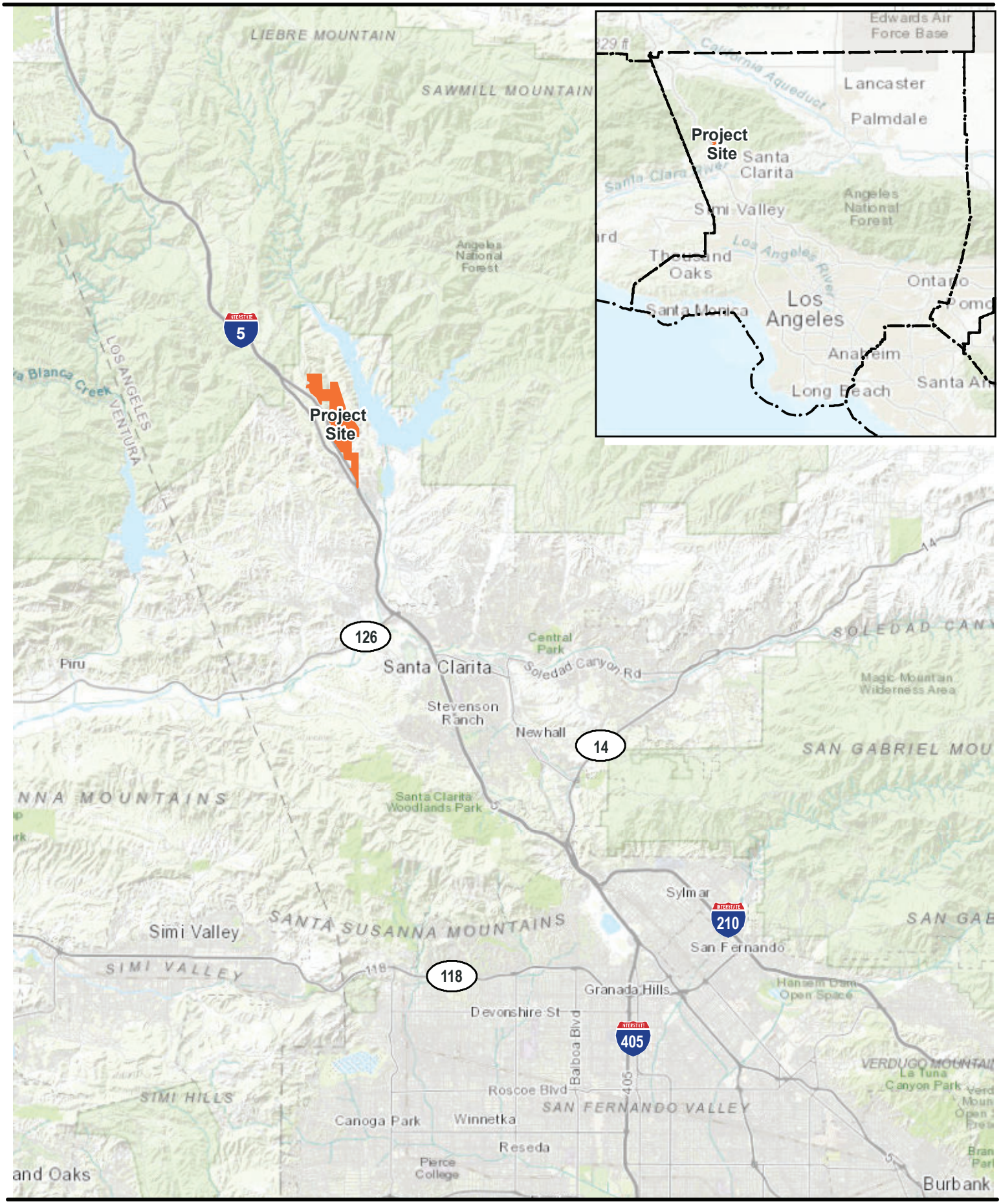
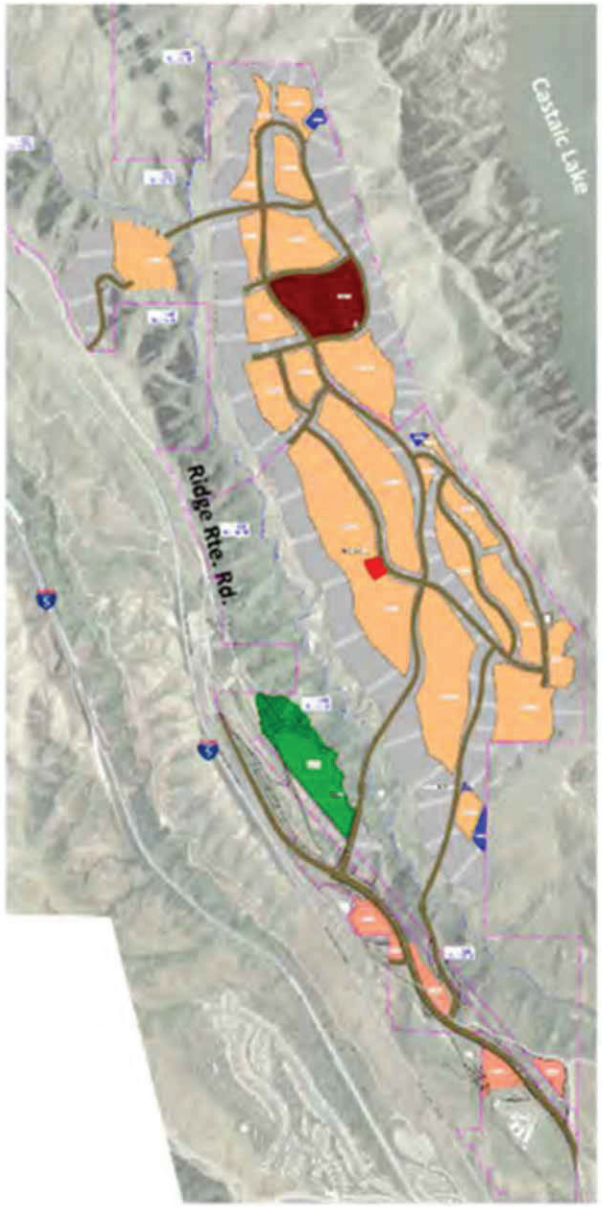


Figure 1
Project Location Map



PREVIOUSLY APPROVED PLAN



CREEK AVOIDANCE ALTERNATIVE



PARTIAL CREEK AVOIDANCE ALTERNATIVE

Source: Wildland Fire Risk Report Northlake Specific Plan (2023)

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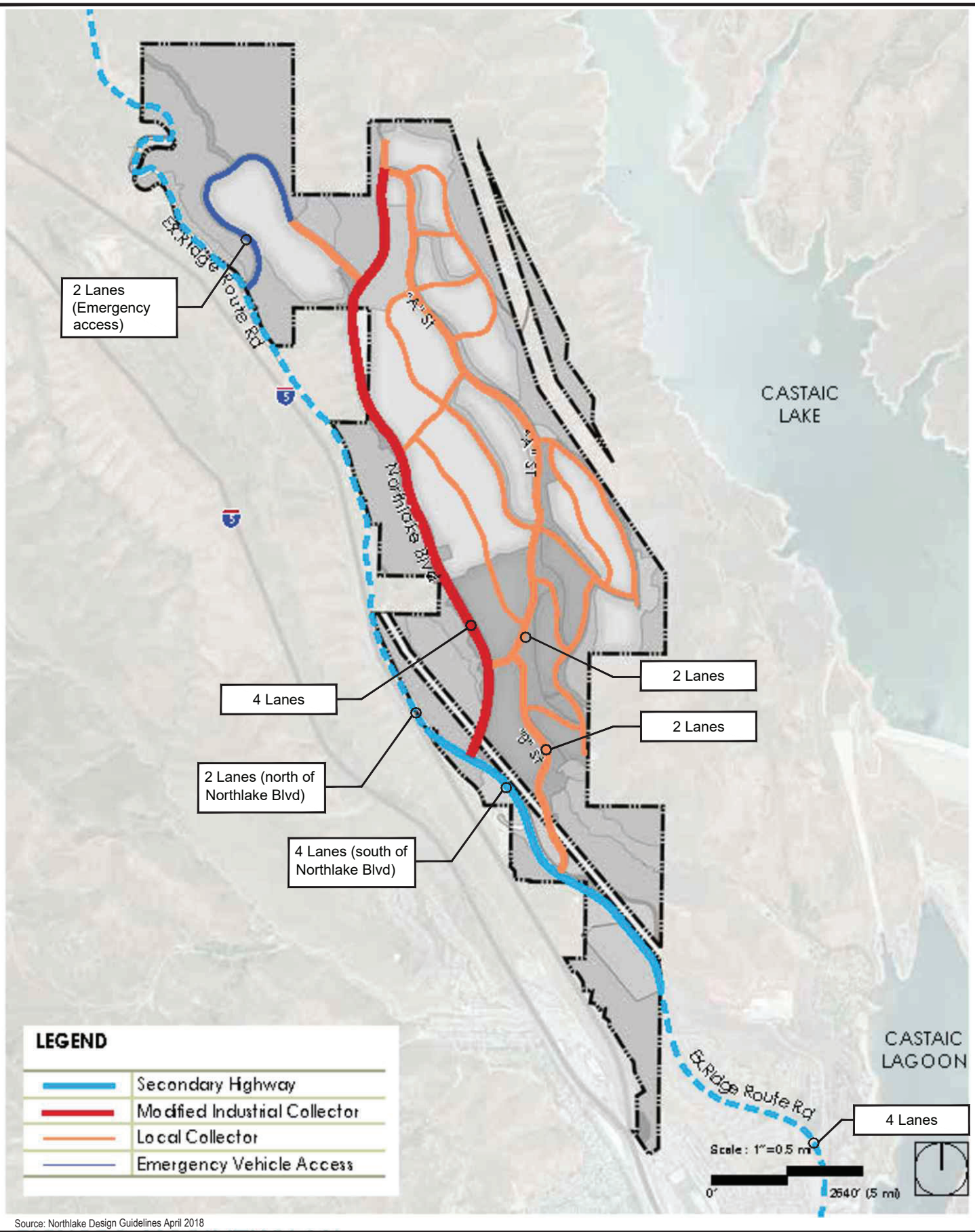
Figure 2
Land Use Alternatives



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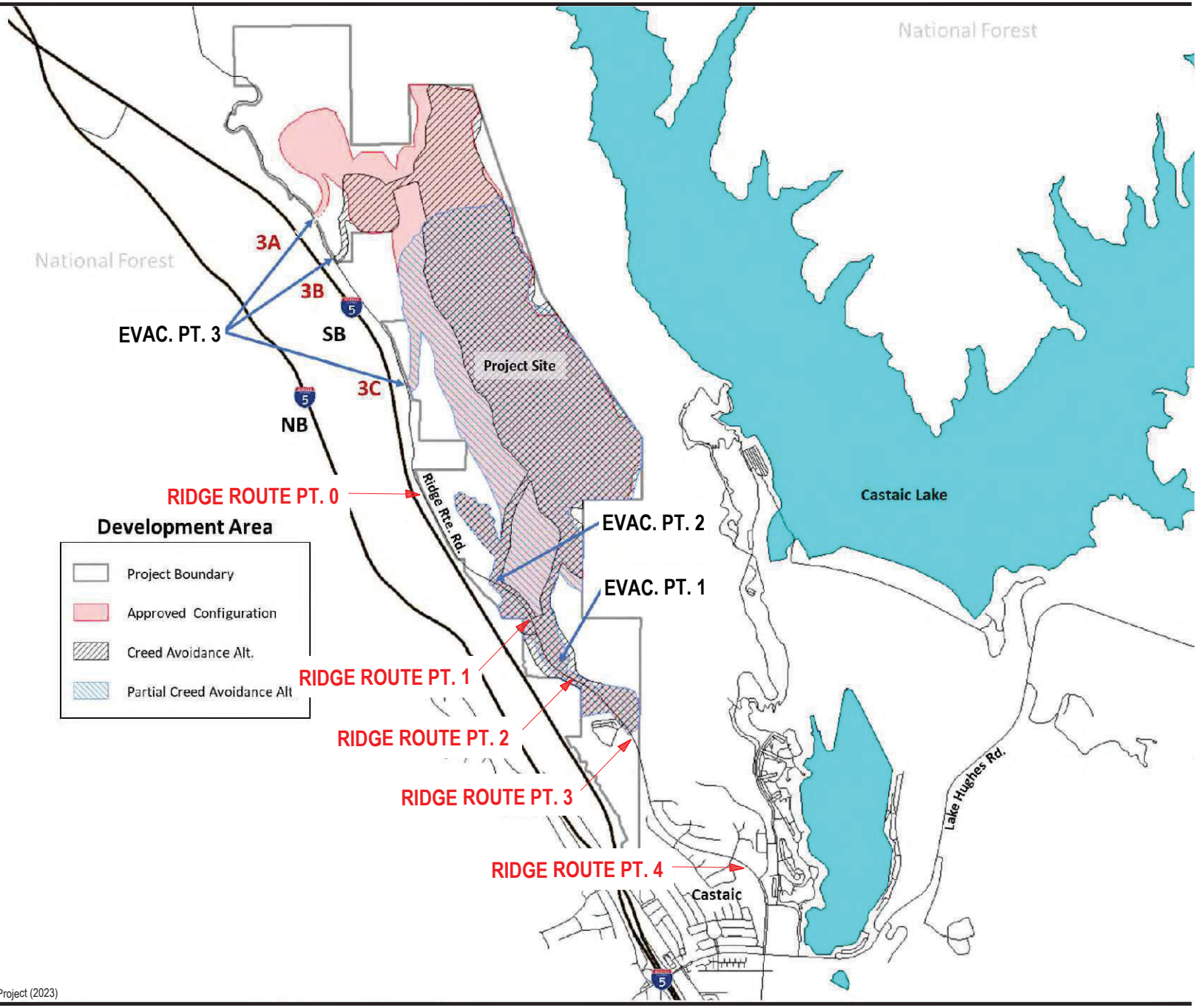
Source: Northlake Design Guidelines April 2018

Figure 3
Previously Approved Project Mobility Plan



Source: Wildland Fire Risk Report Northlake Project (2023)

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Figure 4
Key Evacuation Points

1. Route Fire Sim - Previously Approved Plan

Results: 2 hours to evacuate 1,108 DU (2,593 vehicles) from the priority evacuation area of the Project
4.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

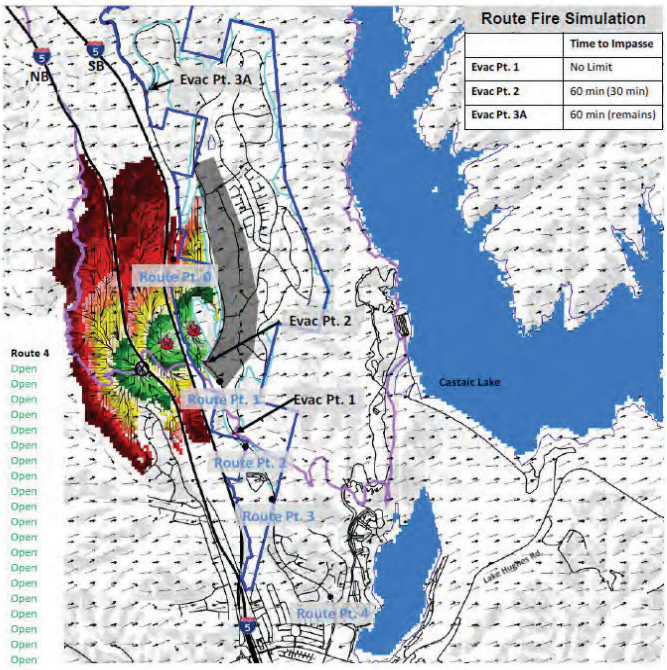
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt 1	Evac Pt. 1	Ridge Route Pt 2	Project Affordable Housing	Ridge Route Pt 3	Northlake Hills	Ridge Route Pt 4
Number of vehicles to evacuate from critical homes i(n shaded area on map)	**356**	**1,264**	**1,620**	**973**	**2,593**	**0**	**2,593**	**0**	**2,593**
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	No limit, however, Ridge Route Pt 0 closes at 60 Min	Closes at 60 Min, reopens in 90 Min	No limit	No limit	No limit	No limit	No limit	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

		A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time		No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15	Min	125	250	375	125	500	250	750	*0*	750
30	Min	250	500	750	250	1,000	500	1,500	*0*	1,500
45	Min	**375**	750	1,125	375	1,500	750	2,250	*0*	2,250
60	Min	*375*	*750*	*1,125*	500	1,625	751	2,376	*0*	2,376
75	Min	*375*	*750*	*1,125*	625	1,750	*751*	2,501	*0*	2,501
90	Min	*375*	1,000	1,375	750	2,125	*751*	2,876	*0*	2,876
105	Min	*375*	1,250	1,625	875	2,500	*751*	3,251	*0*	3,251
120	Min	*375*	**1,500**	**1,875**	**1,000**	**2,875**	*751*	3,626	*0*	3,626
135	Min	*375*	1,750	2,125	1,125	3,250	*751*	4,001	*0*	4,001
150	Min	*375*	2,000	2,375	1,250	3,625	*751*	4,376	*0*	4,376
165	Min	*375*	2,250	2,625	1,375	4,000	*751*	4,751	*0*	4,751
180	Min	*375*	2,500	2,875	1,500	4,375	*751*	5,126	*0*	5,126
195	Min	*375*	2,750	3,125	1,625	4,750	*751*	5,501	*0*	5,501
210	Min	*375*	3,000	3,375	1,750	5,125	*751*	5,876	*0*	5,876
225	Min	*375*	3,250	3,625	1,875	5,500	*751*	6,251	*0*	6,251
240	Min	*375*	3,500	3,875	2,000	5,875	*751*	6,626	*0*	6,626
255	Min	*375*	3,750	4,125	2,125	6,250	*751*	7,001	*0*	7,001
270	Min	*375*	4,000	4,375	2,250	6,625	*751*	**7,376**	*0*	**7,376**
285	Min	*375*	*4,000*	*4,375*	*2,250*	*6,625*	*751*	*7,376*	*0*	*7,376*

Existing Conditions prior to the Route Fire
Previously Approved Development Added

Narrative: Fire begins as spot fires west of the northbound I-5 under a WSW Wind at 25 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn ENE And spots over the SB I-5 impacting Ridge Route and Evac Point 2 at 60 min (elapsed time) and continues to burn to the north to the north and south along the Project Site.



Route Fire Sim 25 mph Approved — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Closed	Open	n/a	n/a	Closed	Open	Open	Open	Open
75	1:15	Open	Closed	Open	n/a	n/a	Closed	Open	Open	Open	Open
90	1:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
105	1:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
120	2:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
135	2:15	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
150	2:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
165	2:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
180	3:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
195	3:15	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
210	3:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
225	3:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
240	4:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
255	4:15	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
270	4:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
285	4:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
300	5:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
315	5:15	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
330	5:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
345	5:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
360	6:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
375	6:15	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
390	6:30	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
405	6:45	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open
420	7:00	Open	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open

1. Route Fire Sim - Creek Avoidance Alt.

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 1 hour to evacuate 651 DU (1,524 vehicles) from the priority evacuation area of the Project
3 hours to evacuate 1,815 DU entire Project (4,247 vehicles)

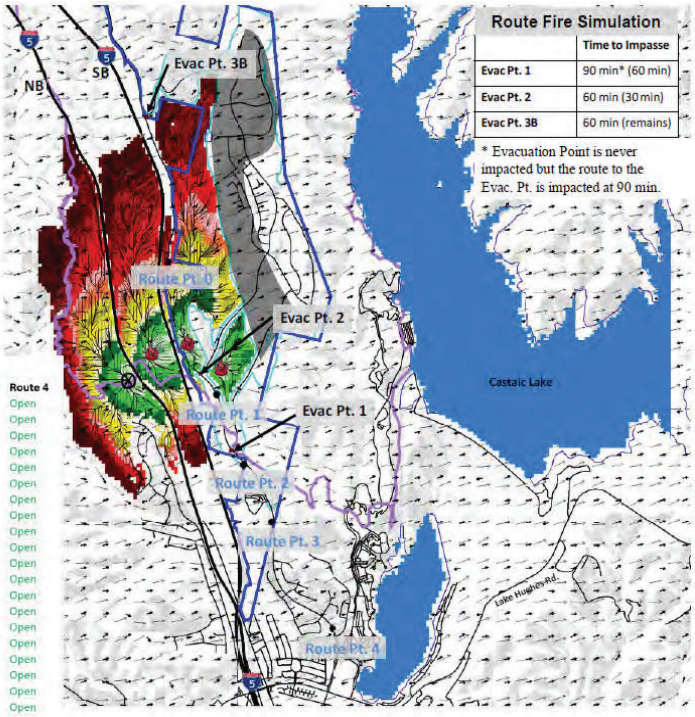
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt 1	Evac Pt. 1	Ridge Route Pt 2	Project Affordable Housing	Ridge Route Pt 3	Northlake Hills	Ridge Route Pt 4
Number of vehicles to evacuate from critical homes i(n shaded area on map)	**365**	**728**	**1,093**	**431**	**1,524**	**0**	**1,524**	**0**	**1,524**
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closes at 60 Min, Ridge Route Pt 0 closes at 60 Min	Closes at 60 Min, reopens at 90 Min	No limit	Closes at 90 Min, opens at 150 Min	No limit	No limit	No limit	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

		A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time		No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15	Min	125	250	375	125	500	250	750	*0*	750
30	Min	250	500	750	250	1,000	386	1,386	*0*	1,386
45	Min	**375**	**750**	**1,125**	375	1,500	*386*	1,886	*0*	1,886
60	Min	*375*	*750*	*1,125*	**500**	**1,625**	*386*	2,011	*0*	2,011
75	Min	*375*	*750*	*1,125*	625	1,750	*386*	2,136	*0*	2,136
90	Min	*375*	1,000	1,375	*625*	*2,000*	*386*	2,386	*0*	2,386
105	Min	*375*	1,250	1,625	*625*	*2,250*	*386*	2,636	*0*	2,636
120	Min	*375*	1,500	1,875	*625*	*2,500*	*386*	2,886	*0*	2,886
135	Min	*375*	1,750	2,125	*625*	*2,750*	*386*	3,136	*0*	3,136
150	Min	*375*	2,000	2,375	750	3,125	*386*	3,511	*0*	3,511
165	Min	*375*	2,250	2,625	875	3,500	*386*	3,886	*0*	3,886
180	Min	*375*	2,500	2,875	1,000	3,875	*386*	**4,261**	*0*	**4,261**
195	Min	*375*	*2,500*	*2,875*	*1,000*	*3,875*	*386*	*4,261*	*0*	*4,261*

Existing Conditions prior to the Route Fire Creek Avoidance Development Added

Narrative: Fire begins as spot fires west of the northbound I-5 under a WSW Wind at 25 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn ENE And spots over the SB I-5 impacting Ridge Route and Evac Point 2 at 60 min (elapsed time) and continues to burn to the north to the north and south along the Project Site spotting over Evac Point 2 at .



Route Fire Sim 25 mph Avoid — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Closed	n/a	Closed	n/a	Closed	Open	Open	Open	Open
75	1:15	Open	Closed	n/a	Closed	n/a	Closed	Open	Open	Open	Open
90	1:30	Closed	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
105	1:45	Closed	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
120	2:00	Closed	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
135	2:15	Closed	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
150	2:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
165	2:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
180	3:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
195	3:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
210	3:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
225	3:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
240	4:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
255	4:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
270	4:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
285	4:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
300	5:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
315	5:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
330	5:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
345	5:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
360	6:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
375	6:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
390	6:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
405	6:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
420	7:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open

1. Route Fire Sim - Partial Creek Avoidance Alt.

Results: 1.75 hours to evacuate 927 DU (2,169 vehicles) from the priority evacuation area of the Project
4.5 hours to evacuate 3,150 DU entire Project (7,371 vehicles)

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

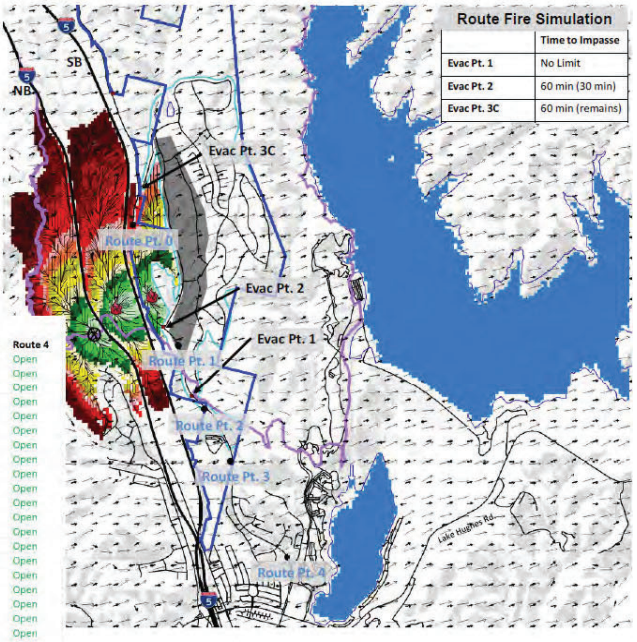
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt 1	Evac Pt. 1	Ridge Route Pt 2	Project Affordable Housing	Ridge Route Pt 3	Northlake Hills	Ridge Route Pt 4
Number of vehicles to evacuate from critical homes i(n shaded area on map)	**374**	**938**	**1,311**	**858**	**2,169**	**0**	**2,169**	**0**	**2,169**
Number of lanes at evacuation point	**1**	**2**	--	**1**	--	2	--		--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closes at 60 Min, Ridge Route Pt 0 closes at 60 Min	Closes at 60 Min, reopens at 90 Min	No limit	No limit	No limit	No limit	No limit	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

	A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time	No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15 Min	125	250	375	125	500	250	750	*0*	750
30 Min	250	500	750	250	1,000	500	1,500	*0*	1,500
45 Min	**375**	750	1,125	375	1,500	750	2,250	*0*	2,250
60 Min	*375*	*750*	*1,125*	500	1,625	*751*	2,376	*0*	2,376
75 Min	*375*	*750*	*1,125*	625	1,750	*751*	2,501	*0*	2,501
90 Min	*375*	**1,000**	**1,375**	750	2,125	*751*	2,876	*0*	2,876
105 Min	*375*	1,250	1,625	**875**	**2,500**	*751*	3,251	*0*	3,251
120 Min	*375*	1,500	1,875	1,000	2,875	*751*	3,626	*0*	3,626
135 Min	*375*	1,750	2,125	1,125	3,250	*751*	4,001	*0*	4,001
150 Min	*375*	2,000	2,375	1,250	3,625	*751*	4,376	*0*	4,376
165 Min	*375*	2,250	2,625	1,375	4,000	*751*	4,751	*0*	4,751
180 Min	*375*	2,500	2,875	1,500	4,375	*751*	5,126	*0*	5,126
195 Min	*375*	2,750	3,125	1,625	4,750	*751*	5,501	*0*	5,501
210 Min	*375*	3,000	3,375	1,750	5,125	*751*	5,876	*0*	5,876
225 Min	*375*	3,250	3,625	1,875	5,500	*751*	6,251	*0*	6,251
240 Min	*375*	3,500	3,875	2,000	5,875	*751*	6,626	*0*	6,626
255 Min	*375*	3,750	4,125	2,125	6,250	*751*	7,001	*0*	7,001
270 Min	*375*	4,000	4,375	2,250	6,625	*751*	**7,376**	*0*	**7,376**
285 Min	*375*	*4,000*	*4,375*	*2,250*	*6,625*	*751*	*7,376*	*0*	*7,376*

Existing Conditions prior to the Route Fire
Partial Creek Avoidance Development Added

Narrative: Fire begins as spot fires west of the northbound I-5 under a WSW Wind at 25 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn ENE And spots over the SB I-5 impacting Ridge Route and Evac Point 2 at 60 min (elapsed time) and continues to burn to the north to the north and south along the Project Site.



Route Fire Sim 25 mph Partial Avoid — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
60	1:00	Open	Closed	n/a	n/a	Closed	Closed	Open	Open	Open	Open
75	1:15	Open	Closed	n/a	n/a	Closed	Closed	Open	Open	Open	Open
90	1:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
105	1:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
120	2:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
135	2:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
150	2:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
165	2:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
180	3:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
195	3:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
210	3:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
225	3:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
240	4:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
255	4:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
270	4:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
285	4:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
300	5:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
315	5:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
330	5:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
345	5:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
360	6:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
375	6:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
390	6:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
405	6:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
420	7:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open

2. SSWat40Spot - Previously Approved Plan

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 2.25 hours to evacuate 1,286 DU (3,009 vehicles) from the priority evacuation area of the Project
4.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

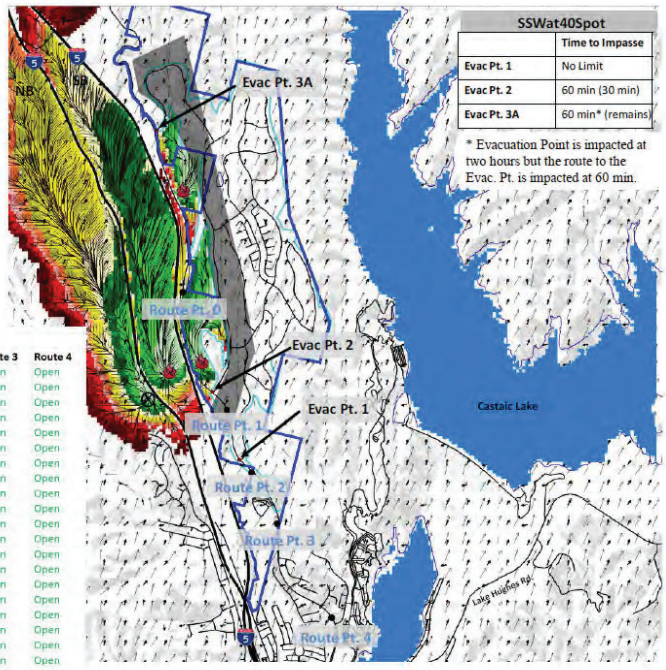
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt 1	Evac Pt. 1	Ridge Route Pt 2	Project Affordable Housing	Ridge Route Pt 3	Northlake Hills	Ridge Route Pt 4
Number of vehicles to evacuate from critical homes (in shaded area on map)	**366**	**1,632**	**1,998**	**1,011**	**3,009**	**0**	**3,009**	**0**	**3,009**
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closes at 60 Min, Ridge Route Pt 0 closes at 60 Min	Closes at 60 Min, reopens at 90 Min	No limit	No limit	No limit	No limit	No limit	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

Time		A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
		No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15	Min	125	250	375	125	500	250	750	*0*	750
30	Min	250	500	750	250	1,000	500	1,500	*0*	1,500
45	Min	**375**	750	1,125	375	1,500	750	2,250	*0*	2,250
60	Min	*375*	*750*	*1,125*	500	1,625	751	2,376	*0*	2,376
75	Min	*375*	*750*	*1,125*	625	1,750	*751*	2,501	*0*	2,501
90	Min	*375*	1,000	1,375	750	2,125	*751*	2,876	*0*	2,876
105	Min	*375*	1,250	1,625	875	2,500	*751*	3,251	*0*	*3,251*
120	Min	*375*	1,500	1,875	1,000	2,875	*751*	3,626	*0*	3,626
135	Min	*375*	**1,750**	**2,125**	**1,125**	**3,250**	*751*	4,001	*0*	4,001
150	Min	*375*	2,000	2,375	1,250	3,625	*751*	4,376	*0*	4,376
165	Min	*375*	2,250	2,625	1,375	4,000	*751*	4,751	*0*	4,751
180	Min	*375*	2,500	2,875	1,500	4,375	*751*	5,126	*0*	5,126
195	Min	*375*	2,750	3,125	1,625	4,750	*751*	5,501	*0*	5,501
210	Min	*375*	3,000	3,375	1,750	5,125	*751*	5,876	*0*	5,876
225	Min	*375*	3,250	3,625	1,875	5,500	*751*	6,251	*0*	6,251
240	Min	*375*	3,500	3,875	2,000	5,875	*751*	6,626	*0*	6,626
255	Min	*375*	3,750	4,125	2,125	6,250	*751*	7,001	*0*	7,001
270	Min	*375*	4,000	4,375	2,250	6,625	*751*	**7,376**	*0*	**7,376**
285	Min	*375*	*4,000*	*4,375*	*2,250*	*6,625*	*751*	*7,376*	*0*	*7,376*

Increased Wind Speed (SSW direction)
Previously Approved Development Added

Narrative: Fire begins as spot fires west of the northbound I-5 under a SSW Wind at 40 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn NNE and spots over the SB I-5 impacting Ridge Route north of Evac Point 2 at 60 min (elapsed time). The fire spots over the SB I-5 south of Evac Point 3A at 90 min (elapsed time) continues to burn to the north to the north and south along the west side of the Project Site.



SSW Spot at 40 mph Approved — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Closed	Closed	n/a	n/a	Closed	Open	Open	Open	Open
75	1:15	Open	Closed	Closed	n/a	n/a	Closed	Open	Open	Open	Open
90	1:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
105	1:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
120	2:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
135	2:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
150	2:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
165	2:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
180	3:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
195	3:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
210	3:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
225	3:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
240	4:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
255	4:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
270	4:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
285	4:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
300	5:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
315	5:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
330	5:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
345	5:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
360	6:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
375	6:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
390	6:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
405	6:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
420	7:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open

2. SSWat40Spot - Creek Avoidance Plan

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 45 minutes to evacuate 483 DU (1,129 vehicles) from the priority evacuation area of the Project
2.5 hours to evacuate entire Project 1,815 DU (4,247 vehicles)

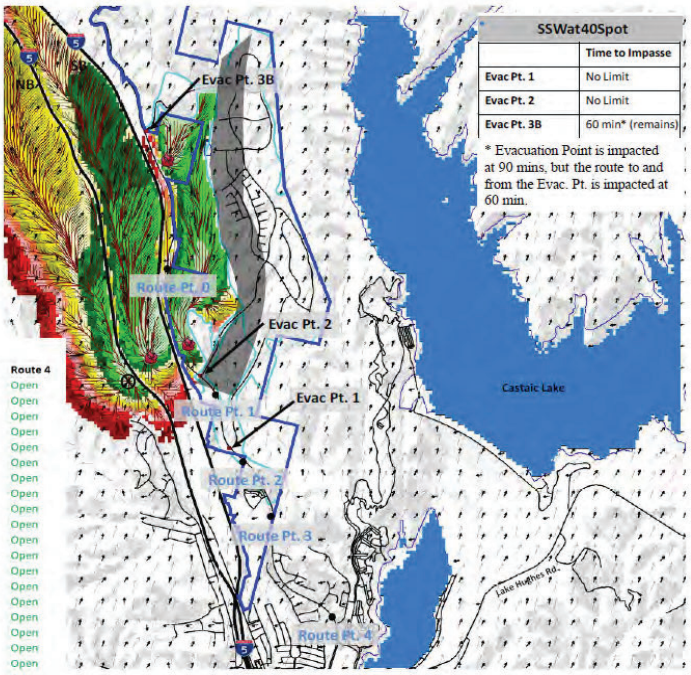
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt 1	Evac Pt. 1	Ridge Route Pt 2	Project Affordable Housing	Ridge Route Pt 3	Northlake Hills	Ridge Route Pt 4
Number of vehicles to evacuate from critical homes (in shaded area on map)	**257**	**508**	**765**	**364**	**1,129**	**0**	**1,129**	**0**	**1,129**
Number of lanes at evacuation point	1	2		1		2		1	
Vehicles per hour (vph) - no congestion	1,600	3,200		1,600		1,600		1,600	
Vehicles per hour (vph) - with congestion	500	1,000		500		1,000		500	
Vehicles per 15 min	125	250		125		250		125	
Time limit	Closes at 60 Min, Ridge Route Pt 0 closes at 60 Min	No limit		No limit		--		--	

Vehicle Evacuation Shown in 15 Minute Intervals

		A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time		No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15	Min	125	250	375	125	500	250	750	*0*	750
30	Min	250	500	750	250	1,000	386	1,386	*0*	1,386
45	Min	**375**	**750**	**1,125**	**375**	**1,500**	*386*	1,886	*0*	1,886
60	Min	*375*	1,000	1,375	500	1,875	*386*	2,261	*0*	2,261
75	Min	*375*	1,250	1,625	625	2,250	*386*	2,636	*0*	2,636
90	Min	*375*	1,500	1,875	750	2,625	*386*	3,011	*0*	3,011
105	Min	*375*	1,750	2,125	875	3,000	*386*	3,386	*0*	3,386
120	Min	*375*	2,000	2,375	1,000	3,375	*386*	3,761	*0*	3,761
135	Min	*375*	2,250	2,625	1,125	3,750	*386*	4,136	*0*	4,136
150	Min	*375*	2,500	2,875	1,250	4,125	*386*	**4,511**	*0*	**4,511**
165	Min	*375*	*2,500*	*2,875*	*1,250*	*4,125*	*386*	*4,511*	*0*	*4,511*

Increased Wind Speed (SSW direction)
Creek Avoidance Development Added

Narrative: Fire begins as spot fires west of the northbound I-5 under a SSW Wind at 40 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn NNE and spots over the SB I-5 impacting Ridge Route north of Evac Point 2 at 60 min (elapsed time). The fire spots over the SB I-5 south of Evac Point 3A at 90 min (elapsed time) continues to burn to the north to the north and south along the west side of the Project Site.



SSW Spot at 40 mph Avoid — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
75	1:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
90	1:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
105	1:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
120	2:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
135	2:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
150	2:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
165	2:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
180	3:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
195	3:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
210	3:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
225	3:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
240	4:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
255	4:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
270	4:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
285	4:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
300	5:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
315	5:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
330	5:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
345	5:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
360	6:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
375	6:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
390	6:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
405	6:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
420	7:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open

2. SSWat40Spot - Partial Creek Avoidance Alt.

Results: 2 hours to evacuate 1,370 DU (3,206 vehicles) from the priority evacuation area of the Project
4.25 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

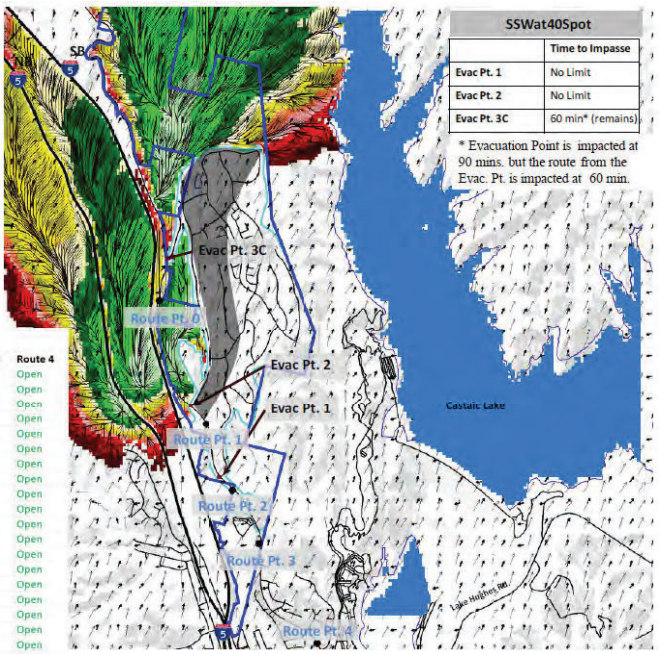
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt 1	Evac Pt. 1	Ridge Route Pt 2	Project Affordable Housing	Ridge Route Pt 3	Northlake Hills	Ridge Route Pt 4
Number of vehicles to evacuate from critical homes (in shaded area on map)	**372**	**1,839**	**2,211**	**994**	**3,206**	**0**	**3,206**	**0**	**3,206**
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closes at 60 Min, Ridge Route Pt 0 closes at 60 Min	No limit	--	No limit	--	--	--	--	--

Vehicle Evacuation Shown in 15 Minute Intervals

Time	A No. of Vehicles Passing Through Evac Pt. 3	B No. of Vehicles Passing Through Evac Pt. 2	A+B=C Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	D No. of Vehicles Passing Through Evac Pt. 1	C+D=E Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	F No. of Vehicles from Project AH Passing through Ridge Rt south of B St	E+F=G Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	H No. of Vehicles from NH Passing Through Ridge Rt	G+H=I Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15 Min	125	250	375	125	500	250	750	*0*	750
30 Min	250	500	750	250	1,000	500	1,500	*0*	1,500
45 Min	**375**	750	1,125	375	1,500	750	2,250	*0*	2,250
60 Min	*375*	1,000	1,375	500	1,875	751	2,626	*0*	2,626
75 Min	*375*	1,250	1,625	625	2,250	*751*	3,001	*0*	3,001
90 Min	*375*	1,500	1,875	750	2,625	*751*	3,376	*0*	3,376
105 Min	*375*	1,750	2,125	875	3,000	*751*	3,751	*0*	3,751
120 Min	*375*	**2,000**	**2,375**	**1,000**	**3,375**	*751*	4,126	*0*	4,126
135 Min	*375*	2,250	2,625	1,125	3,750	*751*	4,501	*0*	4,501
150 Min	*375*	2,500	2,875	1,250	4,125	*751*	4,876	*0*	4,876
165 Min	*375*	2,750	3,125	1,375	4,500	*751*	5,251	*0*	5,251
180 Min	*375*	3,000	3,375	1,500	4,875	*751*	5,626	*0*	5,626
195 Min	*375*	3,250	3,625	1,625	5,250	*751*	6,001	*0*	6,001
210 Min	*375*	3,500	3,875	1,750	5,625	*751*	6,376	*0*	6,376
225 Min	*375*	3,750	4,125	1,875	6,000	*751*	6,751	*0*	6,751
240 Min	*375*	4,000	4,375	2,000	6,375	*751*	7,126	*0*	7,126
255 Min	*375*	4,250	4,625	2,125	6,750	*751*	**7,501**	*0*	**7,501**
270 Min	*375*	*4,250*	*4,625*	*2,125*	*6,750*	*751*	*7,501*	*0*	*7,501*

Increased Wind Speed (SSW direction)
Partial Creek Avoidance Development Added

Narrative: Fire begins as spot fires west of the northbound I-5 under a SSW Wind at 40 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn NNE and spots over the SB I-5 impacting Ridge Route north of Evac Point 2 at 60 min (elapsed time). The fire spots over the SB I-5 south of Evac Point 3A at 90 min (elapsed time) continues to burn to the north to the north and south along the west side of the Project Site.



SSW Spot at 40 mph Partial Avoid — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
60	1:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
75	1:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
90	1:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
105	1:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
120	2:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
135	2:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
150	2:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
165	2:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
180	3:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
195	3:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
210	3:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
225	3:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
240	4:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
255	4:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
270	4:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
285	4:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
300	5:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
315	5:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
330	5:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
345	5:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
360	6:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
375	6:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
390	6:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
405	6:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
420	7:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open

3. SSWat40Line - Previously Approved Plan

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 2 hours to evacuate 1,383 DU (3,236 vehicles) from the priority evacuation area of the Project
4.25 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

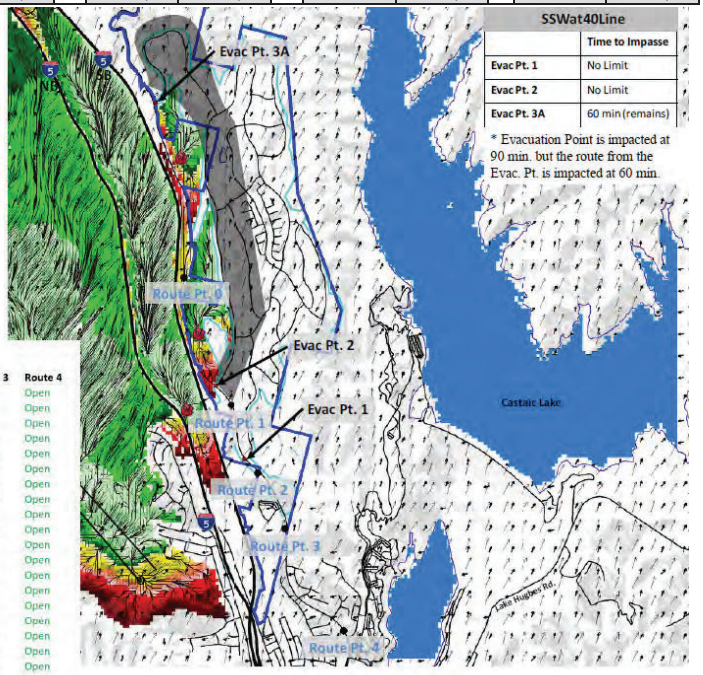
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	351	1,917	2,268	968	3,236	0	3,236	0	3,236
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closes at 60 Min, Ridge Route Pt 0 closes at 60 Min	No limit	No limit	No limit	No limit	No limit	No limit	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

		A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time		No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15	Min	125	250	375	125	500	250	750	*0*	750
30	Min	250	500	750	250	1,000	500	1,500	*0*	1,500
45	Min	375	750	1,125	375	1,500	750	2,250	*0*	2,250
60	Min	*375*	1,000	1,375	500	1,875	751	2,626	*0*	2,626
75	Min	*375*	1,250	1,625	625	2,250	*751*	3,001	*0*	3,001
90	Min	*375*	1,500	1,875	750	2,625	*751*	3,376	*0*	3,376
105	Min	*375*	1,750	2,125	875	3,000	*751*	3,751	*0*	3,751
120	Min	*375*	2,000	2,375	1,000	3,375	*751*	4,126	*0*	4,126
135	Min	*375*	2,250	2,625	1,125	3,750	*751*	4,501	*0*	4,501
150	Min	*375*	2,500	2,875	1,250	4,125	*751*	4,876	*0*	4,876
165	Min	*375*	2,750	3,125	1,375	4,500	*751*	5,251	*0*	5,251
180	Min	*375*	3,000	3,375	1,500	4,875	*751*	5,626	*0*	5,626
195	Min	*375*	3,250	3,625	1,625	5,250	*751*	6,001	*0*	6,001
210	Min	*375*	3,500	3,875	1,750	5,625	*751*	6,376	*0*	6,376
225	Min	*375*	3,750	4,125	1,875	6,000	*751*	6,751	*0*	6,751
240	Min	*375*	4,000	4,375	2,000	6,375	*751*	7,126	*0*	7,126
255	Min	*375*	4,250	4,625	2,125	6,750	*751*	7,501	*0*	7,501
270	Min	*375*	*4,250*	*4,625*	*2,125*	*6,750*	*751*	*7,501*	*0*	*7,501*

Increased Wind Speed (SSW direction) Line of Fire with Previously Approved Development

Narrative: Fire as a line of fire west of the northbound I-5 under a SSW Wind at 40 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn NNE and spots over the SB I-5 impacting Ridge Route north of Evac Point 2 at 60 min (elapsed time). The fire spots over the SB I-5 south of Evac Point 3A at 90 min (elapsed time) continues to burn to the north to the north and south along the west side of the Project Site.



SSW Line at 40 mph Approved — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
75	1:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
90	1:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
105	1:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
120	2:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
135	2:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
150	2:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
165	2:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
180	3:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
195	3:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
210	3:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
225	3:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
240	4:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
255	4:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
270	4:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
285	4:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
300	5:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
315	5:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
330	5:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
345	5:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
360	6:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
375	6:15	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
390	6:30	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
405	6:45	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open
420	7:00	Open	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open

Priority Area to Evacuate

3. SSWat40Line - Creek Avoidance Alt.

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 1.5 hour to evacuate 1134 DU (2,653 vehicles) from the priority evacuation area of the Project
2.5 hours to evacuate entire Project 1,815 DU (4,247 vehicles)

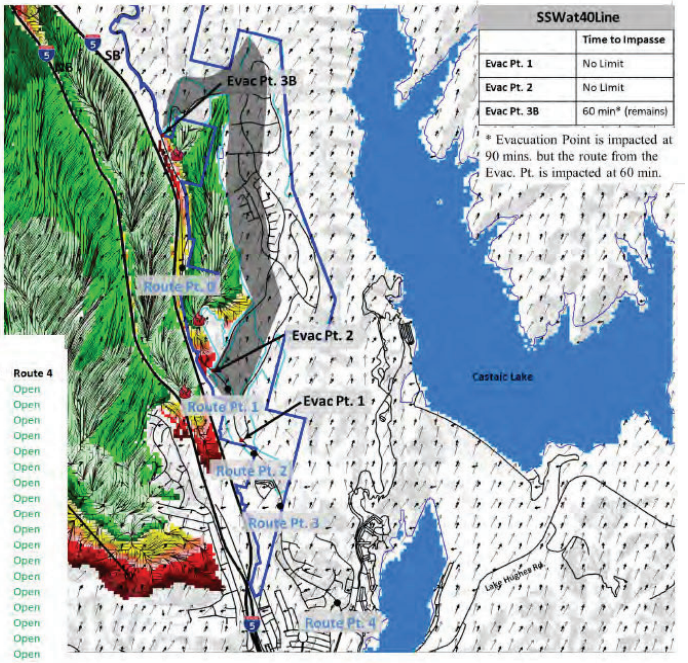
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Vehicles that need to evacuate	342	1,418	1,760	700	2,460	250	2,653	0	2,653
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour per lane (Vphpl) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour per lane (Vphpl) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time Limits	Closes at 60 Min, Ridge Route Pt 0 closes at 60 Min	No limit	No limit	No limit	No limit	No limit	No limit	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

Time	A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
	No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15 Min	125	250	375	125	500	250	750	*0*	750
30 Min	250	500	750	250	1,000	386	1,386	*0*	1,386
45 Min	375	750	1,125	375	1,500	*386*	1,886	*0*	1,886
60 Min	*375*	1,000	1,375	500	1,875	*386*	2,261	*0*	2,261
75 Min	*375*	1,250	1,625	625	2,250	*386*	2,636	*0*	2,636
90 Min	*375*	1,500	1,875	750	2,625	*386*	3,011	*0*	3,011
105 Min	*375*	1,750	2,125	875	3,000	*386*	3,386	*0*	3,386
120 Min	*375*	2,000	2,375	1,000	3,375	*386*	3,761	*0*	3,761
135 Min	*375*	2,250	2,625	1,125	3,750	*386*	4,136	*0*	4,136
150 Min	*375*	2,500	2,875	1,250	4,125	*386*	4,511	*0*	4,511
165 Min	*375*	*2,500*	*2,875*	*1,250*	*4,125*	*386*	*4,511*	*0*	*4,511*

Increased Wind Speed (SSW direction)
Line of Fire with Creek Avoidance Development

Narrative: Fire as a line of fire west of the northbound I-5 under a SSW Wind at 40 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn NNE and spots over the SB I-5 impacting Ridge Route north of Evac Point 2 at 60 min (elapsed time). The fire spots over the SB I-5 south of Evac Point 3A at 90 min (elapsed time) continues to burn to the north to the north and south along the west side of the Project Site.



SSW Line at 40 mph Avoid — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
75	1:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
90	1:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
105	1:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
120	2:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
135	2:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
150	2:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
165	2:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
180	3:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
195	3:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
210	3:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
225	3:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
240	4:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
255	4:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
270	4:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
285	4:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
300	5:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
315	5:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
330	5:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
345	5:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
360	6:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
375	6:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
390	6:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
405	6:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
420	7:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open

3. SSWat40Line - Partial Creek Avoidance Alt.

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 2.25 hours to evacuate 1,485 DU (3,475 vehicles) from the priority evacuation area of the Project
4.25 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

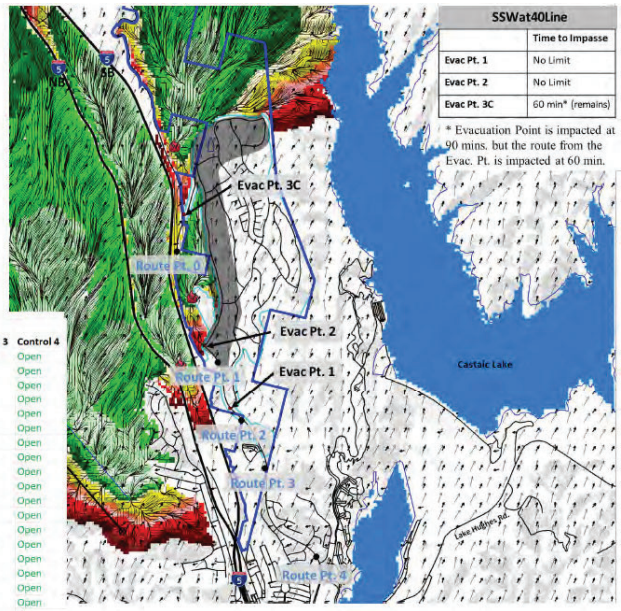
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Vehicles that need to evacuate	**375**	**2,000**	**2,375**	**1,100**	**3,475**	**0**	**3,475**	**0**	**3,475**
Number of lanes at evacuation point	1	2	--	1	--	2	--	**1**	--
Vehicles per hour per lane (Vphpl) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour per lane (Vphpl) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time imits	Closes at 60 Min, Ridge Route Pt 0 closes at 60 Min	No limit	No limit	No limit	No limit	No limit	No limit	--	--

Vehicle Evacuation Shown in 15 Minute Intervals

Time	A No. of Vehicles Passing Through Evac Pt. 3	B No. of Vehicles Passing Through Evac Pt. 2	A+B=C Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	D No. of Vehicles Passing Through Evac Pt. 1	C+D=E Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	F No. of Vehicles from Project AH Passing through Ridge Rt south of B St	E+F=G Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	H No. of Vehicles from NH Passing Through Ridge Rt	G+H=I Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15 Min	125	250	375	125	500	250	750	*0*	750
30 Min	250	500	750	250	1,000	500	1,500	*0*	1,500
45 Min	**375**	750	1,125	375	1,500	750	2,250	*0*	2,250
60 Min	*375*	1,000	1,375	500	1,875	751	2,626	*0*	2,626
75 Min	*375*	1,250	1,625	625	2,250	*751*	3,001	*0*	3,001
90 Min	*375*	1,500	1,875	750	2,625	*751*	3,376	*0*	3,376
105 Min	*375*	1,750	2,125	875	3,000	*751*	3,751	*0*	3,751
120 Min	*375*	**2,000**	**2,375**	1,000	3,375	*751*	4,126	*0*	4,126
135 Min	*375*	2,250	2,625	**1,125**	**3,750**	*751*	4,501	*0*	4,501
150 Min	*375*	2,500	2,875	1,250	4,125	*751*	4,876	*0*	4,876
165 Min	*375*	2,750	3,125	1,375	4,500	*751*	5,251	*0*	5,251
180 Min	*375*	3,000	3,375	1,500	4,875	*751*	5,626	*0*	5,626
195 Min	*375*	3,250	3,625	1,625	5,250	*751*	6,001	*0*	6,001
210 Min	*375*	3,500	3,875	1,750	5,625	*751*	6,376	*0*	6,376
225 Min	*375*	3,750	4,125	1,875	6,000	*751*	6,751	*0*	6,751
240 Min	*375*	4,000	4,375	2,000	6,375	*751*	7,126	*0*	7,126
255 Min	*375*	4,250	4,625	2,125	6,750	*751*	**7,501**	*0*	**7,501**
270 Min	*375*	*4,250*	*4,625*	*2,250*	*6, 75*	*751*	*7,626*	*0*	*7,626*

Increased Wind Speed (SSW direction)
Line of Fire with Partial Creek Avoidance Development

Narrative: Fire as a line of fire west of the northbound I-5 under a SSW Wind at 40 mph with the head fire moving to the northeast (branching to the north and south). At 30 min (elapsed time) fire spots over the NB I-5. The fire continues to burn NNE and spots over the SB I-5 impacting Ridge Route north of Evac Point 2 at 60 min (elapsed time). The fire spots over the SB I-5 south of Evac Point 3A at 90 min (elapsed time) continues to burn to the north to the north and south along the west side and moves to the east at the top of the Project Site.



SSW Line at 40 mph Partial Avoid — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Control 0	Control 1	Control 2	Control 3	Control 4
15	0:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
60	1:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
75	1:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
90	1:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
105	1:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
120	2:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
135	2:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
150	2:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
165	2:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
180	3:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
195	3:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
210	3:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
225	3:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
240	4:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
255	4:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
270	4:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
285	4:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
300	5:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
315	5:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
330	5:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
345	5:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
360	6:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
375	6:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
390	6:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
405	6:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
420	7:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open

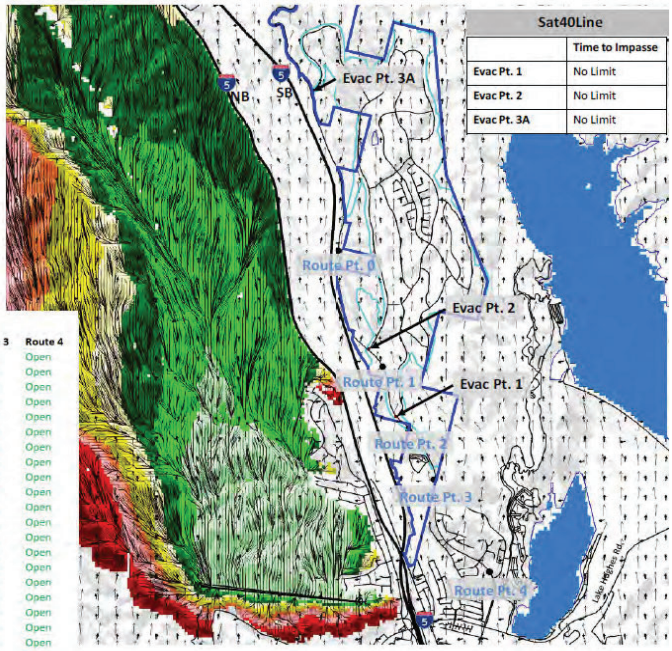
4. Sat40Line - Previously Approved Plan

Results: 3.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

Description	Evac Pt. 3	Evac Pt. 2	Ridge Rt. Pt 1	Evac Pt. 1	Ridge Rt. Pt 2	Project Affordable Housing	Ridge Rt. Pt 3	Northlake Hills	Ridge Rt. Pt 4
Number of vehicles to evacuate	1,655	3,310	4,965	1,655	6,620	751	7,371	0	7,371
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	No limit	No limit	No limit	No limit	No limit	No limit	No limit	--	No limit
Vehicle Evacuation Shown in 15 Minute Intervals									
	A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time	No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15 Min	125	250	375	125	500	250	750	*0*	750
30 Min	250	500	750	250	1,000	500	1,500	*0*	1,500
45 Min	375	750	1,125	375	1,500	750	2,250	*0*	2,250
60 Min	500	1,000	1,500	500	2,000	751	2,751	*0*	2,751
75 Min	625	1,250	1,875	625	2,500	*751*	3,251	*0*	3,251
90 Min	750	1,500	2,250	750	3,000	*751*	3,751	*0*	3,751
105 Min	875	1,750	2,625	875	3,500	*751*	4,251	*0*	4,251
120 Min	1,000	2,000	3,000	1,000	4,000	*751*	4,751	*0*	4,751
135 Min	1,125	2,250	3,375	1,125	4,500	*751*	5,251	*0*	5,251
150 Min	1,250	2,500	3,750	1,250	5,000	*751*	5,751	*0*	5,751
165 Min	1,375	2,750	4,125	1,375	5,500	*751*	6,251	*0*	6,251
180 Min	1,500	3,000	4,500	1,500	6,000	*751*	6,751	*0*	6,751
195 Min	1,625	3,250	4,875	1,625	6,500	*751*	7,251	*0*	7,251
210 Min	1,750	3,500	4,875	1,750	6,625	*751*	7,376	*0*	7,376
225 Min	*1,750*	*3,500*	*4,875*	*1,750*	6,625	*751*	*7,376*	*0*	*7,376*

Wind Speed 40 mph (S direction) with Previously Approved Development

Narrative: Fire as a line of fire west of the northbound I-5 under a South Wind at 40 mph with the head fire moving to the north (branching to the west but holding at the freeway on the east). The wind direction and location of the fire does not have a high probability of spotting over the freeway in the vicinity of the Project Site. The program did not provide spots and they were not added manually.



South Line at 40 mph Approved — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
75	1:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
90	1:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
135	2:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
150	2:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
255	4:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
270	4:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open

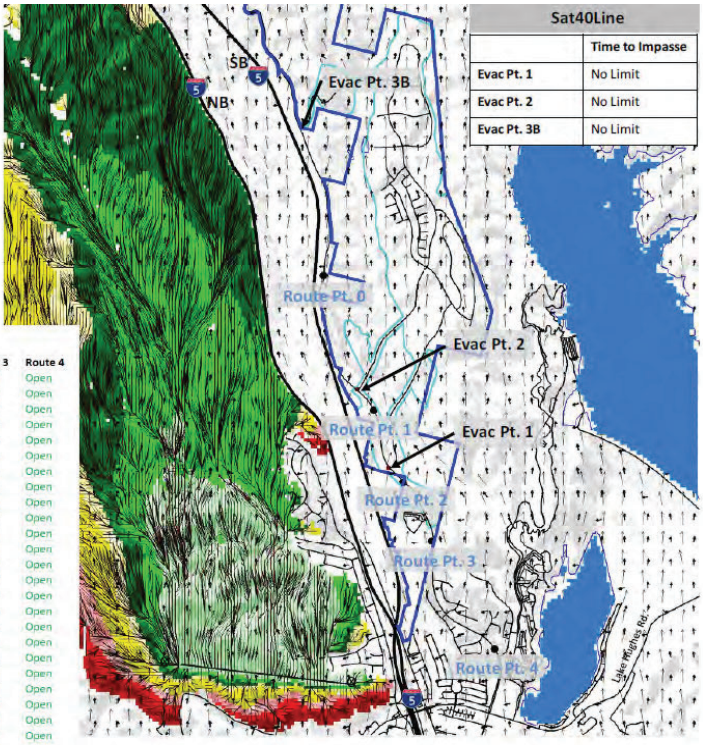
4. Sat40Line - Creek Avoidance Alt.

Results: 2 hours to evacuate entire Project 1,815 DU (4,247 vehicles)

Description	Evac Pt. 3	Evac Pt. 2	Ridge Rt. Pt 1	Evac Pt. 1	Ridge Rt. Pt 2	Project Affordable Housing	Ridge Rt. Pt 3	Northlake Hills	Ridge Rt. Pt 4
Number of vehicles to evacuate	965	1,931	2,896	965	3,861	386	4,247	0	4,247
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	No limit	No limit	No limit	No limit	No limit	No limit	No limit	--	No limit
Vehicle Evacuation Shown in 15 Minute Intervals									
	A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time	No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15 Min	125	250	375	125	500	250	750	*0*	750
30 Min	250	500	750	250	1,000	386	1,386	*0*	1,386
45 Min	375	750	1,125	375	1,500	*386*	1,886	*0*	1,886
60 Min	500	1,000	1,500	500	2,000	*386*	2,386	*0*	2,386
75 Min	625	1,250	1,875	625	2,500	*386*	2,886	*0*	2,886
90 Min	750	1,500	2,250	750	3,000	*386*	3,386	*0*	3,386
105 Min	875	1,750	2,625	875	3,500	*386*	3,886	*0*	3,886
120 Min	1,000	2,000	3,000	1,000	4,000	*386*	4,386	*0*	4,386
135 Min	*1,000*	*2,000*	*3,000*	*1,000*	*4,000*	386	*4,386*	*0*	*4,386*

Wind Speed 40 mph (S direction) with Creek Avoidance Development

Narrative: Fire as a line of fire west of the northbound I-5 under a South Wind at 40 mph with the head fire moving to the north (branching to the west but holding at the freeway on the east). The wind direction and location of the fire does not have a high probability of spotting over the freeway in the vicinity of the Project Site. The program did not provide spots and they were not added manually.



South Line at 40 mph Avoid — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
75	1:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
90	1:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
135	2:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
150	2:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
255	4:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
270	4:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open

4. Sat40Line - Partial Creek Avoidance Alt.

Results 3 5 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)

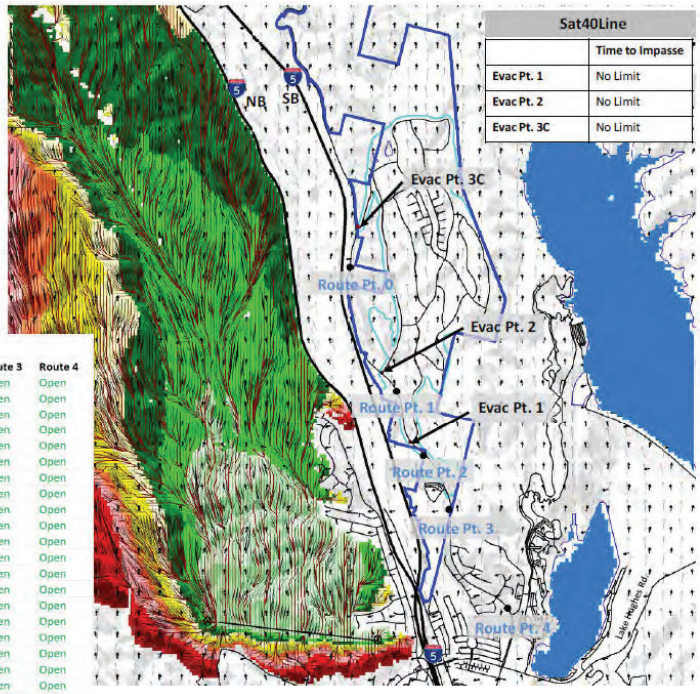
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	**1,655**	**3,310**	**4,965**	**1,655**	**6,620**	**751**	**7,371**	**0**	**7,371**
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	No limit	No limit	No limit	No limit	No limit	No limit	No limit	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

		A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time		No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15	Min	125	250	375	125	500	250	750	*0*	750
30	Min	250	500	750	250	1,000	500	1,500	*0*	1,500
45	Min	375	750	1,125	375	1,500	750	2,250	*0*	2,250
60	Min	500	1,000	1,500	500	2,000	751	2,751	*0*	2,751
75	Min	625	1,250	1,875	625	2,500	*751*	3,251	*0*	3,251
90	Min	750	1,500	2,250	750	3,000	*751*	3,751	*0*	3,751
105	Min	875	1,750	2,625	875	3,500	*751*	4,251	*0*	4,251
120	Min	1,000	2,000	3,000	1,000	4,000	*751*	4,751	*0*	4,751
135	Min	1,125	2,250	3,375	1,125	4,500	*751*	5,251	*0*	5,251
150	Min	1,250	2,500	3,750	1,250	5,000	*751*	5,751	*0*	5,751
165	Min	1,375	2,750	4,125	1,375	5,500	*751*	6,251	*0*	6,251
180	Min	1,500	3,000	4,500	1,500	6,000	*751*	6,751	*0*	6,751
195	Min	1,625	3,250	4,875	1,625	6,500	*751*	7,251	*0*	7,251
210	Min	1,750	3,500	5,250	1,750	7,000	*751*	**7,751**	*0*	**7,751**
225	Min	*1,750*	*3,500*	*5,250*	*1,750*	*7,000*	751	*7,751*	0	*7,751*

Wind Speed 40 mph (S direction)
with Partial Creek Avoidance Development

Narrative: Fire as a line of fire west of the northbound I-5 under a South Wind at 40 mph with the head fire moving to the north (branching to the west but holding at the freeway on the east). The wind direction and location of the fire does not have a high probability of spotting over the freeway in the vicinity of the Project Site. The program did not provide spots and they were not added manually.



South Line at 40 mph Partial Avoid — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
60	1:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
75	1:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
90	1:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
105	1:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
120	2:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
135	2:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
150	2:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
165	2:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
180	3:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
195	3:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
210	3:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
225	3:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
240	4:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
255	4:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
270	4:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
285	4:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
300	5:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
315	5:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
330	5:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
345	5:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
360	6:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
375	6:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
390	6:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
405	6:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
420	7:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open

5. FreewaySpotsat40 - Previously Approved Plan

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 2.5 hours to evacuate 822 DU (1,924 vehicles) from the priority evacuation area of the Project
3.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	484	997	1,482	442	1,924	0	1,924	0	1,924
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

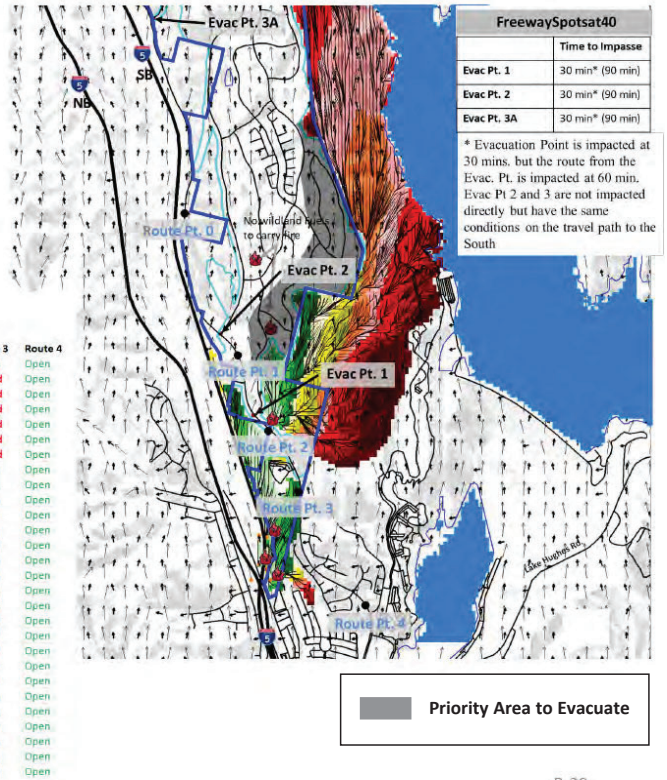
		A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time		No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15	Min	125	250	375	125	500	250	750	0	750
30	Min	125	250	375	125	500	250	750	0	750
45	Min	125	250	375	125	500	250	750	0	750
60	Min	125	250	375	125	500	250	750	0	750
75	Min	125	250	375	125	500	250	750	0	750
90	Min	125	250	375	125	500	250	750	0	750
105	Min	125	250	375	125	500	250	750	0	750
120	Min	250	500	750	250	1,000	500	1,500	0	1,500
135	Min	375	750	1,125	375	1,500	750	2,250	0	2,250
150	Min	500	1,000	1,500	500	2,000	751	2,751	0	2,751
165	Min	625	1,250	1,875	625	2,500	751	3,251	0	3,251
180	Min	750	1,500	2,250	750	3,000	751	3,751	0	3,751
195	Min	875	1,750	2,625	875	3,500	751	4,251	0	4,251
210	Min	1,000	2,000	3,000	1,000	4,000	751	4,751	0	4,751
225	Min	1,125	2,250	3,375	1,125	4,500	751	5,251	0	5,251
240	Min	1,250	2,500	3,750	1,250	5,000	751	5,751	0	5,751
255	Min	1,375	2,750	4,125	1,375	5,500	751	6,251	0	6,251
270	Min	1,500	3,000	4,500	1,500	6,000	751	6,751	0	6,751
285	Min	1,625	3,250	4,875	1,625	6,500	751	7,251	0	7,251
300	Min	1,750	3,500	5,250	1,750	7,000	751	7,751	0	7,751
315	Min	1,750	3,500	5,250	1,750	7,000	751	7,751	0	7,751

Spot Fire off Freeway NB (Wind S direction @ 40 mph) with Previously Approved Development

Narrative: Fire begins as a series of spot fires on the SB I-5 north of the NB/SB crossover. The fires is driven by a South wind at 40 mph. The fire was made to spot over Ridge Route in 30 min. It was made to spot again in another 30 min (60 min. elapsed time) to the north and a final time in another 30 min. (90 min. elapsed time). No flame propagation within the development area occurs. Ridge Route will be impacted for approximately 90 minutes for all Evac Points beginning 30 min into the scenario. Once the fire has passed this impact points, all Evac Points will reopen and remain open.

Freeway Spot at 40 mph Approved — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Closed	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Open
45	0:45	Closed	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Open
60	1:00	Closed	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Open
75	1:15	Closed	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Open
90	1:30	Closed	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Open
105	1:45	Closed	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Open
120	2:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
135	2:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
150	2:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
255	4:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
270	4:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open



5. FreewaySpotsat40 - Creek Avoidance Alt.

Results: 3.25 hours to evacuate 910 DU (2,129 vehicles) from the priority evacuation area of the Project
4.5 hours to evacuate entire Project 1,815 DU (4,247 vehicles)

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

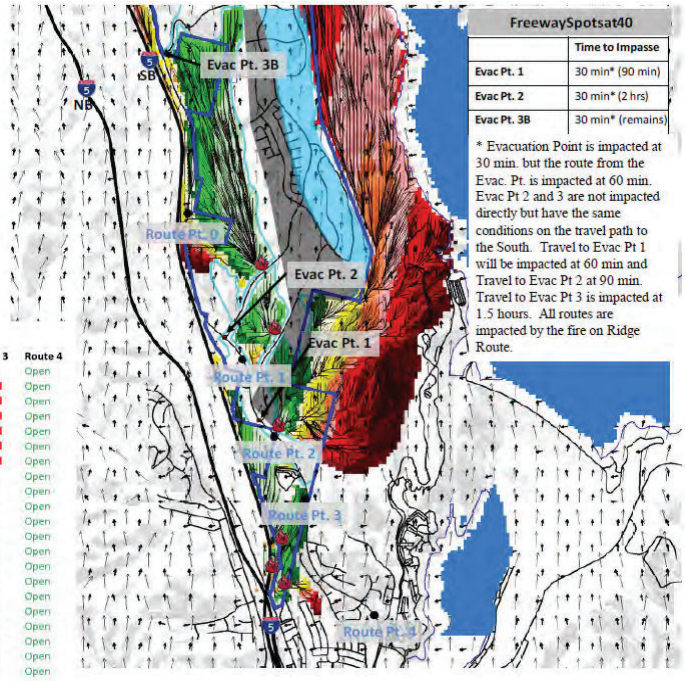
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	122	1,119	1,241	792	2,033	97	2,129	0	2,129
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closes at 30 Min	Closes at 30 Min, reopens at 150 Min	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

		A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time		No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15	Min	125	250	375	125	500	250	750	0	750
30	Min	125	250	375	125	500	250	750	0	750
45	Min	125	250	375	125	500	250	750	0	750
60	Min	125	250	375	125	500	250	750	0	750
75	Min	125	250	375	125	500	250	750	0	750
90	Min	125	250	375	125	500	250	750	0	750
105	Min	125	250	375	125	500	250	750	0	750
120	Min	125	250	375	250	625	386	1,011	0	1,011
135	Min	125	250	375	375	750	386	1,136	0	1,136
150	Min	125	500	625	500	1,125	386	1,511	0	1,511
165	Min	125	750	875	625	1,500	386	1,886	0	1,886
180	Min	125	1,000	1,125	750	1,875	386	2,261	0	2,261
195	Min	125	1,250	1,375	875	2,250	386	2,636	0	2,636
210	Min	125	1,500	1,625	1,000	2,625	386	3,011	0	3,011
225	Min	125	1,750	1,875	1,125	3,000	386	3,386	0	3,386
240	Min	125	2,000	2,125	1,250	3,375	386	3,761	0	3,761
255	Min	125	2,250	2,375	1,375	3,750	386	4,136	0	4,136
270	Min	125	2,500	2,625	1,500	4,125	386	4,511	0	4,511
285	Min	125	2,500	2,625	1,500	4,125	386	4,511	0	4,511

Spot Fire off Freeway NB (Wind S direction @ 40 mph) with Creek Avoidance Development

Narrative: Fire begins as a series of spot fires on the SB I-5 north of the NB/SB crossover. The fires is driven by a South wind at 40 mph. The fire was made to spot over Ridge Route in 30 min. It was made to spot again in another 30 min (60 min. elapsed time) to the north and a final time in another 30 min. (90 min. elapsed time). Ridge Route will be impacted for approximately 90 minutes for all Evac Points beginning 30 min into the scenario. Once the fire has passed this impact points, all Evac Points will reopen and remain open.



FreewaySpotsat40

	Time to Impasse
Evac Pt. 1	30 min* (90 min)
Evac Pt. 2	30 min* (2 hrs)
Evac Pt. 3B	30 min* (remains)

* Evacuation Point is impacted at 30 min. but the route from the Evac. Pt. is impacted at 60 min. Evac Pt 2 and 3 are not impacted directly but have the same conditions on the travel path to the South. Travel to Evac Pt 1 will be impacted at 60 min and Travel to Evac Pt 2 at 90 min. Travel to Evac Pt 3 is impacted at 1.5 hours. All routes are impacted by the fire on Ridge Route.

Freeway Spot at 40 mph Avoid — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
30	0:30	Closed	Closed	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
45	0:45	Closed	Closed	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
60	1:00	Closed	Closed	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
75	1:15	Closed	Closed	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
90	1:30	Closed	Closed	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
105	1:45	Closed	Closed	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
120	2:00	Open	Closed	n/a	Closed	n/a	Closed	Open	Open	Open	Open
135	2:15	Open	Closed	n/a	Closed	n/a	Closed	Open	Open	Open	Open
150	2:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
165	2:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
180	3:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
195	3:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
210	3:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
225	3:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
240	4:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
255	4:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
270	4:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
285	4:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
300	5:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
315	5:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
330	5:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
345	5:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
360	6:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
375	6:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
390	6:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
405	6:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
420	7:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open

An early shelter in place order is likely with evacuation after the fire front has cleared Evac Pt. 1 and Route Pts 2 and 3.

Priority Area to Evacuate

5. FreewaySpotsat40 - Partial Creek Avoidance Alt.

Results: 2.75 hours to evacuate 1,132 DU (2,649 vehicles) from the priority evacuation area of the Project 5 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	**633**	**1,233**	**1,866**	**596**	**2,462**	**188**	**2,649**	**0**	**2,649**
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	Closes at 30 Min, reopens at 120 Min	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

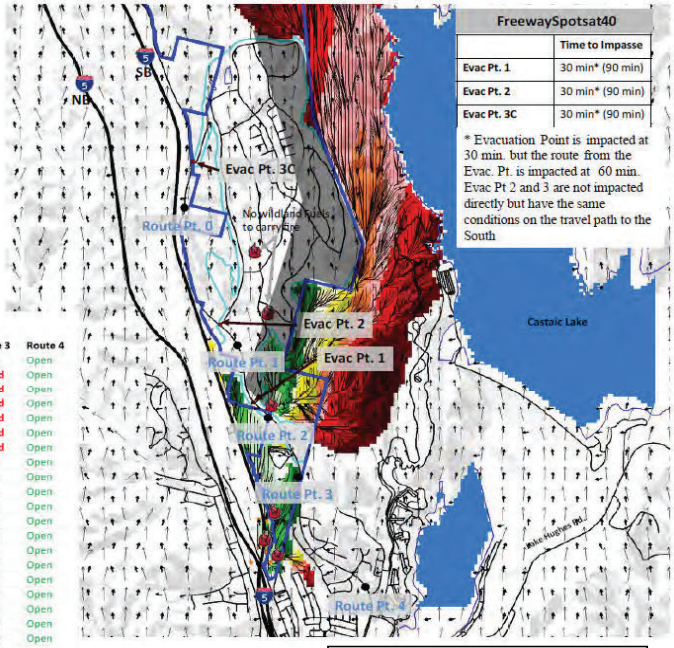
Time	A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
	No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15 Min	125	250	375	125	500	**250**	750	*0*	750
30 Min	*125*	*250*	*375*	*125*	*500*	*250*	*750*	*0*	*750*
45 Min	*125*	*250*	*375*	*125*	*500*	*250*	*750*	*0*	*750*
60 Min	*125*	*250*	*375*	*125*	*500*	*250*	*750*	*0*	*750*
75 Min	*125*	*250*	*375*	*125*	*500*	*250*	*750*	*0*	*750*
90 Min	*125*	*250*	*375*	*125*	*500*	*250*	*750*	*0*	*750*
105 Min	*125*	*250*	*375*	*125*	*500*	*250*	*750*	*0*	*750*
120 Min	250	500	750	250	1,000	500	1,500	*0*	1,500
135 Min	375	750	1,125	375	1,500	750	2,250	*0*	2,250
150 Min	500	1,000	1,500	500	2,000	751	2,751	*0*	2,751
165 Min	**625**	**1,250**	**1,875**	**625**	**2,500**	*751*	3,251	*0*	3,251
180 Min	750	1,500	2,250	750	3,000	*751*	3,751	*0*	3,751
195 Min	875	1,750	2,625	875	3,500	*751*	4,251	*0*	4,251
210 Min	1,000	2,000	3,000	1,000	4,000	*751*	4,751	*0*	4,751
225 Min	1,125	2,250	3,375	1,125	4,500	*751*	5,251	*0*	5,251
240 Min	1,250	2,500	3,750	1,250	5,000	*751*	5,751	*0*	5,751
255 Min	1,375	2,750	4,125	1,375	5,500	*751*	6,251	*0*	6,251
270 Min	1,500	3,000	4,500	1,500	6,000	*751*	6,751	*0*	6,751
285 Min	1,625	3,250	4,875	1,625	6,500	*751*	7,251	*0*	7,251
300 Min	1,750	3,500	5,250	1,750	7,000	*751*	7,751	*0*	7,751
315 Min	*1,750*	*3,500*	*5,250*	*1,750*	*7,000*	*751*	*7,751*	*0*	*7,751*

Spot Fire off Freeway NB (Wind S direction @ 40 mph) with Partial Creek Avoidance Development

Narrative: Fire begins as a series of spot fires on the SB I-5 north of the NB/SB crossover. The fires is driven by a South wind at 40 mph. The fire was made to spot over Ridge Route in 30 min. It was made to spot again in another 30 min (60 min. elapsed time) to the north and a final time in another 30 min. (90 min. elapsed time). No flame propagation within the development area occurs. Ridge Route will be impacted for approximately 90 minutes for all Evac Points beginning 30 min into the scenario. Once the fire has passed this impact points, all Evac Points will reopen and remain open.

Freeway Spot at 40 mph Partial Avoid — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
30	0:30	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Closed	Open
45	0:45	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Closed	Open
60	1:00	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Closed	Open
75	1:15	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Closed	Open
90	1:30	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Closed	Open
105	1:45	Closed	Closed	n/a	n/a	Closed	Closed	Closed	Closed	Closed	Open
120	2:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
135	2:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
150	2:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
165	2:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
180	3:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
195	3:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
210	3:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
225	3:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
240	4:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
255	4:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
270	4:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
285	4:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
300	5:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
315	5:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
330	5:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
345	5:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
360	6:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
375	6:15	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
390	6:30	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
405	6:45	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
420	7:00	Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open



6. LakeSpotsat40 - Previously Approved Plan

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 1.25 hours to evacuate 898 DU (2,101 vehicles) from the priority evacuation area of the Project
3.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

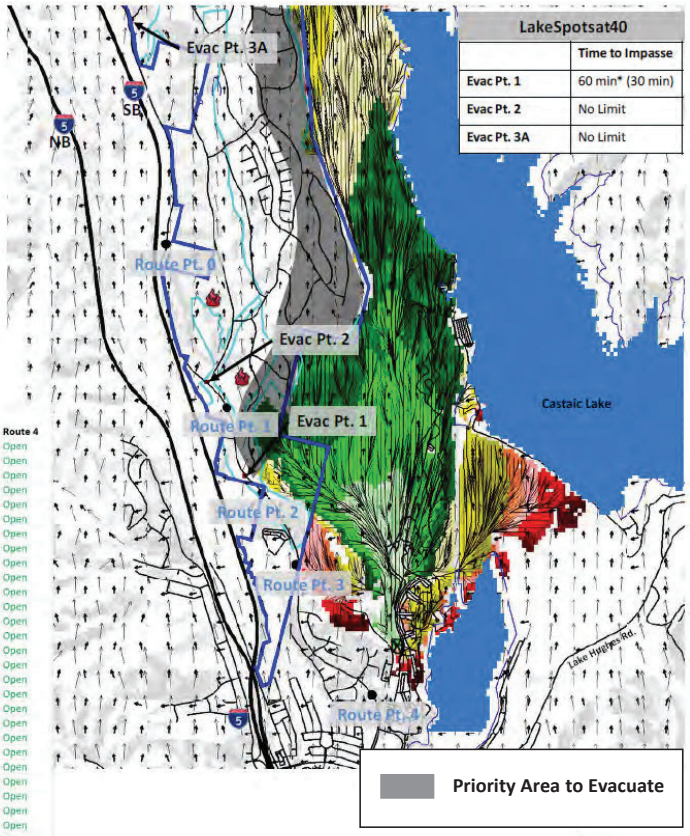
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	510	1,032	1,542	370	1,912	189	2,101	0	2,101
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	No Limit	No limit	Closes at 240 Min, reopens at 300 Min	Closes at 60 Min, reopens at 90 Min	Closes at 240 Min, reopens at 300 Min	Closes at 240 Min, reopens at 300 Min	Closes at 240 Min, reopens at 300 Min	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

Time	A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
	No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15 Min	125	250	375	125	500	250	750	*0*	750
30 Min	250	500	750	250	1,000	500	1,500	*0*	1,500
45 Min	375	750	1,125	375	1,500	750	2,250	*0*	2,250
60 Min	500	1,000	1,500	*375*	1,875	751	2,626	*0*	2,626
75 Min	625	1,250	1,875	*375*	2,250	*751*	3,001	*0*	3,001
90 Min	750	1,500	2,250	500	2,750	*751*	3,501	*0*	3,501
105 Min	875	1,750	2,625	625	3,250	*751*	4,001	*0*	4,001
120 Min	1,000	2,000	3,000	750	3,750	*751*	4,501	*0*	4,501
135 Min	1,125	2,250	3,375	875	4,250	*751*	5,001	*0*	5,001
150 Min	1,250	2,500	3,750	1,000	4,750	*751*	5,501	*0*	5,501
165 Min	1,375	2,750	4,125	1,125	5,250	*751*	6,001	*0*	6,001
180 Min	1,500	3,000	4,500	1,250	5,750	*751*	6,501	*0*	6,501
195 Min	1,625	3,250	4,875	1,375	6,250	*751*	7,001	*0*	7,001
210 Min	1,750	3,500	5,250	1,500	6,750	*751*	7,501	*0*	7,501
225 Min	*1,750*	*3,500*	*5,250*	*1,500*	*6,750*	751	*7,501*	0	*7,501*

Origin with the County Recreation Area (Wind S direction @ 40 mph) with Previously Approved Development

Narrative: Fire begins as spot fires in the Recreation Area under a South Wind at 40 mph with the head fire moving to the north (branching to the east and west). Fire does not spot over roadways on the west side due to development. Fire continues to burn to the north on the east side of the Project Site.



Evacuation to the South

Lake Spots at 40 mph Approved		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Closed	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
75	1:15	Closed	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
90	1:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
135	2:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
150	2:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	Open	n/a	n/a	Open	Closed	Closed	Closed	Open
255	4:15	Open	Open	Open	n/a	n/a	Open	Closed	Closed	Closed	Open
270	4:30	Open	Open	Open	n/a	n/a	Open	Closed	Closed	Closed	Open
285	4:45	Open	Open	Open	n/a	n/a	Open	Closed	Closed	Closed	Open
300	5:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open

6. LakeSpotsat40 - Creek Avoidance Alt.

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 2.5 hours to evacuate 1,650 DU (3,861 vehicles) from the priority evacuation area of the Project
2.5 hours to evacuate entire Project 1,815 DU (4,247 vehicles)

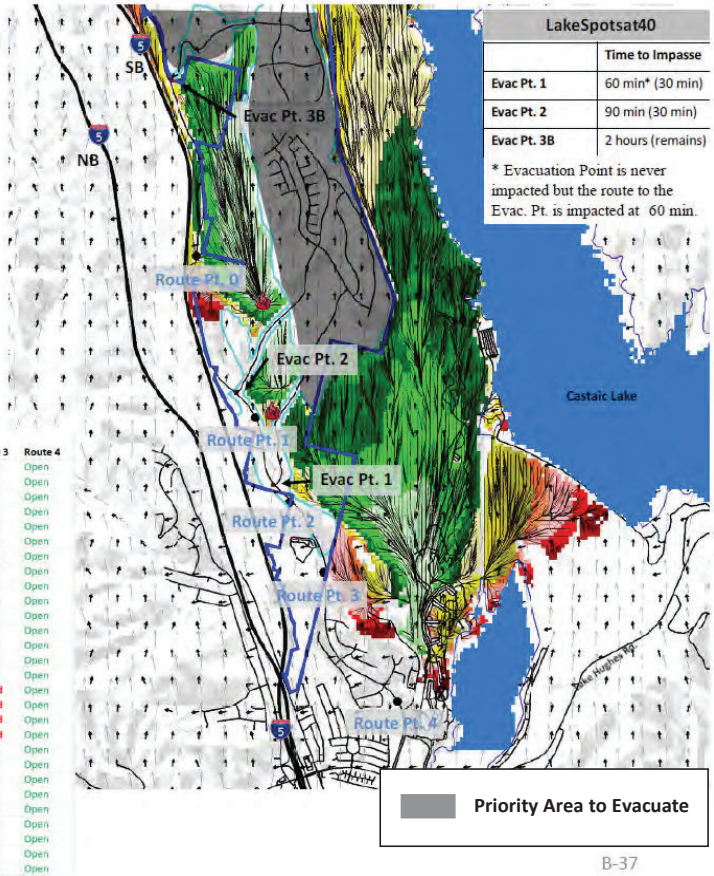
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1		Evac Pt. 1	Ridge Route Pt. 2		Project Affordable Housing	Ridge Route Pt. 3		Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	550	1,188	1,738		295	2,033		0	2,033		0	2,033
Number of lanes at evacuation point	1	2	--		1	--		2	--		1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--		1,600	--		1,600	--		1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--		500	--		1,000	--		500	--
Vehicles per 15 min	125	250	--		125	--		250	--		125	--
Time limit	Closes at 120 Min.	Closes at 90 Min, reopens at 120 Min	Closes at 240 Min, reopens at 300 Min		Closes at 60 Min, reopens at 90 Min	Closes at 240 Min, reopens at 300 Min		Closes at 240 Min, reopens at 300 Min	Closes at 240 Min, reopens at 300 Min		--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

		A	B	A+B=C		D	C+D=E		F	E+F=G		H	G+H=I
Time		No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1		No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2		No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3		No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15	Min	125	250	375		125	500		250	750		*0*	750
30	Min	250	500	750		250	1,000		386	1,386		*0*	1,386
45	Min	375	750	1,125		375	1,500		*386*	1,886		*0*	1,886
60	Min	500	1,000	1,500		*375*	1,875		*386*	2,261		*0*	2,261
75	Min	625	1,250	1,875		*375*	2,250		*386*	2,636		*0*	2,636
90	Min	750	*1,250*	2,000		500	2,500		*386*	2,886		*0*	2,886
105	Min	875	*1,250*	2,125		625	2,750		*386*	3,136		*0*	3,136
120	Min	*875*	1,500	2,375		750	3,125		*386*	3,511		*0*	3,511
135	Min	*875*	1,750	2,625		875	3,500		*386*	3,886		*0*	3,886
150	Min	*875*	2,000	2,875		1,000	3,875		*386*	4,261		*0*	4,261
165	Min	*875*	*2,000*	*2,875*		*1,000*	*3,875*		*386*	*4,261*		*0*	*4,261*

Origin with the County Recreation Area (Wind S direction @ 40 mph) with Creek Avoidance Development

Narrative: Fire begins as spot fires in the Recreation Area under a South Wind at 40 mph with the head fire moving to the north (branching to the east and west). At 60 min (elapsed time) fire spots over the access road to Evac Point 1, closing the access for 30 minutes. The fire on the west continues to burn north and spots over the access to Evac Point 2 at 90 min (elapsed time) and continues to burn to the north on both sides of the Project Site.



Lake Spots at 40 mph Creek Avoidance — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
60	1:00	Closed	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
75	1:15	Closed	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
90	1:30	Open	Closed	n/a	Open	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Closed	n/a	Open	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
135	2:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
150	2:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
165	2:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
180	3:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
195	3:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
210	3:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
225	3:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
240	4:00	Open	Open	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
255	4:15	Open	Open	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
270	4:30	Open	Open	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
285	4:45	Open	Open	n/a	Closed	n/a	Closed	Closed	Closed	Closed	Open
300	5:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
315	5:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
330	5:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
345	5:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
360	6:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
375	6:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
390	6:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
405	6:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
420	7:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open

6. LakeSpotsat40 - Partial Creek Avoidance Alt.

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 1.5 hours to evacuate 1,056 DU (2,471 vehicles) from the priority evacuation area of the Projec
3.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

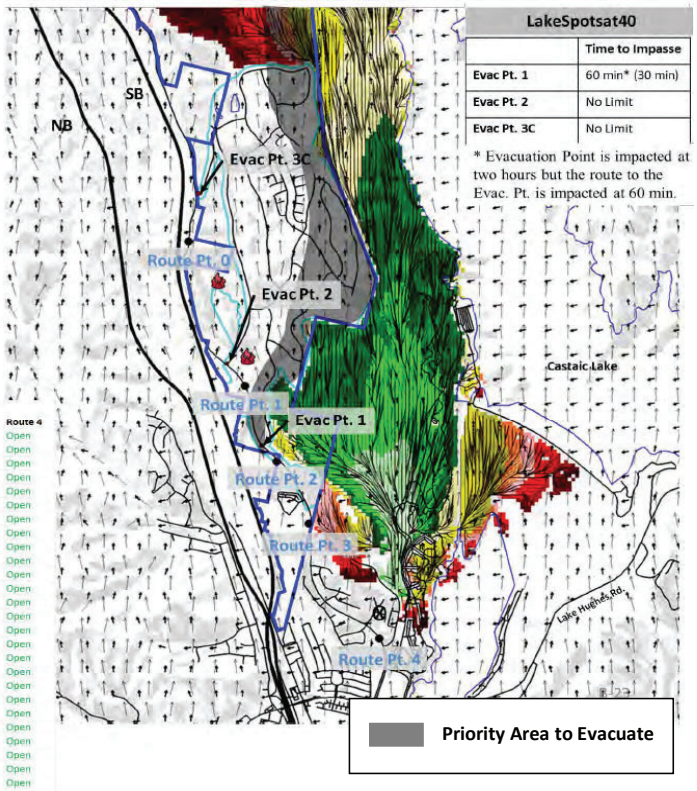
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	**623**	**1,280**	**1,903**	**380**	**2,283**	**188**	**2,471**	**0**	**2,471**
Number of lanes at evacuation point	1	2	--	1	--	2	--		--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	No limit	No limit	Closes at 240 Min, reopens at 300 Min	Closes at 60 Min, reopens at 90 Min	Closes at 240 Min, reopens at 300 Min	Closes at 240 Min, reopens at 300 Min	Closes at 240 Min, reopens at 300 Min	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

	A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time	No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15 Min	125	250	375	125	500	250	750	*0*	750
30 Min	250	500	750	250	1,000	500	1,500	*0*	1,500
45 Min	375	750	1,125	375	1,500	750	2,250	*0*	2,250
60 Min	500	1,000	1,500	*375*	1,875	751	2,626	*0*	2,626
75 Min	**625**	1,250	1,875	*375*	2,250	*751*	3,001	*0*	3,001
90 Min	750	**1,500**	**2,250**	**500**	**2,750**	*751*	3,501	*0*	3,501
105 Min	875	1,750	2,625	625	3,250	*751*	4,001	*0*	4,001
120 Min	1,000	2,000	3,000	750	3,750	*751*	4,501	*0*	4,501
135 Min	1,125	2,250	3,375	875	4,250	*751*	5,001	*0*	5,001
150 Min	1,250	2,500	3,750	1,000	4,750	*751*	5,501	*0*	5,501
165 Min	1,375	2,750	4,125	1,125	5,250	*751*	6,001	*0*	6,001
180 Min	1,500	3,000	4,500	1,250	5,750	*751*	6,501	*0*	6,501
195 Min	1,625	3,250	4,875	1,375	6,250	*751*	7,001	*0*	7,001
210 Min	1,750	3,500	5,250	1,500	6,750	*751*	**7,501**	*0*	**7,501**
225 Min	*1,750*	*3,500*	*5,250*	*1,500*	*6,750*	*751*	*7,501*	*0*	*7,501*

Origin with the County Recreation Area (Wind S direction @ 40 mph) with Partial Creek Avoidance Development

Narrative: Fire begins as spot fires in the Recreation Area under a South Wind at 40 mph with the head fire moving to the north (branching to the east and west). Fire does not spot over roadways on the west side due to development. Fire continues to burn to the north on the east side of the Project Site.



Lake Spots at 40 mphParital Creek Avoidance — Evacuation to the South

	Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
30	0:30 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
45	0:45 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
60	1:00 Closed	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
75	1:15 Closed	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
90	1:30 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
105	1:45 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
120	2:00 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
135	2:15 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
150	2:30 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
165	2:45 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
180	3:00 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
195	3:15 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
210	3:30 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
225	3:45 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
240	4:00 Open	Open	n/a	n/a	Open	Open	Closed	Closed	Closed	Open
255	4:15 Open	Open	n/a	n/a	Open	Open	Closed	Closed	Closed	Open
270	4:30 Open	Open	n/a	n/a	Open	Open	Closed	Closed	Closed	Open
285	4:45 Open	Open	n/a	n/a	Open	Open	Closed	Closed	Closed	Open
300	5:00 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
315	5:15 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
330	5:30 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
345	5:45 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
360	6:00 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
375	6:15 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
390	6:30 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
405	6:45 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open
420	7:00 Open	Open	n/a	n/a	Open	Open	Open	Open	Open	Open

7. NEat70Line - Previously Approved Plan

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 1 hour to evacuate 570 DU (1,334 vehicles) from the priority evacuation area of the Project
4.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

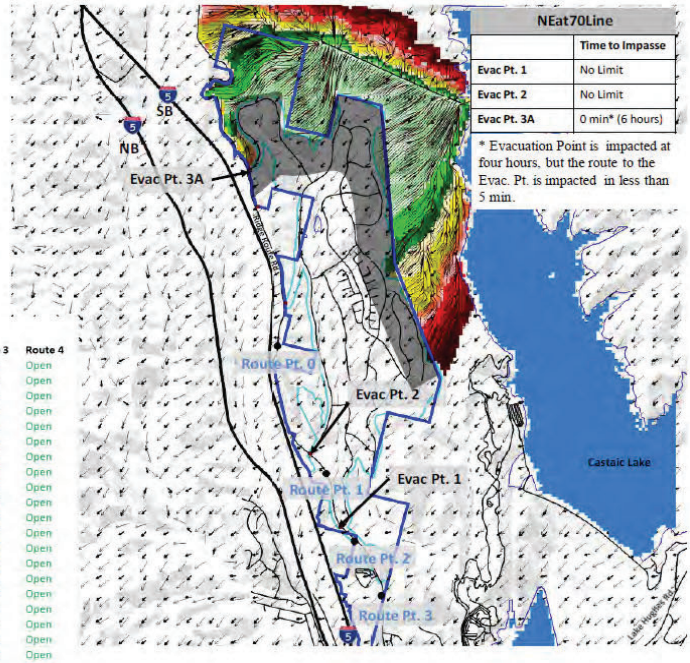
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	0	927	927	408	1,334	0	1,334	0	1,334
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closed until 300 Min after fire started	No limit	No limit	No limit	No limit	No limit	No limit	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

	A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time	No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15 Min	*0*	250	250	125	375	250	625	*0*	625
30 Min	*0*	500	500	250	750	500	1,250	*0*	1,250
45 Min	*0*	750	750	375	1,125	750	1,875	*0*	1,875
60 Min	*0*	1,000	1,000	500	1,500	751	2,251	*0*	2,251
75 Min	*0*	1,250	1,250	625	1,875	*751*	2,626	*0*	2,626
90 Min	*0*	1,500	1,500	750	2,250	*751*	3,001	*0*	3,001
105 Min	*0*	1,750	1,750	875	2,625	*751*	3,376	*0*	3,376
120 Min	*0*	2,000	2,000	1,000	3,000	*751*	3,751	*0*	3,751
135 Min	*0*	2,250	2,250	1,125	3,375	*751*	4,126	*0*	4,126
150 Min	*0*	2,500	2,500	1,250	3,750	*751*	4,501	*0*	4,501
165 Min	*0*	2,750	2,750	1,375	4,125	*751*	4,876	*0*	4,876
180 Min	*0*	3,000	3,000	1,500	4,500	*751*	5,251	*0*	5,251
195 Min	*0*	3,250	3,250	1,625	4,875	*751*	5,626	*0*	5,626
210 Min	*0*	3,500	3,500	1,750	5,250	*751*	6,001	*0*	6,001
225 Min	*0*	3,750	3,750	1,875	5,625	*751*	6,376	*0*	6,376
240 Min	*0*	4,000	4,000	2,000	6,000	*751*	6,751	*0*	6,751
255 Min	*0*	4,250	4,250	2,125	6,375	*751*	7,126	*0*	7,126
270 Min	*0*	4,500	4,500	2,250	6,750	*751*	7,501	*0*	7,501
285 Min	*0*	*4,500*	*4,500*	*2,250*	*6,750*	*751*	*7,501*	*0*	*7,501*

Wind Driven Fire at North Interface (Wind NE direction @ 70 mph) with Previously Approved Development

Narrative: Fire is modeled from an existing line of fire to the NE of the Project Site. Wind is from the NE at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled.



NE at 70 mph Approved				Evacuation to the South							
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
75	1:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
90	1:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
135	2:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
150	2:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
255	4:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
270	4:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open

Priority Area to Evacuate

7. NEat70Line - Creek Avoidance Alt.

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 1.5 hours to evacuate 826 DU (1,932 vehicles) from the priority evacuation area of the Project
2.5 hours to evacuate 1,815 DU entire Project (4,247 vehicles)

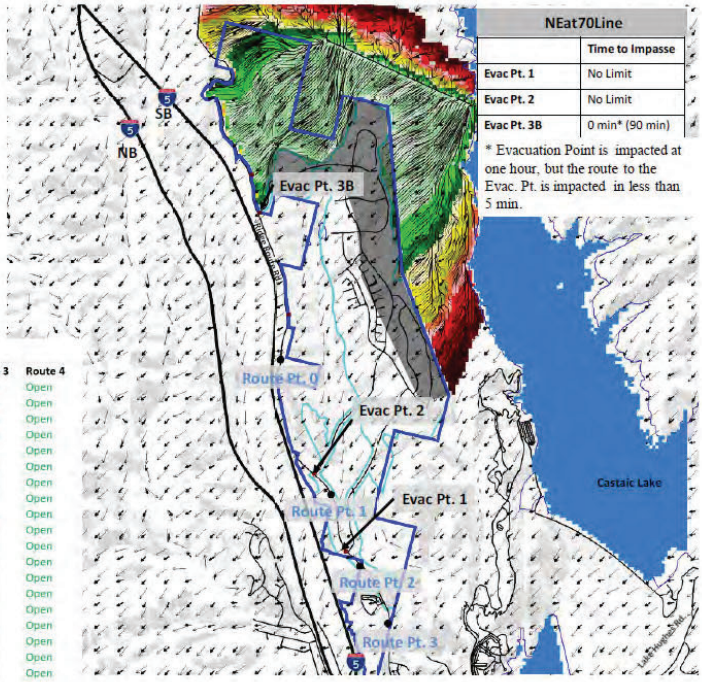
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	0	1,267	1,069	665	1,932	0	1,932	0	1,932
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closed until 105 Min after the fire started	No limit	No limit	No limit	No limit	No limit	No limit	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

Time	A No. of Vehicles Passing Through Evac Pt. 3	B No. of Vehicles Passing Through Evac Pt. 2	A+B=C Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	D No. of Vehicles Passing Through Evac Pt. 1	C+D=E Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	F No. of Vehicles from Project AH Passing through Ridge Rt south of B St	E+F=G Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	H No. of Vehicles from NH Passing Through Ridge Rt	G+H=I Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15 Min	*0*	250	250	125	375	250	625	*0*	625
30 Min	*0*	500	500	250	750	386	1,136	*0*	1,136
45 Min	*0*	750	750	375	1,125	*386*	1,511	*0*	1,511
60 Min	*0*	1,000	1,000	500	1,500	*386*	1,886	*0*	1,886
75 Min	*0*	1,250	1,250	625	1,875	*386*	2,261	*0*	2,261
90 Min	*0*	1,500	1,500	750	2,250	*386*	2,636	*0*	2,636
105 Min	125	1,750	1,875	875	2,750	*386*	3,136	*0*	3,136
120 Min	250	2,000	2,250	1,000	3,250	*386*	3,636	*0*	3,636
135 Min	375	2,250	2,625	1,125	3,750	*386*	4,136	*0*	4,136
150 Min	500	2,500	3,000	1,250	4,250	*386*	4,636	*0*	4,636
165 Min	*500*	*2,500*	*3,000*	*1,250*	*4,250*	*386*	*4,636*	*0*	*4,636*

Wind Driven Fire at North Interface (Wind NE direction @ 70 mph) with Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the NE of the Project Site. Wind is from the NE at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled.



NE at 70 mph Creek Avoidance — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
75	1:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
90	1:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
135	2:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
150	2:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
255	4:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
270	4:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open

7. NEat70Line - Partial Creek Avoidance Alt.

Results: 4.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

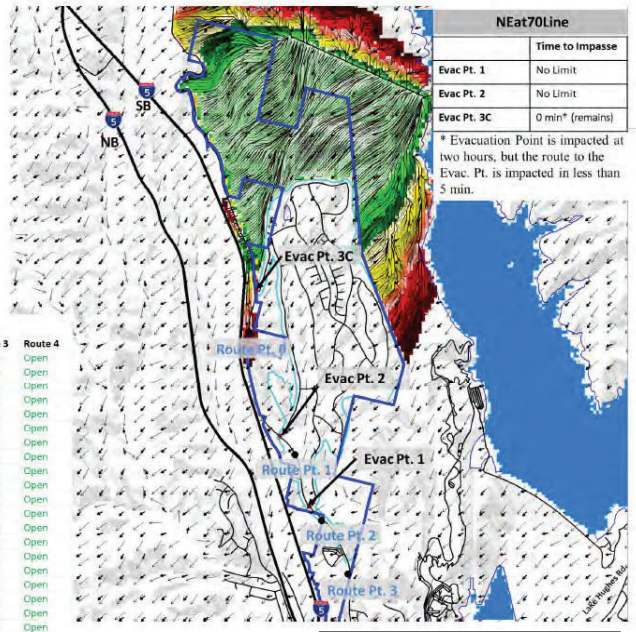
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	**0**	**4,423**	**4,423**	**2,197**	**6,620**	**751**	**7,371**	**0**	**7,371**
Number of lanes at evacuation point	1	2	--	1	--	2	--		--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closed, Ridge Route 0 closes at 60 Min	No limit	No limit	No limit	No limit	No limit	No limit	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

	A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time	No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15 Min	*0*	250	250	125	375	250	625	*0*	625
30 Min	*0*	500	500	250	750	500	1,250	*0*	1,250
45 Min	*0*	750	750	375	1,125	750	1,875	*0*	1,875
60 Min	*0*	1,000	1,000	500	1,500	751	2,251	*0*	2,251
75 Min	*0*	1,250	1,250	625	1,875	*751*	2,626	*0*	2,626
90 Min	*0*	1,500	1,500	750	2,250	*751*	3,001	*0*	3,001
105 Min	*0*	1,750	1,750	875	2,625	*751*	3,376	*0*	3,376
120 Min	*0*	2,000	2,000	1,000	3,000	*751*	3,751	*0*	3,751
135 Min	*0*	2,250	2,250	1,125	3,375	*751*	4,126	*0*	4,126
150 Min	*0*	2,500	2,500	1,250	3,750	*751*	4,501	*0*	4,501
165 Min	*0*	2,750	2,750	1,375	4,125	*751*	4,876	*0*	4,876
180 Min	*0*	3,000	3,000	1,500	4,500	*751*	5,251	*0*	5,251
195 Min	*0*	3,250	3,250	1,625	4,875	*751*	5,626	*0*	5,626
210 Min	*0*	3,500	3,500	1,750	5,250	*751*	6,001	*0*	6,001
225 Min	*0*	3,750	3,750	1,875	5,625	*751*	6,376	*0*	6,376
240 Min	*0*	4,000	4,000	2,000	6,000	*751*	6,751	*0*	6,751
255 Min	*0*	4,250	4,250	2,125	6,375	*751*	7,126	*0*	7,126
270 Min	*0*	4,500	4,500	2,250	6,750	*751*	**7,501**	*0*	**7,501**
285 Min	*0*	*4,500*	*4,500*	*2,250*	*6,750*	*751*	*7,501*	*0*	*7,501*

Wind Driven Fire at North Interface (Wind NE direction @ 70 mph) with Partial Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the NE of the Project Site. Wind is from the NE at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site (out of alignment) for the balance of the modeling timeframe.



NE at 70 mph Parital Creek Avoidance — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
60	1:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
75	1:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
90	1:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
105	1:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
120	2:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
135	2:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
150	2:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
165	2:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
180	3:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
195	3:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
210	3:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
225	3:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
240	4:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
255	4:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
270	4:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
285	4:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
300	5:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
315	5:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
330	5:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
345	5:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
360	6:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
375	6:15	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
390	6:30	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
405	6:45	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
420	7:00	Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open

8. NNEat70Line- Previously Approved Plan

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 1.5 hour to evacuate 842 DU (1,970 vehicles) from the priority evacuation area of the Project
4.75 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

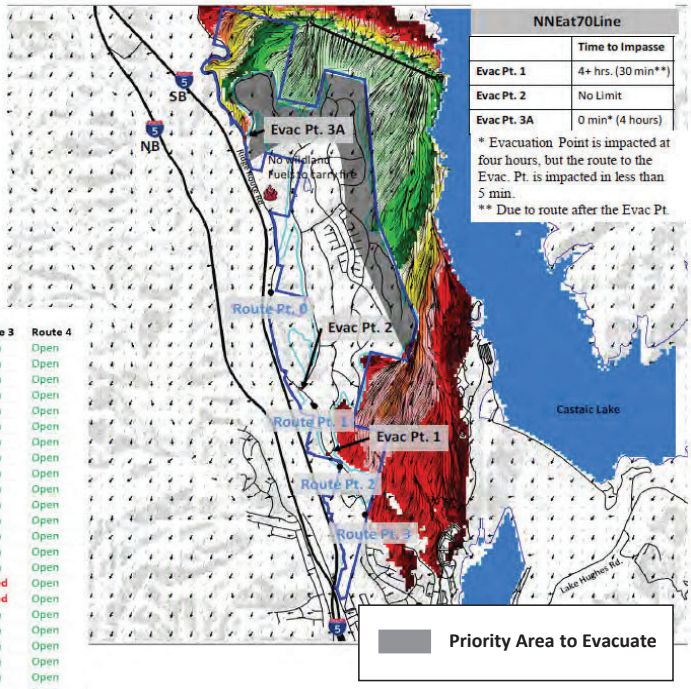
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	0	1,276	1,276	693	1,970	0	1,970	0	1,970
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closed until 255 Min from start of fire	No limit	No limit	No limit	Ridge Route closes at 240 Min and reopens at 270 Min	Ridge Route closes at 240 Min and reopens at 270 Min	Ridge Route closes at 240 Min and reopens at 270 Min	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

		A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time		No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15	Min	0	250	250	125	375	250	625	0	625
30	Min	0	500	500	250	750	500	1,250	0	1,250
45	Min	0	750	750	375	1,125	750	1,875	0	1,875
60	Min	0	1,000	1,000	500	1,500	751	2,251	0	2,251
75	Min	0	1,250	1,250	625	1,875	751	2,626	0	2,626
90	Min	0	1,500	1,500	750	2,250	751	3,001	0	3,001
105	Min	0	1,750	1,750	875	2,625	751	3,376	0	3,376
120	Min	0	2,000	2,000	1,000	3,000	751	3,751	0	3,751
135	Min	0	2,250	2,250	1,125	3,375	751	4,126	0	4,126
150	Min	0	2,500	2,500	1,250	3,750	751	4,501	0	4,501
165	Min	0	2,750	2,750	1,375	4,125	751	4,876	0	4,876
180	Min	0	3,000	3,000	1,500	4,500	751	5,251	0	5,251
195	Min	0	3,250	3,250	1,625	4,875	751	5,626	0	5,626
210	Min	0	3,500	3,500	1,750	5,250	751	6,001	0	6,001
225	Min	0	3,750	3,750	1,875	5,625	751	6,376	0	6,376
240	Min	0	3,750	3,750	1,875	5,625	751	6,376	0	6,376
255	Min	0	3,750	3,750	1,875	5,625	751	6,376	0	6,376
270	Min	125	4,000	4,125	2,000	6,125	751	6,876	0	6,876
285	Min	250	4,250	4,500	2,125	6,625	751	7,376	0	7,376
300	Min	250	4,250	4,500	2,125	6,625	751	7,376	0	7,376

Wind Driven Fire at North Interface (Wind NNE direction @ 70 mph) with Previously Approved Development

Narrative: Fire is modeled from an existing line of fire to the NE of the Project Site. Wind is from the NNE at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately four hours into the simulated event.



NNE at 70 mph Approved — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
75	1:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
90	1:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
135	2:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
150	2:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	Closed	n/a	n/a	Open	Open	Closed	Closed	Open
255	4:15	Open	Open	Open	n/a	n/a	Open	Open	Closed	Closed	Open
270	4:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open

8. NNEat70Line - Creek Avoidance Alt.

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 1.25 hours to evacuate 767 DU (1,795 vehicles) from the priority evacuation area of the Project
2.75 hours to evacuate entire Project 1,815 DU (4,247 vehicles)

Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	0	1,227	1,227	567	1,795	0	1,795	0	1,795
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closed until 255 Min at fire started	No limit	No limit	No limit	Ridge Route closes at 240 Min and reopens at 270 Min	Ridge Route closes at 240 Min and reopens at 270 Min	Ridge Route closes at 240 Min and reopens at 270 Min	--	No limit

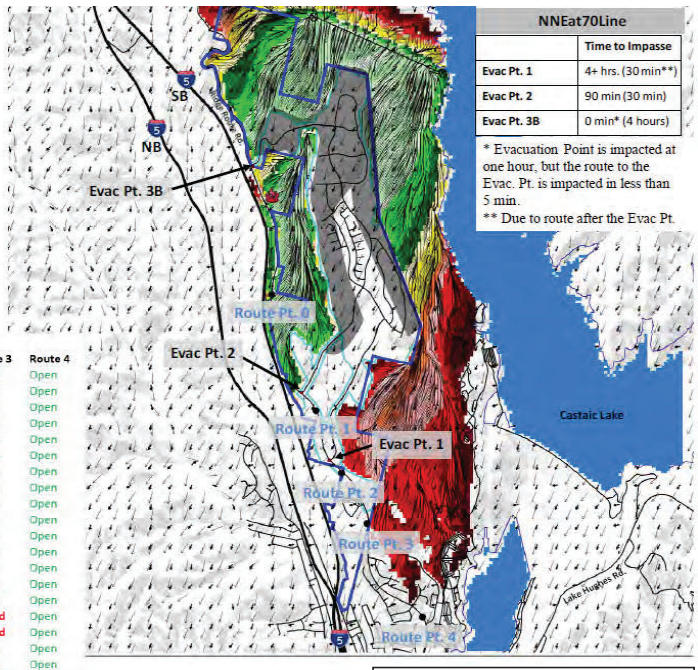
Vehicle Evacuation Shown in 15 Minute Intervals

	A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time	No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15 Min	0	250	250	125	375	250	625	0	625
30 Min	0	500	500	250	750	386	1,136	0	1,136
45 Min	0	750	750	375	1,125	386	1,511	0	1,511
60 Min	0	1,000	1,000	500	1,500	386	1,886	0	1,886
75 Min	0	1,250	1,250	625	1,875	386	2,261	0	2,261
90 Min	0	1,500	1,500	750	2,250	386	2,636	0	2,636
105 Min	0	1,750	1,750	875	2,625	386	3,011	0	3,011
120 Min	0	2,000	2,000	1,000	3,000	386	3,386	0	3,386
135 Min	0	2,250	2,250	1,125	3,375	386	3,761	0	3,761
150 Min	0	2,500	2,500	1,250	3,750	386	4,136	0	4,136
165 Min	0	2,750	2,750	1,375	4,125	386	4,511	0	4,511
180 Min	0	2,750	2,750	1,375	4,125	386	4,511	0	4,511

Wind Driven Fire at North Interface (Wind NNE direction @ 70 mph) with Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the NE of the Project Site. Wind is from the NNE at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 2. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately four hours into the simulated event.

NNE at 70 mph Creek Avoidance			Evacuation to the South								
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
75	1:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
90	1:30	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
105	1:45	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
120	2:00	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
135	2:15	Open	Open	n/a	Closed	n/a	Closed	Open	Open	Open	Open
150	2:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	n/a	Closed	n/a	Open	Open	Closed	Closed	Open
255	4:15	Open	Open	n/a	Open	n/a	Open	Open	Closed	Closed	Open
270	4:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	n/a	Open	n/a	Open	Open	Open	Open	Open



8. NNEat70Line - Partial Creek Avoidance Alt.

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 1.75 hours to evacuate 963 DU (2,253 vehicles) from the priority evacuation area of the Project
4.5 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

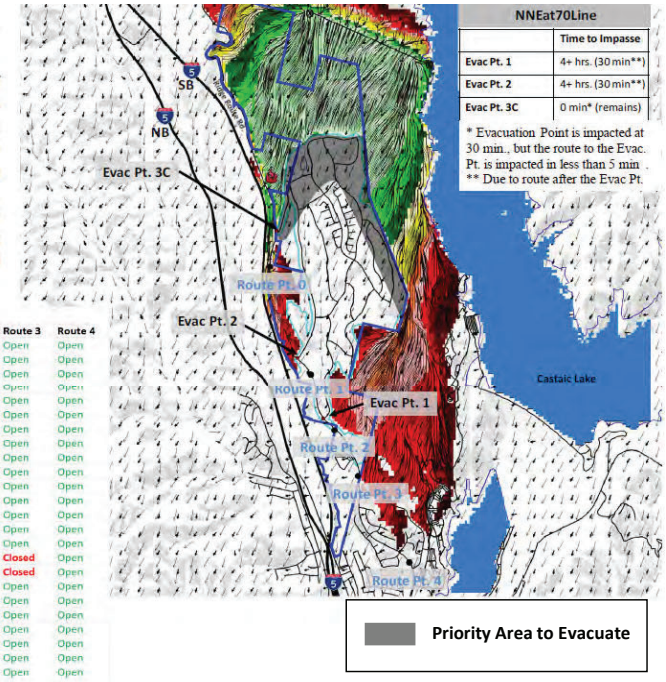
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	**0**	**1,485**	**1,485**	**769**	**2,253**	**0**	**2,253**	**0**	**2,253**
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closed	No limit	No limit	No limit	Ridge Route closes at 240 Min and reopens at 270 Min	Ridge Route closes at 240 Min and reopens at 270 Min	Ridge Route closes at 240 Min and reopens at 270 Min	--	No limit

Vehicle Evacuation Shown in 15 Minute Intervals

	A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time	No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15 Min	*0*	250	250	125	375	250	625	*0*	625
30 Min	*0*	500	500	250	750	500	1,250	*0*	1,250
45 Min	*0*	750	750	375	1,125	750	1,875	*0*	1,875
60 Min	*0*	1,000	1,000	500	1,500	751	2,251	*0*	2,251
75 Min	*0*	1,250	1,250	625	1,875	*751*	2,626	*0*	2,626
90 Min	*0*	**1,500**	**1,500**	750	2,250	*751*	3,001	*0*	3,001
105 Min	*0*	1,750	1,750	**875**	**2,625**	*751*	3,376	*0*	3,376
120 Min	*0*	2,000	2,000	1,000	3,000	*751*	3,751	*0*	3,751
135 Min	*0*	2,250	2,250	1,125	3,375	*751*	4,126	*0*	4,126
150 Min	*0*	2,500	2,500	1,250	3,750	*751*	4,501	*0*	4,501
165 Min	*0*	2,750	2,750	1,375	4,125	*751*	4,876	*0*	4,876
180 Min	*0*	3,000	3,000	1,500	4,500	*751*	5,251	*0*	5,251
195 Min	*0*	3,250	3,250	1,625	4,875	*751*	5,626	*0*	5,626
210 Min	*0*	3,500	3,500	1,750	5,250	*751*	6,001	*0*	6,001
225 Min	*0*	3,750	3,750	1,875	5,625	*751*	6,376	*0*	6,376
240 Min	*0*	4,000	4,000	2,000	6,000	*751*	6,751	*0*	6,751
255 Min	*0*	4,250	4,250	2,125	6,375	*751*	7,126	*0*	7,126
270 Min	*0*	4,500	4,500	2,250	6,750	*751*	**7,501**	*0*	**7,501**
285 Min	*0*	*4,500*	*4,500*	*2,250*	*6,750*	*751*	*7,501*	*6 1*	*,1 2*

Wind Driven Fire at North Interface (Wind NNE direction @ 70 mph) with Partial Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the NE of the Project Site. Wind is from the NNE at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 2. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately four hours into the simulated event.



NNE at 70 mph Partial Creek Avoidance			Evacuation to the South							
	Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
30	0:30 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
45	0:45 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
60	1:00 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
75	1:15 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
90	1:30 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
105	1:45 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
120	2:00 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
135	2:15 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
150	2:30 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
165	2:45 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
180	3:00 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
195	3:15 Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
210	3:30 Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
225	3:45 Open	Open	n/a	n/a	Closed	Closed	Open	Open	Open	Open
240	4:00 Open	Open	n/a	n/a	Closed	Open	Open	Closed	Closed	Open
255	4:15 Open	Open	n/a	n/a	Closed	Open	Open	Closed	Closed	Open
270	4:30 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
285	4:45 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
300	5:00 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
315	5:15 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
330	5:30 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
345	5:45 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
360	6:00 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
375	6:15 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
390	6:30 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
405	6:45 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
420	7:00 Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open

9. Nat70Line- Previously Approved Plan

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 3.5 hours to evacuate 1,687 DU (3,948 vehicles) from the priority evacuation area of the Project
5.75 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	0	2,447	2,447	1,500	3,948	0	3,948	0	3,948
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closed	Closed at 90 Min, reopens at 120 Min	No limit	No limit	Ridge Route closes at 240 Min, reopens at 270 Min	Ridge Route closes at 120 Min, reopens at 150 Min	Ridge Route closes at 120 Min, reopens at 150 Min	--	Ridge Route closes at 240 Min, reopens at 270 Min

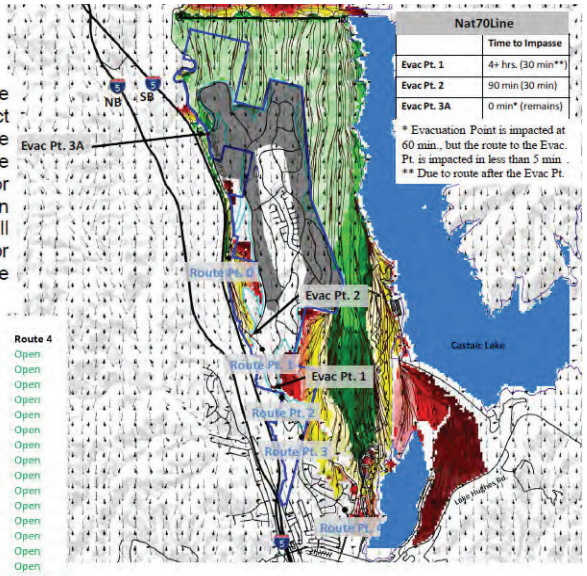
Vehicle Evacuation Shown in 15 Minute Intervals

		A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time		No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15	Min	0	250	250	125	375	250	625	0	625
30	Min	0	500	500	250	750	500	1,250	0	1,250
45	Min	0	750	750	375	1,125	750	1,875	0	1,875
60	Min	0	1,000	1,000	500	1,500	751	2,251	0	2,251
75	Min	0	1,250	1,250	625	1,875	751	2,626	0	2,626
90	Min	0	1,250	1,250	750	2,000	751	2,751	0	2,751
105	Min	0	1,250	1,250	875	2,125	751	2,876	0	2,876
120	Min	0	1,250	1,250	875	2,125	751	2,876	0	2,876
135	Min	0	1,250	1,250	875	2,125	751	2,876	0	2,876
150	Min	0	1,500	1,500	1,000	2,500	751	3,251	0	3,251
165	Min	0	1,750	1,750	1,125	2,875	751	3,626	0	3,626
180	Min	0	2,000	2,000	1,250	3,250	751	4,001	0	4,001
195	Min	0	2,250	2,250	1,375	3,625	751	4,376	0	4,376
210	Min	0	2,500	2,500	1,500	4,000	751	4,751	0	4,751
225	Min	0	2,750	2,750	1,625	4,375	751	5,126	0	5,126
240	Min	0	2,750	2,750	1,625	4,375	751	5,126	0	5,126
255	Min	0	2,750	2,750	1,625	4,375	751	5,126	0	5,126
270	Min	0	3,000	3,000	1,750	4,750	751	5,501	0	5,501
285	Min	0	3,250	3,250	1,875	5,125	751	5,876	0	5,876
300	Min	0	3,500	3,500	2,000	5,500	751	6,251	0	6,251
315	Min	0	3,750	3,750	2,125	5,875	751	6,626	0	6,626
330	Min	0	4,000	4,000	2,250	6,250	751	7,001	0	7,001
345	Min	0	4,250	4,250	2,375	6,625	751	7,376	0	7,376
360	Min	0	4,250	4,250	2,375	6,625	751	7,376	0	7,376

Wind Driven Fire at North Interface (Wind N direction @ 70 mph) with Previously Approved Development

Narrative: Fire is modeled from an existing line of fire to the North of the Project Site. Wind is from the North at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 2. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately two hours into the simulated event and again at approximately four hours.

N at 70 mph Approved		Evacuation to the South								
		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
75	1:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
90	1:30	Open	Closed	Closed	n/a	n/a	Closed	Open	Open	Open	Open
105	1:45	Open	Closed	Closed	n/a	n/a	Closed	Open	Open	Open	Open
120	2:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Closed	Open
135	2:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Closed	Open
150	2:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	Closed	n/a	n/a	Open	Open	Closed	Open	Closed
255	4:15	Open	Open	Closed	n/a	n/a	Open	Open	Closed	Open	Closed
270	4:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open



9. Nat70Line - Creek Avoidance Alt.

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results: 2.5 hrs to evacuate 940 DU (2,198 vehicles) from the priority evacuation area of the Project
3.5 hrs to evacuate entire Project 1,815 DU (4,247 vehicles)

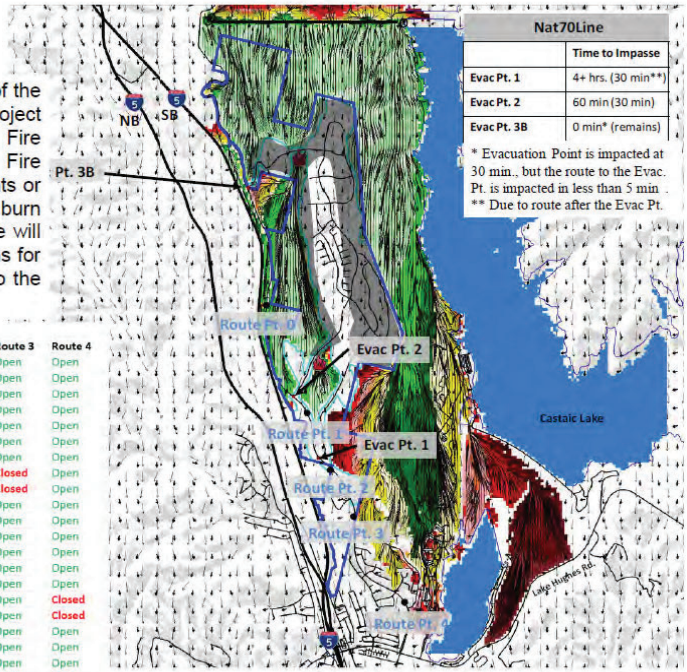
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	0	1,265	1,265	933	2,198	0	2,198	0	2,198
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closed	Closes at 60 Min, reopens at 90 Min	Closes at 60 Min, reopens at 90 Min	No limit	Ridge Route closes at 240 Min, reopens at 270 Min	Ridge Route closes at 120 Min, reopens at 150 Min	Ridge Route closes at 120 Min, reopens at 150 Min	--	Ridge Route closes at 240 Min, reopens at 270 Min

Vehicle Evacuation Shown in 15 Minute Intervals

		A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time		No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15	Min	0	250	250	125	375	250	625	0	625
30	Min	0	500	500	250	750	386	1,136	0	1,136
45	Min	0	750	750	375	1,125	386	1,511	0	1,511
60	Min	0	750	750	500	1,250	386	1,636	0	1,636
75	Min	0	750	750	625	1,375	386	1,761	0	1,761
90	Min	0	1,000	1,000	750	1,750	386	2,136	0	2,136
105	Min	0	1,250	1,250	875	2,125	386	2,511	0	2,511
120	Min	0	1,250	1,250	875	2,125	386	2,511	0	2,511
135	Min	0	1,250	1,250	875	2,125	386	2,511	0	2,511
150	Min	0	1,500	1,500	1,000	2,500	386	2,886	0	2,886
165	Min	0	1,750	1,750	1,125	2,875	386	3,261	0	3,261
180	Min	0	2,000	2,000	1,250	3,250	386	3,636	0	3,636
195	Min	0	2,250	2,250	1,375	3,625	386	4,011	0	4,011
210	Min	0	2,500	2,500	1,500	4,000	386	4,386	0	
225	Min	0	2,500	2,500	1,500	4,000	386	4,386	0	4,386

Wind Driven Fire at North Interface (Wind N direction @ 70 mph) with Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the North of the Project Site. Wind is from the North at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 2. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately two hours into the simulated event and again at approximately four hours.



N at 70 mph Creek Avoidance — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Closed	n/a	Closed	n/a	Closed	Closed	Open	Open	Open
75	1:15	Open	Closed	n/a	Closed	n/a	Closed	Closed	Open	Open	Open
90	1:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Closed	Open
135	2:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Closed	Open
150	2:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	n/a	Closed	n/a	Open	Open	Closed	Open	Closed
255	4:15	Open	Open	n/a	Closed	n/a	Open	Open	Closed	Open	Closed
270	4:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
315	5:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
330	5:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open

9. Nat70Line - Partial Creek Avoidance Alt.

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Results 3 5 hours to evacuate 1,702 (3,983 vehicles) from the priorit evacuation area of the Pro ect
5 25 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)

Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	**0**	**2,489**	**2,489**	**1,493**	**3,983**	**0**	**3,983**	**0**	**3,983**
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closed	Closes at 60 Min, reopens at 90 Min	No limit	No limit	Ridge Route closes at 240 Min, reopens at 270 Min	Ridge Route closes at 120 Min, reopens at 150 Min	Ridge Route closes at 120 Min, reopens at 150 Min	--	Ridge Route closes at 240 Min, reopens at 270 Min

Vehicle Evacuation Shown in 15 Minute Intervals

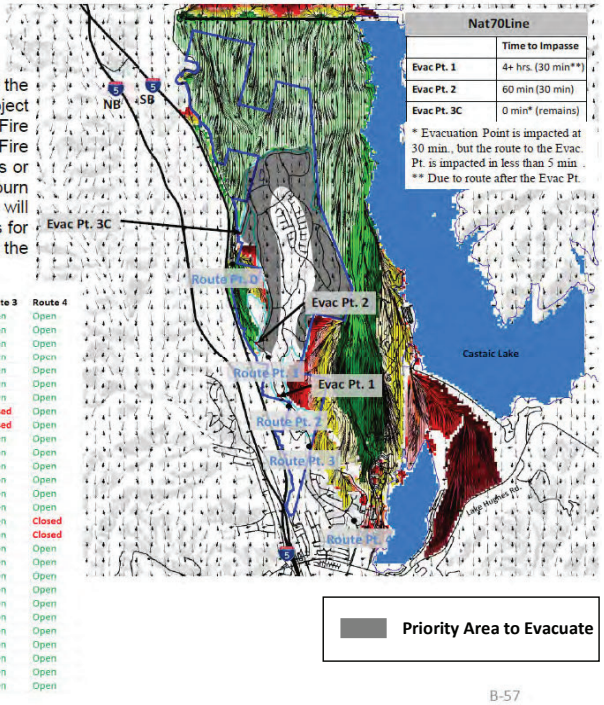
		A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time		No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15	Min	*0*	250	250	125	375	250	625	*0*	625
30	Min	*0*	500	500	250	750	500	1,250	*0*	1,250
45	Min	*0*	750	750	375	1,125	750	1,875	*0*	1,875
60	Min	*0*	*750*	*750*	500	1,250	751	2,001	*0*	2,001
75	Min	*0*	*750*	*750*	625	1,375	*751*	2,126	*0*	2,126
90	Min	*0*	1,000	1,000	750	1,750	*751*	2,501	*0*	2,501
105	Min	*0*	1,250	1,250	875	2,125	*751*	2,876	*0*	2,876
120	Min	*0*	*1,250*	*1,250*	*75*	*2,125*	*751*	*2, 76*	*0*	*2, 76*
135	Min	*0*	*1,250*	*1,250*	*75*	*2,125*	*751*	*2, 76*	*0*	*2, 76*
150	Min	*0*	1,500	1,500	1,000	2,500	*751*	3,251	*0*	3,251
165	Min	*0*	1,750	1,750	1,125	2,875	*751*	3,626	*0*	3,626
180	Min	*0*	2,000	2,000	1,250	3,250	*751*	4,001	*0*	4,001
195	Min	*0*	2,250	2,250	1,375	3,625	*751*	4,376	*0*	4,376
210	Min	*0*	2,500	**2,500**	1,500	**4,000**	*751*	4,751	*0*	4,751
225	Min	*0*	2,750	2,750	1,625	4,375	*751*	5,126	*0*	5,126
240	Min	*0*	3,000	3,000	1,750	4,750	*751*	5,501	*0*	5,501
255	Min	*0*	3,250	3,250	1,875	5,125	*751*	5,876	*0*	5,876
270	Min	*0*	3,500	3,500	2,000	5,500	*751*	6,251	*0*	6,251
285	Min	*0*	3,750	3,750	2,125	5,875	*751*	6,626	*0*	6,626
300	Min	*0*	4,000	4,000	2,250	6,250	*751*	7,001	*0*	7,001
315	Min	*0*	4,250	4,250	2,375	6,625	*751*	**7,376**	*0*	**7,376**
330	Min	*0*	*4,250*	*4,250*	*2,375*	*6,625*	*751*	*7,376*	*0*	*7,376*

Wind Driven Fire at North Interface (Wind N direction @ 70 mph) with Partial Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the North of the Project Site. Wind is from the North at 70 mph. Fire impact the Project Site in less than 5 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 2. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately two hours into the simulated event and again at approximately four hours.

N at 70 mphParital Creek Avoidance — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
60	1:00	Open	Closed	n/a	n/a	Closed	Closed	Open	Open	Open	Open
75	1:15	Open	Closed	n/a	n/a	Closed	Closed	Open	Open	Open	Open
90	1:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
105	1:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
120	2:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Closed	Open
135	2:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Closed	Open
150	2:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
165	2:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
180	3:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
195	3:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
210	3:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
225	3:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
240	4:00	Open	Open	n/a	n/a	Closed	Open	Open	Closed	Open	Closed
255	4:15	Open	Open	n/a	n/a	Closed	Open	Open	Closed	Open	Closed
270	4:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
285	4:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
300	5:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
315	5:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
330	5:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
345	5:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
360	6:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
375	6:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
390	6:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
405	6:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
420	7:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open



10. Templin Trigger- Approved Plan

Results: 4 hours to evacuate entire Project 3,150 DU (7,371 vehicles)

Vehicles from Priority Evacation Area of the Project

Remaining Vehicles from Project Area

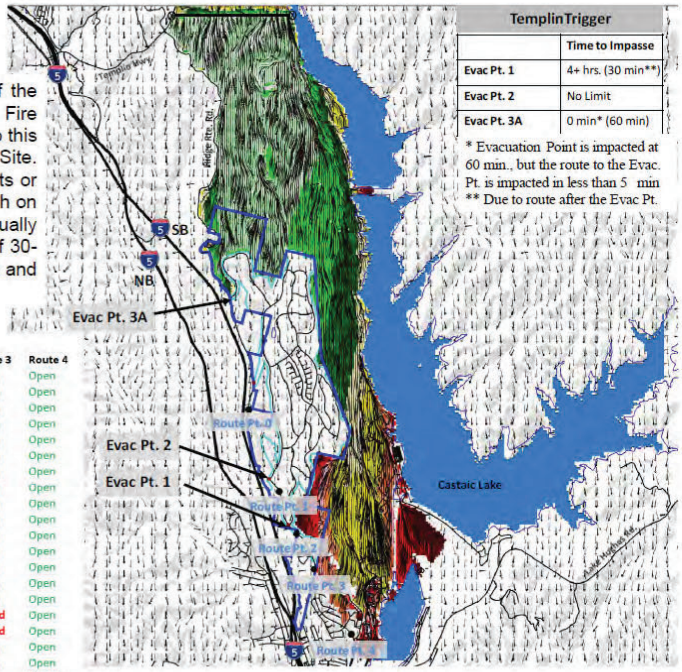
Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	1,258	3,575	4,832	1,787	6,620	751	7,371	0	7,371
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closed for first 60 Min.	No limit	No limit	No limit	Ridge Route closes at 300 Min, reopens at 330 Min	Ridge Route closes at 225 Min, reopens at 255 Min	Ridge Route closes at 240 Min, reopens at 270 Min	--	Ridge Route closes at 300 Min, reopens at 330 Min

Vehicle Evacuation Shown in 15 Minute Intervals

		A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time		No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15	Min	*0*	250	250	125	375	250	625	*0*	625
30	Min	*0*	500	500	250	750	500	1,250	*0*	1,250
45	Min	*0*	750	750	375	1,125	750	1,875	*0*	1,875
60	Min	*0*	1,000	1,000	500	1,500	751	2,251	*0*	2,251
75	Min	125	1,250	1,375	625	2,000	*751*	2,751	*0*	2,751
90	Min	250	1,500	*1,750*	750	2,500	*751*	3,251	*0*	3,251
105	Min	375	1,750	*2,125*	875	3,000	*751*	3,751	*0*	3,751
120	Min	500	2,000	*2,500*	1,000	3,500	*751*	4,251	*0*	4,251
135	Min	625	2,250	*2,875*	1,125	4,000	*751*	4,751	*0*	4,751
150	Min	750	2,500	*3,250*	1,250	4,500	*751*	5,251	*0*	5,251
165	Min	875	2,750	3,625	1,375	5,000	*751*	5,751	*0*	5,751
180	Min	1,000	3,000	4,000	1,500	5,500	*751*	6,251	*0*	6,251
195	Min	1,125	3,250	4,375	1,625	6,000	*751*	6,751	*0*	6,751
210	Min	1,250	3,500	4,750	1,750	6,500	*751*	7,251	*0*	7,251
225	Min	1,375	3,750	5,125	1,875	7,000	*751*	7,751	*0*	7,751
240	Min	*1,375*	*3,750*	*5,125*	*1,875*	*7,000*	*751*	*7,751*	*0*	*7,751*

Templin Highway and Ridge Route Road Trigger Point Previously Approved Development

Narrative: Fire is modeled from an existing line of fire to the North of the Project Site at Templin Highway. Wind is from the North at 70 mph. Fire impact the Project Site in less than 10 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 3A. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately two hours into the simulated event and again at approximately four hours and again at five hours.



Templin at 70 mph Approved — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Open	Closed	n/a	n/a	Open	Open	Open	Open	Open
75	1:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
90	1:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
135	2:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
150	2:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Closed	Open
255	4:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Closed	Open
270	4:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	Open	n/a	n/a	Open	Open	Closed	Open	Closed
315	5:15	Open	Open	Open	n/a	n/a	Open	Open	Closed	Open	Closed
330	5:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	Open	n/a	n/a	Open	Open	Open	Open	Open

Entire Project Area under Priority Evacuation

10. Templin Trigger - Creek Avoidance Alt.

Results: 3.25 hours to evacuate entire Project 1,815 DU (4,247 vehicles)

Vehicles from Priority Evacation Area of the Project

Remaining Vehicles from Project Area

Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	0	2,317	2,317	1,544	3,861	386	4,247	0	4,247
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closed	Closes at 60 Min, reopens at 105 Min	Closes at 60 Min, reopens at 90 Min	No limit	Closes at 300 Min, reopens at 330 Min	Closes at 240 Min, reopens at 270 Min	Closes at 240 Min, reopens at 270 Min	--	Closes at 300 Min, reopens at 330 Min

Vehicle Evacuation Shown in 15 Minute Intervals

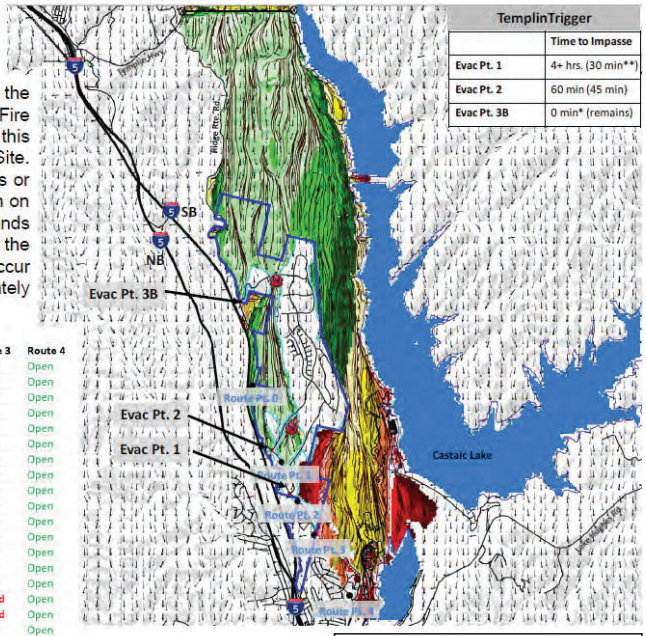
		A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time		No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15	Min	0	250	250	125	375	250	625	0	625
30	Min	0	500	500	250	750	386	1,136	0	1,136
45	Min	0	750	750	375	1,125	386	1,511	0	1,511
60	Min	0	750	750	500	1,250	386	1,636	0	1,636
75	Min	0	750	750	625	1,375	386	1,761	0	1,761
90	Min	0	750	750	750	1,500	386	1,886	0	1,886
105	Min	0	1,000	1,000	875	1,875	386	2,261	0	2,261
120	Min	0	1,250	1,250	1,000	2,250	386	2,636	0	2,636
135	Min	0	1,500	1,500	1,125	2,625	386	3,011	0	3,011
150	Min	0	1,750	1,750	1,250	3,000	386	3,386	0	3,386
165	Min	0	2,000	2,000	1,375	3,375	386	3,761	0	3,761
180	Min	0	2,250	2,250	1,500	3,750	386	4,136	0	4,136
195	Min	0	2,500	2,500	1,625	4,125	386	4,511	0	4,511
210	Min	0	2,500	2,500	1,625	4,125	386	4,511	0	4,511

Templin Highway and Ridge Route Road Trigger Point
Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the North of the Project Site at Templin Highway. Wind is from the North at 70 mph. Fire impact the Project Site in less than 10 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 1 due to the fuel islands between the access roads. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately two hours into the simulated event and again at approximately four hours and again at five hours.

Templin at 70 mph Creek Avoidance — Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
60	1:00	Open	Closed	n/a	Closed	n/a	Closed	Closed	Open	Open	Open
75	1:15	Open	Closed	n/a	Closed	n/a	Closed	Closed	Open	Open	Open
90	1:30	Open	Closed	n/a	Closed	n/a	Open	Open	Open	Open	Open
105	1:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
120	2:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
135	2:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
150	2:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
165	2:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
180	3:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
195	3:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
210	3:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
225	3:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
240	4:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Closed	Open
255	4:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Closed	Open
270	4:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
285	4:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
300	5:00	Open	Open	n/a	Closed	n/a	Open	Open	Closed	Open	Closed
315	5:15	Open	Open	n/a	Closed	n/a	Open	Open	Closed	Open	Closed
330	5:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
345	5:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
360	6:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
375	6:15	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
390	6:30	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
405	6:45	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open
420	7:00	Open	Open	n/a	Closed	n/a	Open	Open	Open	Open	Open



Entire Project Area under Priority Evacuation

10. Templin Trigger - Partial Creek Avoidance Alt.

Results 5 5 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)

Vehicles from Priority Evacation Area of the Project
Remaining Vehicles from Project Area

Description	Evac Pt. 3	Evac Pt. 2	Ridge Route Pt. 1	Evac Pt. 1	Ridge Route Pt. 2	Project Affordable Housing	Ridge Route Pt. 3	Northlake Hills	Ridge Route Pt. 4
Number of vehicles to evacuate	**0**	**4,171**	**4,171**	**2,449**	**6,620**	**751**	**7,371**	**0**	**7,371**
Number of lanes at evacuation point	1	2	--	1	--	2	--	1	--
Vehicles per hour (vph) - no congestion	1,600	3,200	--	1,600	--	1,600	--	1,600	--
Vehicles per hour (vph) - with congestion	500	1,000	--	500	--	1,000	--	500	--
Vehicles per 15 min	125	250	--	125	--	250	--	125	--
Time limit	Closed	Closes at 60 Min, reopens at 105 Min	No limit	No limit	Closes at 300 Min, reopens at 330 Min	Closes at 240 Min, reopens at 270 Min	Closes at 240 Min, reopens at 270 Min	--	Closes at 300 Min, reopens at 330 Min

Vehicle Evacuation Shown in 15 Minute Intervals

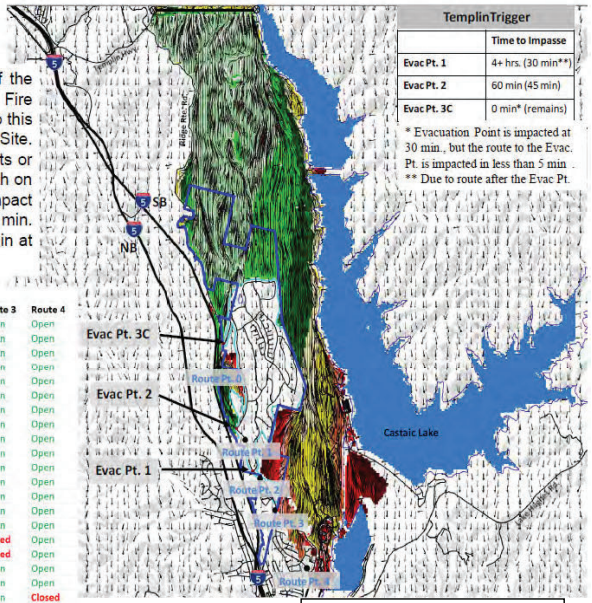
	A	B	A+B=C	D	C+D=E	F	E+F=G	H	G+H=I
Time	No. of Vehicles Passing Through Evac Pt. 3	No. of Vehicles Passing Through Evac Pt. 2	Total No. of Vehicles from Evac Pt. 3 and Evac Pt. 2 Passing Through Ridge Rt Pt. 1	No. of Vehicles Passing Through Evac Pt. 1	Total No. of Vehicles from Evac Pts. 3, 2 & 1 Passing Through Ridge Rt. Pt. 2	No. of Vehicles from Project AH Passing through Ridge Rt south of B St	Total No. of Vehicles from Evac Pts. 3, 2, 1, & AH Passing Through Ridge Rt Pt. 3	No. of Vehicles from NH Passing Through Ridge Rt	Total No. of Vehicles from Evac Pts. 3, 2, 1, AH, NH Passing Through Ridge Rt Pt. 4
15 Min	*0*	250	250	125	375	250	625	*0*	625
30 Min	*0*	500	500	250	750	500	1,250	*0*	1,250
45 Min	*0*	750	750	375	1,125	750	1,875	*0*	1,875
60 Min	*0*	*750*	*750*	500	1,250	751	2,001	*0*	2,001
75 Min	*0*	*750*	*750*	625	1,375	*751*	2,126	*0*	2,126
90 Min	*0*	*750*	*750*	750	1,500	*751*	2,251	*0*	2,251
105 Min	*0*	1,000	1,000	875	1,875	*751*	2,626	*0*	2,626
120 Min	*0*	1,250	1,250	1,000	2,250	*751*	3,001	*0*	3,001
135 Min	*0*	1,500	1,500	1,125	2,625	*751*	3,376	*0*	3,376
150 Min	*0*	1,750	1,750	1,250	3,000	*751*	3,751	*0*	3,751
165 Min	*0*	2,000	2,000	1,375	3,375	*751*	4,126	*0*	4,126
180 Min	*0*	2,250	2,250	1,500	3,750	*751*	4,501	*0*	4,501
195 Min	*0*	2,500	2,500	1,625	4,125	*751*	4,876	*0*	4,876
210 Min	*0*	2,750	2,750	1,750	4,500	*751*	5,251	*0*	5,251
225 Min	*0*	3,000	3,000	1,875	4,875	*751*	5,626	*0*	5,626
240 Min	*0*	*3,000*	*3,000*	*1, 75*	*4, 75*	*751*	*5,626*	*0*	*5,626*
255 Min	*0*	*3,000*	*3,000*	*1, 75*	*4, 75*	*751*	*5,626*	*0*	*5,626*
270 Min	*0*	3,250	3,250	2,000	5,250	*751*	6,001	*0*	6,001
285 Min	*0*	3,500	3,500	2,125	5,625	*751*	6,376	*0*	6,376
300 Min	*0*	3,750	3,750	2,250	6,000	*751*	6,751	*0*	6,751
315 Min	*0*	4,000	4,000	2,375	6,375	*751*	7,126	*0*	7,126
330 Min	*0*	**4,250**	**4,250**	**2,500**	**6,750**	*751*	**7,501**	*0*	**7,501**
345 Min	*0*	*4,250*	*4,250*	*2,500*	*6,750*	*751*	*7,501*	*0*	*7,501*

Templin Highway and Ridge Route Road Trigger Point
Partial Creek Avoidance Development

Narrative: Fire is modeled from an existing line of fire to the North of the Project Site at Templin Highway. Wind is from the North at 70 mph. Fire impact the Project Site in less than 10 minutes if the fire has progressed to this point. Fire continues to burn south along the eastern edge of the Project Site. Fire may spot across the freeway but will not impact the evacuation points or route points if it did so if was not modeled. Fire will continue to burn south on the west side of the Project Site down to Evac Pt. 2. Fire will eventually impact Ridge Route to the south and close all evacuations for a period of 30-60 min. This will occur approximately two hours into the simulated event and again at approximately four hours and again at five hours.

Templin at 70 mphParital Creek Avoidance Evacuation to the South

		Evac Pt 1	Evac Pt 2	Evac Pt. 3A	Evac Pt. 3B	Evac Pt. 3C	Route 0	Route 1	Route 2	Route 3	Route 4
15	0:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
30	0:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
45	0:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
60	1:00	Open	Closed	n/a	n/a	Closed	Closed	Open	Open	Open	Open
75	1:15	Open	Closed	n/a	n/a	Closed	Closed	Open	Open	Open	Open
90	1:30	Open	Closed	n/a	n/a	Closed	Open	Open	Open	Open	Open
105	1:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
120	2:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
135	2:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
150	2:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
165	2:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
180	3:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
195	3:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
210	3:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
225	3:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
240	4:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Closed	Open
255	4:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Closed	Open
270	4:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
285	4:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
300	5:00	Open	Open	n/a	n/a	Closed	Open	Open	Closed	Open	Closed
315	5:15	Open	Open	n/a	n/a	Closed	Open	Open	Closed	Open	Closed
330	5:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
345	5:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
360	6:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
375	6:15	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
390	6:30	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
405	6:45	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open
420	7:00	Open	Open	n/a	n/a	Closed	Open	Open	Open	Open	Open



Entire Project Area under Priority Evacuation

Northlake Specific Plan

Evacuation Route Assumptions and Estimated Evacuation Time

Scenario	Previously Approved Plan		Creek Avoidance Alternative		Partial Creek Avoidance Alternative	
	Assumptions	Total Time to Evacuate Based on Evacuation Worksheets	Assumptions	Total Time to Evacuate Based on Evacuation Worksheets	Assumptions	Total Time to Evacuate Based on Evacuation Worksheets
1 Route ire im	vac Pt 1 No impact vac Pt 2 Closes at 60 minutes, reopens at 90 minutes vac Pt 3 No impact Ithough there is no impact at vac Pt 3 , vehicles passing through vac Pt 3 drive southbound on Ridge Route where a segment of the roadwa (Ridge Route Pt 0) closes at 60 minutes Therefore, this anal sis assumes vehicles do not use vac Pt 3 at 60 minutes vac Pt 2 is impassable at 60 minutes and reopen at 90 minutes (from the start of the fire) uring vac Pt 2 closure, all traffic uses vac Pt 1 This anal sis assumes no evacuation route is available to the north	2 hours to evacuate 1,108 (2,593 vehicles) from the priorit evacuation area of the Pro ect 4 5 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)	vac Pt 1 Closes at 90 minutes, reopens at 150 minutes vac Pt 2 Closes at 60 minutes, reopens at 90 minutes vac Pt 3 Closes at 60 minutes vac Pt 3 and Ridge Route Pt 0 are both impassable at 60 minutes and do not reopen vac Pt 2 is impassable at 60 minutes and reopens at 90 minutes (from the start of the fire) vac Pt 1 closes at 60 minutes and reopens at 150 minutes (from the start of the fire) This anal sis assumes no evacuation route is available to the north	1 hour to evacuate 651 (1,524 vehicles) from the priorit evacuation area of the Pro ect 3 hours to evacuate 1,815 entire Pro ect (4,247 vehicles)	vac Pt 1 No impact vac Pt 2 Closes at 60 minutes, reopens at 90 minutes vac Pt 3C Closes at 60 minutes vac Pt 3C and Ridge Route Pt 0 are both impassable at 60 minutes and do not reopen vac Pt 2 is impassable at 60 minutes and reopens at 90 minutes (from the start of the fire) uring vac Pt 2 closure, all traffic use vac Pt 1 This anal sis assumes no evacuation route is available to the north	1 75 hours to evacuate 927 (2,169 vehicles) from the priorit evacuation area of the Pro ect 4 5 hours to evacuate 3,150 entire Pro ect (7,371 vehicles)
2 at40 pot	vac Pt 1 No impact vac Pt 2 Closes at 60 minutes, reopens at 90 minutes vac Pt 3 Closes at 60 minutes vac Pt 3 and Ridge Route Pt 0 are both impassable at 60 minutes and do not reopen vac Pt 2 is impassable at 60 minutes and reopens at 90 minutes (from the start of the fire) uring vac Pt 2 closure, all traffic would use vac Pt 1 This anal sis assumes no evacuation route is available to the north	2 25 hours to evacuate 1,286 (3,009 vehicles) from the priorit evacuation area of the Pro ect 4 5 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)	vac Pt 1 No impact vac Pt 2 No impact vac Pt 3 Closed at 60 minutes vac Pt 3 and Ridge Route Pt 0 are both impassable at 60 minutes do not reopen This anal sis assumes no evacuation route is available to the north	45 minutes to evacuate 483 (1,129 vehicles) from the priorit evacuation area of the Pro ect 2 5 hours to evacuate entire Pro ect 1,815 (4,247 vehicles)	vac Pt 1 No impact vac Pt 2 No impact vac Pt 3C Closes at 60 minutes vac Pt 3C and Ridge Route Pt 0 are both impassable at 60 minutes do not reopen This anal sis assumes no evacuation route is available to the north	2 hours to evacuate 1,370 (3,206 vehicles) from the priorit evacuation area of the Pro ect 4 25 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)
3 at40 ine	vac Pt 1 No impact vac Pt 2 No impact vac Pt 3 Closes at 60 minutes vac Pt 3 and Ridge Route Pt 0 are both impassable at 60 minutes and do not reopen This anal sis assumes no evacuation route is available to the north	2 hours to evacuate 1,383 (3,236 vehicles) from the priorit evacuation area of the Pro ect 4 25 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)	vac Pt 1 No impact vac Pt 2 No impact vac Pt 3 Closes at 60 minutes vac Pt 3 and Ridge Route Pt 0 are both impassable at 60 minutes and do not reopen This anal sis assumes no evacuation route is available to the north	1 5 hour to evacuate 1134 (2,653 vehicles) from the priorit evacuation area of the Pro ect 2 5 hours to evacuate entire Pro ect 1,815 (4,247 vehicles)	vac Pt 1 No impact vac Pt 2 No impact vac Pt 3C Closes at 60 minutes vac Pt 3C and Ridge Route Pt 0 are north impassable at 60 minutes and do not reopen This anal sis assumes no evacuation route is available to the north	2 25 hours to evacuate 1,485 (3,475 vehicles) from the priorit evacuation area of the Pro ect 4 25 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)
4 at40 ine	vac Pt 1 No impact vac Pt 2 No impact vac Pt 3 No impact ll evacuation points would remain open	3 5 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)	vac Pt 1 No impact vac Pt 2 No impact vac Pt 3 No impact ll evacuation points would remain open	2 hours to evacuate entire Pro ect 1,815 (4,247 vehicles)	vac Pt 1 No impact vac Pt 2 No impact vac Pt 3C No impact ll evacuation points would remain open	3 5 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)

Northlake Specific Plan

Evacuation Route Assumptions and Estimated Evacuation Time

Scenario	Previously Approved Plan		Creek Avoidance Alternative		Partial Creek Avoidance Alternative	
	Assumptions	Total Time to Evacuate Based on Evacuation Worksheets	Assumptions	Total Time to Evacuate Based on Evacuation Worksheets	Assumptions	Total Time to Evacuate Based on Evacuation Worksheets
5 reewa potsat40	vac Pt 1 Closes at 30 minutes, reopens at 120 minutes vac Pt 2 Closes at 30 minutes, reopens at 120 minutes vac Pt 3 Closes at 30 minutes, reopens at 120 minutes egments of Ridge Route, Route Pt 3 and Route Pt 2 (southerl end of the Pro ect) are impassable at 30 minutes, therefore evacuation would close during this period ll evacuation points reopen at 120 minutes This anal sis assumes no evacuation route is available to the north	2 5 hours to evacuate 822 (1,924 vehicles) from the priorit evacuation area of the Pro ect 5 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)	vac Pt 1 Closes at 30 minutes, reopens at 120 minutes vac Pt 2 Closes at 30 minutes, reopens at 150 minutes vac Pt 3 Closes at 30 minutes ll evacuation points and Ridge Route points closes at 30 minutes vac Pt 1 reopens at 120 minutes, vac Pt 2 reopens at 150 minutes, and vac Pt 3 remains closed Ridge Route points reopen at 120 minutes This anal sis assumes no evacuation route is available to the north	3 25 hours to evacuate 910 (2,129 vehicles) from the priorit evacuation area of the Pro ect 4 5 hours to evacuate entire Pro ect 1,815 (4,247 vehicles)	vac Pt 1 Closes at 30 minutes, reopens at 120 minutes vac Pt 2 Closes at 30 minutes, reopens at 120 minutes vac Pt 3C Closes at 30 minutes, reopens at 120 minutes egments of Ridge Route, Route Pt 3 and Route Pt 2 (southerl end of the Pro ect) are impassable at 30 minutes, therefore evacuation would close during this period ll evacuation points reopen at 120 minutes This anal sis assumes no evacuation route is available to the north	2 75 hours to evacuate 1,132 (2,649 vehicles) from the priorit evacuation area of the Pro ect 5 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)
6 a e potat40	vac Pt 1 Closes at 60 minutes, reopens at 90 minutes vac Pt 2 No impact vac Pt 3 No impact vac Pt 1 closes at 60 minutes and reopens at 90 minutes (from the start of the fire) Ridge Route remains open during this closure Ridge Route Pts 1, 2 and 3 are all impassable at 240 minutes and reopens at 300 minutes (from the start of the fire) This anal sis assumes no evacuation route is available to the north	1 25 hours to evacuate 898 (2,101 vehicles) from the priorit evacuation area of the Pro ect 3 5 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)	vac Pt 1 Closes at 60 minutes, reopens at 90 minutes vac Pt 2 Closes at 90 minutes, reopens at 120 minutes vac Pt 3 Closes at 120 minutes vac Pt 1 closes at 60 minutes and reopens at 90 minutes (from the start of the fire) vac Point 2 closes at 90 minutes and reopens at 120 minutes vac Pt 3 closes at 120 minutes and does not reopen Ridge Route Pts 1, 2 and 3 are all impassable at 240 minutes and reopens at 300 minutes (from the start of the fire) This anal sis assumes no evacuation route is available to the north	2 5 hours to evacuate 1,650 (3,861 vehicles) from the priorit evacuation area of the Pro ect 2 5 hours to evacuate entire Pro ect 1,815 (4,247 vehicles)	vac Pt 1 Closes at 60 minutes, reopens at 90 minutes vac Pt 2 No impact vac Pt 3C No impact vac Pt 1 closes at 60 minutes and reopens at 90 minutes (from the start of the fire) Ridge Route remains open during this closure Ridge Route Pts 1, 2 and 3 are all impassable at 240 minutes and reopens at 300 minutes (from the start of the fire) This anal sis assumes no evacuation route is available to the north	1 5 hour to evacuate 1,056 (2,471 vehicles) from the priorit evacuation area of the Pro ect 3 5 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)
7 N at70 ine	vac Pt 1 No impact vac Pt 2 No impact vac Pt 3 Closed until 300 minutes after start of fire vac Pt 3 remains closed until 300 minutes from the start of fire Vehicles to use vac Pt 2 and vac Pt 1 This anal sis assumes no evacuation route is available to the north	1 hour to evacuate 570 (1,334 vehicles) from the priorit evacuation area of the Pro ect 4 5 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)	vac Pt 1 No impact vac Pt 2 No impact vac Pt 3 Closed until 105 minutes after start of fire vac Pt 3 would remain closed until 105 minutes from the start of the fire Vehicles to use vac Pt 2 and vac Pt 1 This anal sis assumes no evacuation route is available to the north	1 5 hours to evacuate 826 (1,932 vehicles) from the priorit evacuation area of the Pro ect 2 5 hours to evacuate 1,815 entire Pro ect (4,247 vehicles)	vac Pt 1 No impact vac Pt 2 No impact vac Pt 3C Remains closed vac Pt 3C would remain closed Ridge Route Pt 0 is impassable at 60 minutes and remains closed Vehicles to use vac Pt 2 and vac Pt 1 This anal sis assumes no evacuation route is available to the north	4 5 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)
8 NN at70 ine	vac Pt 1 No impact vac Pt 2 No impact vac Pt 3 Closed until 255 minutes from start of fire vac Pt 3 would remain closed until 255 minutes from the start of the fire Vehicles would use vac Pt 2 and vac Pt 1 Ridge Route Pt 2 and Ridge Route Pt 3 are north impassable at 240 minutes and reopens at 270 minutes (from the start of the fire) uring this period all evacuations would close This anal sis assumes no evacuation route is available to the north	1 5 hour to evacuate 842 (1,970 vehicles) from the priorit evacuation area of the Pro ect 4 75 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)	vac Pt 1 No impact vac Pt 2 No impact vac Pt 3 Closed until 255 minutes at fire started vac Pt 3 would remain closed until 255 minutes from the start of the fire Vehicles to use vac Pt 2 and vac Pt 1 Ridge Route Pt 2 and Ridge Route Pt 3 are both impassable at 240 minutes and reopens at 270 minutes (from the start of the fire) uring this period all evacuations would close This anal sis assumes no evacuation route is available to the north	1 25 hours to evacuate 767 (1,795 vehicles) from the priorit evacuation area of the Pro ect 2 75 hours to evacuate entire Pro ect 1,815 (4,247 vehicles)	vac Pt 1 No impact vac Pt 2 No impact vac Pt 3C Closed vac Pt 3C would remain closed Vehicles to use vac Pt 2 and vac Pt 1 Ridge Route Pt 2 and Ridge Route Pt 3 are both impassable at 240 minutes and reopens at 270 minutes (from the start of the fire) uring this period all evacuations would close This anal sis assumes no evacuation route is available to the north	1 75 hours to evacuate 963 (2,253 vehicles) from the priorit evacuation area of the Pro ect 4 5 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)

Northlake Specific Plan

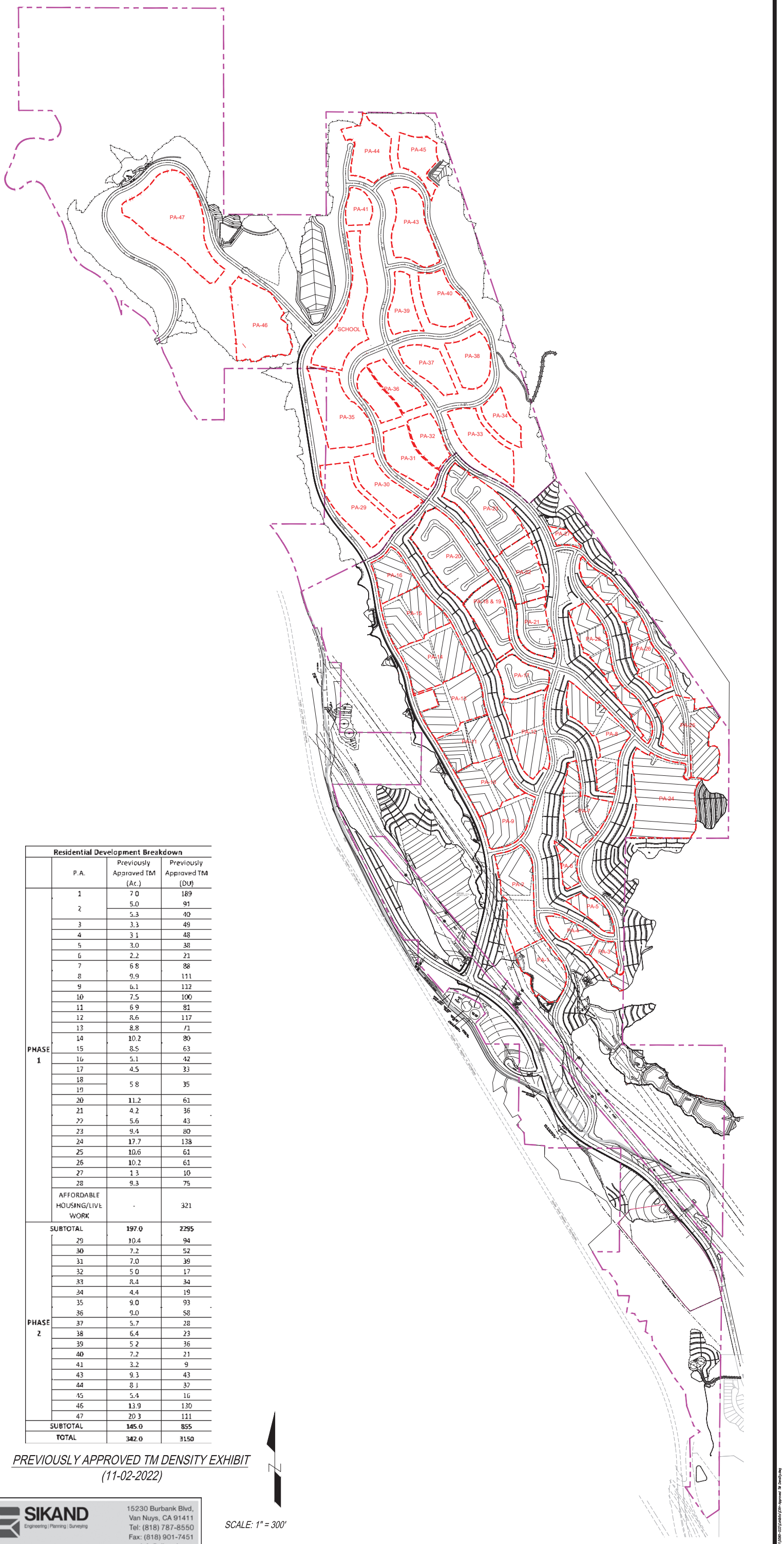
Evacuation Route Assumptions and Estimated Evacuation Time

Scenario	Previously Approved Plan		Creek Avoidance Alternative		Partial Creek Avoidance Alternative	
	Assumptions	Total Time to Evacuate Based on Evacuation Worksheets	Assumptions	Total Time to Evacuate Based on Evacuation Worksheets	Assumptions	Total Time to Evacuate Based on Evacuation Worksheets
9 Nat70 ine	vac Pt 1 No impact vac Pt 2 Closes at 90 minutes and reopens at 120 minutes vac Pt 3 Closed vac Pt 3 would remain closed vac Pt 2 is impassable at 90 minutes and reopens at 120 minutes (from the start of the fire) egments of Ridge Route are impassable at 120 minutes and reopens at 150 (Ridge Route Pt 3), Ridge Route Pt 2 and Ridge Route Pt 4 are both impassable at 240 minutes and reopen at 270 minutes (from the start of the fire) hen Ridge Route Pt 2, 3 and 4 are impassable, evacuations close during that period of time This anal sis assumes no evacuation route is available to the north	3 5 hours to evacuate 1,687 (3,948 vehicles) from the priorit evacuation area of the Pro ect 5 75 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)	vac Pt 1 No impact vac Pt 2 Closes at 60 minutes, reopens at 90 minutes vac Pt 3 Closed vac Pt 3 would remain closed vac Pt 2 is impassable at 60 minutes and reopens at 90 minutes (from the start of the fire) egments of Ridge Route are impassable at 120 minutes and reopens at 150 (Ridge Route Pt 3), Ridge Route Pt 2 and Ridge Route Pt 4 are both impassable at 240 minutes and reopen at 270 minutes (from the start of the fire) hen Ridge Route Pt 2, 3 and 4 are impassable, evacuations close during that period of time This anal sis assumes no evacuation route is available to the north	2 5 hours to evacuate 940 (2,198 vehicles) from the priorit evacuation area of the Pro ect 3 5 hours to evacuate entire Pro ect 1,815 (4,247 vehicles)	vac Pt 1 No impact vac Pt 2 Closed at 90 minutes, reopens at 120 minutes vac Pt 3 Closed vac Pt 3C would remain closed vac Pt 2 is impassable at 90 minutes and reopens at 120 minutes (from the start of the fire) egments of Ridge Route are impassable at 120 minutes and reopens at 150 (Ridge Route Pt 3), Ridge Route Pt 2 and Ridge Route Pt 4 are both impassable at 240 minutes and reopen at 270 minutes (from the start of the fire) hen Ridge Route Pt 2, 3 and 4 are impassable, evacuations close during that period This anal sis assumes no evacuation route is available to the north of time	3 5 hours to evacuate 1,702 (3,983 vehicles) from the priorit evacuation area of the Pro ect 5 25 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)
10 Templin Trigger	vac Pt 1 No impact vac Pt 2 No impact vac Pt 3 Closed for first 60 minutes vac Pt 3 would be closed for the first 60 minutes egments of Ridge Route are impassable at 240 minutes and reopens at 270 (Ridge Route Pt 3), Ridge Route Pt 2 and Ridge Route Pt 4 are both impassable at 300 minutes and reopen at 330 minutes (from the start of the fire) hen Ridge Route Pt 2, 3 and 4 are impassable, evacuations close during that period of time This anal sis assumes no evacuation route is available to the north	3 75 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)	vac Pt 1 No impact vac Pt 2 Closes at 60 minutes, reopens at 105 minutes vac Pt 3 Closed vac Pt 3 would remain closed vac Pt 2 is impassable at 60 minutes and reopens at 105 minutes (from the start of the fire) egments of Ridge Route are impassable at 240 minutes and reopens at 270 (Ridge Route Pt 3), Ridge Route Pt 2 and Ridge Route Pt 4 are both impassable at 300 minutes and reopen at 330 minutes (from the start of the fire) hen Ridge Route Pt 2, 3 and 4 are impassable, evacuations close during that period of time This anal sis assumes no evacuation route is available to the north	3 25 hours to evacuate entire Pro ect 1,815 (4,247 vehicles)	vac Pt 1 No impact vac Pt 2 Closes at 60 minutes, reopens at 105 minutes vac Pt 3C Closed vac Pt 3C would remain closed vac Pt 2 is impassable at 60 minutes and reopens at 105 minutes (from the start of the fire) egments of Ridge Route are impassable at 240 minutes and reopens at 270 (Ridge Route Pt 3), Ridge Route Pt 2 and Ridge Route Pt 4 are both impassable at 300 minutes and reopen at 330 minutes (from the start of the fire) hen Ridge Route Pt 2, 3 and 4 are impassable, evacuations close during that period of time This anal sis assumes no evacuation route is available to the north	5 5 hours to evacuate entire Pro ect 3,150 (7,371 vehicles)

ource for the amount of time that the evacuation point would remain viable during each scenario ildland ire Ris Report 2023

Notes The amount of dwelling units under evacuation per scenario is based on ppendi - ire ehavior nal sis utcomes for vacuation Modeling from the ildland ire Ris Report Northla e Pro ect, March 2023

DU = dwelling units; Evac. Pt = Evacuation Point



Residential Development Breakdown			
	P.A.	Previously Approved TM (Ac.)	Previously Approved TM (DU)
PHASE 1	1	7.0	189
	2	5.0	91
		5.3	40
	3	3.3	49
	4	3.1	48
	5	3.0	38
	6	2.2	21
	7	6.8	88
	8	9.9	111
	9	6.1	112
	10	7.5	100
	11	6.9	81
	12	8.6	117
	13	8.8	71
	14	10.2	80
	15	8.5	63
	16	5.1	42
	17	4.5	33
	18	5.8	35
	19		
	20	11.2	61
	21	4.2	36
	22	5.6	43
	23	9.4	80
	24	17.7	138
	25	10.6	61
	26	10.2	61
	27	1.3	10
	28	9.3	75
	AFFORDABLE HOUSING/LIVE WORK	-	321
SUBTOTAL		197.0	2295
PHASE 2	29	10.4	94
	30	7.2	52
	31	7.0	39
	32	5.0	17
	33	8.4	34
	34	4.4	19
	35	9.0	93
	36	9.0	58
	37	5.7	28
	38	6.4	23
	39	5.2	36
	40	7.2	21
	41	3.2	9
	43	9.3	43
	44	8.1	32
	45	5.4	16
	46	13.9	130
	47	20.3	111
SUBTOTAL		145.0	855
TOTAL		342.0	3150

PREVIOUSLY APPROVED TM DENSITY EXHIBIT
(11-02-2022)

N

SCALE: 1" = 300'

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

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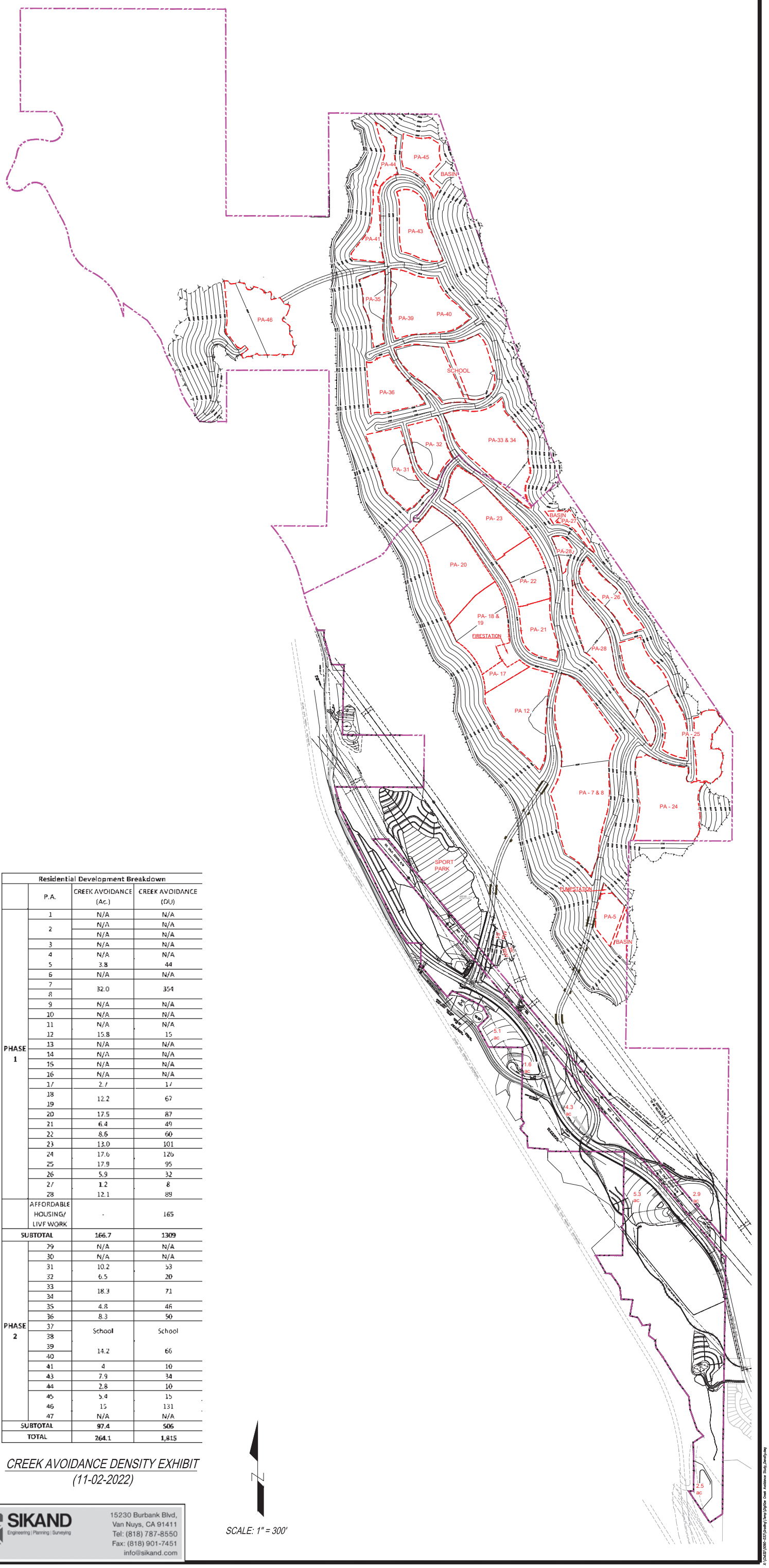

Residential Development Breakdown			
	P.A.	CREEK AVOIDANCE (Ac.)	CREEK AVOIDANCE (DU)
PHASE 1	1	N/A	N/A
	2	N/A	N/A
		N/A	N/A
	3	N/A	N/A
	4	N/A	N/A
	5	3.8	44
	6	N/A	N/A
	7	32.0	354
	8		
	9	N/A	N/A
	10	N/A	N/A
	11	N/A	N/A
	12	15.8	15
	13	N/A	N/A
	14	N/A	N/A
	15	N/A	N/A
	16	N/A	N/A
	17	2.7	17
	18	12.2	67
	19		
	20	17.5	87
	21	6.4	49
	22	8.6	60
	23	13.0	101
	24	17.6	126
	25	17.9	95
	26	5.9	32
	27	1.2	8
	28	12.1	89
	AFFORDABLE HOUSING/ LIVF WORK	-	165
SUBTOTAL		166.7	1309
PHASE 2	29	N/A	N/A
	30	N/A	N/A
	31	10.2	53
	32	6.5	20
	33	18.3	71
	34		
	35	4.8	46
	36	8.3	50
	37	School	School
	38		
	39	14.2	66
	40		
	41	4	10
	43	7.9	34
	44	2.8	10
	45	5.4	15
	46	15	131
	47	N/A	N/A
SUBTOTAL		97.4	506
TOTAL		264.1	1,815

CREEK AVOIDANCE DENSITY EXHIBIT
(11-02-2022)

N

SCALE: 1" = 300'

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Van Nuys, CA 91411
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Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

NORTH
SCALE: 1" = 300'

LEGEND:
- AFFORDABLE HOUSING
- DEBRIS BASIN
- WATER QUALITY / DEBRIS BASIN
- FIRE STATION
- HIGHWAY COMMERCIAL
- PLANNING AREA
- PUMP STATION
- SCHOOL
- SPORT PARK
- STREET
- CREEK FLOWLINE

PARTIAL CREEK AVOIDANCE ALTERNATIVE (PCAA)

EXHIBIT "A"

APPENDIX D-3

NORTHLAKE DRAINAGE MEMORANDUM

SIKAND
Engineering | Planning | Surveying

15230 Burbank Blvd., #100 Van Nuys, CA 91411
Phone 818.787.8550 Fax 818.901.7451
www.sikand.com Email: info@sikand.com

MEMORANDUM



TO: VIA email

FROM: Doug Farmer, PE

DATE: May 17, 2023

SUBJECT: Northlake Drainage

W.O.: 5099-033-35

In response to the comment below for the Northlake project regarding drainage related questions:

2.3.4.4 Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Per the approved hydrology study and latest county policies, the project has been designed with upstream debris basins. These basins are designed to contain debris flows from upstream natural areas which have burned in wildfires. The flows are conveyed into basins where the debris will settle and clear water will be conveyed downstream through a conduit. Per the approved hydrology, proposed flows exiting the project will mimic the existing conditions and as such would not result in downslope or downstream flooding.

APPENDIX D-4

NORTHLAKE HYDROLOGY STUDY

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION
HYDROLOGY UNIT

TO: Sikand Engineering
15230 Burbank Blvd
Van Nuys, CA 91411

Date: 04/27/17

REVIEW OF HYDROLOGY STUDY

TR NO. **073336** **DATE OF REPORT** **04/27/17**

We have reviewed your Hydrology Study.

[X] The Hydrology Study has been approved.

[X] Refer to comments below:

COMMENTS:

1. Infiltration rate for the project site has been assumed but must be approved by Geotechnical and Materials Engineering Division prior to the grading plans. Any changes to the assumed infiltration rate may require a revised Hydrology Study and/or Tentative Map.

2. Work within soft bottom drainage areas (which may include but is not limited to soft bottom basins, channels, watercourses, grade to drain) will require maintenance permits from Fish and Game, Army Corps of Engineers, and RWQCB prior to approval of the storm drain, and the permits must be still active prior to acceptance.

3. A Drainage Benefit Assessment Area must be established prior to the recordation of the final map. This DBAA will be to finance the future ongoing maintenance and capital replacement of all water quality devices/systems identified to be maintained by the County of Los Angeles.

REVIEWED BY _____
Vilong Truong (626) 458-4921

REGISTERED PROFESSIONAL ENGINEER
VILONG TRUONG
NO. C82680
CIVIL
STATE OF CALIFORNIA

APPROVED BY: _____

DRAINAGE CONCEPT

FOR

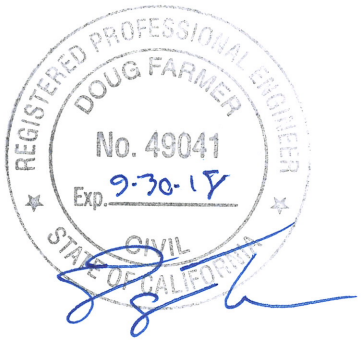
Vesting TTM No. 073336
(Northlake Phase 1)

IN THE UNINCORPORATED AREA OF
LOS ANGELES COUNTY

Prepared For:

Northlake Associates, LLC

1999 Avenue of the Stars, Suite 2850, Los Angeles, CA 90067



Prepared By:

SIKAND
Engineering | Planning | Surveying

15230 Burbank Blvd., Suite 100, Van Nuys, Ca 91411
Tel: (818) 787-8550; Fax: (818) 901-7451

HYDROLOGY STUDY APPROVED

CHECKED BY: _____ RCE NO. 82680 DATE 4/27/2017

APPROVED BY: _____ DATE 4/27/2017

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION

W.O.: 5090-033-35
Date: 04-27-17

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Purpose of The Study
Project Description
Hydrologic Criteria & Methodology
Summary

Section 2 **HYDROLOGIC INFORMATION**

Section 3 **EXISTING CONDITION**

Design Frequency (Q_B and Q_{B+D})
TC & MODRAT Calculations
Clear Frequency (50, 25, 10, 5, 2-yr, and LID)
TC & MODRAT Calculations
Hydrology Map

Section 4 **PROPOSED CONDITION (Pre-Retarding)**

Design Frequency (Q_B and Q_{B+D})
TC & MODRAT Calculations
Clear Frequency (50, 25, 10, 5, 2-yr, and LID)
TC & MODRAT Calculations
Hydrology Map
PD 2443 Reference Plans

Section 5 **DEBRIS PRODUCTION ANALYSIS**

Debris Production Calculations
Bulking Calculations
Debris Basin Calculations & Exhibits

Section 6 **FLOOD HAZARD CALCULATIONS**

Exsiting & Proposed Condition HECRAS Results
Flood Hazard Map/ Section Exhibit

Section 7 **BIOFILTRATION BASIN SIZING CALCULATIONS**

APPENDIX **LOW IMPACT DEVELOPMENT PLAN**

Northlake Specific Plan and VTTM No. 073336
Low Impact Development Plan, by Geosyntec Consultants, Feb. 2016

Section 1

Purpose of the Study

The purpose of this study is to analyze the hydrological impacts of the proposed site development against its pre-development receiving outlet conditions; to provide respective mitigation solutions and related BMPs, to comply with the requirements established by the County of Los Angeles and the State of California; and, to provide the criteria for the design of the on-site storm drain systems and other drainage devices.

Project Description

The site is located between the west side of the Castaic Lake and the east side of the Golden State Freeway (Interstate 5), in the unincorporated area of Los Angeles County in Castaic, State of California (See Section 2, Vicinity Map).

The project lies in the middle of the drainage path of Grasshopper Canyon, and is currently undeveloped. The natural drainage pattern of the canyon flows from northwest to southeast. The natural outlet point of the site at the tract boundary is about approximately 2880 feet of natural canyon, northwest and upstream of the Castaic Lagoon. No portion of the project site is within the any floodway or floodplain, according to the FEMA Firm Map (See Section 2, Firm Map)

PROPOSED CONDITION: The project is mostly residential development, consisting of single-family and multi-family residential homes. It is also comprised of a number of park sites, open spaces, tank site, debris basins, and water quality/mitigation basin. The onsite storm drain conveyance is divided into two (2) systems prior to discharging back to the natural canyon: Clean water system, which conveys runoff from the proposed development areas; and, Dirty water system, which conveys runoff coming from the debris basins and areas with natural condition tributaries. The clean water system outlets into 5 proposed retarding basins (combined basin for both retention and detention) located downstream of the development. Design spillways are located south of each basin, and conveys the excess flow out of each basin. Discharge from the southerly most basin, Basin E, will join the Dirty water system to discharge back into the natural canyon.

Hydrologic Criteria & Methodology

This report follows the hydrologic criteria and methodology set forth by Los Angeles County Department of Public Works, as explained in its “Hydrology Manual”, “Sedimentation Manual”. Water Quality requirements are based on the LID Ordinance.

The following are the criteria used in the calculations:

- Design Storm Frequency :
  50-yr for undeveloped areas and developed sump areas,
  25-yr for developed areas.
- Soil Type Number = 094
- Basin Name = Santa Clara
- DPA Zones = 3 and 5
- Peak Bulking Factor
  - DPA Zone 3 = 1.620 (for areas ≤ 64 ac)
  - DPA Zone 5 = 1.465 (for areas ≤ 64 ac)

- Debris Production:
  - DPA Zone 3 = 218.75 cy/ac (for areas ≤ 64 ac)
  - DPA Zone 5 = 128.125 cy/ac (for areas ≤ 64 ac)
- Isohyet = 5.8" (50-yr, 24-hr)
- % Imperviousness:
  1% for undeveloped areas,
  5% for graded, landscaped, or park areas,
  42% for single-family residential areas,
  86% for multi-family residential areas,
  91% for paved street areas.

Time of Concentration (TC) and design Peak Flow (Q) for each subarea are calculated using the TC Calculator. Burning of flows, flood routing and confluence Peak Qs are calculated using F0601M program, also know as the Modified Rational Method program (MODRAT) (See Sections 3 & 4, TC and MODRAT Calculations).

This report provides calculations for all subareas within the Existing Condition and subareas up to Node 90C for the Proposed Condition.

Routing output, Cumulative Hydrograph for Nodes 64A (Natural subareas) and 90C (Developed Subareas), and an Individual Hydrograph for Node 102A, have been calculated and provided to Geosyntec for use in the retention basin analysis and outlet node calculations.

Routing and Hydrograph output has been included in Section 4 of this report for all storm events. The Hydrographs were then utilized by Geosyntec as a basis for their modeling. Refer to Geosyntec's report for calculations downstream of Node 90C, and for final Outlet Node conditions for all storm events.

Debris Production Volumes are calculated using the DPR Chart for undeveloped areas under single DPA Zone; except for the Existing Condition outlet, which uses multiple DPA Zones; and bulking of the flows are obtained using the Peak Bulk Factors Chart for undeveloped areas under single DPA Zone (See Section 2 for Charts; Section 5 for Calculations).

Refer to Geosyntec's report for basin Retarding calculations

Summary

The impacts of increased flow (ΔQ) and increased volume (ΔVol) due to the proposed development will be mitigated onsite using the combination effect of retention and detention of the proposed retarding basins, for the design storm event.

Comparing the design frequency between the Pre-Development and Post-Development/Post Retarding conditions at the outlet point, the proposed condition discharge does not exceed the existing condition discharge, as shown below.

Design Frequency Summary, Post-Retarding:

	Pre-Development				***Post-Development / Post-Retarding**			
	Area (ac)	**Q**b (cfs)	**Q**bb (cfs)	**DPV** (cy)	**Area** (ac)	**Q**b+d (cfs)	**Q**bb+d (cfs)	**DPV** (cy)
OUTLET	2108.9	2899.2	4064.8	143,392	2154.4	2730.5	2739.9	2,050

**Refer to Geosyntec's Report for Post-Development POST-RETARDING Calculations and Outlet Node Flows.*

Similarly, for the hydromodification clear frequency comparison, Post-Development/Post-Retarding condition Volumes, Velocities, and Depth/Width ratios do not exceed the existing condition values, as shown below.

Clear Frequency Summary, Post-Retarding:

	Pre-Development				**Post-Development**					**Delta**			
Freq.	**Q** (cfs)	**Vol** (ac-ft)	**Velocity** (ft/s)	**Depth/Width** (ft/ft)	**Q** (cfs)	**Vol** (ac-ft)	**Geomorphically Significant Flow Volume, > 11 cfs**	**Velocity** (ft/s)	**Depth/ Width** (ft/ft)	**%Δ Q**	**%Δ Volume**	**%Δ Velocity**	**%Δ Depth/ Width**
50	2817.3	326.4	7.24	0.12	2812.7	340.6	316.9	7.24	0.12	-0.2	-3	0	0
25	2415.4	270.6	6.89	0.11	2180.6	269.4	245.7	6.68	0.11	-10	-9	-3	-2
10	1636.4	175.2	6.12	0.11	1423.8	183.5	160.5	5.88	0.11	-13	-8	-4	-1
5	1243.5	136.0	5.65	0.11	1019.3	129.8	112.6	5.33	0.10	-18	-17	-6	-2
2	535.0	69.4	4.55	0.10	469.3	67.2	54.9	4.42	0.10	-12	-21	-3	0

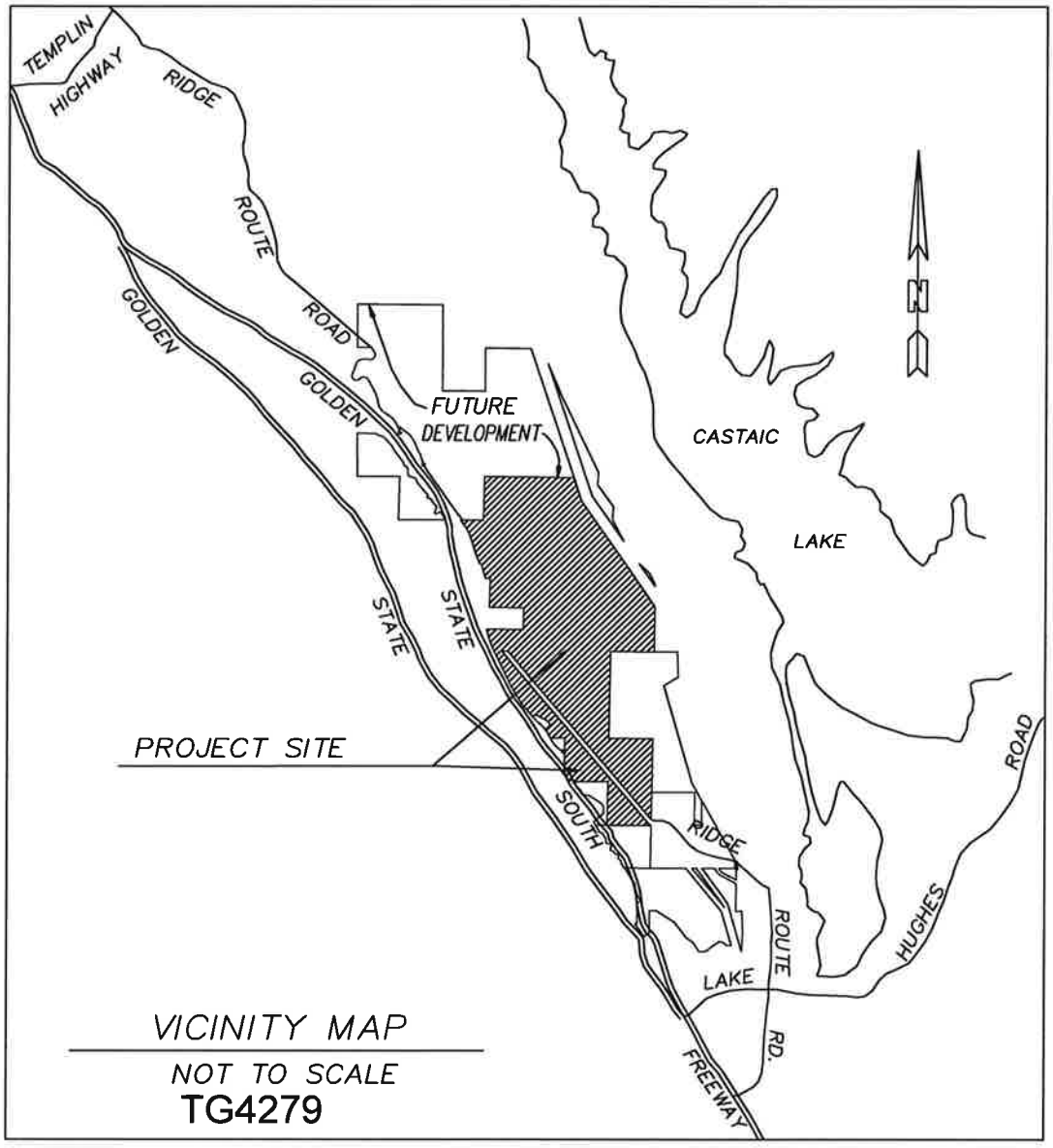
Pre and Post Development Q, Volume, Velocity, and Depth/Width at Outlet Node provided by Geosyntec

**Refer to Geosyntec's Report for Post-Development POST-RETARDING Calculations and Outlet Node Flows.*

After mitigation, the Volumes, Velocities, and Depth/Width ratios for all frequencies have decreased to below the existing condition values.

Preliminary alignment and layout of the drainage device, swales, detention/retention combination, and storm drain system are shown on the Proposed Condition Map (see Section 4).

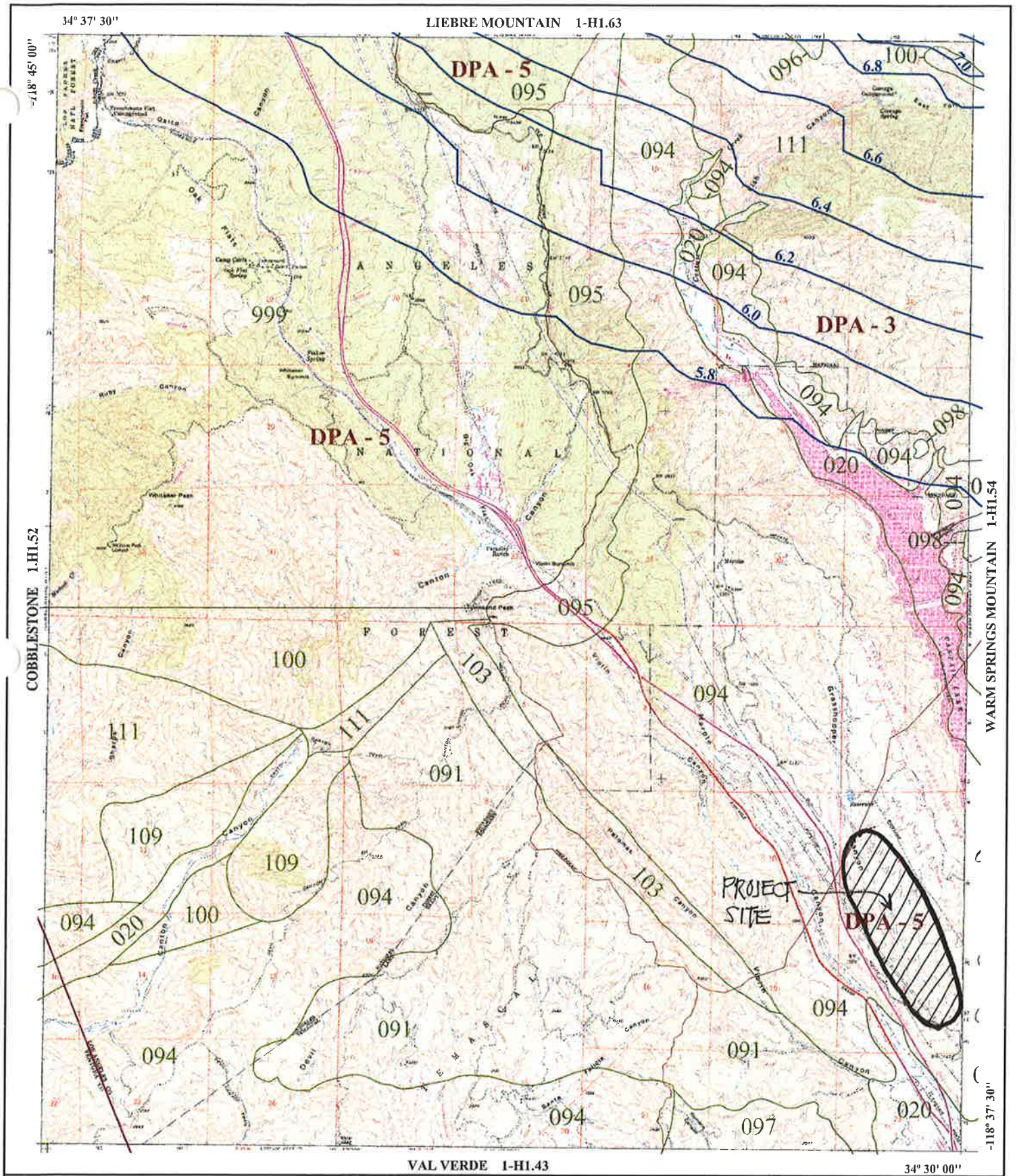
Section 2



VICINITY MAP

NOT TO SCALE

TG4279



016 SOIL CLASSIFICATION AREA

7.2 INCHES OF RAINFALL

DPA - 6 DEBRIS POTENTIAL AREA

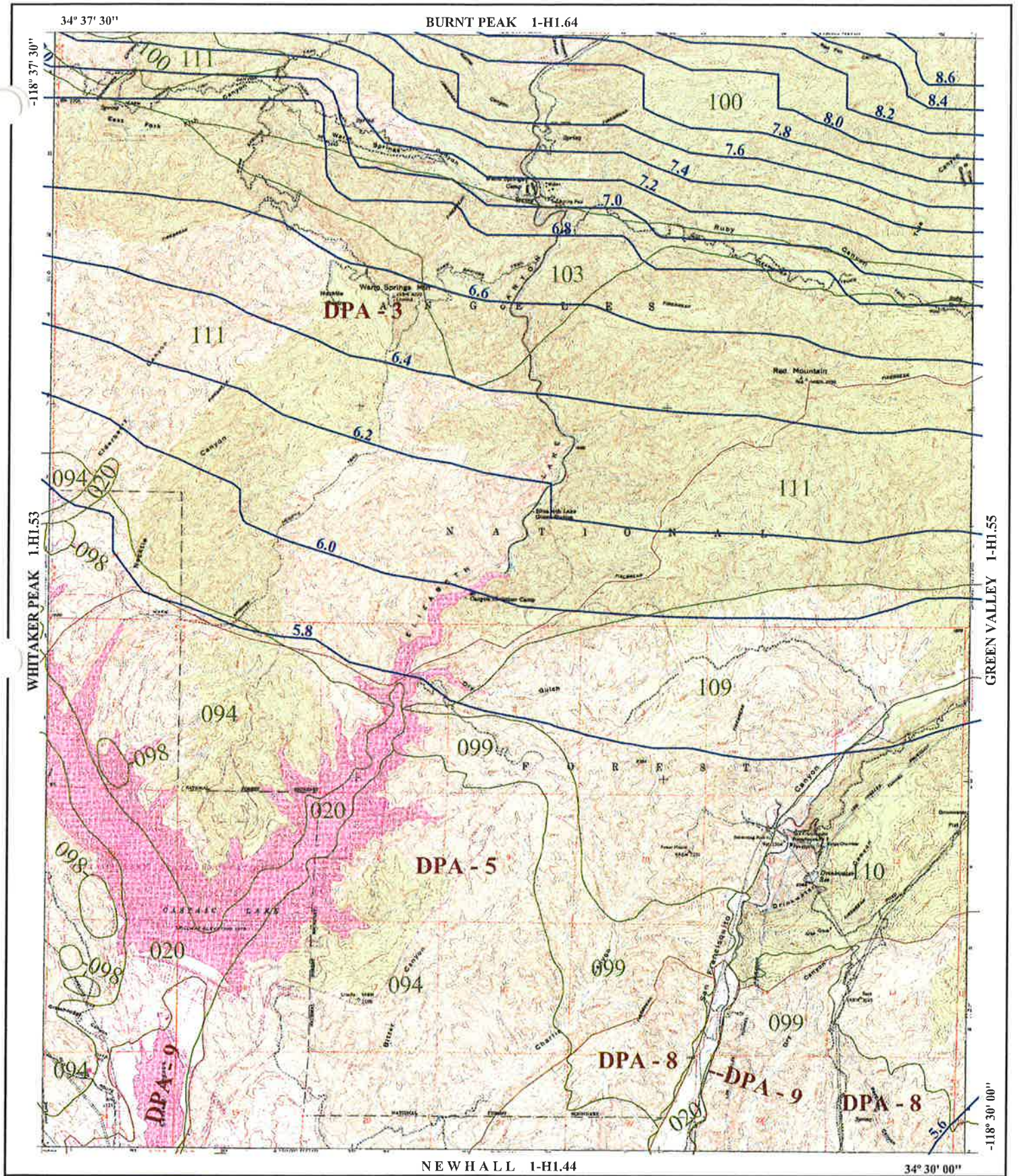
1 0 1 2 Miles

25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878
10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714

WHITAKER PEAK
50-YEAR 24-HOUR ISOHYET

1-H1.53

LOS ANGELES COUNTY PUBLIC WORKS Public Service That Works



016 SOIL CLASSIFICATION AREA

7.2 INCHES OF RAINFALL

DPA - 6 DEBRIS POTENTIAL AREA

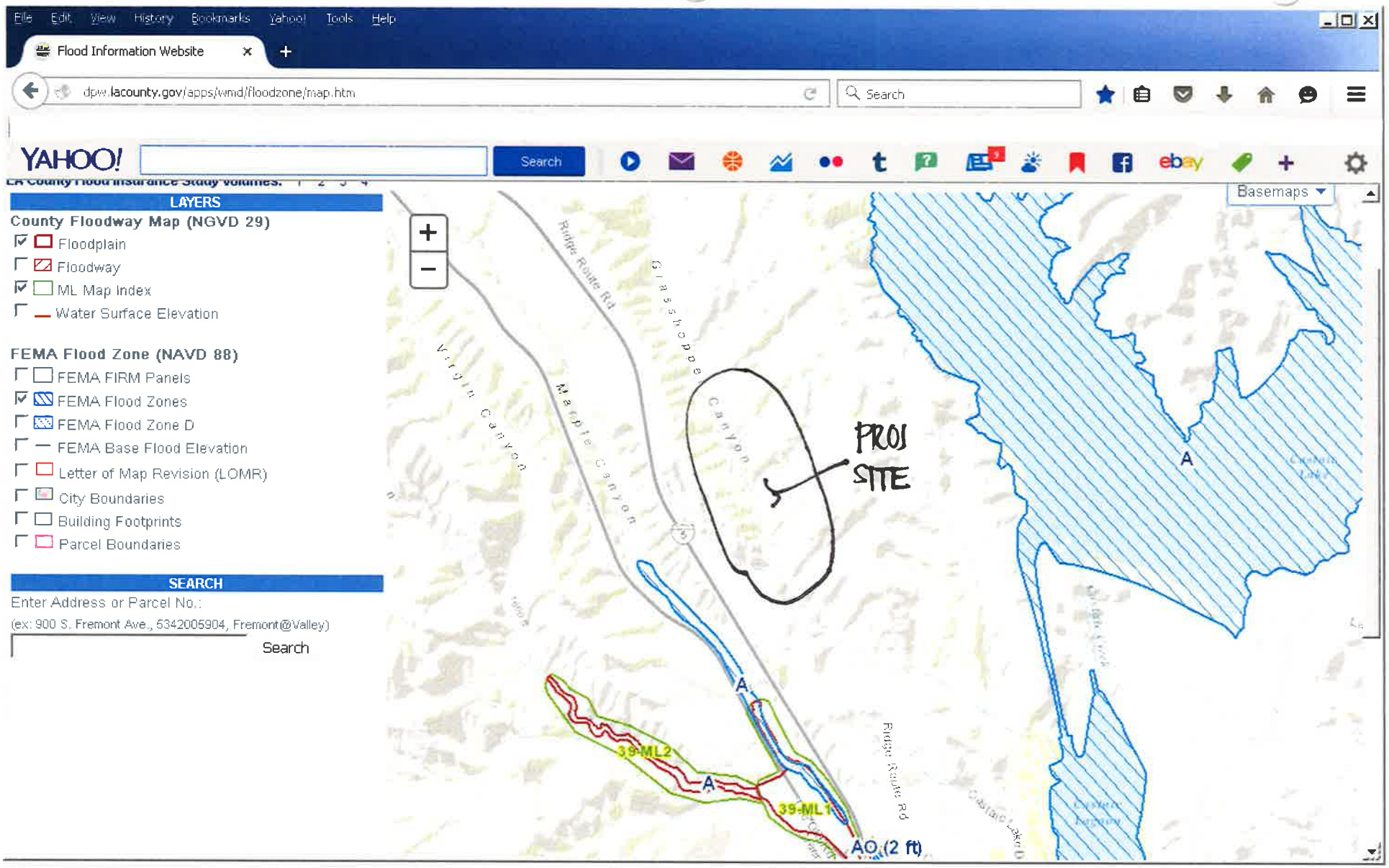
1 0 1 2 Miles

25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878
10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714

WARM SPRINGS MOUNTAIN 50-YEAR 24-HOUR ISOHYET

1-H1.54

LOS ANGELES COUNTY PUBLIC WORKS Public Service That Works


File Edit View History Bookmarks Yahoo! Tools Help
Flood Information Website
dpw.lacounty.gov/apps/wmd/floodzone/map.htm
Search
YAHOO!
Search
LA County Flood Insurance Study Volumes: 1 2 3 4
LAYERS
County Floodway Map (NGVD 29)
Floodplain
Floodway
ML Map Index
Water Surface Elevation
FEMA Flood Zone (NAVD 88)
FEMA FIRM Panels
FEMA Flood Zones
FEMA Flood Zone D
FEMA Base Flood Elevation
Letter of Map Revision (LOMR)
City Boundaries
Building Footprints
Parcel Boundaries
SEARCH
Enter Address or Parcel No.:
(ex: 900 S. Fremont Ave., 5342005904, Fremont@Valley)
Search
Basemaps
Ridge Route Rd
Marple Canyon
Virgin Canyon
PROJ SITE
A
39-ML2
39-ML1
AO (2 ft)



...e Flood Insurance Study report for this jurisdiction.

...ce is available in this community, contact your insurance ...d Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'

0 600 1200 METERS

PANEL 0575F

FIRM

FLOOD INSURANCE RATE MAP

LOS ANGELES COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 575 OF 2350

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LOS ANGELES COUNTY	065043	0575	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06037C0575F

EFFECTIVE DATE
SEPTEMBER 26, 2008

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

This is an official copy **of** a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood **Map** Store at www.msc.fema.gov

ZONE D
FOREST B
ZONE A
ZONE D
ZONE A
LAKE HUGHES
ZONE A
ZONE D
ZONE D
1% ANNUAL CHANCE FLOOD DISCHARGE CONTAINED IN RESERVOIR
Bitter Canyon Creek
2020000 FT
2015000 FT
Spillway
Castaic Lake
Dam
ZONE A
HUGHES LAKE
BOUNDARY RD
ZONE D
2010000 FT
ZONE D
Castaic Tunnel
LOS ANGELES COUNTY UNINCORPORATED AREAS 065043
RIDGE ROUTE RD
Castaic Lagoon
Violin Canyon Creek
1% ANNUAL CHANCE FLOOD DISCHARGE CONTAINED IN CHANNEL
Levee
ZONE A
ZONE D
FOREST
ZONE D
FOREST BOUNDARY
Charlie Canyon
ZONE D
34°30'00.00"
2005000 FT
118°37'30.00"
352000mE
353000mE
354000mE
355000mE
356000mE
357000mE
JOINS PANEL 0805

he Flood Insurance Study report for this jurisdiction.

nce is available in this community, contact your insurance
d Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'

0 600 1200

PANEL 0600F

FIRM

FLOOD INSURANCE RATE MAP

LOS ANGELES COUNTY, CALIFORNIA

AND INCORPORATED AREAS

PANEL 600 OF 2350

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LOS ANGELES COUNTY	065043	0600	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06037C0600F

EFFECTIVE DATE
SEPTEMBER 26, 2008

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

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Proportion Impervious Data

Code	Land Use Description	% Impervious
1111	High-Density Single Family Residential	42
1112	Low-Density Single Family Residential	21
1121	Mixed Multi-Family Residential	74
1122	Duplexes, Triplexes and 2-or 3-Unit Condominiums and Townhouses	55
1123	Low-Rise Apartments, Condominiums, and Townhouses	86
1124	Medium-Rise Apartments and Condominiums	86
1125	High-Rise Apartments and Condominiums	90
1131	Trailer Parks and Mobile Home Courts, High-Density	91
1132	Mobile Home Courts and Subdivisions, Low-Density	42
1140	Mixed Residential	59
1151	Rural Residential, High-Density	15
1152	Rural Residential, Low-Density	10
1211	Low- and Medium-Rise Major Office Use	91
1212	High-Rise Major Office Use	91
1213	Skyscrapers	91
1221	Regional Shopping Center	95
1222	Retail Centers (Non-Strip With Contiguous Interconnected Off-Street	96
1223	Modern Strip Development	96
1224	Older Strip Development	97
1231	Commercial Storage	90
1232	Commercial Recreation	90
1233	Hotels and Motels	96
1234	Attended Pay Public Parking Facilities	91
1241	Government Offices	91
1242	Police and Sheriff Stations	91
1243	Fire Stations	91
1244	Major Medical Health Care Facilities	74
1245	Religious Facilities	82
1246	Other Public Facilities	91
1247	Non-Attended Public Parking Facilities	91
1251	Correctional Facilities	91
1252	Special Care Facilities	74
1253	Other Special Use Facilities	86
1261	Pre-Schools/Day Care Centers	68
1262	Elementary Schools	82
1263	Junior or Intermediate High Schools	82
1264	Senior High Schools	82
1265	Colleges and Universities	47
1266	Trade Schools and Professional Training Facilities	91
1271	Base (Built-up Area)	65
1271.01	Base High-Density Single Family Residential	42
1271.02	Base Duplexes, Triplexes and 2-or 3-Unit Condominiums and T	55

Code	Land Use Description	% Impervious
1271.03	Base Government Offices	91
1271.04	Base Fire Stations	91
1271.05	Base Non-Attended Public Parking Facilities	91
1271.06	Base Air Field	45
1271.07	Base Petroleum Refining and Processing	91
1271.08	Base Mineral Extraction - Oil and Gas	10
1271.09	Base Harbor Facilities	91
1271.10	Base Navigation Aids	47
1271.11	Base Developed Local Parks and Recreation	10
1271.12	Base Vacant Undifferentiated	1
1272	Vacant Area	2
1273	Air Field	45
1274	Former Base (Built-up Area)	65
1275	Former Base Vacant Area	2
1276	Former Base Air Field	91
1311	Manufacturing, Assembly, and Industrial Services	91
1312	Motion Picture and Television Studio Lots	82
1313	Packing Houses and Grain Elevators	96
1314	Research and Development	91
1321	Manufacturing	91
1322	Petroleum Refining and Processing	91
1323	Open Storage	66
1324	Major Metal Processing	91
1325	Chemical Processing	91
1331	Mineral Extraction - Other Than Oil and Gas	10
1332	Mineral Extraction - Oil and Gas	10
1340	Wholesaling and Warehousing	91
1411	Airports	91
1411.01	Airstrip	10
1412	Railroads	15
1412.01	Railroads-Attended Pay Public Parking Facilities	91
1412.02	Railroads-Non-Attended Public Parking Facilities	91
1412.03	Railroads-Manufacturing, Assembly, and Industrial Services	91
1412.04	Railroads-Petroleum Refining and Processing	91
1412.05	Railroads-Open Storage	66
1412.06	Railroads-Truck Terminals	91
1413	Freeways and Major Roads	91
1414	Park-and-Ride Lots	91
1415	Bus Terminals and Yards	91
1416	Truck Terminals	91
1417	Harbor Facilities	91
1418	Navigation Aids	47
1420	Communication Facilities	82
1420.01	Communication Facilities-Antenna	2

Code	Land Use Description	% Impervious
1431	Electrical Power Facilities	47
1431.01	Electrical Power Facilities-Powerlines (Urban)	2
1431.02	Electrical Power Facilities-Powerlines (Rural)	1
1432	Solid Waste Disposal Facilities	15
1433	Liquid Waste Disposal Facilities	96
1434	Water Storage Facilities	91
1435	Natural Gas and Petroleum Facilities	91
1435.01	Natural Gas and Petroleum Facilities-Manufacturing, Assembly, and In	91
1435.02	Natural Gas and Petroleum Facilities-Petroleum Refining and Processing	91
1435.03	Natural Gas and Petroleum Facilities-Mineral Extraction – Oil and Gas	10
1435.04	Natural Gas and Petroleum Facilities-Vacant Undifferentiated	1
1436	Water Transfer Facilities	96
1437	Improved Flood Waterways and Structures	100
1440	Maintenance Yards	91
1450	Mixed Transportation	90
1460	Mixed Transportation and Utility	91
1460.01	Mixed Utility and Transportation-Improved Flood Waterways and Structures	100
1460.02	Mixed Utility and Transportation-Railroads	15
1460.03	Mixed Utility and Transportation-Freeways and Major Roads	91
1500	Mixed Commercial and Industrial	91
1600	Mixed Urban	89
1700	Under Construction (Use appropriate value)	91
1810	Golf Courses	3
1821	Developed Local Parks and Recreation	10
1822	Undeveloped Local Parks and Recreation	2
1831	Developed Regional Parks and Recreation	2
1832	Undeveloped Regional Parks and Recreation	1
1840	Cemeteries	10
1850	Wildlife Preserves and Sanctuaries	2
1850.01	Wildlife-Commercial Recreation	90
1850.02	Wildlife-Other Special Use Facilities	86
1850.03	Wildlife-Developed Local Parks and Recreation	10
1860	Specimen Gardens and Arboreta	15
1870	Beach Parks	10
1880	Other Open Space and Recreation	10
2110	Irrigated Cropland and Improved Pasture Land	2
2120	Non-Irrigated Cropland and Improved Pasture Land	2
2200	Orchards and Vineyards	2
2300	Nurseries	15
2400	Dairy, Intensive Livestock, and Associated Facilities	42
2500	Poultry Operations	62
2600	Other Agriculture	42
2700	Horse Ranches	42

Code	Land Use Description	% Impervious
3100	Vacant Undifferentiated	1
3200	Abandoned Orchards and Vineyards	2
3300	Vacant With Limited Improvements (Use appropriate value)	42
3400	Beaches (Vacant)	1
4100	Water, Undifferentiated	100
4200	Harbor Water Facilities	100
4300	Marina Water Facilities	100
4400	Water Within a Military Installation	100

Section 3

TC Calculator Results

VTM 73336, Northlake Phase 1

Existing Condition

50-yr Design Frequency

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
50	1A	40.9	0.01	50	94	2501	0.2	5.8	12	2.29	0.86	0.86	80.55
50	2A	50.6	0.01	50	94	2085	0.24	5.8	10	2.5	0.86	0.86	108.79
50	3A	48.8	0.01	50	94	1886	0.17	5.8	10	2.5	0.86	0.86	104.92
50	4A	37.8	0.01	50	94	1577	0.19	5.8	9	2.63	0.87	0.87	86.49
50	5A	46.9	0.01	50	94	2013	0.15	5.8	11	2.39	0.86	0.86	96.4
50	8B	55.4	0.01	50	94	1990	0.29	5.8	10	2.5	0.86	0.86	119.11
50	9B	51	0.01	50	94	2230	0.22	5.8	11	2.39	0.86	0.86	104.83
50	11A	46.3	0.01	50	94	2402	0.19	5.8	12	2.29	0.86	0.86	91.18
50	12A	46.7	0.01	50	94	2523	0.24	5.8	12	2.29	0.86	0.86	91.97
50	13A	55	0.01	50	94	2188	0.21	5.8	11	2.39	0.86	0.86	113.05
50	14A	52.8	0.01	50	94	2314	0.24	5.8	11	2.39	0.86	0.86	108.53
50	15A	52.6	0.01	50	94	2494	0.18	5.8	12	2.29	0.86	0.86	103.59
50	16A	23.5	0.01	50	94	1862	0.24	5.8	10	2.5	0.86	0.86	50.53
50	19C	26	0.01	50	94	1296	0.28	5.8	7	2.95	0.88	0.88	67.5
50	20C	48.7	0.01	50	94	2971	0.16	5.8	14	2.13	0.85	0.85	88.17
50	22A	49.7	0.01	50	94	3412	0.15	5.8	15	2.06	0.85	0.85	87.02
50	25D	45	0.01	50	94	2381	0.23	5.8	11	2.39	0.86	0.86	92.49
50	26D	31.1	0.01	50	94	2454	0.22	5.8	12	2.29	0.86	0.86	61.25
50	27D	49.3	0.01	50	94	2374	0.18	5.8	12	2.29	0.86	0.86	97.09
50	28D	47.5	0.01	50	94	2966	0.16	5.8	14	2.13	0.85	0.85	86
50	29D	29.2	0.01	50	94	2182	0.19	5.8	11	2.39	0.86	0.86	60.02
50	30D	48.6	0.01	50	94	1877	0.24	5.8	10	2.5	0.86	0.86	104.49
50	31D	41.1	0.01	50	94	2744	0.19	5.8	13	2.21	0.85	0.85	77.21
50	35A	41.3	0.01	50	94	2799	0.18	5.8	13	2.21	0.85	0.85	77.58
50	36A	46.4	0.01	50	94	2330	0.22	5.8	11	2.39	0.86	0.86	95.37
50	37A	26.8	0.01	50	94	1890	0.25	5.8	10	2.5	0.86	0.86	57.62
50	38A	64.1	0.01	50	94	3261	0.14	5.8	15	2.06	0.85	0.85	112.24
50	39A	41.6	0.01	50	94	2268	0.21	5.8	11	2.39	0.86	0.86	85.5
50	42E	61.9	0.01	50	94	3825	0.15	5.8	17	1.95	0.84	0.84	101.39
50	43E	50.1	0.01	50	94	2265	0.18	5.8	12	2.29	0.86	0.86	98.67
50	44E	64.4	0.01	50	94	3261	0.15	5.8	15	2.06	0.85	0.85	112.76
50	46A	47.5	0.01	50	94	2761	0.16	5.8	13	2.21	0.85	0.85	89.23
50	47A	38.8	0.01	50	94	4397	0.14	5.8	18	1.9	0.84	0.84	61.92
50	48A	38.8	0.01	50	94	4016	0.14	5.8	17	1.95	0.84	0.84	63.55
50	49A	25.9	0.01	50	94	1562	0.24	5.8	8	2.77	0.87	0.87	62.42
50	50A	68.3	0.01	50	94	3772	0.11	5.8	17	1.95	0.84	0.84	111.88

50	53F	45.6	0.01	50	94	2373	0.13	5.8	12	2.29	0.86	0.86	89.8
50	54F	53.1	0.01	50	94	3206	0.14	5.8	15	2.06	0.85	0.85	92.98
50	56A	46	0.01	50	94	3001	0.16	5.8	14	2.13	0.85	0.85	83.28
50	57A	50.8	0.01	50	94	3314	0.15	5.8	15	2.06	0.85	0.85	88.95
50	60B	53	0.01	50	94	3978	0.1	5.8	18	1.9	0.84	0.84	84.59
50	61B	38.3	0.01	50	94	1840	0.16	5.8	10	2.5	0.86	0.86	82.35
50	63A	47.7	0.01	50	94	2864	0.18	5.8	13	2.21	0.85	0.85	89.6
50	64A	50	0.01	50	94	2172	0.24	5.8	11	2.39	0.86	0.86	102.77
50	65A	45.7	0.01	50	94	1777	0.28	5.8	9	2.63	0.87	0.87	104.57
50	66A	38.3	0.01	50	94	1612	0.25	5.8	9	2.63	0.87	0.87	87.63
50	OP1	2.5	0.01	50	94	250	0.05	5.8	5	3.46	0.89	0.89	7.72
50	OP5	4	0.01	50	94	250	0.4	5.8	5	3.46	0.89	0.89	12.36

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006     1    1A 294  140.912A29                                        G1
006     1    2A 294  150.610A292 1320 10000
006     1    3A 294  148.810A292  960 10000
006     1    4A 294  137.8 9A292 1272 08000
006     1    5A 294  146.911A29
006     1    6A  94       99A29
006     1    7A  94       99A29
006     1    8B 294  155.410A291 1656 12000
006     1    9B 294  151.011A29
006     1   10AB 94         A292 1663 08000
006     1   11A 294  146.312A29
006     1   12A 294  146.712A29
006     1   13A 294  155.011A292 1584 04000
006     1   14A 294  152.811A29
006     1   15A 294  152.612A292 1085 05000
006     1   16A 294  123.510A29
006     1   17A  94       99A29
006     1   18A  94       99A29
006     1   19C 294  126.0 7A292 1584 09000
006     1   20C 294  148.714A29
006     1   21AC 94         A292 1337 05000
006     1   22A 294  149.715A29
006     1   23A  94       99A29
006     1   24A  94       99A29
006     1   25D 294  145.011A29
006     1   26D 294  131.112A292 1020 10000
006     1   27D 294  149.312A292 1290 10000
006     1   28D 294  147.514A29
006     1   29D 294  129.211A292 1232 10000
006     1   30D 294  148.610A292 1423 08000
006     1   31D 294  141.113A29
006     1   32AD 94         A292  827 03000
006     1   33A  94       99A29
006     1   34A  94       99A29
006     1   35A 294  141.313A292  488 04000
006     1   36A 294  146.411A292 1164 03000
006     1   37A 294  126.810A29
006     1   38A 294  164.115A292 1779 04000
006     1   39A 294  141.611A29
006     1   40A  94       99A29
006     1   41A  94       99A29
006     1   42E 294  161.917A29
006     1   43E 294  150.112A292 1851 08000
006     1   44E 294  164.415A29
006     1   45AE 94         A292 1975 03000
006     1   46A 294  147.513A29
006     1   47A 294  138.818A29
006     1   48A 294  138.817A292  888 04000
006     1   49A 294  125.9 8A292 1226 03000
006     1   50A 294  168.317A29
006     1   51A  94       99A29
006     1   52A  94       99A29
006     1   53F 294  145.612A291 2348 11000
006     1   54F 294  153.115A29
006     1   55AF 94         A292 1223 02000
006     1   56A 294  146.014A292 1272 02000
006     1   57A 294  150.815A29
006     1   58A  94       99A29
006     1   59A  94       99A29
006     1   60B 294  153.018A291 1480 11000
006     1   61B 294  138.310A29
006     1   62AB 94         A292  589 03000
006     1   63A 294  147.713A292  826 02000
006     1   64A 294  150.011A292 1214 03000
006     1   65A 294  145.7 9A292 1165 02000
006     1   66A 294  138.3 9A29                                      2  2
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005     1    1A Northlake, Exist. DESIGN 50-yr BURNED
005     1   66A Northlake, Exist. DESIGN 50-yr BURNED, OUTLET HYD.
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Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild_MORA\scr_soilx_34.dat

Northlake, Exist. DESIGN 50-yr BURNED

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM RAIN ZONE	DAY 4 PCT IMPV
1	1A	40.9	81.79	40.9	81.79	0	0.	.00000	.00	.00	0.	294	12	A29	.01
1	2A	50.6	111.78	91.5	193.57	2	1320.	.10000	.00	.00	0.	294	10	A29	.01
1	3A	48.8	107.80	140.3	295.20	2	960.	.10000	.00	.00	0.	294	10	A29	.01
1	4A	37.8	87.55	178.1	375.91	2	1272.	.08000	.00	.00	0.	294	9	A29	.01
1	5A	46.9	98.25	225.0	463.32	0	0.	.00000	.00	.00	0.	294	11	A29	.01
1	6A	.0	.00	225.0	463.32	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	7A	.0	.00	225.0	463.32	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	8B	55.4	122.38	55.4	122.38	1	1656.	.12000	.00	.00	0.	294	10	A29	.01
1	9B	51.0	106.84	106.4	213.34	0	0.	.00000	.00	.00	0.	294	11	A29	.01
1	10AB	106.4	213.34	331.4	676.47	2	1663.	.08000	.00	.00	0.	94	0	A29	.00
1	11A	46.3	92.59	377.7	756.56	0	0.	.00000	.00	.00	0.	294	12	A29	.01
1	12A	46.7	93.39	424.4	841.37	0	0.	.00000	.00	.00	0.	294	12	A29	.01
1	13A	55.0	115.22	479.4	944.80	2	1584.	.04000	.00	.00	0.	294	11	A29	.01
1	14A	52.8	110.61	532.2	1023.37	0	0.	.00000	.00	.00	0.	294	11	A29	.01
1	15A	52.6	105.19	584.8	1118.22	2	1085.	.05000	.00	.00	0.	294	12	A29	.01
1	16A	23.5	51.91	608.3	1144.93	0	0.	.00000	.00	.00	0.	294	10	A29	.01
1	17A	.0	.00	608.3	1144.93	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	18A	.0	.00	608.3	1144.93	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	19C	26.0	67.96	26.0	67.96	2	1584.	.09000	.00	.00	0.	294	7	A29	.01
1	20C	48.7	90.12	74.7	152.92	0	0.	.00000	.00	.00	0.	294	14	A29	.01
1	21AC	74.7	152.92	683.0	1274.91	2	1337.	.05000	.00	.00	0.	94	0	A29	.00
1	22A	49.7	89.00	732.7	1347.23	0	0.	.00000	.00	.00	0.	294	15	A29	.01
1	23A	.0	.00	732.7	1347.23	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	24A	.0	.00	732.7	1347.23	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	25D	45.0	94.27	45.0	94.27	0	0.	.00000	.00	.00	0.	294	11	A29	.01
1	26D	31.1	62.20	76.1	156.47	2	1020.	.10000	.00	.00	0.	294	12	A29	.01
1	27D	49.3	98.59	125.4	253.67	2	1290.	.10000	.00	.00	0.	294	12	A29	.01
1	28D	47.5	87.90	172.9	338.17	0	0.	.00000	.00	.00	0.	294	14	A29	.01
1	29D	29.2	61.17	202.1	396.41	2	1232.	.10000	.00	.00	0.	294	11	A29	.01
1	30D	48.6	107.36	250.7	491.82	2	1423.	.08000	.00	.00	0.	294	10	A29	.01
1	31D	41.1	78.89	291.8	561.36	0	0.	.00000	.00	.00	0.	294	13	A29	.01
1	32AD	291.8	561.36	1024.5	1889.29	2	827.	.03000	.00	.00	0.	94	0	A29	.00
1	33A	.0	.00	1024.5	1882.66	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	34A	.0	.00	1024.5	1882.66	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	35A	41.3	79.27	1065.8	1950.89	2	488.	.04000	.00	.00	0.	294	13	A29	.01
1	36A	46.4	97.20	1112.2	2008.46	2	1164.	.03000	.00	.00	0.	294	11	A29	.01
1	37A	26.8	59.20	1139.0	2021.58	0	0.	.00000	.00	.00	0.	294	10	A29	.01
1	38A	64.1	114.78	1203.1	2120.34	2	1779.	.04000	.00	.00	0.	294	15	A29	.01
1	39A	41.6	87.15	1244.7	2139.66	0	0.	.00000	.00	.00	0.	294	11	A29	.01
1	40A	.0	.00	1244.7	2139.66	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	41A	.0	.00	1244.7	2139.66	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	42E	61.9	103.51	61.9	103.51	0	0.	.00000	.00	.00	0.	294	17	A29	.01
1	43E	50.1	100.19	112.0	203.71	2	1851.	.08000	.00	.00	0.	294	12	A29	.01
1	44E	64.4	115.32	176.4	313.07	0	0.	.00000	.00	.00	0.	294	15	A29	.01
1	45AE	176.4	313.07	1421.1	2413.19	2	1975.	.03000	.00	.00	0.	94	0	A29	.00
1	46A	47.5	91.17	1468.6	2433.68	0	0.	.00000	.00	.00	0.	294	13	A29	.01

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild_MORA\scr_soilx_34.dat

Northlake, Exist. DESIGN 50-yr BURNED

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM RAIN ZONE	DAY 4 PCT IMPV
1	47A	38.8	62.98	1507.4	2487.97	0	0.	.00000	.00	.00	0.	294	18	A29	.01
1	48A	38.8	64.88	1546.2	2542.48	2	888.	.04000	.00	.00	0.	294	17	A29	.01
1	49A	25.9	63.46	1572.1	2548.91	2	1226.	.03000	.00	.00	0.	294	8	A29	.01
1	50A	68.3	114.22	1640.4	2617.61	0	0.	.00000	.00	.00	0.	294	17	A29	.01
1	51A	.0	.00	1640.4	2617.61	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	52A	.0	.00	1640.4	2617.61	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	53F	45.6	91.19	45.6	91.19	1	2348.	.11000	.00	.00	0.	294	12	A29	.01
1	54F	53.1	95.09	98.7	169.26	0	0.	.00000	.00	.00	0.	294	15	A29	.01
1	55AF	98.7	169.26	1739.1	2740.59	2	1223.	.02000	.00	.00	0.	94	0	A29	.00
1	56A	46.0	85.12	1785.1	2757.22	2	1272.	.02000	.00	.00	0.	294	14	A29	.01
1	57A	50.8	90.97	1835.9	2772.60	0	0.	.00000	.00	.00	0.	294	15	A29	.01
1	58A	.0	.00	1835.9	2772.60	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	59A	.0	.00	1835.9	2772.60	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	60B	53.0	86.03	53.0	86.03	1	1480.	.11000	.00	.00	0.	294	18	A29	.01
1	61B	38.3	84.60	91.3	157.98	0	0.	.00000	.00	.00	0.	294	10	A29	.01
1	62AB	91.3	157.98	1927.2	2862.59	2	589.	.03000	.00	.00	0.	94	0	A29	.00
1	63A	47.7	91.56	1974.9	2877.09	2	826.	.02000	.00	.00	0.	294	13	A29	.01
1	64A	50.0	104.75	2024.9	2890.28	2	1214.	.03000	.00	.00	0.	294	11	A29	.01
1	65A	45.7	105.85	2070.6	2895.76	2	1165.	.02000	.00	.00	0.	294	9	A29	.01
1	66A	38.3	88.71	2108.9	2899.20	0	0.	.00000	.00	.00	0.	294	9	A29	.01

Program Package Serial Number: 2083
02/13/15 FILE: EXD INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 3
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
Northlake, Exist. DESIGN 50-yr BURNED, OUTLET HYD.
HYDROGRAPH AT 1 66A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	46.31	200	47.37	300	49.78	400	52.49
500	55.65	600	59.75	700	64.92	800	82.24	900	135.06
1000	227.92	1050	317.78	1100	484.22	1110	539.82	1120	619.57
1130	740.54	1131	754.45	1132	768.38	1133	783.50	1134	799.21
1135	815.63	1136	832.66	1137	850.78	1138	869.72	1139	889.65
1140	910.22	1141	932.39	1142	955.48	1143	979.97	1144	1005.74
1145	1034.08	1146	1064.06	1147	1096.15	1148	1130.11	1149	1174.91
1150	1225.62	1151	1285.21	1152	1354.42	1153	1434.58	1154	1515.94
1155	1601.40	1156	1688.21	1157	1776.95	1158	1858.17	1159	1937.20
1160	2015.10	1161	2093.65	1162	2171.12	1163	2255.79	1164	2344.01
1165	2436.38	1166	2529.91	1167	2623.61	1168	2714.23	1169	2794.35
1170	2856.29	1171	2893.02	1172	2899.20	1173	2874.71	1174	2820.51
1175	2741.32	1176	2642.51	1177	2529.54	1178	2407.80	1179	2282.20
1180	2155.84	1181	2032.11	1182	1912.03	1183	1797.20	1184	1688.33
1185	1586.15	1186	1490.64	1187	1402.01	1188	1319.67	1189	1244.15
1190	1174.46	1191	1110.58	1192	1051.90	1193	998.23	1194	948.74
1195	903.24	1196	861.55	1197	823.31	1198	788.08	1199	755.65
1200	725.92	1201	697.33	1202	670.02	1203	644.52	1204	621.26
1205	600.28	1206	580.46	1207	561.33	1208	543.73	1209	527.72
1210	512.50	1211	498.33	1212	485.24	1213	473.66	1214	462.21
1215	450.88	1216	440.14	1217	429.29	1218	418.79	1219	408.95
1220	399.01	1221	389.69	1222	380.43	1223	371.68	1224	363.22
1225	354.85	1226	347.25	1227	339.71	1228	332.39	1229	325.83
1230	319.54	1231	314.25	1232	309.28	1233	304.25	1234	299.21
1235	293.88	1236	288.80	1237	283.72	1238	278.46	1239	273.82
1240	269.00	1241	264.31	1242	259.43	1243	254.83	1244	250.26
1245	245.53	1246	241.17	1247	236.90	1248	232.84	1249	229.06
1250	225.42	1251	222.58	1252	219.16	1253	216.03	1254	212.87
1255	209.69	1256	206.54	1257	203.41	1258	200.02	1259	196.88
1260	193.71	1261	190.57	1262	187.24	1263	184.44	1264	181.10
1265	178.08	1266	175.07	1267	172.07	1268	169.14	1269	166.25
1270	163.41	1271	160.63	1272	157.84	1273	155.18	1274	152.52
1275	149.87	1276	147.31	1277	144.79	1278	142.28	1279	139.94
1280	137.70	1281	135.66	1282	133.85	1283	132.22	1284	130.53
1285	128.83	1286	127.13	1287	125.42	1288	123.67	1289	121.96
1290	120.24	1291	118.53	1292	116.82	1293	115.14	1294	113.47
1295	111.81	1296	110.17	1297	108.56	1298	106.97	1299	105.40
1300	103.86	1310	90.61	1320	81.17	1330	74.57	1340	69.27
1350	65.50	1360	62.73	1370	60.58	1380	58.76	1390	57.10
1400	55.71	1420	53.24	1440	51.01	1460	45.98	1500	45.47

TOTAL VOLUME THIS HYDROGRAPH = 375.29(Ac.Ft)

TC Calculator Results

VTM 73336, Northlake Phase 1

Existing Condition

25-yr Clear Frequency

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
25	1A	40.9	0.01	25	94	2501	0.2	5.1	13	1.94	0.84	0.84	66.65
25	2A	50.6	0.01	25	94	2085	0.24	5.1	11	2.1	0.85	0.85	90.32
25	3A	48.8	0.01	25	94	1886	0.17	5.1	11	2.1	0.85	0.85	87.11
25	4A	37.8	0.01	25	94	1577	0.19	5.1	10	2.2	0.85	0.85	70.69
25	5A	46.9	0.01	25	94	2013	0.15	5.1	12	2.02	0.85	0.85	80.53
25	8B	55.4	0.01	25	94	1990	0.29	5.1	11	2.1	0.85	0.85	98.89
25	9B	51	0.01	25	94	2230	0.22	5.1	12	2.02	0.85	0.85	87.57
25	11A	46.3	0.01	25	94	2402	0.19	5.1	13	1.94	0.84	0.84	75.45
25	12A	46.7	0.01	25	94	2523	0.24	5.1	13	1.94	0.84	0.84	76.1
25	13A	55	0.01	25	94	2188	0.21	5.1	12	2.02	0.85	0.85	94.44
25	14A	52.8	0.01	25	94	2314	0.24	5.1	12	2.02	0.85	0.85	90.66
25	15A	52.6	0.01	25	94	2494	0.18	5.1	13	1.94	0.84	0.84	85.72
25	16A	23.5	0.01	25	94	1862	0.24	5.1	11	2.1	0.85	0.85	41.95
25	19C	26	0.01	25	94	1296	0.28	5.1	8	2.44	0.86	0.86	54.56
25	20C	48.7	0.01	25	94	2971	0.16	5.1	15	1.82	0.83	0.83	73.57
25	22A	49.7	0.01	25	94	3412	0.15	5.1	17	1.71	0.82	0.82	69.69
25	25D	45	0.01	25	94	2381	0.23	5.1	12	2.02	0.85	0.85	77.27
25	26D	31.1	0.01	25	94	2454	0.22	5.1	13	1.94	0.84	0.84	50.68
25	27D	49.3	0.01	25	94	2374	0.18	5.1	13	1.94	0.84	0.84	80.34
25	28D	47.5	0.01	25	94	2966	0.16	5.1	15	1.82	0.83	0.83	71.75
25	29D	29.2	0.01	25	94	2182	0.19	5.1	12	2.02	0.85	0.85	50.14
25	30D	48.6	0.01	25	94	1877	0.24	5.1	11	2.1	0.85	0.85	86.75
25	31D	41.1	0.01	25	94	2744	0.19	5.1	14	1.88	0.84	0.84	64.91
25	35A	41.3	0.01	25	94	2799	0.18	5.1	14	1.88	0.84	0.84	65.22
25	36A	46.4	0.01	25	94	2330	0.22	5.1	12	2.02	0.85	0.85	79.67
25	37A	26.8	0.01	25	94	1890	0.25	5.1	11	2.1	0.85	0.85	47.84
25	38A	64.1	0.01	25	94	3261	0.14	5.1	17	1.71	0.82	0.82	89.88
25	39A	41.6	0.01	25	94	2268	0.21	5.1	12	2.02	0.85	0.85	71.43
25	42E	61.9	0.01	25	94	3825	0.15	5.1	18	1.67	0.82	0.82	84.77
25	43E	50.1	0.01	25	94	2265	0.18	5.1	12	2.02	0.85	0.85	86.02
25	44E	64.4	0.01	25	94	3261	0.15	5.1	16	1.76	0.83	0.83	94.08
25	46A	47.5	0.01	25	94	2761	0.16	5.1	15	1.82	0.83	0.83	71.75
25	47A	38.8	0.01	25	94	4397	0.14	5.1	21	1.55	0.81	0.81	48.71
25	48A	38.8	0.01	25	94	4016	0.14	5.1	19	1.62	0.82	0.82	51.54
25	49A	25.9	0.01	25	94	1562	0.24	5.1	10	2.2	0.85	0.85	48.43
25	50A	68.3	0.01	25	94	3772	0.11	5.1	19	1.62	0.82	0.82	90.73

TC Calculator Results

VTM 73336, Northlake Phase 1

Existing Condition

25	53F	45.6	0.01	25	94	2373	0.13	5.1	14	1.88	0.84	0.84	72.01
25	54F	53.1	0.01	25	94	3206	0.14	5.1	17	1.71	0.82	0.82	74.46
25	56A	46	0.01	25	94	3001	0.16	5.1	15	1.82	0.83	0.83	69.49
25	57A	50.8	0.01	25	94	3314	0.15	5.1	17	1.71	0.82	0.82	71.23
25	60B	53	0.01	25	94	3978	0.1	5.1	20	1.59	0.82	0.82	69.1
25	61B	38.3	0.01	25	94	1840	0.16	5.1	11	2.1	0.85	0.85	68.37
25	63A	47.7	0.01	25	94	2864	0.18	5.1	15	1.82	0.83	0.83	72.06
25	64A	50	0.01	25	94	2172	0.24	5.1	12	2.02	0.85	0.85	85.85
25	65A	45.7	0.01	25	94	1777	0.28	5.1	10	2.2	0.85	0.85	85.46
25	66A	38.3	0.01	25	94	1612	0.25	5.1	10	2.2	0.85	0.85	71.62

TC Calculator Results

VTM 73336, Northlake Phase 1

Existing Condition

10-yr Clear Frequency

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
10	1A	40.9	0.01	10	94	2501	0.2	4.1	16	1.42	0.8	0.8	46.46
10	2A	50.6	0.01	10	94	2085	0.24	4.1	13	1.56	0.81	0.81	63.94
10	3A	48.8	0.01	10	94	1886	0.17	4.1	13	1.56	0.81	0.81	61.66
10	4A	37.8	0.01	10	94	1577	0.19	4.1	12	1.62	0.82	0.82	50.21
10	5A	46.9	0.01	10	94	2013	0.15	4.1	14	1.51	0.81	0.81	57.36
10	8B	55.4	0.01	10	94	1990	0.29	4.1	12	1.62	0.82	0.82	73.59
10	9B	51	0.01	10	94	2230	0.22	4.1	14	1.51	0.81	0.81	62.38
10	11A	46.3	0.01	10	94	2402	0.19	4.1	15	1.46	0.8	0.8	54.08
10	12A	46.7	0.01	10	94	2523	0.24	4.1	15	1.46	0.8	0.8	54.55
10	13A	55	0.01	10	94	2188	0.21	4.1	14	1.51	0.81	0.81	67.27
10	14A	52.8	0.01	10	94	2314	0.24	4.1	14	1.51	0.81	0.81	64.58
10	15A	52.6	0.01	10	94	2494	0.18	4.1	16	1.42	0.8	0.8	59.75
10	16A	23.5	0.01	10	94	1862	0.24	4.1	12	1.62	0.82	0.82	31.22
10	19C	26	0.01	10	94	1296	0.28	4.1	10	1.77	0.83	0.83	38.2
10	20C	48.7	0.01	10	94	2971	0.16	4.1	18	1.34	0.79	0.79	51.55
10	22A	49.7	0.01	10	94	3412	0.15	4.1	21	1.25	0.78	0.78	48.46
10	25D	45	0.01	10	94	2381	0.23	4.1	15	1.46	0.8	0.8	52.56
10	26D	31.1	0.01	10	94	2454	0.22	4.1	15	1.46	0.8	0.8	36.32
10	27D	49.3	0.01	10	94	2374	0.18	4.1	16	1.42	0.8	0.8	56
10	28D	47.5	0.01	10	94	2966	0.16	4.1	18	1.34	0.79	0.79	50.28
10	29D	29.2	0.01	10	94	2182	0.19	4.1	14	1.51	0.81	0.81	35.71
10	30D	48.6	0.01	10	94	1877	0.24	4.1	12	1.62	0.82	0.82	64.56
10	31D	41.1	0.01	10	94	2744	0.19	4.1	17	1.38	0.79	0.79	44.81
10	35A	41.3	0.01	10	94	2799	0.18	4.1	17	1.38	0.79	0.79	45.03
10	36A	46.4	0.01	10	94	2330	0.22	4.1	15	1.46	0.8	0.8	54.2
10	37A	26.8	0.01	10	94	1890	0.25	4.1	12	1.62	0.82	0.82	35.6
10	38A	64.1	0.01	10	94	3261	0.14	4.1	20	1.28	0.78	0.78	64
10	39A	41.6	0.01	10	94	2268	0.21	4.1	15	1.46	0.8	0.8	48.59
10	42E	61.9	0.01	10	94	3825	0.15	4.1	22	1.22	0.77	0.77	58.15
10	43E	50.1	0.01	10	94	2265	0.18	4.1	15	1.46	0.8	0.8	58.52
10	44E	64.4	0.01	10	94	3261	0.15	4.1	20	1.28	0.78	0.78	64.3
10	46A	47.5	0.01	10	94	2761	0.16	4.1	18	1.34	0.79	0.79	50.28
10	47A	38.8	0.01	10	94	4397	0.14	4.1	25	1.15	0.76	0.76	33.91
10	48A	38.8	0.01	10	94	4016	0.14	4.1	23	1.19	0.77	0.77	35.55
10	49A	25.9	0.01	10	94	1562	0.24	4.1	11	1.69	0.82	0.82	35.89
10	50A	68.3	0.01	10	94	3772	0.11	4.1	24	1.17	0.77	0.77	61.53

TC Calculator Results

VTM 73336, Northlake Phase 1

Existing Condition

10	53F	45.6	0.01	10	94	2373	0.13	4.1	16	1.42	0.8	0.8	51.8
10	54F	53.1	0.01	10	94	3206	0.14	4.1	20	1.28	0.78	0.78	53.02
10	56A	46	0.01	10	94	3001	0.16	4.1	19	1.31	0.78	0.78	47
10	57A	50.8	0.01	10	94	3314	0.15	4.1	20	1.28	0.78	0.78	50.72
10	60B	53	0.01	10	94	3978	0.1	4.1	25	1.15	0.76	0.76	46.32
10	61B	38.3	0.01	10	94	1840	0.16	4.1	13	1.56	0.81	0.81	48.4
10	63A	47.7	0.01	10	94	2864	0.18	4.1	18	1.34	0.79	0.79	50.5
10	64A	50	0.01	10	94	2172	0.24	4.1	14	1.51	0.81	0.81	61.16
10	65A	45.7	0.01	10	94	1777	0.28	4.1	12	1.62	0.82	0.82	60.71
10	66A	38.3	0.01	10	94	1612	0.25	4.1	11	1.69	0.82	0.82	53.08

TC Calculator Results

VTM 73336, Northlake Phase 1

Existing Condition

5-yr Clear Frequency

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
5	1A	40.9	0.01	5	94	2501	0.2	3.4	19	1.08	0.75	0.75	33.13
5	2A	50.6	0.01	5	94	2085	0.24	3.4	16	1.17	0.77	0.77	45.59
5	3A	48.8	0.01	5	94	1886	0.17	3.4	16	1.17	0.77	0.77	43.96
5	4A	37.8	0.01	5	94	1577	0.19	3.4	14	1.25	0.78	0.78	36.86
5	5A	46.9	0.01	5	94	2013	0.15	3.4	17	1.14	0.76	0.76	40.63
5	8B	55.4	0.01	5	94	1990	0.29	3.4	15	1.21	0.77	0.77	51.62
5	9B	51	0.01	5	94	2230	0.22	3.4	17	1.14	0.76	0.76	44.19
5	11A	46.3	0.01	5	94	2402	0.19	3.4	18	1.11	0.76	0.76	39.06
5	12A	46.7	0.01	5	94	2523	0.24	3.4	18	1.11	0.76	0.76	39.4
5	13A	55	0.01	5	94	2188	0.21	3.4	17	1.14	0.76	0.76	47.65
5	14A	52.8	0.01	5	94	2314	0.24	3.4	17	1.14	0.76	0.76	45.75
5	15A	52.6	0.01	5	94	2494	0.18	3.4	19	1.08	0.75	0.75	42.61
5	16A	23.5	0.01	5	94	1862	0.24	3.4	15	1.21	0.77	0.77	21.89
5	19C	26	0.01	5	94	1296	0.28	3.4	11	1.4	0.8	0.8	29.12
5	20C	48.7	0.01	5	94	2971	0.16	3.4	22	1.01	0.74	0.74	36.4
5	22A	49.7	0.01	5	94	3412	0.15	3.4	24	0.97	0.74	0.74	35.67
5	25D	45	0.01	5	94	2381	0.23	3.4	17	1.14	0.76	0.76	38.99
5	26D	31.1	0.01	5	94	2454	0.22	3.4	18	1.11	0.76	0.76	26.24
5	27D	49.3	0.01	5	94	2374	0.18	3.4	18	1.11	0.76	0.76	41.59
5	28D	47.5	0.01	5	94	2966	0.16	3.4	22	1.01	0.74	0.74	35.5
5	29D	29.2	0.01	5	94	2182	0.19	3.4	17	1.14	0.76	0.76	25.3
5	30D	48.6	0.01	5	94	1877	0.24	3.4	15	1.21	0.77	0.77	45.28
5	31D	41.1	0.01	5	94	2744	0.19	3.4	20	1.06	0.75	0.75	32.67
5	35A	41.3	0.01	5	94	2799	0.18	3.4	20	1.06	0.75	0.75	32.83
5	36A	46.4	0.01	5	94	2330	0.22	3.4	17	1.14	0.76	0.76	40.2
5	37A	26.8	0.01	5	94	1890	0.25	3.4	15	1.21	0.77	0.77	24.97
5	38A	64.1	0.01	5	94	3261	0.14	3.4	24	0.97	0.74	0.74	46.01
5	39A	41.6	0.01	5	94	2268	0.21	3.4	17	1.14	0.76	0.76	36.04
5	42E	61.9	0.01	5	94	3825	0.15	3.4	26	0.93	0.73	0.73	42.02
5	43E	50.1	0.01	5	94	2265	0.18	3.4	18	1.11	0.76	0.76	42.26
5	44E	64.4	0.01	5	94	3261	0.15	3.4	24	0.97	0.74	0.74	46.23
5	46A	47.5	0.01	5	94	2761	0.16	3.4	21	1.03	0.75	0.75	36.69
5	47A	38.8	0.01	5	94	4397	0.14	3.4	29	0.89	0.72	0.72	24.86
5	48A	38.8	0.01	5	94	4016	0.14	3.4	28	0.9	0.72	0.72	25.14
5	49A	25.9	0.01	5	94	1562	0.24	3.4	13	1.29	0.78	0.78	26.06
5	50A	68.3	0.01	5	94	3772	0.11	3.4	28	0.9	0.72	0.72	44.26

TC Calculator Results

VTM 73336, Northlake Phase 1

Existing Condition

5	53F	45.6	0.01	5	94	2373	0.13	3.4	20	1.06	0.75	0.75	36.25
5	54F	53.1	0.01	5	94	3206	0.14	3.4	24	0.97	0.74	0.74	38.12
5	56A	46	0.01	5	94	3001	0.16	3.4	22	1.01	0.74	0.74	34.38
5	57A	50.8	0.01	5	94	3314	0.15	3.4	24	0.97	0.74	0.74	36.46
5	60B	53	0.01	5	94	3978	0.1	3.4	29	0.89	0.72	0.72	33.96
5	61B	38.3	0.01	5	94	1840	0.16	3.4	16	1.17	0.77	0.77	34.5
5	63A	47.7	0.01	5	94	2864	0.18	3.4	21	1.03	0.75	0.75	36.85
5	64A	50	0.01	5	94	2172	0.24	3.4	16	1.17	0.77	0.77	45.05
5	65A	45.7	0.01	5	94	1777	0.28	3.4	14	1.25	0.78	0.78	44.56
5	66A	38.3	0.01	5	94	1612	0.25	3.4	13	1.29	0.78	0.78	38.54

TC Calculator Results

VTM 73336, Northlake Phase 1

Existing Condition

2-yr Clear Frequency

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
2	1A	40.9	0.01	2	94	2501	0.2	2.2	30	0.57	0.6	0.6	13.99
2	2A	50.6	0.01	2	94	2085	0.24	2.2	24	0.63	0.63	0.63	20.08
2	3A	48.8	0.01	2	94	1886	0.17	2.2	24	0.63	0.63	0.63	19.37
2	4A	37.8	0.01	2	94	1577	0.19	2.2	21	0.67	0.65	0.65	16.46
2	5A	46.9	0.01	2	94	2013	0.15	2.2	27	0.59	0.62	0.62	17.16
2	8B	55.4	0.01	2	94	1990	0.29	2.2	23	0.64	0.63	0.63	22.34
2	9B	51	0.01	2	94	2230	0.22	2.2	26	0.6	0.62	0.62	18.97
2	11A	46.3	0.01	2	94	2402	0.19	2.2	29	0.57	0.61	0.61	16.1
2	12A	46.7	0.01	2	94	2523	0.24	2.2	29	0.57	0.61	0.61	16.24
2	13A	55	0.01	2	94	2188	0.21	2.2	26	0.6	0.62	0.62	20.46
2	14A	52.8	0.01	2	94	2314	0.24	2.2	27	0.59	0.62	0.62	19.31
2	15A	52.6	0.01	2	94	2494	0.18	2.2	30	0.57	0.6	0.6	17.99
2	16A	23.5	0.01	2	94	1862	0.24	2.2	22	0.65	0.64	0.64	9.78
2	19C	26	0.01	2	94	1296	0.28	2.2	17	0.74	0.68	0.68	13.08
2	20C	48.7	0.01	2	94	2971	0.16	2.2	30	0.57	0.6	0.6	16.66
2	22A	49.7	0.01	2	94	3412	0.15	2.2	30	0.57	0.6	0.6	17
2	25D	45	0.01	2	94	2381	0.23	2.2	28	0.58	0.61	0.61	15.92
2	26D	31.1	0.01	2	94	2454	0.22	2.2	29	0.57	0.61	0.61	10.81
2	27D	49.3	0.01	2	94	2374	0.18	2.2	29	0.57	0.61	0.61	17.14
2	28D	47.5	0.01	2	94	2966	0.16	2.2	30	0.57	0.6	0.6	16.25
2	29D	29.2	0.01	2	94	2182	0.19	2.2	27	0.59	0.61	0.61	10.51
2	30D	48.6	0.01	2	94	1877	0.24	2.2	23	0.64	0.63	0.63	19.6
2	31D	41.1	0.01	2	94	2744	0.19	2.2	30	0.57	0.6	0.6	14.06
2	35A	41.3	0.01	2	94	2799	0.18	2.2	30	0.57	0.6	0.6	14.12
2	36A	46.4	0.01	2	94	2330	0.22	2.2	27	0.59	0.61	0.61	16.7
2	37A	26.8	0.01	2	94	1890	0.25	2.2	23	0.64	0.63	0.63	10.81
2	38A	64.1	0.01	2	94	3261	0.14	2.2	30	0.57	0.6	0.6	21.92
2	39A	41.6	0.01	2	94	2268	0.21	2.2	27	0.59	0.61	0.61	14.97
2	42E	61.9	0.01	2	94	3825	0.15	2.2	30	0.57	0.6	0.6	21.17
2	43E	50.1	0.01	2	94	2265	0.18	2.2	28	0.58	0.61	0.61	17.73
2	44E	64.4	0.01	2	94	3261	0.15	2.2	30	0.57	0.6	0.6	22.02
2	46A	47.5	0.01	2	94	2761	0.16	2.2	30	0.57	0.6	0.6	16.25
2	47A	38.8	0.01	2	94	4397	0.14	2.2	30	0.57	0.6	0.6	13.27
2	48A	38.8	0.01	2	94	4016	0.14	2.2	30	0.57	0.6	0.6	13.27
2	49A	25.9	0.01	2	94	1562	0.24	2.2	20	0.68	0.65	0.65	11.45
2	50A	68.3	0.01	2	94	3772	0.11	2.2	30	0.57	0.6	0.6	23.36

TC Calculator Results

VTM 73336, Northlake Phase 1

Existing Condition

2	53F	45.6	0.01	2	94	2373	0.13	2.2	30	0.57	0.6	0.6	15.6
2	54F	53.1	0.01	2	94	3206	0.14	2.2	30	0.57	0.6	0.6	18.16
2	56A	46	0.01	2	94	3001	0.16	2.2	30	0.57	0.6	0.6	15.73
2	57A	50.8	0.01	2	94	3314	0.15	2.2	30	0.57	0.6	0.6	17.37
2	60B	53	0.01	2	94	3978	0.1	2.2	30	0.57	0.6	0.6	18.13
2	61B	38.3	0.01	2	94	1840	0.16	2.2	24	0.63	0.63	0.63	15.2
2	63A	47.7	0.01	2	94	2864	0.18	2.2	30	0.57	0.6	0.6	16.31
2	64A	50	0.01	2	94	2172	0.24	2.2	25	0.62	0.63	0.63	19.53
2	65A	45.7	0.01	2	94	1777	0.28	2.2	21	0.67	0.65	0.65	19.9
2	66A	38.3	0.01	2	94	1612	0.25	2.2	20	0.68	0.65	0.65	16.93

TC Calculator Results

VTM 73336, Northlake Phase 1

Existing Condition

LID Clear Frequency

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)	Volume (ac-ft)
LID	1A	40.9	0.01	LID	94	2501	0.2	1.15	30	0.3	0.34	0.35	4.3	0.5
LID	2A	50.6	0.01	LID	94	2085	0.24	1.15	30	0.3	0.34	0.35	5.3	0.6
LID	3A	48.8	0.01	LID	94	1886	0.17	1.15	30	0.3	0.34	0.35	5.1	0.6
LID	4A	37.8	0.01	LID	94	1577	0.19	1.15	30	0.3	0.34	0.35	4.0	0.5
LID	5A	46.9	0.01	LID	94	2013	0.15	1.15	30	0.3	0.34	0.35	4.9	0.6
LID	8B	55.4	0.01	LID	94	1990	0.29	1.15	30	0.3	0.34	0.35	5.8	0.7
LID	9B	51	0.01	LID	94	2230	0.22	1.15	30	0.3	0.34	0.35	5.4	0.6
LID	11A	46.3	0.01	LID	94	2402	0.19	1.15	30	0.3	0.34	0.35	4.9	0.6
LID	12A	46.7	0.01	LID	94	2523	0.24	1.15	30	0.3	0.34	0.35	4.9	0.6
LID	13A	55	0.01	LID	94	2188	0.21	1.15	30	0.3	0.34	0.35	5.8	0.7
LID	14A	52.8	0.01	LID	94	2314	0.24	1.15	30	0.3	0.34	0.35	5.5	0.7
LID	15A	52.6	0.01	LID	94	2494	0.18	1.15	30	0.3	0.34	0.35	5.5	0.7
LID	16A	23.5	0.01	LID	94	1862	0.24	1.15	30	0.3	0.34	0.35	2.5	0.3
LID	19C	26	0.01	LID	94	1296	0.28	1.15	30	0.3	0.34	0.35	2.7	0.3
LID	20C	48.7	0.01	LID	94	2971	0.16	1.15	30	0.3	0.34	0.35	5.1	0.6
LID	22A	49.7	0.01	LID	94	3412	0.15	1.15	30	0.3	0.34	0.35	5.2	0.6
LID	25D	45	0.01	LID	94	2381	0.23	1.15	30	0.3	0.34	0.35	4.7	0.6
LID	26D	31.1	0.01	LID	94	2454	0.22	1.15	30	0.3	0.34	0.35	3.3	0.4
LID	27D	49.3	0.01	LID	94	2374	0.18	1.15	30	0.3	0.34	0.35	5.2	0.6
LID	28D	47.5	0.01	LID	94	2966	0.16	1.15	30	0.3	0.34	0.35	5.0	0.6
LID	29D	29.2	0.01	LID	94	2182	0.19	1.15	30	0.3	0.34	0.35	3.1	0.4
LID	30D	48.6	0.01	LID	94	1877	0.24	1.15	30	0.3	0.34	0.35	5.1	0.6
LID	31D	41.1	0.01	LID	94	2744	0.19	1.15	30	0.3	0.34	0.35	4.3	0.5
LID	35A	41.3	0.01	LID	94	2799	0.18	1.15	30	0.3	0.34	0.35	4.3	0.5
LID	36A	46.4	0.01	LID	94	2330	0.22	1.15	30	0.3	0.34	0.35	4.9	0.6
LID	37A	26.8	0.01	LID	94	1890	0.25	1.15	30	0.3	0.34	0.35	2.8	0.3
LID	38A	64.1	0.01	LID	94	3261	0.14	1.15	30	0.3	0.34	0.35	6.7	0.8
LID	39A	41.6	0.01	LID	94	2268	0.21	1.15	30	0.3	0.34	0.35	4.4	0.5
LID	42E	61.9	0.01	LID	94	3825	0.15	1.15	30	0.3	0.34	0.35	6.5	0.8

TC Calculator Results

VTM 73336, Northlake Phase 1

Existing Condition

LID	43E	50.1	0.01	LID	94	2265	0.18	1.15	30	0.3	0.34	0.35	5.3	0.6
LID	44E	64.4	0.01	LID	94	3261	0.15	1.15	30	0.3	0.34	0.35	6.8	0.8
LID	46A	47.5	0.01	LID	94	2761	0.16	1.15	30	0.3	0.34	0.35	5.0	0.6
LID	47A	38.8	0.01	LID	94	4397	0.14	1.15	30	0.3	0.34	0.35	4.1	0.5
LID	48A	38.8	0.01	LID	94	4016	0.14	1.15	30	0.3	0.34	0.35	4.1	0.5
LID	49A	25.9	0.01	LID	94	1562	0.24	1.15	30	0.3	0.34	0.35	2.7	0.3
LID	50A	68.3	0.01	LID	94	3772	0.11	1.15	30	0.3	0.34	0.35	7.2	0.9
LID	53F	45.6	0.01	LID	94	2373	0.13	1.15	30	0.3	0.34	0.35	4.8	0.6
LID	54F	53.1	0.01	LID	94	3206	0.14	1.15	30	0.3	0.34	0.35	5.6	0.7
LID	56A	46	0.01	LID	94	3001	0.16	1.15	30	0.3	0.34	0.35	4.8	0.6
LID	57A	50.8	0.01	LID	94	3314	0.15	1.15	30	0.3	0.34	0.35	5.3	0.6
LID	60B	53	0.01	LID	94	3978	0.1	1.15	30	0.3	0.34	0.35	5.6	0.7
LID	61B	38.3	0.01	LID	94	1840	0.16	1.15	30	0.3	0.34	0.35	4.0	0.5
LID	63A	47.7	0.01	LID	94	2864	0.18	1.15	30	0.3	0.34	0.35	5.0	0.6
LID	64A	50	0.01	LID	94	2172	0.24	1.15	30	0.3	0.34	0.35	5.3	0.6
LID	65A	45.7	0.01	LID	94	1777	0.28	1.15	30	0.3	0.34	0.35	4.8	0.6
LID	66A	38.3	0.01	LID	94	1612	0.25	1.15	30	0.3	0.34	0.35	4.0	0.5
												Total =	221.4	26.5

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006     1    1A  94  140.912A29                                        G1
006     1    2A  94  150.610A292 1320 10000
006     1    3A  94  148.810A292  960 10000
006     1    4A  94  137.8 9A292 1272 08000
006     1    5A  94  146.911A29
006     1    6A  94       99A29
006     1    7A  94       99A29
006     1    8B  94  155.410A291 1656 12000
006     1    9B  94  151.011A29
006     1   10AB 94         A292 1663 08000
006     1   11A  94  146.312A29
006     1   12A  94  146.712A29
006     1   13A  94  155.011A292 1584 04000
006     1   14A  94  152.811A29
006     1   15A  94  152.612A292 1085 05000
006     1   16A  94  123.510A29
006     1   17A  94       99A29
006     1   18A  94       99A29
006     1   19C  94  126.0 7A292 1584 09000
006     1   20C  94  148.714A29
006     1   21AC 94         A292 1337 05000
006     1   22A  94  149.715A29
006     1   23A  94       99A29
006     1   24A  94       99A29
006     1   25D  94  145.011A29
006     1   26D  94  131.112A292 1020 10000
006     1   27D  94  149.312A292 1290 10000
006     1   28D  94  147.514A29
006     1   29D  94  129.211A292 1232 10000
006     1   30D  94  148.610A292 1423 08000
006     1   31D  94  141.113A29
006     1   32AD 94         A292  827 03000
006     1   33A  94       99A29
006     1   34A  94       99A29
006     1   35A  94  141.313A292  488 04000
006     1   36A  94  146.411A292 1164 03000
006     1   37A  94  126.810A29
006     1   38A  94  164.115A292 1779 04000
006     1   39A  94  141.611A29
006     1   40A  94       99A29
006     1   41A  94       99A29
006     1   42E  94  161.917A29
006     1   43E  94  150.112A292 1851 08000
006     1   44E  94  164.415A29
006     1   45AE 94         A292 1975 03000
006     1   46A  94  147.513A29
006     1   47A  94  138.818A29
006     1   48A  94  138.817A292  888 04000
006     1   49A  94  125.9 8A292 1226 03000
006     1   50A  94  168.317A29
006     1   51A  94       99A29
006     1   52A  94       99A29
006     1   53F  94  145.612A291 2348 11000
006     1   54F  94  153.115A29
006     1   55AF 94         A292 1223 02000
006     1   56A  94  146.014A292 1272 02000
006     1   57A  94  150.815A29
006     1   58A  94       99A29
006     1   59A  94       99A29
006     1   60B  94  153.018A291 1480 11000
006     1   61B  94  138.310A29
006     1   62AB 94         A292  589 03000
006     1   63A  94  147.713A292  826 02000
006     1   64A  94  150.011A292 1214 03000
006     1   65A  94  145.7 9A292 1165 02000
006     1   66A  94  138.3 9A29                                        2  2
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Program Package Serial Number: 2083

02/13/15 FILE: EX50 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 1

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild_MORA\scr_soilx_34.dat

Northlake, Exist. 50-yr CLEAR

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM RAIN ZONE	DAY 4 PCT IMPV
1	1A	40.9	80.14	40.9	80.14	0	0.	.00000	.00	.00	0.	94	12	A29	.01
1	2A	50.6	109.62	91.5	189.77	2	1320.	.10000	.00	.00	0.	94	10	A29	.01
1	3A	48.8	105.72	140.3	289.36	2	960.	.10000	.00	.00	0.	94	10	A29	.01
1	4A	37.8	85.90	178.1	368.33	2	1272.	.08000	.00	.00	0.	94	9	A29	.01
1	5A	46.9	96.31	225.0	453.97	0	0.	.00000	.00	.00	0.	94	11	A29	.01
1	6A	.0	.00	225.0	453.97	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	7A	.0	.00	225.0	453.97	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	8B	55.4	120.02	55.4	120.02	1	1656.	.12000	.00	.00	0.	94	10	A29	.01
1	9B	51.0	104.73	106.4	208.82	0	0.	.00000	.00	.00	0.	94	11	A29	.01
1	10AB	106.4	208.82	331.4	662.70	2	1663.	.08000	.00	.00	0.	94	0	A29	.00
1	11A	46.3	90.72	377.7	740.79	0	0.	.00000	.00	.00	0.	94	12	A29	.01
1	12A	46.7	91.51	424.4	823.79	0	0.	.00000	.00	.00	0.	94	12	A29	.01
1	13A	55.0	112.95	479.4	924.54	2	1584.	.04000	.00	.00	0.	94	11	A29	.01
1	14A	52.8	108.43	532.2	1001.20	0	0.	.00000	.00	.00	0.	94	11	A29	.01
1	15A	52.6	103.07	584.8	1093.26	2	1085.	.05000	.00	.00	0.	94	12	A29	.01
1	16A	23.5	50.91	608.3	1119.04	0	0.	.00000	.00	.00	0.	94	10	A29	.01
1	17A	.0	.00	608.3	1119.04	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	18A	.0	.00	608.3	1119.04	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	19C	26.0	66.75	26.0	66.75	2	1584.	.09000	.00	.00	0.	94	7	A29	.01
1	20C	48.7	88.22	74.7	149.78	0	0.	.00000	.00	.00	0.	94	14	A29	.01
1	21AC	74.7	149.78	683.0	1246.29	2	1337.	.05000	.00	.00	0.	94	0	A29	.00
1	22A	49.7	87.10	732.7	1316.61	0	0.	.00000	.00	.00	0.	94	15	A29	.01
1	23A	.0	.00	732.7	1316.61	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	24A	.0	.00	732.7	1316.61	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	25D	45.0	92.41	45.0	92.41	0	0.	.00000	.00	.00	0.	94	11	A29	.01
1	26D	31.1	60.94	76.1	153.35	2	1020.	.10000	.00	.00	0.	94	12	A29	.01
1	27D	49.3	96.60	125.4	248.57	2	1290.	.10000	.00	.00	0.	94	12	A29	.01
1	28D	47.5	86.05	172.9	331.19	0	0.	.00000	.00	.00	0.	94	14	A29	.01
1	29D	29.2	59.96	202.1	388.26	2	1232.	.10000	.00	.00	0.	94	11	A29	.01
1	30D	48.6	105.29	250.7	481.67	2	1423.	.08000	.00	.00	0.	94	10	A29	.01
1	31D	41.1	77.26	291.8	549.56	0	0.	.00000	.00	.00	0.	94	13	A29	.01
1	32AD	291.8	549.56	1024.5	1846.33	2	827.	.03000	.00	.00	0.	94	0	A29	.00
1	33A	.0	.00	1024.5	1839.85	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	34A	.0	.00	1024.5	1839.85	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	35A	41.3	77.64	1065.8	1906.54	2	488.	.04000	.00	.00	0.	94	13	A29	.01
1	36A	46.4	95.28	1112.2	1961.87	2	1164.	.03000	.00	.00	0.	94	11	A29	.01
1	37A	26.8	58.06	1139.0	1973.88	0	0.	.00000	.00	.00	0.	94	10	A29	.01
1	38A	64.1	112.33	1203.1	2070.31	2	1779.	.04000	.00	.00	0.	94	15	A29	.01
1	39A	41.6	85.43	1244.7	2087.28	0	0.	.00000	.00	.00	0.	94	11	A29	.01
1	40A	.0	.00	1244.7	2087.28	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	41A	.0	.00	1244.7	2087.28	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	42E	61.9	101.21	61.9	101.21	0	0.	.00000	.00	.00	0.	94	17	A29	.01
1	43E	50.1	98.17	112.0	199.38	2	1851.	.08000	.00	.00	0.	94	12	A29	.01
1	44E	64.4	112.86	176.4	306.21	0	0.	.00000	.00	.00	0.	94	15	A29	.01
1	45AE	176.4	306.21	1421.1	2354.56	2	1975.	.03000	.00	.00	0.	94	0	A29	.00
1	46A	47.5	89.29	1468.6	2371.32	0	0.	.00000	.00	.00	0.	94	13	A29	.01
1	47A	38.8	61.55	1507.4	2424.25	0	0.	.00000	.00	.00	0.	94	18	A29	.01
1	48A	38.8	63.44	1546.2	2477.39	2	888.	.04000	.00	.00	0.	94	17	A29	.01
1	49A	25.9	62.29	1572.1	2483.94	2	1226.	.03000	.00	.00	0.	94	8	A29	.01

							EX50								
1	50A	68.3	111.68	1640.4	2549.82	0	0.	.00000	.00	.00	0.	94	17	A29	.01
1	51A	.0	.00	1640.4	2549.82	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	52A	.0	.00	1640.4	2549.82	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	53F	45.6	89.35	45.6	89.35	1	2348.	.11000	.00	.00	0.	94	12	A29	.01
1	54F	53.1	93.05	98.7	165.31	0	0.	.00000	.00	.00	0.	94	15	A29	.01
1	55AF	98.7	165.31	1739.1	2669.70	2	1223.	.02000	.00	.00	0.	94	0	A29	.00
1	56A	46.0	83.33	1785.1	2683.90	2	1272.	.02000	.00	.00	0.	94	14	A29	.01
1	57A	50.8	89.02	1835.9	2696.32	0	0.	.00000	.00	.00	0.	94	15	A29	.01
1	58A	.0	.00	1835.9	2696.32	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	59A	.0	.00	1835.9	2696.32	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	60B	53.0	84.08	53.0	84.08	1	1480.	.11000	.00	.00	0.	94	18	A29	.01
1	61B	38.3	82.98	91.3	154.38	0	0.	.00000	.00	.00	0.	94	10	A29	.01
1	62AB	91.3	154.38	1927.2	2783.67	2	589.	.03000	.00	.00	0.	94	0	A29	.00
1	63A	47.7	89.67	1974.9	2797.24	2	826.	.02000	.00	.00	0.	94	13	A29	.01
1	64A	50.0	102.68	2024.9	2807.27	2	1214.	.03000	.00	.00	0.	94	11	A29	.01
1	65A	45.7	103.85	2070.6	2813.80	2	1165.	.02000	.00	.00	0.	94	9	A29	.01
1	66A	38.3	87.04	2108.9	2817.32	0	0.	.00000	.00	.00	0.	94	9	A29	.01

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Program Package Serial Number: 2083

02/13/15 FILE: EX50 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 3

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
Northlake, Exist. 50-yr CLEAR, OUTLET HYD.

HYDROGRAPH AT 1 66A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	29.79	200	30.40	300	31.85	400	33.55
500	35.50	600	38.04	700	41.24	800	55.77	900	106.22
1000	197.43	1050	283.93	1100	444.89	1110	498.62	1120	575.35
1130	691.95	1131	705.39	1132	718.83	1133	733.43	1134	748.62
1135	764.52	1136	781.02	1137	798.60	1138	816.99	1139	836.36
1140	856.35	1141	877.92	1142	900.40	1143	924.26	1144	949.39
1145	977.07	1146	1006.34	1147	1037.71	1148	1070.89	1149	1114.70
1150	1164.25	1151	1222.46	1152	1290.00	1153	1368.23	1154	1447.62
1155	1531.11	1156	1615.94	1157	1702.64	1158	1781.89	1159	1858.92
1160	1934.73	1161	2011.21	1162	2086.72	1163	2169.31	1164	2255.37
1165	2345.68	1166	2437.44	1167	2529.91	1168	2620.23	1169	2701.37
1170	2765.78	1171	2806.33	1172	2817.32	1173	2798.15	1174	2749.43
1175	2675.59	1176	2581.79	1177	2473.38	1178	2355.81	1179	2233.79
1180	2110.69	1181	1989.78	1182	1872.01	1183	1759.60	1184	1652.62
1185	1551.86	1186	1457.53	1187	1370.00	1188	1288.52	1189	1213.73
1190	1144.73	1191	1081.36	1192	1023.11	1193	969.78	1194	920.59
1195	875.31	1196	833.78	1197	795.62	1198	760.41	1199	728.04
1200	698.31	1201	670.63	1202	643.76	1203	618.24	1204	594.67
1205	572.90	1206	553.61	1207	534.72	1208	517.02	1209	500.55
1210	485.40	1211	471.28	1212	457.97	1213	445.73	1214	434.67
1215	423.83	1216	413.48	1217	402.95	1218	392.71	1219	383.08
1220	373.31	1221	364.12	1222	354.98	1223	346.31	1224	337.92
1225	329.61	1226	322.04	1227	314.49	1228	307.09	1229	300.27
1230	293.58	1231	287.71	1232	282.45	1233	277.86	1234	273.18
1235	268.19	1236	263.40	1237	258.56	1238	253.53	1239	249.08
1240	244.43	1241	239.88	1242	235.15	1243	230.68	1244	226.22
1245	221.59	1246	217.30	1247	213.07	1248	208.94	1249	204.97
1250	200.95	1251	197.70	1252	194.40	1253	191.56	1254	188.67
1255	185.71	1256	182.77	1257	179.84	1258	176.65	1259	173.69
1260	170.69	1261	167.70	1262	164.50	1263	161.82	1264	158.61
1265	155.70	1266	152.80	1267	149.89	1268	147.03	1269	144.22
1270	141.45	1271	138.73	1272	136.02	1273	133.41	1274	130.80
1275	128.22	1276	125.70	1277	123.22	1278	120.75	1279	118.37
1280	116.01	1281	113.73	1282	111.51	1283	109.47	1284	107.61
1285	105.93	1286	104.56	1287	103.14	1288	101.66	1289	100.19
1290	98.70	1291	97.19	1292	95.69	1293	94.18	1294	92.68
1295	91.17	1296	89.68	1297	88.19	1298	86.72	1299	85.25
1300	83.81	1310	70.88	1320	60.91	1330	53.97	1340	49.03
1350	45.05	1360	42.19	1370	40.19	1380	38.68	1390	37.42
1400	36.43	1420	34.73	1440	33.26	1460	29.98	1500	29.25

TOTAL VOLUME THIS HYDROGRAPH = 326.40(Ac.Ft)

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006     1     1A  94  140.913A26                                        G1
006     1     2A  94  150.611A262 1320 10000
006     1     3A  94  148.811A262  960 10000
006     1     4A  94  137.810A262 1272 08000
006     1     5A  94  146.912A26
006     1     6A  94       99A26
006     1     7A  94       99A26
006     1     8B  94  155.411A261 1656 12000
006     1     9B  94  151.012A26
006     1    10AB 94         A262 1663 08000
006     1    11A  94  146.313A26
006     1    12A  94  146.713A26
006     1    13A  94  155.012A262 1584 04000
006     1    14A  94  152.812A26
006     1    15A  94  152.613A262 1085 05000
006     1    16A  94  123.511A26
006     1    17A  94       99A26
006     1    18A  94       99A26
006     1    19C  94  126.0 8A262 1584 09000
006     1    20C  94  148.715A26
006     1    21AC 94         A262 1337 05000
006     1    22A  94  149.717A26
006     1    23A  94       99A26
006     1    24A  94       99A26
006     1    25D  94  145.012A26
006     1    26D  94  131.113A262 1020 10000
006     1    27D  94  149.313A262 1290 10000
006     1    28D  94  147.515A26
006     1    29D  94  129.212A262 1232 10000
006     1    30D  94  148.611A262 1423 08000
006     1    31D  94  141.114A26
006     1    32AD 94         A262  827 03000
006     1    33A  94       99A26
006     1    34A  94       99A26
006     1    35A  94  141.314A262  488 04000
006     1    36A  94  146.412A262 1164 03000
006     1    37A  94  126.811A26
006     1    38A  94  164.117A262 1779 04000
006     1    39A  94  141.612A26
006     1    40A  94       99A26
006     1    41A  94       99A26
006     1    42E  94  161.918A26
006     1    43E  94  150.112A262 1851 08000
006     1    44E  94  164.416A26
006     1    45AE 94         A262 1975 03000
006     1    46A  94  147.515A26
006     1    47A  94  138.821A26
006     1    48A  94  138.819A262  888 04000
006     1    49A  94  125.910A262 1226 03000
006     1    50A  94  168.319A26
006     1    51A  94       99A26
006     1    52A  94       99A26
006     1    53F  94  145.614A261 2348 11000
006     1    54F  94  153.117A26
006     1    55AF 94         A262 1223 02000
006     1    56A  94  146.015A262 1272 02000
006     1    57A  94  150.817A26
006     1    58A  94       99A26
006     1    59A  94       99A26
006     1    60B  94  153.020A261 1480 11000
006     1    61B  94  138.311A26
006     1    62AB 94         A262  589 03000
006     1    63A  94  147.715A262  826 02000
006     1    64A  94  150.012A262 1214 03000
006     1    65A  94  145.710A262 1165 02000
006     1    66A  94  138.310A26                                        2  2
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Program Package Serial Number: 2083
02/23/15 FILE: EX25 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 1
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild_MORA\scr_soilx_34.dat

Northlake, Exist. 25-yr CLEAR

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM RAIN ZONE	DAY 4 PCT IMPV
1	1A	40.9	68.03	40.9	68.03	0	0.	.00000	.00	.00	0.	94	13	A26	.01
1	2A	50.6	92.27	91.5	160.30	2	1320.	.10000	.00	.00	0.	94	11	A26	.01
1	3A	48.8	88.99	140.3	245.64	2	960.	.10000	.00	.00	0.	94	11	A26	.01
1	4A	37.8	72.76	178.1	312.17	2	1272.	.08000	.00	.00	0.	94	10	A26	.01
1	5A	46.9	81.56	225.0	385.96	0	0.	.00000	.00	.00	0.	94	12	A26	.01
1	6A	.0	.00	225.0	385.96	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	7A	.0	.00	225.0	385.96	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	8B	55.4	101.02	55.4	101.02	1	1656.	.12000	.00	.00	0.	94	11	A26	.01
1	9B	51.0	88.69	106.4	177.30	0	0.	.00000	.00	.00	0.	94	12	A26	.01
1	10AB	106.4	177.30	331.4	563.27	2	1663.	.08000	.00	.00	0.	94	0	A26	.00
1	11A	46.3	77.01	377.7	627.74	0	0.	.00000	.00	.00	0.	94	13	A26	.01
1	12A	46.7	77.67	424.4	699.46	0	0.	.00000	.00	.00	0.	94	13	A26	.01
1	13A	55.0	95.65	479.4	785.92	2	1584.	.04000	.00	.00	0.	94	12	A26	.01
1	14A	52.8	91.82	532.2	854.53	0	0.	.00000	.00	.00	0.	94	12	A26	.01
1	15A	52.6	87.49	584.8	932.54	2	1085.	.05000	.00	.00	0.	94	13	A26	.01
1	16A	23.5	42.85	608.3	954.06	0	0.	.00000	.00	.00	0.	94	11	A26	.01
1	17A	.0	.00	608.3	954.06	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	18A	.0	.00	608.3	954.06	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	19C	26.0	55.43	26.0	55.43	2	1584.	.09000	.00	.00	0.	94	8	A26	.01
1	20C	48.7	75.49	74.7	126.63	0	0.	.00000	.00	.00	0.	94	15	A26	.01
1	21AC	74.7	126.63	683.0	1060.56	2	1337.	.05000	.00	.00	0.	94	0	A26	.00
1	22A	49.7	71.91	732.7	1121.14	0	0.	.00000	.00	.00	0.	94	17	A26	.01
1	23A	.0	.00	732.7	1121.14	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	24A	.0	.00	732.7	1121.14	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	25D	45.0	78.26	45.0	78.26	0	0.	.00000	.00	.00	0.	94	12	A26	.01
1	26D	31.1	51.73	76.1	129.98	2	1020.	.10000	.00	.00	0.	94	13	A26	.01
1	27D	49.3	82.00	125.4	210.92	2	1290.	.10000	.00	.00	0.	94	13	A26	.01
1	28D	47.5	73.63	172.9	281.00	0	0.	.00000	.00	.00	0.	94	15	A26	.01
1	29D	29.2	50.78	202.1	329.96	2	1232.	.10000	.00	.00	0.	94	12	A26	.01
1	30D	48.6	88.62	250.7	409.56	2	1423.	.08000	.00	.00	0.	94	11	A26	.01
1	31D	41.1	65.87	291.8	467.89	0	0.	.00000	.00	.00	0.	94	14	A26	.01
1	32AD	291.8	467.89	1024.5	1573.70	2	827.	.03000	.00	.00	0.	94	0	A26	.00
1	33A	.0	.00	1024.5	1567.57	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	34A	.0	.00	1024.5	1567.57	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	35A	41.3	66.19	1065.8	1623.14	2	488.	.04000	.00	.00	0.	94	14	A26	.01
1	36A	46.4	80.69	1112.2	1671.79	2	1164.	.03000	.00	.00	0.	94	12	A26	.01
1	37A	26.8	48.87	1139.0	1683.49	0	0.	.00000	.00	.00	0.	94	11	A26	.01
1	38A	64.1	92.74	1203.1	1763.95	2	1779.	.04000	.00	.00	0.	94	17	A26	.01
1	39A	41.6	72.34	1244.7	1781.03	0	0.	.00000	.00	.00	0.	94	12	A26	.01
1	40A	.0	.00	1244.7	1781.03	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	41A	.0	.00	1244.7	1781.03	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	42E	61.9	86.80	61.9	86.80	0	0.	.00000	.00	.00	0.	94	18	A26	.01
1	43E	50.1	87.12	112.0	173.92	2	1851.	.08000	.00	.00	0.	94	12	A26	.01
1	44E	64.4	96.18	176.4	264.85	0	0.	.00000	.00	.00	0.	94	16	A26	.01
1	45AE	176.4	264.85	1421.1	2002.21	2	1975.	.03000	.00	.00	0.	94	0	A26	.00
1	46A	47.5	73.63	1468.6	2027.67	0	0.	.00000	.00	.00	0.	94	15	A26	.01
1	47A	38.8	50.09	1507.4	2072.20	0	0.	.00000	.00	.00	0.	94	21	A26	.01
1	48A	38.8	52.86	1546.2	2116.92	2	888.	.04000	.00	.00	0.	94	19	A26	.01
1	49A	25.9	49.86	1572.1	2121.64	2	1226.	.03000	.00	.00	0.	94	10	A26	.01
1	50A	68.3	93.04	1640.4	2184.22	0	0.	.00000	.00	.00	0.	94	19	A26	.01
1	51A	.0	.00	1640.4	2184.22	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	52A	.0	.00	1640.4	2184.22	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	53F	45.6	73.08	45.6	73.08	1	2348.	.11000	.00	.00	0.	94	14	A26	.01

EX25

1	54F	53.1	76.83	98.7	137.06	0	0.	.00000	.00	.00	0.	94	17	A26	.01
1	55AF	98.7	137.06	1739.1	2292.56	2	1223.	.02000	.00	.00	0.	94	0	A26	.00
1	56A	46.0	71.31	1785.1	2301.49	2	1272.	.02000	.00	.00	0.	94	15	A26	.01
1	57A	50.8	73.50	1835.9	2314.91	0	0.	.00000	.00	.00	0.	94	17	A26	.01
1	58A	.0	.00	1835.9	2314.91	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	59A	.0	.00	1835.9	2314.91	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	60B	53.0	70.29	53.0	70.29	1	1480.	.11000	.00	.00	0.	94	20	A26	.01
1	61B	38.3	69.84	91.3	129.46	0	0.	.00000	.00	.00	0.	94	11	A26	.01
1	62AB	91.3	129.46	1927.2	2388.45	2	589.	.03000	.00	.00	0.	94	0	A26	.00
1	63A	47.7	73.94	1974.9	2400.73	2	826.	.02000	.00	.00	0.	94	15	A26	.01
1	64A	50.0	86.95	2024.9	2409.78	2	1214.	.03000	.00	.00	0.	94	12	A26	.01
1	65A	45.7	87.97	2070.6	2415.10	2	1165.	.02000	.00	.00	0.	94	10	A26	.01
1	66A	38.3	73.73	2108.9	2415.40	0	0.	.00000	.00	.00	0.	94	10	A26	.01

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Program Package Serial Number: 2083

02/23/15 FILE: EX25 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 3

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
Northlake, Exist. 25-yr CLEAR, OUTLET HYD.

HYDROGRAPH AT 1 66A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	26.65	200	27.24	300	28.56	400	30.05
500	31.80	600	34.05	700	36.90	800	40.65	900	61.78
1000	137.20	1050	219.78	1100	361.92	1110	407.63	1120	471.26
1130	568.27	1131	579.35	1132	590.56	1133	602.42	1134	615.04
1135	628.11	1136	641.92	1137	656.45	1138	671.66	1139	687.82
1140	704.60	1141	722.70	1142	741.54	1143	761.23	1144	781.87
1145	804.81	1146	829.13	1147	855.13	1148	882.78	1149	918.39
1150	959.09	1151	1005.99	1152	1059.94	1153	1121.87	1154	1185.47
1155	1251.92	1156	1319.30	1157	1387.42	1158	1456.68	1159	1519.95
1160	1581.88	1161	1643.09	1162	1705.17	1163	1767.43	1164	1835.93
1165	1908.74	1166	1986.39	1167	2066.41	1168	2147.27	1169	2226.43
1170	2298.28	1171	2356.89	1172	2397.16	1173	2415.40	1174	2409.64
1175	2380.50	1176	2330.06	1177	2261.38	1178	2178.69	1179	2086.40
1180	1987.94	1181	1886.67	1182	1785.04	1183	1684.72	1184	1587.68
1185	1494.54	1186	1405.77	1187	1322.15	1188	1243.82	1189	1171.06
1190	1103.45	1191	1040.53	1192	982.47	1193	928.98	1194	879.53
1195	834.22	1196	792.16	1197	753.52	1198	717.64	1199	684.45
1200	653.68	1201	625.59	1202	599.39	1203	575.13	1204	552.51
1205	530.34	1206	509.44	1207	489.76	1208	471.98	1209	455.62
1210	440.14	1211	425.15	1212	411.28	1213	398.57	1214	386.52
1215	375.30	1216	364.84	1217	355.24	1218	346.08	1219	337.11
1220	328.20	1221	319.50	1222	310.80	1223	302.51	1224	294.38
1225	286.25	1226	278.60	1227	271.40	1228	264.01	1229	257.13
1230	250.21	1231	243.72	1232	237.49	1233	231.64	1234	226.05
1235	221.41	1236	216.94	1237	213.02	1238	208.99	1239	204.67
1240	200.79	1241	196.43	1242	192.33	1243	188.22	1244	184.10
1245	179.88	1246	176.02	1247	171.86	1248	167.94	1249	164.08
1250	160.25	1251	156.55	1252	152.91	1253	149.34	1254	145.93
1255	142.71	1256	139.73	1257	137.05	1258	134.88	1259	132.68
1260	130.44	1261	128.16	1262	125.88	1263	123.59	1264	121.29
1265	118.99	1266	116.71	1267	114.42	1268	112.15	1269	109.90
1270	107.66	1271	105.45	1272	103.27	1273	101.11	1274	98.99
1275	96.91	1276	94.84	1277	92.84	1278	90.87	1279	88.94
1280	87.06	1281	85.20	1282	83.40	1283	81.64	1284	79.92
1285	78.25	1286	76.63	1287	75.05	1288	73.51	1289	72.01
1290	70.57	1291	69.21	1292	67.88	1293	66.61	1294	65.45
1295	64.38	1296	63.41	1297	62.54	1298	61.77	1299	61.11
1300	60.43	1310	53.68	1320	47.90	1330	43.63	1340	40.68
1350	38.68	1360	37.05	1370	35.78	1380	34.69	1390	33.70
1400	32.82	1420	31.26	1440	29.94	1460	26.98	1500	26.16

TOTAL VOLUME THIS HYDROGRAPH = 270.58(Ac.Ft)

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006    1    1A  94  140.916A20                                        G1
006    1    2A  94  150.613A202 1320 10000
006    1    3A  94  148.813A202  960 10000
006    1    4A  94  137.812A202 1272 08000
006    1    5A  94  146.914A20
006    1    6A  94       99A20
006    1    7A  94       99A20
006    1    8B  94  155.412A201 1656 12000
006    1    9B  94  151.014A20
006    1   10AB 94         A202 1663 08000
006    1   11A  94  146.315A20
006    1   12A  94  146.715A20
006    1   13A  94  155.014A202 1584 04000
006    1   14A  94  152.814A20
006    1   15A  94  152.616A202 1085 05000
006    1   16A  94  123.512A20
006    1   17A  94       99A20
006    1   18A  94       99A20
006    1   19C  94  126.010A202 1584 09000
006    1   20C  94  148.718A20
006    1   21AC 94         A202 1337 05000
006    1   22A  94  149.721A20
006    1   23A  94       99A20
006    1   24A  94       99A20
006    1   25D  94  145.015A20
006    1   26D  94  131.115A202 1020 10000
006    1   27D  94  149.316A202 1290 10000
006    1   28D  94  147.518A20
006    1   29D  94  129.214A202 1232 10000
006    1   30D  94  148.612A202 1423 08000
006    1   31D  94  141.117A20
006    1   32AD 94         A202  827 03000
006    1   33A  94       99A20
006    1   34A  94       99A20
006    1   35A  94  141.317A202  488 04000
006    1   36A  94  146.415A202 1164 03000
006    1   37A  94  126.812A20
006    1   38A  94  164.120A202 1779 04000
006    1   39A  94  141.615A20
006    1   40A  94       99A20
006    1   41A  94       99A20
006    1   42E  94  161.922A20
006    1   43E  94  150.115A202 1851 08000
006    1   44E  94  164.420A20
006    1   45AE 94         A202 1975 03000
006    1   46A  94  147.518A20
006    1   47A  94  138.825A20
006    1   48A  94  138.823A202  888 04000
006    1   49A  94  125.911A202 1226 03000
006    1   50A  94  168.324A20
006    1   51A  94       99A20
006    1   52A  94       99A20
006    1   53F  94  145.616A201 2348 11000
006    1   54F  94  153.120A20
006    1   55AF 94         A202 1223 02000
006    1   56A  94  146.019A202 1272 02000
006    1   57A  94  150.820A20
006    1   58A  94       99A20
006    1   59A  94       99A20
006    1   60B  94  153.025A201 1480 11000
006    1   61B  94  138.313A20
006    1   62AB 94         A202  589 03000
006    1   63A  94  147.718A202  826 02000
006    1   64A  94  150.014A202 1214 03000
006    1   65A  94  145.712A202 1165 02000
006    1   66A  94  138.311A20                                      2  2
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Program Package Serial Number: 2083

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild_MORA\scr_soilx_34.dat

Northlake, Exist. 10-yr CLEAR

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM RAIN ZONE	DAY 4 PCT IMPV
1	1A	40.9	45.07	40.9	45.07	0	0.	.00000	.00	.00	0.	94	16	A20	.01
1	2A	50.6	62.14	91.5	107.21	2	1320.	.10000	.00	.00	0.	94	13	A20	.01
1	3A	48.8	59.93	140.3	165.26	2	960.	.10000	.00	.00	0.	94	13	A20	.01
1	4A	37.8	48.44	178.1	210.20	2	1272.	.08000	.00	.00	0.	94	12	A20	.01
1	5A	46.9	55.46	225.0	260.90	0	0.	.00000	.00	.00	0.	94	14	A20	.01
1	6A	.0	.00	225.0	260.90	0	0.	.00000	.00	.00	0.	94	99	A20	.00
1	7A	.0	.00	225.0	260.90	0	0.	.00000	.00	.00	0.	94	99	A20	.00
1	8B	55.4	71.00	55.4	71.00	1	1656.	.12000	.00	.00	0.	94	12	A20	.01
1	9B	51.0	60.31	106.4	123.00	0	0.	.00000	.00	.00	0.	94	14	A20	.01
1	10AB	106.4	123.00	331.4	383.90	2	1663.	.08000	.00	.00	0.	94	0	A20	.00
1	11A	46.3	52.94	377.7	428.44	0	0.	.00000	.00	.00	0.	94	15	A20	.01
1	12A	46.7	53.40	424.4	477.62	0	0.	.00000	.00	.00	0.	94	15	A20	.01
1	13A	55.0	65.04	479.4	536.46	2	1584.	.04000	.00	.00	0.	94	14	A20	.01
1	14A	52.8	62.44	532.2	583.40	0	0.	.00000	.00	.00	0.	94	14	A20	.01
1	15A	52.6	57.96	584.8	634.13	2	1085.	.05000	.00	.00	0.	94	16	A20	.01
1	16A	23.5	30.12	608.3	648.00	0	0.	.00000	.00	.00	0.	94	12	A20	.01
1	17A	.0	.00	608.3	648.00	0	0.	.00000	.00	.00	0.	94	99	A20	.00
1	18A	.0	.00	608.3	648.00	0	0.	.00000	.00	.00	0.	94	99	A20	.00
1	19C	26.0	37.08	26.0	37.08	2	1584.	.09000	.00	.00	0.	94	10	A20	.01
1	20C	48.7	50.16	74.7	84.66	0	0.	.00000	.00	.00	0.	94	18	A20	.01
1	21AC	74.7	84.66	683.0	723.72	2	1337.	.05000	.00	.00	0.	94	0	A20	.00
1	22A	49.7	47.02	732.7	762.47	0	0.	.00000	.00	.00	0.	94	21	A20	.01
1	23A	.0	.00	732.7	762.47	0	0.	.00000	.00	.00	0.	94	99	A20	.00
1	24A	.0	.00	732.7	762.47	0	0.	.00000	.00	.00	0.	94	99	A20	.00
1	25D	45.0	51.45	45.0	51.45	0	0.	.00000	.00	.00	0.	94	15	A20	.01
1	26D	31.1	35.56	76.1	87.01	2	1020.	.10000	.00	.00	0.	94	15	A20	.01
1	27D	49.3	54.33	125.4	140.37	2	1290.	.10000	.00	.00	0.	94	16	A20	.01
1	28D	47.5	48.92	172.9	187.79	0	0.	.00000	.00	.00	0.	94	18	A20	.01
1	29D	29.2	34.53	202.1	221.26	2	1232.	.10000	.00	.00	0.	94	14	A20	.01
1	30D	48.6	62.28	250.7	276.35	2	1423.	.08000	.00	.00	0.	94	12	A20	.01
1	31D	41.1	43.79	291.8	315.55	0	0.	.00000	.00	.00	0.	94	17	A20	.01
1	32AD	291.8	315.55	1024.5	1063.22	2	827.	.03000	.00	.00	0.	94	0	A20	.00
1	33A	.0	.00	1024.5	1059.35	0	0.	.00000	.00	.00	0.	94	99	A20	.00
1	34A	.0	.00	1024.5	1059.35	0	0.	.00000	.00	.00	0.	94	99	A20	.00
1	35A	41.3	44.00	1065.8	1097.33	2	488.	.04000	.00	.00	0.	94	17	A20	.01
1	36A	46.4	53.05	1112.2	1134.99	2	1164.	.03000	.00	.00	0.	94	15	A20	.01
1	37A	26.8	34.35	1139.0	1139.96	0	0.	.00000	.00	.00	0.	94	12	A20	.01
1	38A	64.1	62.50	1203.1	1193.77	2	1779.	.04000	.00	.00	0.	94	20	A20	.01
1	39A	41.6	47.56	1244.7	1210.25	0	0.	.00000	.00	.00	0.	94	15	A20	.01
1	40A	.0	.00	1244.7	1210.25	0	0.	.00000	.00	.00	0.	94	99	A20	.00
1	41A	.0	.00	1244.7	1210.25	0	0.	.00000	.00	.00	0.	94	99	A20	.00
1	42E	61.9	57.10	61.9	57.10	0	0.	.00000	.00	.00	0.	94	22	A20	.01
1	43E	50.1	57.28	112.0	114.06	2	1851.	.08000	.00	.00	0.	94	15	A20	.01
1	44E	64.4	62.79	176.4	173.93	0	0.	.00000	.00	.00	0.	94	20	A20	.01
1	45AE	176.4	173.93	1421.1	1360.37	2	1975.	.03000	.00	.00	0.	94	0	A20	.00
1	46A	47.5	48.92	1468.6	1378.29	0	0.	.00000	.00	.00	0.	94	18	A20	.01
1	47A	38.8	33.21	1507.4	1407.12	0	0.	.00000	.00	.00	0.	94	25	A20	.01
1	48A	38.8	34.86	1546.2	1436.16	2	888.	.04000	.00	.00	0.	94	23	A20	.01
1	49A	25.9	34.96	1572.1	1438.59	2	1226.	.03000	.00	.00	0.	94	11	A20	.01
1	50A	68.3	59.85	1640.4	1481.83	0	0.	.00000	.00	.00	0.	94	24	A20	.01
1	51A	.0	.00	1640.4	1481.83	0	0.	.00000	.00	.00	0.	94	99	A20	.00
1	52A	.0	.00	1640.4	1481.83	0	0.	.00000	.00	.00	0.	94	99	A20	.00
1	53F	45.6	50.25	45.6	50.25	1	2348.	.11000	.00	.00	0.	94	16	A20	.01

1	54F	53.1	51.77	98.7	92.62	0	0.	.00000	.00	.00	0.	94	20	A20	.01
1	55AF	98.7	92.62	1739.1	1555.11	2	1223.	.02000	.00	.00	0.	94	0	A20	.00
1	56A	46.0	46.05	1785.1	1566.02	2	1272.	.02000	.00	.00	0.	94	19	A20	.01
1	57A	50.8	49.53	1835.9	1574.84	0	0.	.00000	.00	.00	0.	94	20	A20	.01
1	58A	.0	.00	1835.9	1574.84	0	0.	.00000	.00	.00	0.	94	99	A20	.00
1	59A	.0	.00	1835.9	1574.84	0	0.	.00000	.00	.00	0.	94	99	A20	.00
1	60B	53.0	45.36	53.0	45.36	1	1480.	.11000	.00	.00	0.	94	25	A20	.01
1	61B	38.3	47.03	91.3	85.18	0	0.	.00000	.00	.00	0.	94	13	A20	.01
1	62AB	91.3	85.18	1927.2	1622.31	2	589.	.03000	.00	.00	0.	94	0	A20	.00
1	63A	47.7	49.13	1974.9	1629.89	2	826.	.02000	.00	.00	0.	94	18	A20	.01
1	64A	50.0	59.13	2024.9	1634.94	2	1214.	.03000	.00	.00	0.	94	14	A20	.01
1	65A	45.7	58.57	2070.6	1636.42	2	1165.	.02000	.00	.00	0.	94	12	A20	.01
1	66A	38.3	51.70	2108.9	1636.44	0	0.	.00000	.00	.00	0.	94	11	A20	.01

Program Package Serial Number: 2083

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
Northlake, Exist. 10-yr CLEAR, OUTLET HYD.

HYDROGRAPH AT 1 66A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	20.50	200	20.95	300	21.92	400	23.00
500	24.38	600	26.15	700	28.30	800	31.15	900	35.15
1000	43.04	1050	81.65	1100	191.64	1110	226.10	1120	270.29
1130	333.96	1131	341.29	1132	348.58	1133	356.25	1134	364.29
1135	372.80	1136	381.48	1137	390.93	1138	400.80	1139	410.96
1140	421.77	1141	433.44	1142	445.71	1143	458.55	1144	471.97
1145	486.98	1146	502.68	1147	519.53	1148	537.24	1149	560.33
1150	585.95	1151	615.21	1152	648.02	1153	685.37	1154	722.79
1155	762.96	1156	803.20	1157	844.07	1158	885.13	1159	925.57
1160	962.17	1161	999.80	1162	1036.92	1163	1073.24	1164	1110.17
1165	1151.78	1166	1193.66	1167	1237.70	1168	1284.86	1169	1334.10
1170	1385.47	1171	1438.63	1172	1491.66	1173	1540.55	1174	1582.15
1175	1613.27	1176	1631.43	1177	1636.44	1178	1628.06	1179	1607.04
1180	1575.05	1181	1533.43	1182	1483.83	1183	1427.87	1184	1367.98
1185	1305.29	1186	1241.55	1187	1178.30	1188	1116.19	1189	1055.85
1190	997.92	1191	942.44	1192	889.97	1193	840.40	1194	793.55
1195	749.54	1196	708.52	1197	669.94	1198	634.13	1199	600.63
1200	569.64	1201	540.73	1202	513.59	1203	488.51	1204	464.96
1205	443.16	1206	422.54	1207	403.48	1208	385.72	1209	369.03
1210	353.47	1211	338.87	1212	325.14	1213	311.70	1214	298.72
1215	286.45	1216	274.99	1217	264.47	1218	254.63	1219	245.13
1220	236.11	1221	227.65	1222	219.97	1223	212.73	1224	205.85
1225	199.47	1226	193.51	1227	188.28	1228	183.13	1229	177.90
1230	172.62	1231	167.38	1232	162.19	1233	157.05	1234	152.04
1235	147.13	1236	142.32	1237	137.70	1238	133.18	1239	128.79
1240	124.58	1241	120.51	1242	116.59	1243	112.80	1244	109.21
1245	105.75	1246	102.48	1247	99.40	1248	96.52	1249	93.82
1250	91.42	1251	89.21	1252	87.29	1253	85.55	1254	83.98
1255	82.49	1256	81.26	1257	79.92	1258	78.52	1259	77.05
1260	75.59	1261	74.06	1262	72.55	1263	71.05	1264	69.54
1265	68.06	1266	66.60	1267	65.16	1268	63.73	1269	62.36
1270	61.05	1271	59.72	1272	58.46	1273	57.24	1274	56.04
1275	54.92	1276	53.82	1277	52.74	1278	51.72	1279	50.75
1280	49.84	1281	48.92	1282	48.06	1283	47.25	1284	46.49
1285	45.76	1286	45.06	1287	44.44	1288	43.89	1289	43.38
1290	42.91	1291	42.49	1292	42.10	1293	41.72	1294	41.33
1295	40.95	1296	40.57	1297	40.21	1298	39.85	1299	39.48
1300	39.13	1310	36.24	1320	34.14	1330	32.51	1340	31.12
1350	29.97	1360	28.90	1370	27.97	1380	27.15	1390	26.37
1400	25.67	1420	24.43	1440	23.37	1460	21.04	1500	20.13

TOTAL VOLUME THIS HYDROGRAPH = 175.23(Ac.Ft)

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006    1    1A  94  140.919A17                                        G1
006    1    2A  94  150.616A172 1320 10000
006    1    3A  94  148.816A172  960 10000
006    1    4A  94  137.814A172 1272 08000
006    1    5A  94  146.917A17
006    1    6A  94       99A17
006    1    7A  94       99A17
006    1    8B  94  155.415A171 1656 12000
006    1    9B  94  151.017A17
006    1   10AB 94         A172 1663 08000
006    1   11A  94  146.318A17
006    1   12A  94  146.718A17
006    1   13A  94  155.017A172 1584 04000
006    1   14A  94  152.817A17
006    1   15A  94  152.619A172 1085 05000
006    1   16A  94  123.515A17
006    1   17A  94       99A17
006    1   18A  94       99A17
006    1   19C  94  126.011A172 1584 09000
006    1   20C  94  148.722A17
006    1   21AC 94         A172 1337 05000
006    1   22A  94  149.724A17
006    1   23A  94       99A17
006    1   24A  94       99A17
006    1   25D  94  145.017A17
006    1   26D  94  131.118A172 1020 10000
006    1   27D  94  149.318A172 1290 10000
006    1   28D  94  147.522A17
006    1   29D  94  129.217A172 1232 10000
006    1   30D  94  148.615A172 1423 08000
006    1   31D  94  141.120A17
006    1   32AD 94         A172  827 03000
006    1   33A  94       99A17
006    1   34A  94       99A17
006    1   35A  94  141.320A172  488 04000
006    1   36A  94  146.417A172 1164 03000
006    1   37A  94  126.815A17
006    1   38A  94  164.124A172 1779 04000
006    1   39A  94  141.617A17
006    1   40A  94       99A17
006    1   41A  94       99A17
006    1   42E  94  161.926A17
006    1   43E  94  150.118A172 1851 08000
006    1   44E  94  164.424A17
006    1   45AE 94         A172 1975 03000
006    1   46A  94  147.521A17
006    1   47A  94  138.829A17
006    1   48A  94  138.828A172  888 04000
006    1   49A  94  125.913A172 1226 03000
006    1   50A  94  168.328A17
006    1   51A  94       99A17
006    1   52A  94       99A17
006    1   53F  94  145.620A171 2348 11000
006    1   54F  94  153.124A17
006    1   55AF 94         A172 1223 02000
006    1   56A  94  146.022A172 1272 02000
006    1   57A  94  150.824A17
006    1   58A  94       99A17
006    1   59A  94       99A17
006    1   60B  94  153.029A171 1480 11000
006    1   61B  94  138.316A17
006    1   62AB 94         A172  589 03000
006    1   63A  94  147.721A172  826 02000
006    1   64A  94  150.016A172 1214 03000
006    1   65A  94  145.714A172 1165 02000
006    1   66A  94  138.313A17                                      2  2
```

Program Package Serial Number: 2083

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild_MORA\scr_soilx_34.dat

Northlake, Exist. 5-yr CLEAR

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM RAIN ZONE	DAY 4 PCT IMPV
1	1A	40.9	33.65	40.9	33.65	0	0.	.00000	.00	.00	0.	94	19	A17	.01
1	2A	50.6	45.94	91.5	79.60	2	1320.	.10000	.00	.00	0.	94	16	A17	.01
1	3A	48.8	44.31	140.3	122.19	2	960.	.10000	.00	.00	0.	94	16	A17	.01
1	4A	37.8	36.93	178.1	157.00	2	1272.	.08000	.00	.00	0.	94	14	A17	.01
1	5A	46.9	41.10	225.0	194.79	0	0.	.00000	.00	.00	0.	94	17	A17	.01
1	6A	.0	.00	225.0	194.79	0	0.	.00000	.00	.00	0.	94	99	A17	.00
1	7A	.0	.00	225.0	194.79	0	0.	.00000	.00	.00	0.	94	99	A17	.00
1	8B	55.4	52.30	55.4	52.30	1	1656.	.12000	.00	.00	0.	94	15	A17	.01
1	9B	51.0	44.69	106.4	90.98	0	0.	.00000	.00	.00	0.	94	17	A17	.01
1	10AB	106.4	90.98	331.4	285.78	2	1663.	.08000	.00	.00	0.	94	0	A17	.00
1	11A	46.3	39.26	377.7	319.94	0	0.	.00000	.00	.00	0.	94	18	A17	.01
1	12A	46.7	39.60	424.4	356.17	0	0.	.00000	.00	.00	0.	94	18	A17	.01
1	13A	55.0	48.19	479.4	400.62	2	1584.	.04000	.00	.00	0.	94	17	A17	.01
1	14A	52.8	46.27	532.2	435.80	0	0.	.00000	.00	.00	0.	94	17	A17	.01
1	15A	52.6	43.28	584.8	474.71	2	1085.	.05000	.00	.00	0.	94	19	A17	.01
1	16A	23.5	22.18	608.3	488.17	0	0.	.00000	.00	.00	0.	94	15	A17	.01
1	17A	.0	.00	608.3	488.17	0	0.	.00000	.00	.00	0.	94	99	A17	.00
1	18A	.0	.00	608.3	488.17	0	0.	.00000	.00	.00	0.	94	99	A17	.00
1	19C	26.0	29.05	26.0	29.05	2	1584.	.09000	.00	.00	0.	94	11	A17	.01
1	20C	48.7	36.68	74.7	63.96	0	0.	.00000	.00	.00	0.	94	22	A17	.01
1	21AC	74.7	63.96	683.0	543.67	2	1337.	.05000	.00	.00	0.	94	0	A17	.00
1	22A	49.7	35.62	732.7	573.97	0	0.	.00000	.00	.00	0.	94	24	A17	.01
1	23A	.0	.00	732.7	573.97	0	0.	.00000	.00	.00	0.	94	99	A17	.00
1	24A	.0	.00	732.7	573.97	0	0.	.00000	.00	.00	0.	94	99	A17	.00
1	25D	45.0	39.43	45.0	39.43	0	0.	.00000	.00	.00	0.	94	17	A17	.01
1	26D	31.1	26.37	76.1	65.81	2	1020.	.10000	.00	.00	0.	94	18	A17	.01
1	27D	49.3	41.81	125.4	106.90	2	1290.	.10000	.00	.00	0.	94	18	A17	.01
1	28D	47.5	35.77	172.9	141.74	0	0.	.00000	.00	.00	0.	94	22	A17	.01
1	29D	29.2	25.59	202.1	166.45	2	1232.	.10000	.00	.00	0.	94	17	A17	.01
1	30D	48.6	45.88	250.7	207.97	2	1423.	.08000	.00	.00	0.	94	15	A17	.01
1	31D	41.1	32.77	291.8	237.72	0	0.	.00000	.00	.00	0.	94	20	A17	.01
1	32AD	291.8	237.72	1024.5	802.96	2	827.	.03000	.00	.00	0.	94	0	A17	.00
1	33A	.0	.00	1024.5	800.19	0	0.	.00000	.00	.00	0.	94	99	A17	.00
1	34A	.0	.00	1024.5	800.19	0	0.	.00000	.00	.00	0.	94	99	A17	.00
1	35A	41.3	32.93	1065.8	828.49	2	488.	.04000	.00	.00	0.	94	20	A17	.01
1	36A	46.4	40.66	1112.2	857.51	2	1164.	.03000	.00	.00	0.	94	17	A17	.01
1	37A	26.8	25.30	1139.0	863.13	0	0.	.00000	.00	.00	0.	94	15	A17	.01
1	38A	64.1	45.95	1203.1	903.91	2	1779.	.04000	.00	.00	0.	94	24	A17	.01
1	39A	41.6	36.45	1244.7	915.99	0	0.	.00000	.00	.00	0.	94	17	A17	.01
1	40A	.0	.00	1244.7	915.99	0	0.	.00000	.00	.00	0.	94	99	A17	.00
1	41A	.0	.00	1244.7	915.99	0	0.	.00000	.00	.00	0.	94	99	A17	.00
1	42E	61.9	42.21	61.9	42.21	0	0.	.00000	.00	.00	0.	94	26	A17	.01
1	43E	50.1	42.49	112.0	84.41	2	1851.	.08000	.00	.00	0.	94	18	A17	.01
1	44E	64.4	46.16	176.4	128.96	0	0.	.00000	.00	.00	0.	94	24	A17	.01
1	45AE	176.4	128.96	1421.1	1029.75	2	1975.	.03000	.00	.00	0.	94	0	A17	.00

							EX5							
1	46A	47.5	36.77	1468.6	1045.23	0	0.	.00000	.00	.00	0.	94	21	A17	.01
1	47A	38.8	24.78	1507.4	1066.88	0	0.	.00000	.00	.00	0.	94	29	A17	.01
1	48A	38.8	25.30	1546.2	1088.72	2	888.	.04000	.00	.00	0.	94	28	A17	.01
1	49A	25.9	26.41	1572.1	1090.45	2	1226.	.03000	.00	.00	0.	94	13	A17	.01
1	50A	68.3	44.53	1640.4	1123.15	0	0.	.00000	.00	.00	0.	94	28	A17	.01
1	51A	.0	.00	1640.4	1123.15	0	0.	.00000	.00	.00	0.	94	99	A17	.00
1	52A	.0	.00	1640.4	1123.15	0	0.	.00000	.00	.00	0.	94	99	A17	.00
1	53F	45.6	36.35	45.6	36.35	1	2348.	.11000	.00	.00	0.	94	20	A17	.01
1	54F	53.1	38.06	98.7	68.23	0	0.	.00000	.00	.00	0.	94	24	A17	.01
1	55AF	98.7	68.23	1739.1	1181.92	2	1223.	.02000	.00	.00	0.	94	0	A17	.00
1	56A	46.0	34.64	1785.1	1189.42	2	1272.	.02000	.00	.00	0.	94	22	A17	.01
1	57A	50.8	36.41	1835.9	1200.52	0	0.	.00000	.00	.00	0.	94	24	A17	.01
1	58A	.0	.00	1835.9	1200.52	0	0.	.00000	.00	.00	0.	94	99	A17	.00
1	59A	.0	.00	1835.9	1200.52	0	0.	.00000	.00	.00	0.	94	99	A17	.00
1	60B	53.0	33.85	53.0	33.85	1	1480.	.11000	.00	.00	0.	94	29	A17	.01
1	61B	38.3	34.78	91.3	63.89	0	0.	.00000	.00	.00	0.	94	16	A17	.01
1	62AB	91.3	63.89	1927.2	1235.22	2	589.	.03000	.00	.00	0.	94	0	A17	.00
1	63A	47.7	36.93	1974.9	1240.10	2	826.	.02000	.00	.00	0.	94	21	A17	.01
1	64A	50.0	45.40	2024.9	1243.36	2	1214.	.03000	.00	.00	0.	94	16	A17	.01
1	65A	45.7	44.65	2070.6	1244.20	2	1165.	.02000	.00	.00	0.	94	14	A17	.01
1	66A	38.3	39.05	2108.9	1243.49	0	0.	.00000	.00	.00	0.	94	13	A17	.01

Program Package Serial Number: 2083

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
Northlake, Exist. 5-yr CLEAR, OUTLET HYD.
HYDROGRAPH AT 1 66A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	17.49	200	17.76	300	18.56	400	19.57
500	20.70	600	22.17	700	23.99	800	26.39	900	29.83
1000	35.16	1050	47.01	1100	106.86	1110	130.87	1120	163.14
1130	210.78	1131	216.32	1132	221.87	1133	227.65	1134	233.74
1135	240.10	1136	246.73	1137	253.79	1138	261.15	1139	268.89
1140	277.02	1141	285.85	1142	294.96	1143	304.74	1144	314.94
1145	326.17	1146	338.06	1147	350.56	1148	363.87	1149	381.09
1150	399.54	1151	420.56	1152	444.13	1153	470.46	1154	496.39
1155	524.46	1156	553.17	1157	582.62	1158	611.70	1159	640.78
1160	669.56	1161	698.32	1162	724.68	1163	751.78	1164	778.53
1165	804.66	1166	831.08	1167	860.93	1168	891.33	1169	923.42
1170	957.22	1171	992.56	1172	1029.04	1173	1067.09	1174	1105.55
1175	1142.73	1176	1177.04	1177	1205.64	1178	1226.82	1179	1239.66
1180	1243.49	1181	1238.46	1182	1225.62	1183	1206.02	1184	1180.11
1185	1149.45	1186	1114.08	1187	1075.52	1188	1034.06	1189	990.73
1190	946.36	1191	901.86	1192	857.52	1193	814.10	1194	772.07
1195	731.43	1196	692.73	1197	655.86	1198	620.74	1199	587.50
1200	556.10	1201	526.56	1202	498.78	1203	472.70	1204	448.19
1205	425.27	1206	403.82	1207	383.74	1208	364.92	1209	347.34
1210	330.86	1211	315.37	1212	300.89	1213	287.28	1214	274.50
1215	262.52	1216	251.26	1217	240.73	1218	230.81	1219	221.43
1220	212.59	1221	204.07	1222	195.70	1223	187.65	1224	180.04
1225	172.93	1226	166.26	1227	160.18	1228	154.46	1229	148.89
1230	143.55	1231	138.56	1232	133.84	1233	129.50	1234	125.49
1235	121.65	1236	117.97	1237	114.56	1238	111.36	1239	108.35
1240	105.67	1241	102.94	1242	100.19	1243	97.41	1244	94.63
1245	91.90	1246	89.20	1247	86.55	1248	83.94	1249	81.42
1250	78.97	1251	76.60	1252	74.28	1253	72.07	1254	69.95
1255	67.91	1256	65.95	1257	64.07	1258	62.27	1259	60.56
1260	58.95	1261	57.41	1262	55.97	1263	54.61	1264	53.35
1265	52.18	1266	51.11	1267	50.13	1268	49.26	1269	48.48
1270	47.76	1271	47.11	1272	46.56	1273	45.96	1274	45.38
1275	44.79	1276	44.20	1277	43.61	1278	43.03	1279	42.45
1280	41.86	1281	41.30	1282	40.75	1283	40.21	1284	39.69
1285	39.18	1286	38.68	1287	38.21	1288	37.74	1289	37.30
1290	36.85	1291	36.45	1292	36.06	1293	35.72	1294	35.35
1295	35.03	1296	34.74	1297	34.45	1298	34.15	1299	33.90
1300	33.63	1310	31.32	1320	29.58	1330	28.18	1340	26.95
1350	25.94	1360	25.00	1370	24.18	1380	23.44	1390	22.76
1400	22.11	1420	21.04	1440	20.10	1460	18.14	1500	17.17

TOTAL VOLUME THIS HYDROGRAPH = 136.00(Ac.Ft)

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006     1    1A  94  140.930A11                                        G1
006     1    2A  94  150.624A112 1320 10000
006     1    3A  94  148.824A112  960 10000
006     1    4A  94  137.821A112 1272 08000
006     1    5A  94  146.927A11
006     1    6A  94       99A11
006     1    7A  94       99A11
006     1    8B  94  155.423A111 1656 12000
006     1    9B  94  151.026A11
006     1   10AB 94         A112 1663 08000
006     1   11A  94  146.329A11
006     1   12A  94  146.729A11
006     1   13A  94  155.026A112 1584 04000
006     1   14A  94  152.827A11
006     1   15A  94  152.630A112 1085 05000
006     1   16A  94  123.522A11
006     1   17A  94       99A11
006     1   18A  94       99A11
006     1   19C  94  126.017A112 1584 09000
006     1   20C  94  148.730A11
006     1   21AC 94         A112 1337 05000
006     1   22A  94  149.730A11
006     1   23A  94       99A11
006     1   24A  94       99A11
006     1   25D  94  145.028A11
006     1   26D  94  131.129A112 1020 10000
006     1   27D  94  149.329A112 1290 10000
006     1   28D  94  147.530A11
006     1   29D  94  129.227A112 1232 10000
006     1   30D  94  148.623A112 1423 08000
006     1   31D  94  141.130A11
006     1   32AD 94         A112  827 03000
006     1   33A  94       99A11
006     1   34A  94       99A11
006     1   35A  94  141.330A112  488 04000
006     1   36A  94  146.427A112 1164 03000
006     1   37A  94  126.823A11
006     1   38A  94  164.130A112 1779 04000
006     1   39A  94  141.627A11
006     1   40A  94       99A11
006     1   41A  94       99A11
006     1   42E  94  161.930A11
006     1   43E  94  150.128A112 1851 08000
006     1   44E  94  164.430A11
006     1   45AE 94         A112 1975 03000
006     1   46A  94  147.530A11
006     1   47A  94  138.830A11
006     1   48A  94  138.830A112  888 04000
006     1   49A  94  125.920A112 1226 03000
006     1   50A  94  168.330A11
006     1   51A  94       99A11
006     1   52A  94       99A11
006     1   53F  94  145.630A111 2348 11000
006     1   54F  94  153.130A11
006     1   55AF 94         A112 1223 02000
006     1   56A  94  146.030A112 1272 02000
006     1   57A  94  150.830A11
006     1   58A  94       99A11
006     1   59A  94       99A11
006     1   60B  94  153.030A111 1480 11000
006     1   61B  94  138.324A11
006     1   62AB 94         A112  589 03000
006     1   63A  94  147.730A112  826 02000
006     1   64A  94  150.025A112 1214 03000
006     1   65A  94  145.721A112 1165 02000
006     1   66A  94  138.320A11                                      2  2
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Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild_MORA\scr_soilx_34.dat

Northlake, Exist. 2-yr CLEAR

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM DAY 4 RAIN ZONE	PCT IMPV
1	1A	40.9	14.19	40.9	14.19	0	0.	.00000	.00	.00	0.	94	30	A11	.01
1	2A	50.6	20.40	91.5	34.58	2	1320.	.10000	.00	.00	0.	94	24	A11	.01
1	3A	48.8	19.67	140.3	53.65	2	960.	.10000	.00	.00	0.	94	24	A11	.01
1	4A	37.8	16.63	178.1	69.44	2	1272.	.08000	.00	.00	0.	94	21	A11	.01
1	5A	46.9	17.56	225.0	85.81	0	0.	.00000	.00	.00	0.	94	27	A11	.01
1	6A	.0	.00	225.0	85.81	0	0.	.00000	.00	.00	0.	94	99	A11	.00
1	7A	.0	.00	225.0	85.81	0	0.	.00000	.00	.00	0.	94	99	A11	.00
1	8B	55.4	23.04	55.4	23.04	1	1656.	.12000	.00	.00	0.	94	23	A11	.01
1	9B	51.0	19.51	106.4	40.12	0	0.	.00000	.00	.00	0.	94	26	A11	.01
1	10AB	106.4	40.12	331.4	125.87	2	1663.	.08000	.00	.00	0.	94	0	A11	.00
1	11A	46.3	16.46	377.7	140.47	0	0.	.00000	.00	.00	0.	94	29	A11	.01
1	12A	46.7	16.61	424.4	156.02	0	0.	.00000	.00	.00	0.	94	29	A11	.01
1	13A	55.0	21.04	479.4	175.46	2	1584.	.04000	.00	.00	0.	94	26	A11	.01
1	14A	52.8	19.77	532.2	191.32	0	0.	.00000	.00	.00	0.	94	27	A11	.01
1	15A	52.6	18.24	584.8	207.95	2	1085.	.05000	.00	.00	0.	94	30	A11	.01
1	16A	23.5	10.04	608.3	214.87	0	0.	.00000	.00	.00	0.	94	22	A11	.01
1	17A	.0	.00	608.3	214.87	0	0.	.00000	.00	.00	0.	94	99	A11	.00
1	18A	.0	.00	608.3	214.87	0	0.	.00000	.00	.00	0.	94	99	A11	.00
1	19C	26.0	13.05	26.0	13.05	2	1584.	.09000	.00	.00	0.	94	17	A11	.01
1	20C	48.7	16.89	74.7	29.26	0	0.	.00000	.00	.00	0.	94	30	A11	.01
1	21AC	74.7	29.26	683.0	240.31	2	1337.	.05000	.00	.00	0.	94	0	A11	.00
1	22A	49.7	17.24	732.7	254.27	0	0.	.00000	.00	.00	0.	94	30	A11	.01
1	23A	.0	.00	732.7	254.27	0	0.	.00000	.00	.00	0.	94	99	A11	.00
1	24A	.0	.00	732.7	254.27	0	0.	.00000	.00	.00	0.	94	99	A11	.00
1	25D	45.0	16.42	45.0	16.42	0	0.	.00000	.00	.00	0.	94	28	A11	.01
1	26D	31.1	11.06	76.1	27.48	2	1020.	.10000	.00	.00	0.	94	29	A11	.01
1	27D	49.3	17.53	125.4	44.79	2	1290.	.10000	.00	.00	0.	94	29	A11	.01
1	28D	47.5	16.47	172.9	60.71	0	0.	.00000	.00	.00	0.	94	30	A11	.01
1	29D	29.2	10.93	202.1	71.35	2	1232.	.10000	.00	.00	0.	94	27	A11	.01
1	30D	48.6	20.21	250.7	90.04	2	1423.	.08000	.00	.00	0.	94	23	A11	.01
1	31D	41.1	14.25	291.8	103.05	0	0.	.00000	.00	.00	0.	94	30	A11	.01
1	32AD	291.8	103.05	1024.5	353.13	2	827.	.03000	.00	.00	0.	94	0	A11	.00
1	33A	.0	.00	1024.5	352.51	0	0.	.00000	.00	.00	0.	94	99	A11	.00
1	34A	.0	.00	1024.5	352.51	0	0.	.00000	.00	.00	0.	94	99	A11	.00
1	35A	41.3	14.32	1065.8	364.66	2	488.	.04000	.00	.00	0.	94	30	A11	.01
1	36A	46.4	17.37	1112.2	378.12	2	1164.	.03000	.00	.00	0.	94	27	A11	.01
1	37A	26.8	11.15	1139.0	382.41	0	0.	.00000	.00	.00	0.	94	23	A11	.01
1	38A	64.1	22.23	1203.1	400.40	2	1779.	.04000	.00	.00	0.	94	30	A11	.01
1	39A	41.6	15.58	1244.7	408.61	0	0.	.00000	.00	.00	0.	94	27	A11	.01
1	40A	.0	.00	1244.7	408.61	0	0.	.00000	.00	.00	0.	94	99	A11	.00
1	41A	.0	.00	1244.7	408.61	0	0.	.00000	.00	.00	0.	94	99	A11	.00
1	42E	61.9	21.47	61.9	21.47	0	0.	.00000	.00	.00	0.	94	30	A11	.01
1	43E	50.1	18.28	112.0	39.75	2	1851.	.08000	.00	.00	0.	94	28	A11	.01
1	44E	64.4	22.34	176.4	61.01	0	0.	.00000	.00	.00	0.	94	30	A11	.01
1	45AE	176.4	61.01	1421.1	459.32	2	1975.	.03000	.00	.00	0.	94	0	A11	.00

							EX2								
1	46A	47.5	16.47	1468.6	466.31	0	0.	.00000	.00	.00	0.	94	30	A11	.01
1	47A	38.8	13.46	1507.4	475.30	0	0.	.00000	.00	.00	0.	94	30	A11	.01
1	48A	38.8	13.46	1546.2	484.29	2	888.	.04000	.00	.00	0.	94	30	A11	.01
1	49A	25.9	11.76	1572.1	484.17	2	1226.	.03000	.00	.00	0.	94	20	A11	.01
1	50A	68.3	23.69	1640.4	494.28	0	0.	.00000	.00	.00	0.	94	30	A11	.01
1	51A	.0	.00	1640.4	494.28	0	0.	.00000	.00	.00	0.	94	99	A11	.00
1	52A	.0	.00	1640.4	494.28	0	0.	.00000	.00	.00	0.	94	99	A11	.00
1	53F	45.6	15.82	45.6	15.82	1	2348.	.11000	.00	.00	0.	94	30	A11	.01
1	54F	53.1	18.42	98.7	30.56	0	0.	.00000	.00	.00	0.	94	30	A11	.01
1	55AF	98.7	30.56	1739.1	518.64	2	1223.	.02000	.00	.00	0.	94	0	A11	.00
1	56A	46.0	15.95	1785.1	521.25	2	1272.	.02000	.00	.00	0.	94	30	A11	.01
1	57A	50.8	17.62	1835.9	521.04	0	0.	.00000	.00	.00	0.	94	30	A11	.01
1	58A	.0	.00	1835.9	521.04	0	0.	.00000	.00	.00	0.	94	99	A11	.00
1	59A	.0	.00	1835.9	521.04	0	0.	.00000	.00	.00	0.	94	99	A11	.00
1	60B	53.0	18.38	53.0	18.38	1	1480.	.11000	.00	.00	0.	94	30	A11	.01
1	61B	38.3	15.44	91.3	31.83	0	0.	.00000	.00	.00	0.	94	24	A11	.01
1	62AB	91.3	31.83	1927.2	535.39	2	589.	.03000	.00	.00	0.	94	0	A11	.00
1	63A	47.7	16.54	1974.9	536.86	2	826.	.02000	.00	.00	0.	94	30	A11	.01
1	64A	50.0	19.68	2024.9	536.63	2	1214.	.03000	.00	.00	0.	94	25	A11	.01
1	65A	45.7	20.11	2070.6	536.11	2	1165.	.02000	.00	.00	0.	94	21	A11	.01
1	66A	38.3	17.38	2108.9	535.05	0	0.	.00000	.00	.00	0.	94	20	A11	.01

Program Package Serial Number: 2083
02/23/15 FILE: EX2 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 3
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
Northlake, Exist. 2-yr CLEAR, OUTLET HYD.
HYDROGRAPH AT 1 66A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	11.34	200	11.49	300	11.95	400	12.60
500	13.33	600	14.25	700	15.43	800	16.95	900	19.11
1000	22.47	1050	25.54	1100	31.06	1110	32.57	1120	36.85
1130	44.71	1131	45.71	1132	46.80	1133	47.84	1134	49.05
1135	50.34	1136	51.72	1137	53.20	1138	54.77	1139	56.54
1140	58.32	1141	60.36	1142	62.53	1143	64.74	1144	67.23
1145	69.97	1146	72.98	1147	76.21	1148	79.60	1149	84.56
1150	89.83	1151	95.68	1152	102.25	1153	109.71	1154	116.70
1155	124.26	1156	132.52	1157	141.14	1158	150.51	1159	160.17
1160	170.54	1161	180.98	1162	191.73	1163	202.94	1164	214.48
1165	226.37	1166	238.93	1167	252.01	1168	265.74	1169	278.59
1170	291.96	1171	305.56	1172	319.10	1173	332.71	1174	347.69
1175	363.08	1176	378.99	1177	395.48	1178	412.12	1179	428.80
1180	445.11	1181	460.91	1182	476.20	1183	490.65	1184	503.74
1185	514.98	1186	523.93	1187	530.32	1188	534.00	1189	535.05
1190	533.63	1191	529.88	1192	524.00	1193	516.21	1194	506.78
1195	496.03	1196	484.23	1197	471.65	1198	458.48	1199	444.95
1200	431.15	1201	417.24	1202	403.32	1203	389.43	1204	375.66
1205	362.04	1206	348.65	1207	335.51	1208	322.66	1209	310.11
1210	297.89	1211	286.00	1212	274.45	1213	263.31	1214	252.54
1215	242.13	1216	232.09	1217	222.48	1218	213.25	1219	204.36
1220	195.86	1221	187.74	1222	179.97	1223	172.51	1224	165.45
1225	158.70	1226	152.24	1227	146.14	1228	140.28	1229	134.77
1230	129.47	1231	124.46	1232	119.69	1233	115.16	1234	110.86
1235	106.76	1236	102.89	1237	99.18	1238	95.68	1239	92.33
1240	89.18	1241	86.15	1242	83.28	1243	80.55	1244	77.94
1245	75.46	1246	73.10	1247	70.84	1248	68.71	1249	66.65
1250	64.70	1251	62.85	1252	61.07	1253	59.38	1254	57.76
1255	56.20	1256	54.72	1257	53.32	1258	51.95	1259	50.65
1260	49.41	1261	48.21	1262	47.04	1263	45.93	1264	44.87
1265	43.80	1266	42.77	1267	41.77	1268	40.80	1269	39.86
1270	38.97	1271	38.10	1272	37.31	1273	36.52	1274	35.81
1275	35.13	1276	34.49	1277	33.84	1278	33.24	1279	32.67
1280	32.11	1281	31.60	1282	31.10	1283	30.63	1284	30.15
1285	29.69	1286	29.25	1287	28.81	1288	28.39	1289	27.98
1290	27.59	1291	27.21	1292	26.84	1293	26.49	1294	26.16
1295	25.85	1296	25.54	1297	25.26	1298	24.99	1299	24.72
1300	24.46	1310	22.32	1320	20.82	1330	19.59	1340	18.59
1350	17.77	1360	17.04	1370	16.42	1380	15.87	1390	15.36
1400	14.89	1420	14.11	1440	13.41	1460	12.22	1500	11.14

TOTAL VOLUME THIS HYDROGRAPH = 69.41(Ac.Ft)

Section 4

TC Calculator Results

VTM 73336, Northlake Phase 1

Proposed Condition

Mixed 50 & 25-yr Design Frequency

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
DESIGN	1A	40.9	0.01	50	94	2501	0.2	5.8	12	2.29	0.86	0.86	80.55
DESIGN	2A	50.6	0.01	50	94	2085	0.24	5.8	10	2.5	0.86	0.86	108.79
DESIGN	3A	48.8	0.01	50	94	1886	0.17	5.8	10	2.5	0.86	0.86	104.92
DESIGN	4A	37.8	0.01	50	94	1577	0.19	5.8	9	2.63	0.87	0.87	86.49
DESIGN	5A	46.9	0.01	50	94	2013	0.15	5.8	11	2.39	0.86	0.86	96.4
DESIGN	8B	55.4	0.01	50	94	1990	0.29	5.8	10	2.5	0.86	0.86	119.11
DESIGN	9B	51	0.01	50	94	2230	0.22	5.8	11	2.39	0.86	0.86	104.83
DESIGN	11A	46.3	0.01	50	94	2402	0.19	5.8	12	2.29	0.86	0.86	91.18
DESIGN	12A	46.7	0.01	50	94	2523	0.24	5.8	12	2.29	0.86	0.86	91.97
DESIGN	13A	55	0.01	50	94	2188	0.21	5.8	11	2.39	0.86	0.86	113.05
DESIGN	14A	52.8	0.01	50	94	2314	0.24	5.8	11	2.39	0.86	0.86	108.53
DESIGN	15A	52.6	0.01	50	94	2494	0.18	5.8	12	2.29	0.86	0.86	103.59
DESIGN	16A	23.5	0.01	50	94	1862	0.24	5.8	10	2.5	0.86	0.86	50.53
DESIGN	19C	26	0.01	50	94	1296	0.28	5.8	7	2.95	0.88	0.88	67.5
DESIGN	20C	48.7	0.01	50	94	2971	0.16	5.8	14	2.13	0.85	0.85	88.17
DESIGN	22A	49.7	0.01	50	94	3412	0.15	5.8	15	2.06	0.85	0.85	87.02
DESIGN	25D	45	0.01	50	94	2381	0.23	5.8	11	2.39	0.86	0.86	92.49
DESIGN	26D	31.1	0.01	50	94	2454	0.22	5.8	12	2.29	0.86	0.86	61.25
DESIGN	27D	49.3	0.01	50	94	2374	0.18	5.8	12	2.29	0.86	0.86	97.09
DESIGN	28D	47.5	0.01	50	94	2966	0.16	5.8	14	2.13	0.85	0.85	86
DESIGN	29D	29.2	0.01	50	94	2182	0.19	5.8	11	2.39	0.86	0.86	60.02
DESIGN	30D	48.6	0.01	50	94	1877	0.24	5.8	10	2.5	0.86	0.86	104.49
DESIGN	31D	41.1	0.01	50	94	2744	0.19	5.8	13	2.21	0.85	0.85	77.21
DESIGN	35A	41.3	0.01	50	94	2799	0.18	5.8	13	2.21	0.85	0.85	77.58
DESIGN	36A	46.4	0.01	50	94	2330	0.22	5.8	11	2.39	0.86	0.86	95.37
DESIGN	37A	26	0.01	50	94	1890	0.24	5.8	10	2.5	0.86	0.86	57.62
DESIGN	38A	64.1	0.01	50	94	3294	0.14	5.8	15	2.06	0.85	0.85	112.24
DESIGN	39A	56.1	0.01	50	94	2202	0.1	5.8	12	2.29	0.86	0.86	114.62
DESIGN	42E	37.8	0.02	50	94	2151	0.07	5.8	13	2.21	0.85	0.85	71.01
DESIGN	43F	59.1	0.01	50	94	3511	0.15	5.8	16	2	0.85	0.85	100.47
DESIGN	44F	52.1	0.01	50	94	2154	0.17	5.8	11	2.39	0.86	0.86	107.09
DESIGN	50A	10.8	0.01	50	94	1130	0.27	5.8	7	2.95	0.88	0.88	28.04
DESIGN	51A	13.3	0.01	50	94	1030	0.43	5.8	6	3.18	0.89	0.89	37.64
DESIGN	52A	11.9	0.01	50	94	836	0.45	5.8	5	3.46	0.89	0.89	36.64
DESIGN	53A	15.4	0.01	50	94	1212	0.34	5.8	7	2.95	0.88	0.88	39.98
DESIGN	54A	9.7	0.01	50	94	833	0.26	5.8	6	3.18	0.89	0.89	27.45

TC Calculator Results

VTM 73336, Northlake Phase 1

Proposed Condition

DESIGN	55B	56.4	0.15	50	94	1150	0.05	5.8	9	2.63	0.87	0.87	129.05
DESIGN	57A	20.8	0.02	50	94	1272	0.25	5.8	7	2.95	0.88	0.88	54
DESIGN	58A	7	0.01	50	94	636	0.24	5.8	5	3.46	0.89	0.89	21.56
DESIGN	59A	9.6	0.01	50	94	180	0.11	5.8	5	3.46	0.89	0.89	29.56
DESIGN	60A	4.2	0.01	50	94	1103	0.19	5.8	7	2.95	0.88	0.88	10.9
DESIGN	61A	44.3	0.01	50	94	636	0.25	5.8	11	2.39	0.86	0.86	91.05
DESIGN	62A	37.9	0.01	50	94	1795	0.16	5.8	10	2.5	0.86	0.86	81.49
DESIGN	65C	40.4	0.75	25	94	2025	0.05	5.1	14	1.88	0.84	0.89	67.6
DESIGN	66C	39.8	0.5	25	94	4356	0.03	5.1	26	1.4	0.8	0.85	47.36
DESIGN	67C	51	0.6	25	94	3142	0.06	5.1	18	1.67	0.82	0.87	74.1
DESIGN	68C	34.8	0.4	25	94	3412	0.02	5.1	24	1.46	0.8	0.84	42.68
DESIGN	69C	13.1	0.5	25	94	1145	0.04	5.1	10	2.2	0.85	0.88	25.36
DESIGN	70C	63.7	0.75	25	94	4485	0.04	5.1	25	1.43	0.8	0.88	80.16
DESIGN	71C	10	0.5	25	94	1322	0.07	5.1	10	2.2	0.85	0.88	19.36
DESIGN	73D	7	0.4	25	94	564	0.02	5.1	7	2.6	0.87	0.88	16.02
DESIGN	74D	3.4	0.7	25	94	1762	0.07	5.1	12	2.02	0.85	0.89	6.11
DESIGN	75D	23.6	0.6	25	94	2254	0.03	5.1	17	1.71	0.82	0.87	35.11
DESIGN	76D	29.3	0.86	50	94	1926	0.02	5.8	15	2.06	0.85	0.89	53.72
DESIGN	78E	15.8	0.5	25	94	2787	0.07	5.1	17	1.71	0.82	0.86	23.24
DESIGN	79E	17.4	0.1	25	94	2252	0.08	5.1	14	1.88	0.84	0.85	27.81
DESIGN	80E	5	0.7	25	94	1611	0.05	5.1	12	2.02	0.85	0.89	8.99
DESIGN	84F	21.4	0.5	25	94	1683	0.06	5.1	12	2.02	0.85	0.88	38.04
DESIGN	85F	27.1	0.5	25	94	1439	0.06	5.1	11	2.1	0.85	0.88	50.08
DESIGN	86F	14.6	0.5	25	94	968	0.04	5.1	9	2.31	0.86	0.88	29.68
DESIGN	88C	34.4	0.5	50	94	1818	0.03	5.8	13	2.21	0.85	0.88	66.9
DESIGN	89C	23.7	0.7	25	94	2887	0.04	5.1	19	1.62	0.82	0.88	33.79
DESIGN	90C	6.9	0.02	50	94	1127	0.15	5.8	7	2.95	0.88	0.88	17.91
DESIGN	93C	2.8	0.02	50	94	409	0.1	5.8	5	3.46	0.89	0.89	8.62
DESIGN	95C	1.9	0.02	50	94	216	0.1	5.8	5	3.46	0.89	0.89	5.85
DESIGN	97C	1.2	0.02	50	94	198	0.1	5.8	5	3.46	0.89	0.89	3.7
DESIGN	99C	4.3	0.02	50	94	424	0.1	5.8	5	3.46	0.89	0.89	13.24
DESIGN	102A	16	0.01	50	94	703	0.27	5.8	5	3.46	0.89	0.89	49.27
DESIGN	200A	26.7	0.5	25	94	3387	0.04	5.1	21	1.55	0.81	0.86	35.59
DESIGN	201A	21.3	0.82	25	94	1135	0.1145	5.1	8	2.43	0.86	0.89	46.34
DESIGN	OP1	2.5	0.91	50	94	250	0.05	5.8	5	3.46	0.89	0.9	7.78
DESIGN	OP5	5	0.30	50	94	750	0.28	5.8	5	3.46	0.89	0.89	15.48

Program Package Serial Number: 2083
12/07/16 FILE: prd INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 1
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\scr_soilx_34.dat
Northlake Phase 1, Prop. 50- & 25-yr Mixed Burn

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM RAIN ZONE	DAY 4 PCT IMPV
1	1A	40.9	81.79	40.9	81.79	0	0.	.00000	.00	.00	0.	294	12	A29	.01
1	2A	50.6	111.78	91.5	193.57	2	1320.	.10000	.00	.00	0.	294	10	A29	.01
1	3A	48.8	107.80	140.3	295.20	2	960.	.10000	.00	.00	0.	294	10	A29	.01
1	4A	37.8	87.55	178.1	375.91	2	1272.	.08000	.00	.00	0.	294	9	A29	.01
1	5A	46.9	98.25	225.0	463.32	0	0.	.00000	.00	.00	0.	294	11	A29	.01
1	6A	.0	.00	225.0	463.32	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	7A	.0	.00	225.0	463.32	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	8B	55.4	122.38	55.4	122.38	1	1656.	.12000	.00	.00	0.	294	10	A29	.01
1	9B	51.0	106.84	106.4	213.34	0	0.	.00000	.00	.00	0.	294	11	A29	.01
1	10AB	106.4	213.34	331.4	676.47	2	1663.	.08000	.00	.00	0.	94	0	A29	.00
1	11A	46.3	92.59	377.7	756.56	0	0.	.00000	.00	.00	0.	294	12	A29	.01
1	12A	46.7	93.39	424.4	841.37	0	0.	.00000	.00	.00	0.	294	12	A29	.01
1	13A	55.0	115.22	479.4	944.80	2	1584.	.04000	.00	.00	0.	294	11	A29	.01
1	14A	52.8	110.61	532.2	1023.37	0	0.	.00000	.00	.00	0.	294	11	A29	.01
1	15A	52.6	105.19	584.8	1118.22	2	1085.	.05000	.00	.00	0.	294	12	A29	.01
1	16A	23.5	51.91	608.3	1144.93	0	0.	.00000	.00	.00	0.	294	10	A29	.01
1	17A	.0	.00	608.3	1144.93	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	18A	.0	.00	608.3	1144.93	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	19C	26.0	67.96	26.0	67.96	2	1584.	.09000	.00	.00	0.	294	7	A29	.01
1	20C	48.7	90.12	74.7	152.92	0	0.	.00000	.00	.00	0.	294	14	A29	.01
1	21AC	74.7	152.92	683.0	1274.91	2	1337.	.05000	.00	.00	0.	94	0	A29	.00
1	22A	49.7	89.00	732.7	1347.23	0	0.	.00000	.00	.00	0.	294	15	A29	.01
1	23A	.0	.00	732.7	1347.23	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	24A	.0	.00	732.7	1347.23	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	25D	45.0	94.27	45.0	94.27	0	0.	.00000	.00	.00	0.	294	11	A29	.01
1	26D	31.1	62.20	76.1	156.47	2	1020.	.10000	.00	.00	0.	294	12	A29	.01
1	27D	49.3	98.59	125.4	253.67	2	1290.	.10000	.00	.00	0.	294	12	A29	.01
1	28D	47.5	87.90	172.9	338.17	0	0.	.00000	.00	.00	0.	294	14	A29	.01
1	29D	29.2	61.17	202.1	396.41	2	1232.	.10000	.00	.00	0.	294	11	A29	.01
1	30D	48.6	107.36	250.7	491.82	2	1423.	.08000	.00	.00	0.	294	10	A29	.01
1	31D	41.1	78.89	291.8	561.36	0	0.	.00000	.00	.00	0.	294	13	A29	.01
1	32AD	291.8	561.36	1024.5	1889.29	2	827.	.03000	.00	.00	0.	94	0	A29	.00
1	33A	.0	.00	1024.5	1882.66	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	34A	.0	.00	1024.5	1882.66	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	35A	41.3	79.27	1065.8	1950.89	2	488.	.04000	.00	.00	0.	294	13	A29	.01
1	36A	46.4	97.20	1112.2	2008.46	2	1107.	.02000	.00	.00	0.	294	11	A29	.01
1	37A	26.0	57.43	1138.2	2016.81	0	0.	.00000	.00	.00	0.	294	10	A29	.01
1	38A	64.1	114.78	1202.3	2115.57	2	1195.	.01000	.00	.00	0.	294	15	A29	.01
1	39A	56.1	112.19	1258.4	2141.40	5	175.	.02000	12.00	.00	0.	294	12	A29	.01
1	40A	.0	.00	1258.4	2140.49	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	41A	.0	.00	1258.4	2140.49	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	42E	37.8	72.58	37.8	72.58	4	1519.	.03000	2.50	.00	0.	294	13	A29	.02
1	43F	59.1	102.10	59.1	102.10	0	0.	.00000	.00	.00	0.	294	16	A29	.01
1	44F	52.1	109.15	111.2	211.24	4	161.	.06000	3.25	.00	0.	294	11	A29	.01
1	45EF	111.2	210.88	149.0	279.10	4	1818.	.06000	3.75	.00	0.	94	0	A29	.00
1	46AE	149.0	276.95	1407.4	2352.80	5	625.	.02000	13.00	.00	0.	94	0	A29	.00
1	47A	.0	.00	1407.4	2352.06	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	48A	.0	.00	1407.4	2352.06	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	49A	.0	.00	1407.4	2352.06	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	50A	10.8	28.23	1418.2	2357.23	5	618.	.02000	13.00	.00	0.	294	7	A29	.01
1	51A	13.3	37.68	1431.5	2355.46	5	728.	.02000	13.00	.00	0.	294	6	A29	.01
1	52A	11.9	37.50	1443.4	2358.34	5	795.	.02000	13.00	.00	0.	294	5	A29	.01
1	53A	15.4	40.26	1458.8	2356.54	5	943.	.02000	13.00	.00	0.	294	7	A29	.01
1	54A	9.7	27.48	1468.5	2354.67	5	320.	.02000	13.00	.00	0.	294	6	A29	.01
1	55B	56.4	130.87	56.4	130.87	4	1250.	.05000	3.00	.00	0.	294	9	A29	.15
1	56AB	56.4	129.15	1524.9	2379.73	5	1344.	.05000	11.00	.00	0.	94	0	A29	.00
1	57A	20.8	54.37	1545.7	2384.49	5	449.	.05000	11.00	.00	0.	294	7	A29	.02
1	58A	7.0	22.06	1552.7	2381.90	5	680.	.05000	11.00	.00	0.	294	5	A29	.01
1	59A	9.6	30.25	1562.3	2385.17	5	1215.	.05000	11.00	.00	0.	294	5	A29	.01
1	60A	4.2	10.98	1566.5	2378.63	5	567.	.05000	11.00	.00	0.	294	7	A29	.01
1	61A	44.3	92.80	1610.8	2396.11	5	803.	.05000	11.00	.00	0.	294	11	A29	.01
1	62A	37.9	83.72	1648.7	2406.79	5	642.	.05000	11.00	.00	0.	294	10	A29	.01
1	63A	.0	.00	1648.7	2402.55	0	0.	.00000	.00	.00	0.	94	99	A29	.00

								PRD							
1	64A	.0	.00	1648.7	2402.55	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	65C	40.4	68.18	40.4	68.18	4	664.	.06000	2.25	.00	0.	94	14	A26	.75
1	66C	39.8	48.39	80.2	116.36	4	1491.	.06000	2.75	.00	0.	94	26	A26	.50
1	67C	51.0	75.31	131.2	190.47	0	0.	.00000	.00	.00	0.	94	18	A26	.60
1	68C	34.8	43.57	166.0	233.96	4	880.	.06000	3.50	.00	0.	94	24	A26	.40
1	69C	13.1	25.83	179.1	256.99	4	832.	.06000	3.50	.00	0.	94	10	A26	.50
1	70C	63.7	81.18	242.8	336.69	4	566.	.06000	4.00	.00	0.	94	25	A26	.75
1	71C	10.0	19.72	252.8	352.39	4	27.	.06000	4.00	.00	0.	94	10	A26	.50
1	72C	.0	.00	252.8	352.29	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	73D	7.0	16.16	7.0	16.16	4	1814.	.06000	2.00	.00	0.	94	7	A26	.40
1	74D	3.4	6.16	10.4	21.28	4	2106.	.02000	2.00	.00	0.	94	12	A26	.70
1	75D	23.6	35.87	34.0	53.26	4	1753.	.02000	2.50	.00	0.	94	17	A26	.60
1	76D	29.3	53.99	63.3	99.50	4	255.	.02000	3.00	.00	0.	94	15	A29	.86
1	77D	.0	.00	63.3	99.39	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	78E	15.8	23.82	15.8	23.82	4	670.	.05000	2.00	.00	0.	94	17	A26	.50
1	79E	17.4	28.07	33.2	51.63	4	1024.	.05000	2.00	.00	0.	94	14	A26	.10
1	80E	5.0	9.06	38.2	60.04	4	81.	.05000	2.25	.00	0.	94	12	A26	.70
1	81DE	38.2	59.99	101.5	158.11	4	404.	.05000	3.00	.00	0.	94	0	A26	.00
1	82CD	101.5	157.98	354.3	509.75	4	947.	.05000	4.75	.00	0.	94	0	A26	.00
1	83C	.0	.00	354.3	508.81	0	0.	.00000	.00	.00	0.	94	99	A26	.00
1	84F	21.4	38.34	21.4	38.34	4	1656.	.06000	2.00	.00	0.	94	12	A26	.50
1	85F	27.1	50.77	48.5	87.01	4	1070.	.06000	2.50	.00	0.	94	11	A26	.50
1	86F	14.6	30.09	63.1	114.58	4	16.	.06000	2.75	.00	0.	94	9	A26	.50
1	87CF	63.1	114.55	417.4	613.40	4	585.	.05000	5.00	.00	0.	94	0	A26	.00
1	88C	34.4	66.32	451.8	673.88	4	523.	.05000	5.25	.00	0.	94	13	A29	.50
1	89C	23.7	34.38	475.5	705.90	4	449.	.20000	4.25	.00	0.	94	19	A26	.70
1	90C	6.9	17.72	482.4	712.26	0	0.	.00000	.00	.00	0.	94	7	A29	.02
1	91C	.0	.00	482.4	712.26	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	92C	.0	.00	482.4	712.26	4	85.	.05000	5.25	.00	0.	94	99	A29	.00
1	93C	2.8	8.68	485.2	713.31	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	94C	.0	.00	485.2	713.31	4	85.	.05000	5.50	.00	0.	94	99	A29	.00
1	95C	1.9	5.89	487.1	714.47	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	96C	.0	.00	487.1	714.47	4	76.	.05000	5.50	.00	0.	94	99	A29	.00
1	97C	1.2	3.72	488.3	715.18	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	98C	.0	.00	488.3	715.18	4	283.	.05000	5.50	.00	0.	94	99	A29	.00
1	99C	4.3	7.54	492.6	722.09	0	0.	.00000	.00	.00	0.	94	15	A29	.02
1	100C	.0	.00	492.6	722.09	4	51.	.05000	5.50	.00	0.	94	99	A29	.00
1	101AC	492.6	722.05	2141.3	2900.79	5	36.	.05000	12.00	.00	0.	94	0	A29	.00
1	102A	16.0	50.42	2157.3	2906.12	0	0.	.00000	.00	.00	0.	294	5	A29	.01

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Program Package Serial Number: 2083
12/07/16 FILE: prd INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units
PAGE 3

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
Northlake Phase 1, Prop. 50- & 25-yr Mixed Burn, NATURAL HYD.
HYDROGRAPH AT 1 64A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	37.02	200	37.97	300	39.99	400	42.14
500	44.71	600	48.03	700	52.21	800	66.45	900	110.11
1000	183.36	1050	258.14	1100	393.25	1110	439.99	1120	511.68
1130	618.03	1131	630.71	1132	643.22	1133	656.43	1134	670.32
1135	685.23	1136	700.60	1137	717.18	1138	735.21	1139	754.08
1140	773.20	1141	792.85	1142	813.38	1143	834.59	1144	856.51
1145	880.25	1146	906.57	1147	934.87	1148	964.70	1149	1002.67
1150	1052.43	1151	1110.29	1152	1176.64	1153	1254.94	1154	1338.43
1155	1422.35	1156	1505.68	1157	1585.07	1158	1659.50	1159	1725.75
1160	1784.74	1161	1842.44	1162	1903.27	1163	1970.77	1164	2048.47
1165	2136.00	1166	2225.54	1167	2305.83	1168	2366.13	1169	2399.52
1170	2402.55	1171	2375.15	1172	2318.41	1173	2236.62	1174	2135.38
1175	2020.49	1176	1899.04	1177	1778.00	1178	1656.66	1179	1536.07
1180	1423.27	1181	1319.53	1182	1227.04	1183	1143.72	1184	1065.22
1185	993.10	1186	928.40	1187	869.76	1188	816.23	1189	767.75
1190	725.24	1191	689.35	1192	659.58	1193	630.71	1194	601.59
1195	574.60	1196	549.68	1197	526.92	1198	506.16	1199	487.14
1200	469.39	1201	452.73	1202	437.13	1203	422.41	1204	408.65
1205	396.03	1206	384.30	1207	373.26	1208	362.89	1209	353.24
1210	344.05	1211	335.26	1212	326.82	1213	318.81	1214	311.18
1215	303.69	1216	296.50	1217	289.68	1218	283.05	1219	276.72
1220	270.79	1221	265.08	1222	259.80	1223	255.45	1224	251.27
1225	247.07	1226	242.80	1227	238.56	1228	234.35	1229	230.09
1230	225.76	1231	221.45	1232	217.32	1233	213.37	1234	209.54
1235	205.77	1236	202.01	1237	198.29	1238	194.59	1239	190.94
1240	187.67	1241	184.77	1242	182.19	1243	179.76	1244	177.41
1245	174.97	1246	172.39	1247	169.74	1248	167.12	1249	164.62
1250	162.05	1251	159.39	1252	156.75	1253	154.14	1254	151.54
1255	149.05	1256	146.60	1257	144.18	1258	141.82	1259	139.30
1260	136.83	1261	134.45	1262	132.03	1263	129.69	1264	127.46
1265	125.20	1266	122.97	1267	120.80	1268	118.62	1269	116.57
1270	114.59	1271	112.62	1272	110.78	1273	109.23	1274	107.82
1275	106.45	1276	105.02	1277	103.52	1278	102.02	1279	100.52
1280	99.02	1281	97.54	1282	96.05	1283	94.56	1284	93.07
1285	91.60	1286	90.15	1287	88.72	1288	87.31	1289	85.92
1290	84.54	1291	83.20	1292	81.87	1293	80.58	1294	79.31
1295	78.08	1296	76.87	1297	75.69	1298	74.54	1299	73.42
1300	72.33	1310	64.61	1320	59.71	1330	55.27	1340	52.31
1350	50.18	1360	48.45	1370	47.07	1380	45.76	1390	44.53
1400	43.52	1420	41.74	1440	40.06	1460	37.02	1500	37.02

TOTAL VOLUME THIS HYDROGRAPH = 294.93(Ac.Ft)

Program Package Serial Number: 2083
08/08/16 FILE: prd INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 4
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
Northlake Phase 1, Prop. 50- & 25-yr Mixed Burn, BASIN A HYD.
HYDROGRAPH AT 1 90C STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	32.16	200	33.62	300	35.37	400	37.24
500	39.60	600	42.60	700	46.45	800	51.81	900	62.35
1000	82.73	1050	108.18	1100	146.74	1110	166.17	1120	195.76
1130	231.15	1131	235.25	1132	239.39	1133	243.82	1134	248.41
1135	253.03	1136	257.91	1137	263.40	1138	269.21	1139	275.49
1140	282.02	1141	289.43	1142	297.63	1143	306.29	1144	315.35
1145	325.68	1146	337.60	1147	350.80	1148	365.09	1149	386.65
1150	416.06	1151	452.26	1152	496.10	1153	546.38	1154	594.09
1155	635.32	1156	667.32	1157	690.99	1158	705.89	1159	712.26
1160	710.84	1161	705.14	1162	690.39	1163	667.28	1164	639.48
1165	609.36	1166	577.28	1167	545.92	1168	514.91	1169	483.11
1170	450.55	1171	417.79	1172	385.77	1173	357.07	1174	331.61
1175	308.32	1176	287.22	1177	267.22	1178	248.60	1179	231.08
1180	214.93	1181	200.45	1182	188.17	1183	177.71	1184	168.69
1185	161.05	1186	154.25	1187	148.34	1188	143.26	1189	138.92
1190	135.03	1191	131.40	1192	128.00	1193	124.95	1194	122.08
1195	119.31	1196	116.76	1197	114.45	1198	112.21	1199	110.07
1200	107.95	1201	106.09	1202	104.36	1203	102.42	1204	100.64
1205	99.08	1206	97.54	1207	95.95	1208	94.47	1209	93.11
1210	91.84	1211	90.61	1212	89.35	1213	88.18	1214	87.05
1215	85.90	1216	84.87	1217	83.86	1218	82.69	1219	81.72
1220	80.74	1221	79.83	1222	78.84	1223	77.74	1224	76.81
1225	75.87	1226	75.00	1227	74.19	1228	73.35	1229	72.56
1230	71.64	1231	70.82	1232	70.01	1233	69.13	1234	68.33
1235	67.61	1236	66.97	1237	66.39	1238	65.65	1239	64.90
1240	64.23	1241	63.68	1242	63.01	1243	62.41	1244	61.93
1245	61.38	1246	60.79	1247	60.18	1248	59.60	1249	59.17
1250	58.60	1251	58.14	1252	57.71	1253	57.23	1254	56.75
1255	56.30	1256	55.83	1257	55.46	1258	55.01	1259	54.59
1260	54.20	1261	53.87	1262	53.39	1263	53.04	1264	52.71
1265	52.36	1266	52.07	1267	51.77	1268	51.49	1269	51.27
1270	50.99	1271	50.74	1272	50.54	1273	50.38	1274	50.22
1275	50.06	1276	49.86	1277	49.66	1278	49.51	1279	49.35
1280	49.17	1281	48.97	1282	48.78	1283	48.59	1284	48.40
1285	48.23	1286	48.01	1287	47.79	1288	47.60	1289	47.40
1290	47.21	1291	47.05	1292	46.86	1293	46.62	1294	46.40
1295	46.28	1296	46.12	1297	45.94	1298	45.77	1299	45.58
1300	45.45	1310	44.14	1320	42.79	1330	41.41	1340	40.12
1350	39.23	1360	38.04	1370	37.01	1380	36.42	1390	35.74
1400	35.12	1420	33.75	1440	32.40	1460	32.05	1500	32.05

TOTAL VOLUME THIS HYDROGRAPH = 132.98(Ac.Ft)

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Program Package Serial Number: 2083

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
Northlake Phase 1, Prop. 50- & 25-yr Mixed Burn, NATURAL HYD.
HYDROGRAPH AT 1 102A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	.35	200	.37	300	.39	400	.41
500	.44	600	.47	700	.51	800	.72	900	1.23
1000	1.98	1050	2.98	1100	4.41	1110	6.05	1120	7.02
1130	8.69	1131	8.94	1132	9.20	1133	9.63	1134	10.06
1135	10.49	1136	10.67	1137	11.22	1138	11.58	1139	11.94
1140	12.30	1141	13.21	1142	13.76	1143	14.31	1144	14.86
1145	16.32	1146	17.42	1147	18.52	1148	19.44	1149	26.43
1150	32.56	1151	38.32	1152	44.27	1153	50.42	1154	44.27
1155	37.20	1156	29.77	1157	21.83	1158	13.76	1159	11.58
1160	10.13	1161	9.05	1162	8.16	1163	7.63	1164	6.93
1165	6.58	1166	6.23	1167	5.87	1168	5.52	1169	5.35
1170	4.99	1171	4.82	1172	4.65	1173	4.48	1174	4.31
1175	4.14	1176	3.97	1177	3.97	1178	3.63	1179	3.63
1180	3.46	1181	3.46	1182	3.28	1183	3.28	1184	3.11
1185	3.11	1186	2.94	1187	2.94	1188	2.77	1189	2.77
1190	2.77	1191	2.60	1192	2.43	1193	2.60	1194	2.43
1195	2.26	1196	2.43	1197	2.43	1198	2.26	1199	2.26
1200	2.26	1201	2.09	1202	2.09	1203	1.92	1204	1.92
1205	1.92	1206	1.92	1207	1.75	1208	1.92	1209	1.92
1210	1.75	1211	1.75	1212	1.75	1213	1.75	1214	1.58
1215	1.58	1216	1.58	1217	1.58	1218	1.41	1219	1.58
1220	1.58	1221	1.41	1222	1.41	1223	1.41	1224	1.21
1225	1.21	1226	1.41	1227	1.41	1228	1.41	1229	1.41
1230	1.21	1231	1.01	1232	1.01	1233	1.01	1234	1.01
1235	1.21	1236	1.21	1237	1.21	1238	1.01	1239	1.01
1240	1.01	1241	1.01	1242	.81	1243	1.01	1244	1.01
1245	.81	1246	.81	1247	.81	1248	.81	1249	.81
1250	.81	1251	.81	1252	.81	1253	.81	1254	.61
1255	.81	1256	.61	1257	.81	1258	.61	1259	.61
1260	.61	1261	.61	1262	.52	1263	.61	1264	.61
1265	.52	1266	.61	1267	.61	1268	.52	1269	.61
1270	.61	1271	.52	1272	.52	1273	.61	1274	.52
1275	.52	1276	.52	1277	.52	1278	.49	1279	.52
1280	.52	1281	.52	1282	.52	1283	.52	1284	.49
1285	.49	1286	.49	1287	.49	1288	.49	1289	.49
1290	.49	1291	.49	1292	.49	1293	.49	1294	.49
1295	.49	1296	.49	1297	.49	1298	.49	1299	.49
1300	.49	1310	.47	1320	.45	1330	.44	1340	.42
1350	.42	1360	.40	1370	.40	1380	.39	1390	.37
1400	.39	1420	.36	1440	.35	1460	.00	1500	.00

TOTAL VOLUME THIS HYDROGRAPH = 2.77(Ac.Ft)

Program Package Serial Number: 2083
02/27/17 FILE: BD INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 1
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\scr_soilx_34.dat
Northlake Phase 1, Area B, Prop. 25-yr

LOCATION	SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM RAIN ZONE	DAY 4 PCT IMPV
1 200A	26.7	36.20	26.7	36.20	4	610.	.01500	2.25	.00	0.	94	21	A26	.50
1 201A	21.3	46.84	48.0	81.05	0	0.	.00000	.00	.00	0.	94	8	A26	.82
1 202A	.0	.00	48.0	81.05	0	0.	.00000	.00	.00	0.	94	99	A26	.00

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Program Package Serial Number: 2083

02/27/17 FILE: BD INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
Northlake Phase 1, Area B, Prop. 25-yr HYD.

HYDROGRAPH AT 1 202A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	3.45	200	3.62	300	3.80	400	4.01
500	4.26	600	4.59	700	5.00	800	5.56	900	6.60
1000	8.65	1050	11.29	1100	15.11	1110	17.99	1120	20.87
1130	24.79	1131	25.09	1132	25.54	1133	26.02	1134	26.65
1135	27.15	1136	27.81	1137	28.62	1138	29.48	1139	30.42
1140	31.11	1141	32.25	1142	33.30	1143	34.38	1144	35.41
1145	37.03	1146	38.83	1147	40.62	1148	42.59	1149	48.51
1150	55.28	1151	62.86	1152	70.57	1153	77.53	1154	80.08
1155	81.05	1156	80.63	1157	75.28	1158	69.72	1159	63.85
1160	57.73	1161	51.36	1162	48.98	1163	47.20	1164	45.73
1165	44.41	1166	43.02	1167	41.72	1168	40.27	1169	38.78
1170	37.22	1171	34.80	1172	31.60	1173	28.43	1174	25.15
1175	21.99	1176	19.71	1177	18.37	1178	17.42	1179	16.68
1180	15.89	1181	15.30	1182	14.92	1183	14.45	1184	14.03
1185	13.64	1186	13.26	1187	12.89	1188	12.67	1189	12.47
1190	12.15	1191	11.86	1192	11.55	1193	11.39	1194	11.24
1195	11.11	1196	10.85	1197	10.60	1198	10.34	1199	10.36
1200	10.10	1201	10.00	1202	9.77	1203	9.56	1204	9.59
1205	9.36	1206	9.29	1207	9.06	1208	9.13	1209	8.93
1210	8.89	1211	8.82	1212	8.58	1213	8.52	1214	8.48
1215	8.42	1216	8.22	1217	8.01	1218	7.94	1219	7.88
1220	7.83	1221	7.78	1222	7.60	1223	7.54	1224	7.47
1225	7.44	1226	7.39	1227	7.33	1228	7.14	1229	7.11
1230	7.06	1231	7.00	1232	6.80	1233	6.90	1234	6.71
1235	6.68	1236	6.64	1237	6.60	1238	6.56	1239	6.40
1240	6.52	1241	6.34	1242	6.31	1243	6.25	1244	6.22
1245	6.08	1246	6.17	1247	6.14	1248	6.00	1249	5.97
1250	5.92	1251	5.89	1252	5.86	1253	5.85	1254	5.71
1255	5.69	1256	5.67	1257	5.65	1258	5.63	1259	5.49
1260	5.47	1261	5.46	1262	5.45	1263	5.43	1264	5.42
1265	5.41	1266	5.40	1267	5.39	1268	5.37	1269	5.36
1270	5.35	1271	5.34	1272	5.34	1273	5.33	1274	5.32
1275	5.31	1276	5.18	1277	5.18	1278	5.16	1279	5.15
1280	5.15	1281	5.02	1282	5.02	1283	5.00	1284	5.11
1285	5.11	1286	4.99	1287	4.98	1288	4.96	1289	4.95
1290	4.94	1291	4.93	1292	4.92	1293	4.79	1294	4.90
1295	4.89	1296	4.76	1297	4.87	1298	4.86	1299	4.74
1300	4.74	1310	4.66	1320	4.50	1330	4.31	1340	4.26
1350	4.12	1360	3.96	1370	3.90	1380	3.89	1390	3.77
1400	3.72	1420	3.55	1440	3.45	1460	1.56	1500	1.56

TOTAL VOLUME THIS HYDROGRAPH = 13.63(Ac.Ft)

TC Calculator Results

VTM 73336, Northlake Phase 1
Proposed Condition

50-yr Clear Frequency

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
50	1A	40.9	0.01	50	94	2501	0.2	5.8	12	2.29	0.86	0.86	80.55
50	2A	50.6	0.01	50	94	2085	0.24	5.8	10	2.5	0.86	0.86	108.79
50	3A	48.8	0.01	50	94	1886	0.17	5.8	10	2.5	0.86	0.86	104.92
50	4A	37.8	0.01	50	94	1577	0.19	5.8	9	2.63	0.87	0.87	86.49
50	5A	46.9	0.01	50	94	2013	0.15	5.8	11	2.39	0.86	0.86	96.4
50	8B	55.4	0.01	50	94	1990	0.29	5.8	10	2.5	0.86	0.86	119.11
50	9B	51	0.01	50	94	2230	0.22	5.8	11	2.39	0.86	0.86	104.83
50	11A	46.3	0.01	50	94	2402	0.19	5.8	12	2.29	0.86	0.86	91.18
50	12A	46.7	0.01	50	94	2523	0.24	5.8	12	2.29	0.86	0.86	91.97
50	13A	55	0.01	50	94	2188	0.21	5.8	11	2.39	0.86	0.86	113.05
50	14A	52.8	0.01	50	94	2314	0.24	5.8	11	2.39	0.86	0.86	108.53
50	15A	52.6	0.01	50	94	2494	0.18	5.8	12	2.29	0.86	0.86	103.59
50	16A	23.5	0.01	50	94	1862	0.24	5.8	10	2.5	0.86	0.86	50.53
50	19C	26	0.01	50	94	1296	0.28	5.8	7	2.95	0.88	0.88	67.5
50	20C	48.7	0.01	50	94	2971	0.16	5.8	14	2.13	0.85	0.85	88.17
50	22A	49.7	0.01	50	94	3412	0.15	5.8	15	2.06	0.85	0.85	87.02
50	25D	45	0.01	50	94	2381	0.23	5.8	11	2.39	0.86	0.86	92.49
50	26D	31.1	0.01	50	94	2454	0.22	5.8	12	2.29	0.86	0.86	61.25
50	27D	49.3	0.01	50	94	2374	0.18	5.8	12	2.29	0.86	0.86	97.09
50	28D	47.5	0.01	50	94	2966	0.16	5.8	14	2.13	0.85	0.85	86
50	29D	29.2	0.01	50	94	2182	0.19	5.8	11	2.39	0.86	0.86	60.02
50	30D	48.6	0.01	50	94	1877	0.24	5.8	10	2.5	0.86	0.86	104.49
50	31D	41.1	0.01	50	94	2744	0.19	5.8	13	2.21	0.85	0.85	77.21
50	35A	41.3	0.01	50	94	2799	0.18	5.8	13	2.21	0.85	0.85	77.58
50	36A	46.4	0.01	50	94	2330	0.22	5.8	11	2.39	0.86	0.86	95.37
50	37A	26	0.01	50	94	1890	0.24	5.8	10	2.5	0.86	0.86	57.62
50	38A	64.1	0.01	50	94	3294	0.14	5.8	15	2.06	0.85	0.85	112.24
50	39A	56.1	0.01	50	94	2202	0.1	5.8	12	2.29	0.86	0.86	114.62
50	42E	37.8	0.02	50	94	2151	0.07	5.8	13	2.21	0.85	0.85	71.01
50	43F	59.1	0.01	50	94	3511	0.15	5.8	16	2	0.85	0.85	100.47
50	44F	52.1	0.01	50	94	2154	0.17	5.8	11	2.39	0.86	0.86	107.09
50	50A	10.8	0.01	50	94	1130	0.27	5.8	7	2.95	0.88	0.88	28.04
50	51A	13.3	0.01	50	94	1030	0.43	5.8	6	3.18	0.89	0.89	37.64
50	52A	11.9	0.01	50	94	836	0.45	5.8	5	3.46	0.89	0.89	36.64

TC Calculator Results

VTM 73336, Northlake Phase 1

Proposed Condition

50	53A	15.4	0.01	50	94	1212	0.34	5.8	7	2.95	0.88	0.88	39.98
50	54A	9.7	0.01	50	94	833	0.26	5.8	6	3.18	0.89	0.89	27.45
50	55B	56.4	0.15	50	94	1150	0.05	5.8	9	2.63	0.87	0.87	129.05
50	57A	20.8	0.02	50	94	1272	0.25	5.8	7	2.95	0.88	0.88	54
50	58A	7	0.01	50	94	636	0.24	5.8	5	3.46	0.89	0.89	21.56
50	59A	9.6	0.01	50	94	180	0.11	5.8	5	3.46	0.89	0.89	29.56
50	60A	4.2	0.01	50	94	1103	0.19	5.8	7	2.95	0.88	0.88	10.9
50	61A	44.3	0.01	50	94	636	0.25	5.8	11	2.39	0.86	0.86	91.05
50	62A	37.9	0.01	50	94	1795	0.16	5.8	10	2.5	0.86	0.86	81.49
50	65C	40.4	0.75	50	94	2025	0.05	5.8	13	2.21	0.85	0.89	79.46
50	66C	39.8	0.5	50	94	4356	0.03	5.8	24	1.66	0.82	0.86	56.82
50	67C	51	0.6	50	94	3142	0.06	5.8	17	1.95	0.84	0.88	87.52
50	68C	34.8	0.4	50	94	3412	0.02	5.8	22	1.72	0.83	0.86	51.48
50	69C	13.1	0.5	50	94	1145	0.04	5.8	10	2.5	0.86	0.88	28.82
50	70C	63.7	0.75	50	94	4485	0.04	5.8	23	1.69	0.82	0.88	94.73
50	71C	10	0.5	50	94	1322	0.07	5.8	10	2.5	0.86	0.88	22
50	73D	7	0.4	50	94	564	0.02	5.8	7	2.95	0.88	0.89	18.38
50	74D	3.4	0.7	50	94	1762	0.07	5.8	11	2.39	0.86	0.89	7.23
50	75D	23.6	0.6	50	94	2254	0.03	5.8	15	2.06	0.85	0.88	42.78
50	76D	29.3	0.86	50	94	1926	0.02	5.8	15	2.06	0.85	0.89	53.72
50	78E	15.8	0.5	50	94	2787	0.07	5.8	15	2.06	0.85	0.88	28.64
50	79E	17.4	0.1	50	94	2252	0.08	5.8	13	2.21	0.85	0.86	33.07
50	80E	5	0.7	50	94	1611	0.05	5.8	11	2.39	0.86	0.89	10.64
50	84F	21.4	0.5	50	94	1683	0.06	5.8	11	2.39	0.86	0.88	45.01
50	85F	27.1	0.5	50	94	1439	0.06	5.8	10	2.5	0.86	0.88	59.62
50	86F	14.6	0.5	50	94	968	0.04	5.8	8	2.77	0.87	0.89	35.99
50	88C	34.4	0.5	50	94	1818	0.03	5.8	13	2.21	0.85	0.88	66.9
50	89C	23.7	0.7	50	94	2887	0.04	5.8	17	1.95	0.84	0.88	40.67
50	90C	6.9	0.02	50	94	1127	0.15	5.8	7	2.95	0.88	0.88	17.91
50	93C	2.8	0.02	50	94	409	0.1	5.8	5	3.46	0.89	0.89	8.62
50	95C	1.9	0.02	50	94	216	0.1	5.8	5	3.46	0.89	0.89	5.85
50	97C	1.2	0.02	50	94	198	0.1	5.8	5	3.46	0.89	0.89	3.7
50	99C	4.3	0.02	50	94	424	0.1	5.8	5	3.46	0.89	0.89	13.24
50	102A	16	0.01	50	94	703	0.27	5.8	5	3.46	0.89	0.89	49.27

TC Calculator Results

VTM 73336, Northlake Phase 1
Proposed Condition

25-yr Clear Frequency

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
25	1A	40.9	0.01	25	94	2501	0.2	5.1	13	1.94	0.84	0.84	66.65
25	2A	50.6	0.01	25	94	2085	0.24	5.1	11	2.1	0.85	0.85	90.32
25	3A	48.8	0.01	25	94	1886	0.17	5.1	11	2.1	0.85	0.85	87.11
25	4A	37.8	0.01	25	94	1577	0.19	5.1	10	2.2	0.85	0.85	70.69
25	5A	46.9	0.01	25	94	2013	0.15	5.1	12	2.02	0.85	0.85	80.53
25	8B	55.4	0.01	25	94	1990	0.29	5.1	11	2.1	0.85	0.85	98.89
25	9B	51	0.01	25	94	2230	0.22	5.1	12	2.02	0.85	0.85	87.57
25	11A	46.3	0.01	25	94	2402	0.19	5.1	13	1.94	0.84	0.84	75.45
25	12A	46.7	0.01	25	94	2523	0.24	5.1	13	1.94	0.84	0.84	76.1
25	13A	55	0.01	25	94	2188	0.21	5.1	12	2.02	0.85	0.85	94.44
25	14A	52.8	0.01	25	94	2314	0.24	5.1	12	2.02	0.85	0.85	90.66
25	15A	52.6	0.01	25	94	2494	0.18	5.1	13	1.94	0.84	0.84	85.72
25	16A	23.5	0.01	25	94	1862	0.24	5.1	11	2.1	0.85	0.85	41.95
25	19C	26	0.01	25	94	1296	0.28	5.1	8	2.44	0.86	0.86	54.56
25	20C	48.7	0.01	25	94	2971	0.16	5.1	15	1.82	0.83	0.83	73.57
25	22A	49.7	0.01	25	94	3412	0.15	5.1	17	1.71	0.82	0.82	69.69
25	25D	45	0.01	25	94	2381	0.23	5.1	12	2.02	0.85	0.85	77.27
25	26D	31.1	0.01	25	94	2454	0.22	5.1	13	1.94	0.84	0.84	50.68
25	27D	49.3	0.01	25	94	2374	0.18	5.1	13	1.94	0.84	0.84	80.34
25	28D	47.5	0.01	25	94	2966	0.16	5.1	15	1.82	0.83	0.83	71.75
25	29D	29.2	0.01	25	94	2182	0.19	5.1	12	2.02	0.85	0.85	50.14
25	30D	48.6	0.01	25	94	1877	0.24	5.1	11	2.1	0.85	0.85	86.75
25	31D	41.1	0.01	25	94	2744	0.19	5.1	14	1.88	0.84	0.84	64.91
25	35A	41.3	0.01	25	94	2799	0.18	5.1	14	1.88	0.84	0.84	65.22
25	36A	46.4	0.01	25	94	2330	0.22	5.1	12	2.02	0.85	0.85	79.67
25	37A	26	0.01	25	94	1890	0.24	5.1	11	2.1	0.85	0.85	47.84
25	38A	64.1	0.01	25	94	3294	0.14	5.1	17	1.71	0.82	0.82	89.88
25	39A	56.1	0.01	25	94	2202	0.1	5.1	14	1.88	0.84	0.84	91.91
25	42E	37.8	0.02	25	94	2151	0.07	5.1	14	1.88	0.84	0.84	59.69
25	43F	59.1	0.01	25	94	3511	0.15	5.1	17	1.71	0.82	0.82	82.87
25	44F	52.1	0.01	25	94	2154	0.17	5.1	12	2.02	0.85	0.85	89.46
25	50A	10.8	0.01	25	94	1130	0.27	5.1	7	2.6	0.87	0.87	24.43
25	51A	13.3	0.01	25	94	1030	0.43	5.1	6	2.79	0.88	0.88	32.65
25	52A	11.9	0.01	25	94	836	0.45	5.1	6	2.79	0.88	0.88	29.22

TC Calculator Results

VTM 73336, Northlake Phase 1

Proposed Condition

25	53A	15.4	0.01	25	94	1212	0.34	5.1	7	2.6	0.87	0.87	34.83
25	54A	9.7	0.01	25	94	833	0.26	5.1	6	2.79	0.88	0.88	23.82
25	55B	56.4	0.15	25	94	1150	0.05	5.1	10	2.2	0.85	0.86	106.71
25	57A	20.8	0.02	25	94	1272	0.25	5.1	8	2.44	0.86	0.86	43.65
25	58A	7	0.01	25	94	636	0.24	5.1	5	3.04	0.88	0.88	18.73
25	59A	9.6	0.01	25	94	180	0.11	5.1	5	3.04	0.88	0.88	25.68
25	60A	4.2	0.01	25	94	1103	0.19	5.1	8	2.44	0.86	0.86	8.81
25	61A	44.3	0.01	25	94	636	0.25	5.1	12	2.02	0.85	0.85	76.06
25	62A	37.9	0.01	25	94	1795	0.16	5.1	11	2.1	0.85	0.85	67.65
25	65C	40.4	0.75	25	94	2025	0.05	5.1	14	1.88	0.84	0.89	67.6
25	66C	39.8	0.5	25	94	4356	0.03	5.1	26	1.4	0.8	0.85	47.36
25	67C	51	0.6	25	94	3142	0.06	5.1	18	1.67	0.82	0.87	74.1
25	68C	34.8	0.4	25	94	3412	0.02	5.1	24	1.46	0.8	0.84	42.68
25	69C	13.1	0.5	25	94	1145	0.04	5.1	10	2.2	0.85	0.88	25.36
25	70C	63.7	0.75	25	94	4485	0.04	5.1	25	1.43	0.8	0.88	80.16
25	71C	10	0.5	25	94	1322	0.07	5.1	10	2.2	0.85	0.88	19.36
25	73D	7	0.4	25	94	564	0.02	5.1	7	2.6	0.87	0.88	16.02
25	74D	3.4	0.7	25	94	1762	0.07	5.1	12	2.02	0.85	0.89	6.11
25	75D	23.6	0.6	25	94	2254	0.03	5.1	17	1.71	0.82	0.87	35.11
25	76D	29.3	0.86	25	94	1926	0.02	5.1	16	1.76	0.83	0.89	45.9
25	78E	15.8	0.5	25	94	2787	0.07	5.1	17	1.71	0.82	0.86	23.24
25	79E	17.4	0.1	25	94	2252	0.08	5.1	14	1.88	0.84	0.85	27.81
25	80E	5	0.7	25	94	1611	0.05	5.1	12	2.02	0.85	0.89	8.99
25	84F	21.4	0.5	25	94	1683	0.06	5.1	12	2.02	0.85	0.88	38.04
25	85F	27.1	0.5	25	94	1439	0.06	5.1	11	2.1	0.85	0.88	50.08
25	86F	14.6	0.5	25	94	968	0.04	5.1	9	2.31	0.86	0.88	29.68
25	88C	34.4	0.5	25	94	1818	0.03	5.1	15	1.82	0.83	0.87	54.47
25	89C	23.7	0.7	25	94	2887	0.04	5.1	19	1.62	0.82	0.88	33.79
25	90C	6.9	0.02	25	94	1127	0.15	5.1	8	2.44	0.86	0.86	14.48
25	93C	2.8	0.02	25	94	409	0.1	5.1	5	3.04	0.88	0.88	7.49
25	95C	1.9	0.02	25	94	216	0.1	5.1	5	3.04	0.88	0.88	5.08
25	97C	1.2	0.02	25	94	198	0.1	5.1	5	3.04	0.88	0.88	3.21
25	99C	4.3	0.02	25	94	424	0.1	5.1	5	3.04	0.88	0.88	11.5
25	102A	16	0.01	25	94	703	0.27	5.1	5	3.04	0.88	0.88	42.8

TC Calculator Results

VTM 73336, Northlake Phase 1

Proposed Condition

10-yr Clear Frequency

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
10	1A	40.9	0.01	10	94	2501	0.2	4.1	16	1.42	0.8	0.8	46.46
10	2A	50.6	0.01	10	94	2085	0.24	4.1	13	1.56	0.81	0.81	63.94
10	3A	48.8	0.01	10	94	1886	0.17	4.1	13	1.56	0.81	0.81	61.66
10	4A	37.8	0.01	10	94	1577	0.19	4.1	12	1.62	0.82	0.82	50.21
10	5A	46.9	0.01	10	94	2013	0.15	4.1	14	1.51	0.81	0.81	57.36
10	8B	55.4	0.01	10	94	1990	0.29	4.1	12	1.62	0.82	0.82	73.59
10	9B	51	0.01	10	94	2230	0.22	4.1	14	1.51	0.81	0.81	62.38
10	11A	46.3	0.01	10	94	2402	0.19	4.1	15	1.46	0.8	0.8	54.08
10	12A	46.7	0.01	10	94	2523	0.24	4.1	15	1.46	0.8	0.8	54.55
10	13A	55	0.01	10	94	2188	0.21	4.1	14	1.51	0.81	0.81	67.27
10	14A	52.8	0.01	10	94	2314	0.24	4.1	14	1.51	0.81	0.81	64.58
10	15A	52.6	0.01	10	94	2494	0.18	4.1	16	1.42	0.8	0.8	59.75
10	16A	23.5	0.01	10	94	1862	0.24	4.1	12	1.62	0.82	0.82	31.22
10	19C	26	0.01	10	94	1296	0.28	4.1	10	1.77	0.83	0.83	38.2
10	20C	48.7	0.01	10	94	2971	0.16	4.1	18	1.34	0.79	0.79	51.55
10	22A	49.7	0.01	10	94	3412	0.15	4.1	21	1.25	0.78	0.78	48.46
10	25D	45	0.01	10	94	2381	0.23	4.1	15	1.46	0.8	0.8	52.56
10	26D	31.1	0.01	10	94	2454	0.22	4.1	15	1.46	0.8	0.8	36.32
10	27D	49.3	0.01	10	94	2374	0.18	4.1	16	1.42	0.8	0.8	56
10	28D	47.5	0.01	10	94	2966	0.16	4.1	18	1.34	0.79	0.79	50.28
10	29D	29.2	0.01	10	94	2182	0.19	4.1	14	1.51	0.81	0.81	35.71
10	30D	48.6	0.01	10	94	1877	0.24	4.1	12	1.62	0.82	0.82	64.56
10	31D	41.1	0.01	10	94	2744	0.19	4.1	17	1.38	0.79	0.79	44.81
10	35A	41.3	0.01	10	94	2799	0.18	4.1	17	1.38	0.79	0.79	45.03
10	36A	46.4	0.01	10	94	2330	0.22	4.1	15	1.46	0.8	0.8	54.2
10	37A	26	0.01	10	94	1890	0.24	4.1	12	1.62	0.82	0.82	35.6
10	38A	64.1	0.01	10	94	3294	0.14	4.1	20	1.28	0.78	0.78	64
10	39A	56.1	0.01	10	94	2202	0.1	4.1	16	1.42	0.8	0.8	66.12
10	42E	37.8	0.02	10	94	2151	0.07	4.1	17	1.38	0.79	0.79	41.21
10	43F	59.1	0.01	10	94	3511	0.15	4.1	21	1.25	0.78	0.78	57.62
10	44F	52.1	0.01	10	94	2154	0.17	4.1	15	1.46	0.8	0.8	60.85
10	50A	10.8	0.01	10	94	1130	0.27	4.1	9	1.86	0.84	0.84	16.87
10	51A	13.3	0.01	10	94	1030	0.43	4.1	8	1.96	0.84	0.84	21.9
10	52A	11.9	0.01	10	94	836	0.45	4.1	7	2.09	0.85	0.85	21.14
10	53A	15.4	0.01	10	94	1212	0.34	4.1	9	1.86	0.84	0.84	24.06

TC Calculator Results

VTM 73336, Northlake Phase 1

Proposed Condition

10	54A	9.7	0.01	10	94	833	0.26	4.1	7	2.09	0.85	0.85	17.23
10	55B	56.4	0.15	10	94	1150	0.05	4.1	12	1.62	0.82	0.83	75.84
10	57A	20.8	0.02	10	94	1272	0.25	4.1	10	1.77	0.83	0.83	30.56
10	58A	7	0.01	10	94	636	0.24	4.1	6	2.25	0.85	0.85	13.39
10	59A	9.6	0.01	10	94	180	0.11	4.1	5	2.45	0.86	0.86	20.23
10	60A	4.2	0.01	10	94	1103	0.19	4.1	9	1.86	0.84	0.84	6.56
10	61A	44.3	0.01	10	94	636	0.25	4.1	15	1.46	0.8	0.8	51.74
10	62A	37.9	0.01	10	94	1795	0.16	4.1	13	1.56	0.81	0.81	47.89
10	65C	40.4	0.75	10	94	2025	0.05	4.1	16	1.42	0.8	0.88	50.48
10	66C	39.8	0.5	10	94	4356	0.03	4.1	30	1.05	0.75	0.83	34.69
10	67C	51	0.6	10	94	3142	0.06	4.1	22	1.22	0.77	0.85	52.89
10	68C	34.8	0.4	10	94	3412	0.02	4.1	29	1.07	0.75	0.81	30.16
10	69C	13.1	0.5	10	94	1145	0.04	4.1	12	1.62	0.82	0.86	18.25
10	70C	63.7	0.75	10	94	4485	0.04	4.1	29	1.07	0.75	0.86	58.62
10	71C	10	0.5	10	94	1322	0.07	4.1	12	1.62	0.82	0.86	13.93
10	73D	7	0.4	10	94	564	0.02	4.1	9	1.86	0.84	0.86	11.2
10	74D	3.4	0.7	10	94	1762	0.07	4.1	14	1.51	0.81	0.87	4.47
10	75D	23.6	0.6	10	94	2254	0.03	4.1	20	1.28	0.78	0.85	25.68
10	76D	29.3	0.86	10	94	1926	0.02	4.1	19	1.31	0.78	0.88	33.78
10	78E	15.8	0.5	10	94	2787	0.07	4.1	20	1.28	0.78	0.84	16.99
10	79E	17.4	0.1	10	94	2252	0.08	4.1	17	1.38	0.79	0.8	19.21
10	80E	5	0.7	10	94	1611	0.05	4.1	14	1.51	0.81	0.87	6.57
10	84F	21.4	0.5	10	94	1683	0.06	4.1	14	1.51	0.81	0.86	27.79
10	85F	27.1	0.5	10	94	1439	0.06	4.1	13	1.56	0.81	0.86	36.36
10	86F	14.6	0.5	10	94	968	0.04	4.1	11	1.69	0.82	0.86	21.22
10	88C	34.4	0.5	10	94	1818	0.03	4.1	17	1.38	0.79	0.85	40.35
10	89C	23.7	0.7	10	94	2887	0.04	4.1	22	1.22	0.77	0.86	24.87
10	90C	6.9	0.02	10	94	1127	0.15	4.1	10	1.77	0.83	0.83	10.14
10	93C	2.8	0.02	10	94	409	0.1	4.1	5	2.45	0.86	0.86	5.9
10	95C	1.9	0.02	10	94	216	0.1	4.1	5	2.45	0.86	0.86	4
10	97C	1.2	0.02	10	94	198	0.1	4.1	5	2.45	0.86	0.86	2.53
10	99C	4.3	0.02	10	94	424	0.1	4.1	6	2.25	0.85	0.85	8.22
10	102A	16	0.01	10	94	703	0.27	4.1	6	2.25	0.85	0.85	30.6

TC Calculator Results

VTM 73336, Northlake Phase 1

Proposed Condition

5-yr Clear Frequency

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
5	1A	40.9	0.01	5	94	2501	0.2	3.4	19	1.08	0.75	0.75	33.13
5	2A	50.6	0.01	5	94	2085	0.24	3.4	16	1.17	0.77	0.77	45.59
5	3A	48.8	0.01	5	94	1886	0.17	3.4	16	1.17	0.77	0.77	43.96
5	4A	37.8	0.01	5	94	1577	0.19	3.4	14	1.25	0.78	0.78	36.86
5	5A	46.9	0.01	5	94	2013	0.15	3.4	17	1.14	0.76	0.76	40.63
5	8B	55.4	0.01	5	94	1990	0.29	3.4	15	1.21	0.77	0.77	51.62
5	9B	51	0.01	5	94	2230	0.22	3.4	17	1.14	0.76	0.76	44.19
5	11A	46.3	0.01	5	94	2402	0.19	3.4	18	1.11	0.76	0.76	39.06
5	12A	46.7	0.01	5	94	2523	0.24	3.4	18	1.11	0.76	0.76	39.4
5	13A	55	0.01	5	94	2188	0.21	3.4	17	1.14	0.76	0.76	47.65
5	14A	52.8	0.01	5	94	2314	0.24	3.4	17	1.14	0.76	0.76	45.75
5	15A	52.6	0.01	5	94	2494	0.18	3.4	19	1.08	0.75	0.75	42.61
5	16A	23.5	0.01	5	94	1862	0.24	3.4	15	1.21	0.77	0.77	21.89
5	19C	26	0.01	5	94	1296	0.28	3.4	11	1.4	0.8	0.8	29.12
5	20C	48.7	0.01	5	94	2971	0.16	3.4	22	1.01	0.74	0.74	36.4
5	22A	49.7	0.01	5	94	3412	0.15	3.4	24	0.97	0.74	0.74	35.67
5	25D	45	0.01	5	94	2381	0.23	3.4	17	1.14	0.76	0.76	38.99
5	26D	31.1	0.01	5	94	2454	0.22	3.4	18	1.11	0.76	0.76	26.24
5	27D	49.3	0.01	5	94	2374	0.18	3.4	18	1.11	0.76	0.76	41.59
5	28D	47.5	0.01	5	94	2966	0.16	3.4	22	1.01	0.74	0.74	35.5
5	29D	29.2	0.01	5	94	2182	0.19	3.4	17	1.14	0.76	0.76	25.3
5	30D	48.6	0.01	5	94	1877	0.24	3.4	15	1.21	0.77	0.77	45.28
5	31D	41.1	0.01	5	94	2744	0.19	3.4	20	1.06	0.75	0.75	32.67
5	35A	41.3	0.01	5	94	2799	0.18	3.4	20	1.06	0.75	0.75	32.83
5	36A	46.4	0.01	5	94	2330	0.22	3.4	17	1.14	0.76	0.76	40.2
5	37A	26	0.01	5	94	1890	0.24	3.4	15	1.21	0.77	0.77	24.97
5	38A	64.1	0.01	5	94	3294	0.14	3.4	24	0.97	0.74	0.74	46.01
5	39A	56.1	0.01	5	94	2202	0.1	3.4	20	1.06	0.75	0.75	46.27
5	42E	37.8	0.02	5	94	2151	0.07	3.4	20	1.06	0.75	0.75	30.05
5	43F	59.1	0.01	5	94	3511	0.15	3.4	25	0.95	0.73	0.73	40.99
5	44F	52.1	0.01	5	94	2154	0.17	3.4	17	1.14	0.76	0.76	45.14
5	50A	10.8	0.01	5	94	1130	0.27	3.4	10	1.46	0.8	0.8	12.61
5	51A	13.3	0.01	5	94	1030	0.43	3.4	9	1.54	0.81	0.81	16.59
5	52A	11.9	0.01	5	94	836	0.45	3.4	8	1.63	0.82	0.82	15.91
5	53A	15.4	0.01	5	94	1212	0.34	3.4	10	1.46	0.8	0.8	17.99
5	54A	9.7	0.01	5	94	833	0.26	3.4	8	1.63	0.82	0.82	12.97

TC Calculator Results

VTM 73336, Northlake Phase 1

Proposed Condition

5	55B	56.4	0.15	5	94	7606	0.06	3.4	14	1.25	0.78	0.8	56.4
5	57A	20.8	0.02	5	94	1272	0.25	3.4	11	1.4	0.8	0.8	23.3
5	58A	7	0.01	5	94	636	0.24	3.4	7	1.73	0.83	0.83	10.05
5	59A	9.6	0.01	5	94	180	0.11	3.4	5	2.03	0.85	0.85	16.56
5	60A	4.2	0.01	5	94	1103	0.19	3.4	11	1.4	0.8	0.8	4.7
5	61A	44.3	0.01	5	94	636	0.25	3.4	18	1.4	0.8	0.8	4.7
5	62A	37.9	0.01	5	94	1795	0.16	3.4	16	1.17	0.77	0.77	34.14
5	65C	40.4	0.75	5	94	2025	0.05	3.4	19	1.08	0.75	0.86	37.52
5	66C	39.8	0.5	5	94	4356	0.03	3.4	30	0.87	0.71	0.81	28.05
5	67C	51	0.6	5	94	3142	0.06	3.4	25	0.95	0.73	0.83	40.21
5	68C	34.8	0.4	5	94	3412	0.02	3.4	30	0.87	0.71	0.79	23.92
5	69C	13.1	0.5	5	94	1145	0.04	3.4	14	1.25	0.78	0.84	13.76
5	70C	63.7	0.75	5	94	4485	0.04	3.4	30	0.87	0.71	0.85	47.11
5	71C	10	0.5	5	94	1322	0.07	3.4	14	1.25	0.78	0.84	10.5
5	73D	7	0.4	5	94	564	0.02	3.4	10	1.46	0.8	0.84	8.58
5	74D	3.4	0.7	5	94	1762	0.07	3.4	16	1.17	0.77	0.86	3.42
5	75D	23.6	0.6	5	94	2254	0.03	3.4	23	0.99	0.74	0.84	19.63
5	76D	29.3	0.86	5	94	1926	0.02	3.4	22	1.01	0.74	0.88	26.04
5	78E	15.8	0.5	5	94	2787	0.07	3.4	23	0.99	0.74	0.82	12.83
5	79E	17.4	0.1	5	94	2252	0.08	3.4	20	1.06	0.75	0.77	14.2
5	80E	5	0.7	5	94	1611	0.05	3.4	17	1.14	0.76	0.86	4.9
5	84F	21.4	0.5	5	94	1683	0.06	3.4	17	1.14	0.76	0.83	20.25
5	85F	27.1	0.5	5	94	1439	0.06	3.4	15	1.21	0.77	0.84	27.54
5	86F	14.6	0.5	5	94	968	0.04	3.4	12	1.34	0.79	0.85	16.63
5	88C	34.4	0.5	5	94	1818	0.03	3.4	20	1.06	0.75	0.83	30.27
5	89C	23.7	0.7	5	94	2887	0.04	3.4	25	0.95	0.73	0.85	19.14
5	90C	6.9	0.02	5	94	1127	0.15	3.4	12	1.34	0.79	0.79	7.3
5	93C	2.8	0.02	5	94	409	0.1	3.4	6	1.86	0.84	0.84	4.37
5	95C	1.9	0.02	5	94	216	0.1	3.4	5	2.03	0.85	0.85	3.28
5	97C	1.2	0.02	5	94	198	0.1	3.4	5	2.03	0.85	0.85	2.07
5	99C	4.3	0.02	5	94	424	0.1	3.4	6	1.86	0.84	0.84	6.72
5	102A	16	0.01	5	94	703	0.27	3.4	8	1.63	0.82	0.82	21.39

TC Calculator Results

VTM 73336, Northlake Phase 1

Proposed Condition

2-yr Clear Frequency

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
2	1A	40.9	0.01	2	94	2501	0.2	2.2	30	0.57	0.6	0.6	13.99
2	2A	50.6	0.01	2	94	2085	0.24	2.2	24	0.63	0.63	0.63	20.08
2	3A	48.8	0.01	2	94	1886	0.17	2.2	24	0.63	0.63	0.63	19.37
2	4A	37.8	0.01	2	94	1577	0.19	2.2	21	0.67	0.65	0.65	16.46
2	5A	46.9	0.01	2	94	2013	0.15	2.2	27	0.59	0.62	0.62	17.16
2	8B	55.4	0.01	2	94	1990	0.29	2.2	23	0.64	0.63	0.63	22.34
2	9B	51	0.01	2	94	2230	0.22	2.2	26	0.6	0.62	0.62	18.97
2	11A	46.3	0.01	2	94	2402	0.19	2.2	29	0.57	0.61	0.61	16.1
2	12A	46.7	0.01	2	94	2523	0.24	2.2	29	0.57	0.61	0.61	16.24
2	13A	55	0.01	2	94	2188	0.21	2.2	26	0.6	0.62	0.62	20.46
2	14A	52.8	0.01	2	94	2314	0.24	2.2	27	0.59	0.62	0.62	19.31
2	15A	52.6	0.01	2	94	2494	0.18	2.2	30	0.57	0.6	0.6	17.99
2	16A	23.5	0.01	2	94	1862	0.24	2.2	22	0.65	0.64	0.64	9.78
2	19C	26	0.01	2	94	1296	0.28	2.2	17	0.74	0.68	0.68	13.08
2	20C	48.7	0.01	2	94	2971	0.16	2.2	30	0.57	0.6	0.6	16.66
2	22A	49.7	0.01	2	94	3412	0.15	2.2	30	0.57	0.6	0.6	17
2	25D	45	0.01	2	94	2381	0.23	2.2	28	0.58	0.61	0.61	15.92
2	26D	31.1	0.01	2	94	2454	0.22	2.2	29	0.57	0.61	0.61	10.81
2	27D	49.3	0.01	2	94	2374	0.18	2.2	29	0.57	0.61	0.61	17.14
2	28D	47.5	0.01	2	94	2966	0.16	2.2	30	0.57	0.6	0.6	16.25
2	29D	29.2	0.01	2	94	2182	0.19	2.2	27	0.59	0.61	0.61	10.51
2	30D	48.6	0.01	2	94	1877	0.24	2.2	23	0.64	0.63	0.63	19.6
2	31D	41.1	0.01	2	94	2744	0.19	2.2	30	0.57	0.6	0.6	14.06
2	35A	41.3	0.01	2	94	2799	0.18	2.2	30	0.57	0.6	0.6	14.12
2	36A	46.4	0.01	2	94	2330	0.22	2.2	27	0.59	0.61	0.61	16.7
2	37A	26	0.01	2	94	1890	0.24	2.2	23	0.64	0.63	0.63	10.81
2	38A	64.1	0.01	2	94	3294	0.14	2.2	30	0.57	0.6	0.6	21.92
2	39A	56.1	0.01	2	94	2202	0.1	2.2	30	0.57	0.6	0.6	19.9
2	42E	37.8	0.02	2	94	2151	0.07	2.2	30	0.57	0.6	0.61	13.14
2	43F	59.1	0.01	2	94	3511	0.15	2.2	30	0.57	0.6	0.6	20.21
2	44F	52.1	0.01	2	94	2154	0.17	2.2	27	0.59	0.61	0.61	18.75
2	50A	10.8	0.01	2	94	1130	0.27	2.2	15	0.78	0.69	0.69	5.81
2	51A	13.3	0.01	2	94	1030	0.43	2.2	13	0.84	0.7	0.7	7.82
2	52A	11.9	0.01	2	94	836	0.45	2.2	11	0.91	0.72	0.72	7.8
2	53A	15.4	0.01	2	94	1212	0.34	2.2	15	0.78	0.69	0.69	8.29
2	54A	9.7	0.01	2	94	833	0.26	2.2	12	0.87	0.71	0.71	5.99

TC Calculator Results

VTM 73336, Northlake Phase 1

Proposed Condition

2	55B	56.4	0.15	2	94	7606	0.06	2.2	21	0.67	0.65	0.69	26.07
2	57A	20.8	0.02	2	94	1272	0.25	2.2	17	0.74	0.68	0.68	10.47
2	58A	7	0.01	2	94	636	0.24	2.2	11	0.91	0.72	0.72	4.59
2	59A	9.6	0.01	2	94	180	0.11	2.2	5	1.31	0.78	0.78	9.81
2	60A	4.2	0.01	2	94	1103	0.19	2.2	16	0.76	0.68	0.68	2.17
2	61A	44.3	0.01	2	94	636	0.25	2.2	28	0.58	0.61	0.61	15.67
2	62A	37.9	0.01	2	94	1795	0.16	2.2	24	0.63	0.63	0.63	15.04
2	65C	40.4	0.75	2	94	2025	0.05	2.2	26	0.6	0.62	0.83	20.12
2	66C	39.8	0.5	2	94	4356	0.03	2.2	30	0.57	0.6	0.75	17.01
2	67C	51	0.6	2	94	3142	0.06	2.2	30	0.57	0.6	0.78	22.67
2	68C	34.8	0.4	2	94	3412	0.02	2.2	30	0.57	0.6	0.72	14.28
2	69C	13.1	0.5	2	94	1145	0.04	2.2	20	0.68	0.65	0.78	6.95
2	70C	63.7	0.75	2	94	4485	0.04	2.2	30	0.57	0.6	0.83	30.14
2	71C	10	0.5	2	94	1322	0.07	2.2	20	0.68	0.65	0.78	5.3
2	73D	7	0.4	2	94	564	0.02	2.2	14	0.81	0.7	0.78	4.42
2	74D	3.4	0.7	2	94	1762	0.07	2.2	23	0.64	0.63	0.82	1.78
2	75D	23.6	0.6	2	94	2254	0.03	2.2	30	0.57	0.6	0.78	10.49
2	76D	29.3	0.86	2	94	1926	0.02	2.2	29	0.57	0.6	0.86	14.36
2	78E	15.8	0.5	2	94	2787	0.07	2.2	30	0.57	0.6	0.75	6.75
2	79E	17.4	0.1	2	94	2252	0.08	2.2	30	0.57	0.6	0.63	6.25
2	80E	5	0.7	2	94	1611	0.05	2.2	23	0.64	0.63	0.82	2.62
2	84F	21.4	0.5	2	94	1683	0.06	2.2	24	0.63	0.63	0.77	10.38
2	85F	27.1	0.5	2	94	1439	0.06	2.2	21	0.67	0.65	0.78	14.16
2	86F	14.6	0.5	2	94	968	0.04	2.2	18	0.72	0.67	0.79	8.3
2	88C	34.4	0.5	2	94	1818	0.03	2.2	29	0.57	0.6	0.75	14.71
2	89C	23.7	0.7	2	94	2887	0.04	2.2	30	0.57	0.6	0.81	10.94
2	90C	6.9	0.02	2	94	1127	0.15	2.2	17	0.74	0.68	0.68	3.47
2	93C	2.8	0.02	2	94	409	0.1	2.2	9	1	0.74	0.74	2.07
2	95C	1.9	0.02	2	94	216	0.1	2.2	6	1.2	0.77	0.77	1.76
2	97C	1.2	0.02	2	94	198	0.1	2.2	6	1.2	0.77	0.77	1.11
2	99C	4.3	0.02	2	94	424	0.1	2.2	9	1	0.74	0.74	3.18
2	102A	16	0.01	2	94	703	0.27	2.2	11	0.91	0.72	0.72	10.48

LID Clear Frequency

Program Package Serial Number: 2083
12/07/16 FILE: pr50 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 1
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE: C:\civild\scr_soilx_34.dat
Northlake Phase 1, Prop. 50-yr

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM RAIN ZONE	DAY 4 PCT IMPV
1	1A	40.9	80.14	40.9	80.14	0	0.	.00000	.00	.00	0.	94	12	A29	.01
1	2A	50.6	109.62	91.5	189.77	2	1320.	.10000	.00	.00	0.	94	10	A29	.01
1	3A	48.8	105.72	140.3	289.36	2	960.	.10000	.00	.00	0.	94	10	A29	.01
1	4A	37.8	85.90	178.1	368.33	2	1272.	.08000	.00	.00	0.	94	9	A29	.01
1	5A	46.9	96.31	225.0	453.97	0	0.	.00000	.00	.00	0.	94	11	A29	.01
1	6A	.0	.00	225.0	453.97	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	7A	.0	.00	225.0	453.97	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	8B	55.4	120.02	55.4	120.02	1	1656.	.12000	.00	.00	0.	94	10	A29	.01
1	9B	51.0	104.73	106.4	208.82	0	0.	.00000	.00	.00	0.	94	11	A29	.01
1	10AB	106.4	208.82	331.4	662.70	2	1663.	.08000	.00	.00	0.	94	0	A29	.00
1	11A	46.3	90.72	377.7	740.79	0	0.	.00000	.00	.00	0.	94	12	A29	.01
1	12A	46.7	91.51	424.4	823.79	0	0.	.00000	.00	.00	0.	94	12	A29	.01
1	13A	55.0	112.95	479.4	924.54	2	1584.	.04000	.00	.00	0.	94	11	A29	.01
1	14A	52.8	108.43	532.2	1001.20	0	0.	.00000	.00	.00	0.	94	11	A29	.01
1	15A	52.6	103.07	584.8	1093.26	2	1085.	.05000	.00	.00	0.	94	12	A29	.01
1	16A	23.5	50.91	608.3	1119.04	0	0.	.00000	.00	.00	0.	94	10	A29	.01
1	17A	.0	.00	608.3	1119.04	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	18A	.0	.00	608.3	1119.04	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	19C	26.0	66.75	26.0	66.75	2	1584.	.09000	.00	.00	0.	94	7	A29	.01
1	20C	48.7	88.22	74.7	149.78	0	0.	.00000	.00	.00	0.	94	14	A29	.01
1	21AC	74.7	149.78	683.0	1246.29	2	1337.	.05000	.00	.00	0.	94	0	A29	.00
1	22A	49.7	87.10	732.7	1316.61	0	0.	.00000	.00	.00	0.	94	15	A29	.01
1	23A	.0	.00	732.7	1316.61	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	24A	.0	.00	732.7	1316.61	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	25D	45.0	92.41	45.0	92.41	0	0.	.00000	.00	.00	0.	94	11	A29	.01
1	26D	31.1	60.94	76.1	153.35	2	1020.	.10000	.00	.00	0.	94	12	A29	.01
1	27D	49.3	96.60	125.4	248.57	2	1290.	.10000	.00	.00	0.	94	12	A29	.01
1	28D	47.5	86.05	172.9	331.19	0	0.	.00000	.00	.00	0.	94	14	A29	.01
1	29D	29.2	59.96	202.1	388.26	2	1232.	.10000	.00	.00	0.	94	11	A29	.01
1	30D	48.6	105.29	250.7	481.67	2	1423.	.08000	.00	.00	0.	94	10	A29	.01
1	31D	41.1	77.26	291.8	549.56	0	0.	.00000	.00	.00	0.	94	13	A29	.01
1	32AD	291.8	549.56	1024.5	1846.33	2	827.	.03000	.00	.00	0.	94	0	A29	.00
1	33A	.0	.00	1024.5	1839.85	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	34A	.0	.00	1024.5	1839.85	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	35A	41.3	77.64	1065.8	1906.54	2	488.	.04000	.00	.00	0.	94	13	A29	.01
1	36A	46.4	95.28	1112.2	1961.87	2	1107.	.02000	.00	.00	0.	94	11	A29	.01
1	37A	26.0	56.33	1138.2	1968.79	0	0.	.00000	.00	.00	0.	94	10	A29	.01
1	38A	64.1	112.33	1202.3	2065.22	2	1195.	.01000	.00	.00	0.	94	15	A29	.01
1	39A	56.1	109.93	1258.4	2088.87	5	175.	.02000	12.00	.00	0.	94	12	A29	.01
1	40A	.0	.00	1258.4	2087.51	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	41A	.0	.00	1258.4	2087.51	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	42E	37.8	71.09	37.8	71.09	4	1519.	.03000	2.50	.00	0.	94	13	A29	.02
1	43F	59.1	99.87	59.1	99.87	0	0.	.00000	.00	.00	0.	94	16	A29	.01
1	44F	52.1	106.99	111.2	206.86	4	161.	.06000	3.25	.00	0.	94	11	A29	.01
1	45EF	111.2	206.51	149.0	273.39	4	1818.	.06000	3.75	.00	0.	94	0	A29	.00
1	46AE	149.0	271.20	1407.4	2293.44	5	625.	.02000	13.00	.00	0.	94	0	A29	.00
1	47A	.0	.00	1407.4	2292.92	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	48A	.0	.00	1407.4	2292.92	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	49A	.0	.00	1407.4	2292.92	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	50A	10.8	27.73	1418.2	2297.84	5	618.	.02000	13.00	.00	0.	94	7	A29	.01
1	51A	13.3	37.03	1431.5	2294.49	5	728.	.02000	13.00	.00	0.	94	6	A29	.01
1	52A	11.9	36.89	1443.4	2298.25	5	795.	.02000	13.00	.00	0.	94	5	A29	.01
1	53A	15.4	39.54	1458.8	2297.10	5	943.	.02000	13.00	.00	0.	94	7	A29	.01
1	54A	9.7	27.01	1468.5	2293.22	5	320.	.02000	13.00	.00	0.	94	6	A29	.01
1	55B	56.4	128.76	56.4	128.76	4	1250.	.05000	3.00	.00	0.	94	9	A29	.15
1	56AB	56.4	127.08	1524.9	2318.15	5	1344.	.05000	11.00	.00	0.	94	0	A29	.00
1	57A	20.8	53.41	1545.7	2321.23	5	449.	.05000	11.00	.00	0.	94	7	A29	.02
1	58A	7.0	21.70	1552.7	2320.20	5	680.	.05000	11.00	.00	0.	94	5	A29	.01
1	59A	9.6	29.76	1562.3	2322.90	5	1215.	.05000	11.00	.00	0.	94	5	A29	.01
1	60A	4.2	10.78	1566.5	2317.11	5	567.	.05000	11.00	.00	0.	94	7	A29	.01
1	61A	44.3	90.97	1610.8	2333.24	5	803.	.05000	11.00	.00	0.	94	11	A29	.01
1	62A	37.9	82.11	1648.7	2341.80	5	642.	.05000	11.00	.00	0.	94	10	A29	.01
1	63A	.0	.00	1648.7	2337.56	0	0.	.00000	.00	.00	0.	94	99	A29	.00

								PR50							
1	64A	.0	.00	1648.7	2337.56	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	65C	40.4	78.89	40.4	78.89	4	664.	.06000	2.25	.00	0.	94	13	A29	.75
1	66C	39.8	56.64	80.2	135.39	4	1491.	.06000	2.75	.00	0.	94	24	A29	.50
1	67C	51.0	86.79	131.2	220.10	0	0.	.00000	.00	.00	0.	94	17	A29	.60
1	68C	34.8	51.29	166.0	271.39	4	880.	.06000	3.75	.00	0.	94	22	A29	.40
1	69C	13.1	28.90	179.1	297.27	4	832.	.06000	3.75	.00	0.	94	10	A29	.50
1	70C	63.7	94.60	242.8	390.21	4	566.	.06000	4.25	.00	0.	94	23	A29	.75
1	71C	10.0	22.06	252.8	408.33	4	27.	.06000	4.25	.00	0.	94	10	A29	.50
1	72C	.0	.00	252.8	408.25	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	73D	7.0	18.12	7.0	18.12	4	1814.	.06000	2.00	.00	0.	94	7	A29	.40
1	74D	3.4	7.19	10.4	24.12	4	2106.	.02000	2.00	.00	0.	94	11	A29	.70
1	75D	23.6	42.84	34.0	61.72	4	1753.	.02000	2.50	.00	0.	94	15	A29	.60
1	76D	29.3	53.99	63.3	107.61	4	255.	.02000	3.25	.00	0.	94	15	A29	.86
1	77D	.0	.00	63.3	107.50	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	78E	15.8	28.51	15.8	28.51	4	670.	.05000	2.00	.00	0.	94	15	A29	.50
1	79E	17.4	32.86	33.2	61.10	4	1024.	.05000	2.25	.00	0.	94	13	A29	.10
1	80E	5.0	10.57	38.2	70.97	4	81.	.05000	2.25	.00	0.	94	11	A29	.70
1	81DE	38.2	70.94	101.5	176.38	4	404.	.05000	3.25	.00	0.	94	0	A29	.00
1	82CD	101.5	176.27	354.3	584.02	4	947.	.05000	5.00	.00	0.	94	0	A29	.00
1	83C	.0	.00	354.3	582.65	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	84F	21.4	44.87	21.4	44.87	4	1656.	.06000	2.00	.00	0.	94	11	A29	.50
1	85F	27.1	59.78	48.5	101.44	4	1070.	.06000	2.50	.00	0.	94	10	A29	.50
1	86F	14.6	35.59	63.1	133.53	4	16.	.06000	2.75	.00	0.	94	8	A29	.50
1	87CF	63.1	133.50	417.4	702.28	4	585.	.05000	5.25	.00	0.	94	0	A29	.00
1	88C	34.4	66.32	451.8	763.18	4	523.	.05000	5.50	.00	0.	94	13	A29	.50
1	89C	23.7	40.60	475.5	801.40	4	449.	.20000	4.25	.00	0.	94	17	A29	.70
1	90C	6.9	17.72	482.4	807.56	0	0.	.00000	.00	.00	0.	94	7	A29	.02
1	91C	.0	.00	482.4	807.56	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	92C	.0	.00	482.4	807.56	4	85.	.05000	5.75	.00	0.	94	99	A29	.00
1	93C	2.8	8.68	485.2	809.19	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	94C	.0	.00	485.2	809.19	4	85.	.05000	5.75	.00	0.	94	99	A29	.00
1	95C	1.9	5.89	487.1	810.20	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	96C	.0	.00	487.1	810.20	4	76.	.05000	5.75	.00	0.	94	99	A29	.00
1	97C	1.2	3.72	488.3	810.75	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	98C	.0	.00	488.3	810.75	4	283.	.05000	5.75	.00	0.	94	99	A29	.00
1	99C	4.3	13.33	492.6	812.62	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	100C	.0	.00	492.6	812.62	4	51.	.05000	5.75	.00	0.	94	99	A29	.00
1	101AC	492.6	812.62	2141.3	2876.37	5	36.	.05000	12.00	.00	0.	94	0	A29	.00
1	102A	16.0	49.60	2157.3	2881.27	0	0.	.00000	.00	.00	0.	94	5	A29	.01

♀
Program Package Serial Number: 2083
12/07/16 FILE: pr50 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units
PAGE 3

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
Northlake Phase 1, Prop. 50-yr, NATURAL HYD.
HYDROGRAPH AT 1 64A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	24.18	200	24.70	300	25.94	400	27.38
500	29.00	600	31.11	700	33.74	800	46.08	900	87.25
1000	160.21	1050	231.04	1100	363.56	1110	408.55	1120	477.72
1130	579.77	1131	591.95	1132	603.87	1133	616.47	1134	629.69
1135	643.62	1136	658.22	1137	674.07	1138	691.35	1139	709.45
1140	728.53	1141	748.88	1142	770.18	1143	791.73	1144	813.60
1145	837.03	1146	862.89	1147	890.67	1148	919.96	1149	957.25
1150	1006.17	1151	1063.07	1152	1128.11	1153	1203.11	1154	1284.16
1155	1365.35	1156	1447.58	1157	1526.96	1158	1601.21	1159	1666.36
1160	1723.59	1161	1778.63	1162	1836.54	1163	1902.19	1164	1979.04
1165	2065.89	1166	2155.21	1167	2236.20	1168	2297.98	1169	2333.61
1170	2337.56	1171	2315.62	1172	2261.29	1173	2183.92	1174	2086.39
1175	1975.72	1176	1858.49	1177	1740.76	1178	1620.07	1179	1502.07
1180	1391.30	1181	1289.82	1182	1199.67	1183	1117.17	1184	1038.51
1185	967.06	1186	902.70	1187	844.20	1188	790.89	1189	743.11
1190	702.19	1191	668.55	1192	638.18	1193	607.14	1194	578.58
1195	552.23	1196	527.83	1197	505.01	1198	483.74	1199	464.11
1200	445.93	1201	429.10	1202	413.51	1203	398.86	1204	385.20
1205	372.69	1206	361.15	1207	350.41	1208	340.29	1209	330.81
1210	321.78	1211	313.14	1212	304.86	1213	297.00	1214	289.50
1215	282.14	1216	275.08	1217	268.35	1218	261.81	1219	255.55
1220	249.67	1221	243.95	1222	238.53	1223	233.56	1224	229.48
1225	225.85	1226	222.19	1227	218.44	1228	214.55	1229	210.52
1230	206.37	1231	202.22	1232	198.21	1233	194.35	1234	190.58
1235	186.88	1236	183.18	1237	179.50	1238	175.84	1239	172.21
1240	168.89	1241	165.84	1242	162.84	1243	160.01	1244	157.67
1245	155.34	1246	152.99	1247	150.56	1248	148.13	1249	145.79
1250	143.36	1251	140.84	1252	138.31	1253	135.81	1254	133.30
1255	130.88	1256	128.51	1257	126.17	1258	123.89	1259	121.45
1260	119.05	1261	116.73	1262	114.36	1263	112.06	1264	109.86
1265	107.66	1266	105.47	1267	103.35	1268	101.23	1269	99.20
1270	97.24	1271	95.26	1272	93.33	1273	91.49	1274	89.75
1275	88.15	1276	86.84	1277	85.71	1278	84.64	1279	83.54
1280	82.38	1281	81.15	1282	79.86	1283	78.54	1284	77.20
1285	75.85	1286	74.50	1287	73.15	1288	71.81	1289	70.49
1290	69.17	1291	67.87	1292	66.59	1293	65.32	1294	64.08
1295	62.86	1296	61.66	1297	60.48	1298	59.33	1299	58.20
1300	57.09	1310	48.27	1320	42.71	1330	38.65	1340	35.64
1350	33.62	1360	32.16	1370	31.07	1380	30.18	1390	29.33
1400	28.65	1420	27.48	1440	26.47	1460	24.22	1500	24.18

TOTAL VOLUME THIS HYDROGRAPH = 256.88(Ac.Ft)

Program Package Serial Number: 2083
08/08/16 FILE: pr50 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 4
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:
Northlake Phase 1, Prop. 50-yr, BASIN A HYD.
HYDROGRAPH AT 1 90C STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	35.32	200	36.78	300	38.78	400	40.81
500	43.42	600	46.72	700	50.95	800	58.33	900	72.09
1000	93.72	1050	121.39	1100	163.99	1110	186.36	1120	220.22
1130	259.22	1131	263.79	1132	268.38	1133	273.36	1134	278.55
1135	283.86	1136	289.44	1137	295.62	1138	302.18	1139	309.16
1140	316.52	1141	324.77	1142	333.89	1143	343.69	1144	354.08
1145	366.02	1146	379.67	1147	394.91	1148	411.33	1149	435.87
1150	469.41	1151	511.24	1152	562.27	1153	620.57	1154	675.72
1155	723.20	1156	760.21	1157	786.61	1158	802.12	1159	807.56
1160	805.27	1161	795.88	1162	775.23	1163	745.55	1164	711.76
1165	675.66	1166	636.19	1167	596.66	1168	558.64	1169	518.63
1170	477.27	1171	438.80	1172	403.94	1173	372.35	1174	343.74
1175	317.14	1176	293.11	1177	270.87	1178	250.65	1179	233.10
1180	217.98	1181	205.70	1182	194.75	1183	185.33	1184	177.44
1185	170.60	1186	164.69	1187	159.71	1188	155.05	1189	150.91
1190	147.09	1191	143.48	1192	140.07	1193	136.95	1194	133.93
1195	131.07	1196	128.49	1197	126.09	1198	123.76	1199	121.54
1200	119.54	1201	117.68	1202	115.88	1203	113.86	1204	112.00
1205	110.37	1206	108.73	1207	106.94	1208	105.36	1209	103.93
1210	102.40	1211	101.01	1212	99.70	1213	98.42	1214	97.19
1215	95.88	1216	94.77	1217	93.72	1218	92.54	1219	91.51
1220	90.53	1221	89.56	1222	88.49	1223	87.40	1224	86.45
1225	85.48	1226	84.56	1227	83.77	1228	82.97	1229	82.22
1230	81.32	1231	80.48	1232	79.69	1233	78.74	1234	77.94
1235	77.23	1236	76.49	1237	75.88	1238	75.13	1239	74.37
1240	73.67	1241	73.04	1242	72.34	1243	71.72	1244	71.24
1245	70.66	1246	69.98	1247	69.30	1248	68.66	1249	68.09
1250	67.38	1251	66.80	1252	66.28	1253	65.69	1254	65.07
1255	64.58	1256	64.09	1257	63.62	1258	63.04	1259	62.51
1260	62.03	1261	61.51	1262	60.87	1263	60.36	1264	59.85
1265	59.33	1266	58.85	1267	58.38	1268	57.87	1269	57.51
1270	57.08	1271	56.67	1272	56.29	1273	55.98	1274	55.66
1275	55.31	1276	55.00	1277	54.64	1278	54.32	1279	54.08
1280	53.79	1281	53.52	1282	53.30	1283	53.02	1284	52.80
1285	52.63	1286	52.37	1287	52.09	1288	51.85	1289	51.63
1290	51.39	1291	51.15	1292	50.91	1293	50.65	1294	50.43
1295	50.24	1296	50.04	1297	49.85	1298	49.70	1299	49.55
1300	49.42	1310	48.24	1320	46.93	1330	45.41	1340	43.81
1350	42.67	1360	41.77	1370	40.95	1380	40.13	1390	38.85
1400	38.27	1420	37.27	1440	35.47	1460	35.21	1500	35.21

TOTAL VOLUME THIS HYDROGRAPH = 147.82(Ac.Ft)

Program Package Serial Number: 2083

08/19/16 FILE: PR50 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 2

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 50 SOIL DATA FILE:

Northlake Phase 1, Prop. 50-yr CLEAR, NATURAL HYD.

HYDROGRAPH AT 1 102A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	.23	200	.24	300	.25	400	.26
500	.28	600	.30	700	.33	800	.52	900	1.02
1000	1.75	1050	2.72	1100	4.11	1110	5.71	1120	6.66
1130	8.30	1131	8.55	1132	8.80	1133	9.22	1134	9.65
1135	10.08	1136	10.25	1137	10.79	1138	11.14	1139	11.50
1140	11.85	1141	12.76	1142	13.30	1143	13.84	1144	14.38
1145	15.83	1146	16.91	1147	17.99	1148	18.90	1149	25.84
1150	31.90	1151	37.61	1152	43.50	1153	49.60	1154	43.50
1155	36.50	1156	29.14	1157	21.27	1158	13.30	1159	11.14
1160	9.72	1161	8.65	1162	7.78	1163	7.26	1164	6.57
1165	6.23	1166	5.88	1167	5.54	1168	5.19	1169	5.02
1170	4.68	1171	4.51	1172	4.34	1173	4.18	1174	4.01
1175	3.85	1176	3.68	1177	3.68	1178	3.35	1179	3.35
1180	3.18	1181	3.18	1182	3.02	1183	3.02	1184	2.85
1185	2.85	1186	2.69	1187	2.69	1188	2.52	1189	2.52
1190	2.52	1191	2.36	1192	2.19	1193	2.36	1194	2.19
1195	2.02	1196	2.19	1197	2.19	1198	2.02	1199	2.02
1200	2.02	1201	1.86	1202	1.86	1203	1.69	1204	1.69
1205	1.69	1206	1.69	1207	1.53	1208	1.69	1209	1.69
1210	1.53	1211	1.53	1212	1.53	1213	1.53	1214	1.36
1215	1.36	1216	1.36	1217	1.36	1218	1.20	1219	1.36
1220	1.36	1221	1.20	1222	1.20	1223	1.20	1224	1.00
1225	1.00	1226	1.20	1227	1.20	1228	1.20	1229	1.20
1230	1.00	1231	.81	1232	.81	1233	.81	1234	.81
1235	1.00	1236	1.00	1237	1.00	1238	.81	1239	.81
1240	.81	1241	.81	1242	.61	1243	.81	1244	.81
1245	.61	1246	.61	1247	.61	1248	.61	1249	.61
1250	.61	1251	.61	1252	.61	1253	.61	1254	.41
1255	.61	1256	.41	1257	.61	1258	.41	1259	.41
1260	.41	1261	.41	1262	.33	1263	.41	1264	.41
1265	.33	1266	.41	1267	.41	1268	.33	1269	.41
1270	.41	1271	.33	1272	.33	1273	.41	1274	.33
1275	.33	1276	.33	1277	.33	1278	.31	1279	.33
1280	.33	1281	.33	1282	.33	1283	.33	1284	.31
1285	.31	1286	.31	1287	.31	1288	.31	1289	.31
1290	.31	1291	.31	1292	.31	1293	.31	1294	.31
1295	.31	1296	.31	1297	.31	1298	.31	1299	.31
1300	.31	1310	.30	1320	.29	1330	.28	1340	.27
1350	.27	1360	.26	1370	.26	1380	.25	1390	.24
1400	.25	1420	.23	1440	.22	1460	.00	1500	.00

TOTAL VOLUME THIS HYDROGRAPH = 2.41(Ac.Ft)

Program Package Serial Number: 2083
12/07/16 FILE: pr25 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 1
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE: C:\civild\scr_soilx_34.dat
Northlake Phase 1, Prop. 25-yr CLEAR

LOCATION		SUBAREA AREA(AC)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM RAIN ZONE	DAY 4 PCT IMPV
1	1A	40.9	66.40	40.9	66.40	0	0.	.00000	.00	.00	0.	94	13	A29	.01
1	2A	50.6	89.84	91.5	156.24	2	1320.	.10000	.00	.00	0.	94	11	A29	.01
1	3A	48.8	86.64	140.3	239.55	2	960.	.10000	.00	.00	0.	94	11	A29	.01
1	4A	37.8	70.86	178.1	304.41	2	1272.	.08000	.00	.00	0.	94	10	A29	.01
1	5A	46.9	79.40	225.0	376.25	0	0.	.00000	.00	.00	0.	94	12	A29	.01
1	6A	.0	.00	225.0	376.25	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	7A	.0	.00	225.0	376.25	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	8B	55.4	98.36	55.4	98.36	1	1656.	.12000	.00	.00	0.	94	11	A29	.01
1	9B	51.0	86.34	106.4	172.70	0	0.	.00000	.00	.00	0.	94	12	A29	.01
1	10AB	106.4	172.70	331.4	548.95	2	1663.	.08000	.00	.00	0.	94	0	A29	.00
1	11A	46.3	75.16	377.7	611.81	0	0.	.00000	.00	.00	0.	94	13	A29	.01
1	12A	46.7	75.81	424.4	681.85	0	0.	.00000	.00	.00	0.	94	13	A29	.01
1	13A	55.0	93.11	479.4	766.22	2	1584.	.04000	.00	.00	0.	94	12	A29	.01
1	14A	52.8	89.38	532.2	832.51	0	0.	.00000	.00	.00	0.	94	12	A29	.01
1	15A	52.6	85.39	584.8	908.56	2	1085.	.05000	.00	.00	0.	94	13	A29	.01
1	16A	23.5	41.72	608.3	929.42	0	0.	.00000	.00	.00	0.	94	11	A29	.01
1	17A	.0	.00	608.3	929.42	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	18A	.0	.00	608.3	929.42	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	19C	26.0	54.19	26.0	54.19	2	1584.	.09000	.00	.00	0.	94	8	A29	.01
1	20C	48.7	73.65	74.7	123.60	0	0.	.00000	.00	.00	0.	94	15	A29	.01
1	21AC	74.7	123.60	683.0	1033.42	2	1337.	.05000	.00	.00	0.	94	0	A29	.00
1	22A	49.7	70.05	732.7	1092.32	0	0.	.00000	.00	.00	0.	94	17	A29	.01
1	23A	.0	.00	732.7	1092.32	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	24A	.0	.00	732.7	1092.32	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	25D	45.0	76.18	45.0	76.18	0	0.	.00000	.00	.00	0.	94	12	A29	.01
1	26D	31.1	50.49	76.1	126.67	2	1020.	.10000	.00	.00	0.	94	13	A29	.01
1	27D	49.3	80.03	125.4	205.60	2	1290.	.10000	.00	.00	0.	94	13	A29	.01
1	28D	47.5	71.83	172.9	274.20	0	0.	.00000	.00	.00	0.	94	15	A29	.01
1	29D	29.2	49.43	202.1	322.04	2	1232.	.10000	.00	.00	0.	94	12	A29	.01
1	30D	48.6	86.29	250.7	399.38	2	1423.	.08000	.00	.00	0.	94	11	A29	.01
1	31D	41.1	64.27	291.8	456.34	0	0.	.00000	.00	.00	0.	94	14	A29	.01
1	32AD	291.8	456.34	1024.5	1533.05	2	827.	.03000	.00	.00	0.	94	0	A29	.00
1	33A	.0	.00	1024.5	1527.18	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	34A	.0	.00	1024.5	1527.18	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	35A	41.3	64.59	1065.8	1581.40	2	488.	.04000	.00	.00	0.	94	14	A29	.01
1	36A	46.4	78.55	1112.2	1628.28	2	1107.	.02000	.00	.00	0.	94	12	A29	.01
1	37A	26.0	46.16	1138.2	1636.14	0	0.	.00000	.00	.00	0.	94	11	A29	.01
1	38A	64.1	90.35	1202.3	1714.76	2	1195.	.01000	.00	.00	0.	94	17	A29	.01
1	39A	56.1	87.73	1258.4	1740.59	5	175.	.02000	11.00	.00	0.	94	14	A29	.01
1	40A	.0	.00	1258.4	1739.72	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	41A	.0	.00	1258.4	1739.72	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	42E	37.8	59.16	37.8	59.16	4	1519.	.03000	2.50	.00	0.	94	14	A29	.02
1	43F	59.1	83.30	59.1	83.30	0	0.	.00000	.00	.00	0.	94	17	A29	.01
1	44F	52.1	88.20	111.2	171.50	4	161.	.06000	3.00	.00	0.	94	12	A29	.01
1	45EF	111.2	171.25	149.0	228.06	4	1818.	.06000	3.50	.00	0.	94	0	A29	.00
1	46AE	149.0	226.46	1407.4	1908.92	5	625.	.02000	12.00	.00	0.	94	0	A29	.00
1	47A	.0	.00	1407.4	1908.81	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	48A	.0	.00	1407.4	1908.81	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	49A	.0	.00	1407.4	1908.81	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	50A	10.8	24.05	1418.2	1912.63	5	618.	.02000	12.00	.00	0.	94	7	A29	.01
1	51A	13.3	32.14	1431.5	1910.63	5	728.	.02000	12.00	.00	0.	94	6	A29	.01
1	52A	11.9	28.76	1443.4	1913.40	5	795.	.02000	12.00	.00	0.	94	6	A29	.01
1	53A	15.4	34.29	1458.8	1912.77	5	823.	.02000	12.00	.00	0.	94	7	A29	.01
1	54A	9.7	23.44	1468.5	1910.39	5	443.	.02000	12.00	.00	0.	94	6	A29	.01
1	55B	56.4	106.51	56.4	106.51	4	1197.	.05000	2.75	.00	0.	94	10	A29	.15
1	56AB	56.4	105.16	1524.9	1930.57	4	1344.	.05000	7.75	.00	0.	94	0	A29	.00
1	57A	20.8	43.37	1545.7	1930.58	4	449.	.05000	7.75	.00	0.	94	8	A29	.02
1	58A	7.0	18.85	1552.7	1931.49	4	680.	.05000	7.75	.00	0.	94	5	A29	.01
1	59A	9.6	25.85	1562.3	1928.46	4	1215.	.05000	7.75	.00	0.	94	5	A29	.01
1	60A	4.2	8.75	1566.5	1923.70	4	567.	.05000	7.75	.00	0.	94	8	A29	.01
1	61A	44.3	74.99	1610.8	1935.69	4	803.	.05000	7.75	.00	0.	94	12	A29	.01
1	62A	37.9	67.29	1648.7	1940.77	4	642.	.05000	7.75	.00	0.	94	11	A29	.01
1	63A	.0	.00	1648.7	1939.48	0	0.	.00000	.00	.00	0.	94	99	A29	.00

								pr25							
1	64A	.0	.00	1648.7	1939.48	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	65C	40.4	66.68	40.4	66.68	4	664.	.06000	2.25	.00	0.	94	14	A29	.75
1	66C	39.8	47.28	80.2	113.77	4	1491.	.06000	2.75	.00	0.	94	26	A29	.50
1	67C	51.0	73.56	131.2	186.22	0	0.	.00000	.00	.00	0.	94	18	A29	.60
1	68C	34.8	42.55	166.0	228.73	4	880.	.06000	3.50	.00	0.	94	24	A29	.40
1	69C	13.1	25.19	179.1	251.32	4	832.	.06000	3.50	.00	0.	94	10	A29	.50
1	70C	63.7	79.44	242.8	329.39	4	566.	.06000	4.00	.00	0.	94	25	A29	.75
1	71C	10.0	19.23	252.8	344.93	4	27.	.06000	4.00	.00	0.	94	10	A29	.50
1	72C	.0	.00	252.8	344.85	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	73D	7.0	15.80	7.0	15.80	4	1814.	.06000	2.00	.00	0.	94	7	A29	.40
1	74D	3.4	6.01	10.4	20.76	4	2106.	.02000	2.00	.00	0.	94	12	A29	.70
1	75D	23.6	35.01	34.0	52.00	4	1753.	.02000	2.50	.00	0.	94	17	A29	.60
1	76D	29.3	45.77	63.3	91.63	4	255.	.02000	3.00	.00	0.	94	16	A29	.86
1	77D	.0	.00	63.3	91.56	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	78E	15.8	23.24	15.8	23.24	4	670.	.05000	2.00	.00	0.	94	17	A29	.50
1	79E	17.4	27.39	33.2	50.41	4	1024.	.05000	2.00	.00	0.	94	14	A29	.10
1	80E	5.0	8.84	38.2	58.70	4	81.	.05000	2.25	.00	0.	94	12	A29	.70
1	81DE	38.2	58.64	101.5	148.29	4	404.	.05000	3.00	.00	0.	94	0	A29	.00
1	82CD	101.5	148.19	354.3	492.29	4	947.	.05000	4.75	.00	0.	94	0	A29	.00
1	83C	.0	.00	354.3	491.34	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	84F	21.4	37.38	21.4	37.38	4	1656.	.06000	2.00	.00	0.	94	12	A29	.50
1	85F	27.1	49.51	48.5	85.02	4	1070.	.06000	2.50	.00	0.	94	11	A29	.50
1	86F	14.6	29.39	63.1	111.99	4	16.	.06000	2.75	.00	0.	94	9	A29	.50
1	87CF	63.1	111.94	417.4	593.68	4	585.	.05000	5.00	.00	0.	94	0	A29	.00
1	88C	34.4	54.04	451.8	644.65	4	523.	.05000	5.25	.00	0.	94	15	A29	.50
1	89C	23.7	33.61	475.5	675.86	4	449.	.20000	4.00	.00	0.	94	19	A29	.70
1	90C	6.9	14.39	482.4	681.98	0	0.	.00000	.00	.00	0.	94	8	A29	.02
1	91C	.0	.00	482.4	681.98	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	92C	.0	.00	482.4	681.98	4	85.	.05000	5.25	.00	0.	94	99	A29	.00
1	93C	2.8	7.54	485.2	683.31	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	94C	.0	.00	485.2	683.31	4	85.	.05000	5.25	.00	0.	94	99	A29	.00
1	95C	1.9	5.12	487.1	684.28	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	96C	.0	.00	487.1	684.28	4	76.	.05000	5.25	.00	0.	94	99	A29	.00
1	97C	1.2	3.23	488.3	684.87	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	98C	.0	.00	488.3	684.87	4	283.	.05000	5.25	.00	0.	94	99	A29	.00
1	99C	4.3	11.58	492.6	686.92	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	100C	.0	.00	492.6	686.92	4	51.	.05000	5.25	.00	0.	94	99	A29	.00
1	101AC	492.6	686.85	2141.3	2363.71	5	36.	.05000	11.00	.00	0.	94	0	A29	.00
1	102A	16.0	43.08	2157.3	2367.38	0	0.	.00000	.00	.00	0.	94	5	A29	.01

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Program Package Serial Number: 2083
12/07/16 FILE: pr25 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units
PAGE 3

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:
Northlake Phase 1, Prop. 25-yr CLEAR, NATURAL HYD.
HYDROGRAPH AT 1 64A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	21.23	200	21.74	300	22.84	400	24.04
500	25.47	600	27.31	700	29.63	800	32.67	900	47.06
1000	105.37	1050	172.95	1100	286.62	1110	325.96	1120	382.87
1130	467.91	1131	478.24	1132	488.38	1133	498.95	1134	509.83
1135	521.09	1136	532.79	1137	545.36	1138	559.17	1139	574.06
1140	589.98	1141	607.05	1142	624.95	1143	643.31	1144	661.85
1145	681.65	1146	703.50	1147	727.04	1148	751.82	1149	783.08
1150	823.72	1151	871.20	1152	925.57	1153	987.30	1154	1051.45
1155	1114.32	1156	1176.71	1157	1237.67	1158	1296.29	1159	1351.05
1160	1399.28	1161	1441.69	1162	1482.72	1163	1525.44	1164	1572.94
1165	1627.43	1166	1688.82	1167	1751.57	1168	1811.29	1169	1864.63
1170	1905.62	1171	1931.51	1172	1939.48	1173	1926.60	1174	1885.82
1175	1816.75	1176	1726.83	1177	1622.55	1178	1515.28	1179	1409.92
1180	1309.04	1181	1213.95	1182	1124.85	1183	1042.41	1184	967.35
1185	899.89	1186	839.13	1187	783.48	1188	732.50	1189	685.71
1190	642.88	1191	605.13	1192	570.63	1193	540.46	1194	513.93
1195	489.35	1196	467.43	1197	447.21	1198	427.24	1199	407.95
1200	389.86	1201	373.47	1202	358.36	1203	344.07	1204	330.64
1205	318.57	1206	307.35	1207	296.74	1208	287.00	1209	278.63
1210	270.48	1211	262.56	1212	254.80	1213	247.31	1214	240.20
1215	233.31	1216	226.68	1217	220.29	1218	214.04	1219	208.10
1220	202.39	1221	196.82	1222	191.40	1223	186.22	1224	181.30
1225	176.69	1226	172.73	1227	169.39	1228	166.15	1229	163.00
1230	159.59	1231	156.01	1232	152.48	1233	149.00	1234	145.58
1235	142.22	1236	138.92	1237	135.59	1238	132.16	1239	128.75
1240	125.49	1241	122.47	1242	119.51	1243	116.52	1244	113.65
1245	110.85	1246	108.14	1247	105.66	1248	103.72	1249	101.90
1250	100.19	1251	98.43	1252	96.61	1253	94.73	1254	92.81
1255	90.88	1256	88.96	1257	87.06	1258	85.17	1259	83.30
1260	81.44	1261	79.60	1262	77.77	1263	75.96	1264	74.19
1265	72.44	1266	70.75	1267	69.09	1268	67.48	1269	65.91
1270	64.40	1271	62.92	1272	61.47	1273	60.08	1274	58.73
1275	57.41	1276	56.13	1277	54.89	1278	53.70	1279	52.56
1280	51.47	1281	50.43	1282	49.46	1283	48.55	1284	47.74
1285	47.07	1286	46.55	1287	46.06	1288	45.57	1289	45.05
1290	44.50	1291	43.93	1292	43.36	1293	42.79	1294	42.23
1295	41.68	1296	41.15	1297	40.63	1298	40.12	1299	39.62
1300	39.14	1310	35.36	1320	32.94	1330	31.29	1340	29.95
1350	28.91	1360	28.01	1370	27.22	1380	26.48	1390	25.76
1400	25.16	1420	24.12	1440	23.13	1460	21.23	1500	21.23

TOTAL VOLUME THIS HYDROGRAPH = 205.66(Ac.Ft)

Program Package Serial Number: 2083
08/08/16 FILE: pr25 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 4
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:
Northlake Phase 1, Prop. 25-yr CLEAR, BASIN A HYD.
HYDROGRAPH AT 1 90C STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	31.01	200	32.29	300	34.04	400	35.83
500	38.12	600	41.01	700	44.72	800	49.58	900	58.77
1000	78.46	1050	102.94	1100	140.15	1110	158.36	1120	186.74
1130	220.55	1131	224.42	1132	228.34	1133	232.54	1134	236.96
1135	241.61	1136	246.41	1137	251.56	1138	257.14	1139	263.02
1140	269.16	1141	275.95	1142	283.49	1143	291.60	1144	300.25
1145	310.08	1146	321.30	1147	333.81	1148	347.44	1149	367.19
1150	393.97	1151	427.35	1152	468.26	1153	515.23	1154	560.84
1155	601.37	1156	634.88	1157	658.93	1158	674.26	1159	681.98
1160	681.87	1161	675.36	1162	662.68	1163	644.65	1164	621.59
1165	594.68	1166	565.88	1167	536.94	1168	505.14	1169	472.73
1170	441.00	1171	408.60	1172	376.63	1173	347.91	1174	322.63
1175	299.78	1176	278.93	1177	259.47	1178	241.15	1179	223.79
1180	208.05	1181	193.77	1182	181.74	1183	171.49	1184	162.57
1185	154.89	1186	148.38	1187	142.62	1188	137.70	1189	133.39
1190	129.61	1191	126.12	1192	122.77	1193	119.77	1194	116.97
1195	114.23	1196	111.80	1197	109.49	1198	107.29	1199	105.27
1200	103.32	1201	101.51	1202	99.87	1203	98.15	1204	96.46
1205	94.87	1206	93.33	1207	91.84	1208	90.40	1209	89.01
1210	87.65	1211	86.45	1212	85.15	1213	84.01	1214	82.89
1215	81.71	1216	80.62	1217	79.57	1218	78.52	1219	77.61
1220	76.70	1221	75.69	1222	74.80	1223	73.90	1224	72.87
1225	71.90	1226	71.11	1227	70.28	1228	69.46	1229	68.72
1230	67.88	1231	67.10	1232	66.32	1233	65.57	1234	64.80
1235	64.02	1236	63.33	1237	62.73	1238	62.05	1239	61.38
1240	60.80	1241	60.22	1242	59.55	1243	58.96	1244	58.49
1245	57.95	1246	57.43	1247	56.91	1248	56.38	1249	55.93
1250	55.45	1251	54.98	1252	54.55	1253	54.16	1254	53.79
1255	53.42	1256	53.05	1257	52.76	1258	52.50	1259	52.17
1260	51.88	1261	51.63	1262	51.32	1263	51.02	1264	50.74
1265	50.43	1266	50.19	1267	49.96	1268	49.67	1269	49.45
1270	49.23	1271	49.00	1272	48.77	1273	48.58	1274	48.41
1275	48.22	1276	48.00	1277	47.79	1278	47.60	1279	47.40
1280	47.22	1281	47.04	1282	46.84	1283	46.66	1284	46.50
1285	46.28	1286	46.08	1287	45.91	1288	45.69	1289	45.46
1290	45.26	1291	45.08	1292	44.87	1293	44.66	1294	44.47
1295	44.28	1296	44.11	1297	43.97	1298	43.80	1299	43.65
1300	43.53	1310	42.43	1320	41.30	1330	40.00	1340	38.58
1350	37.56	1360	36.74	1370	36.02	1380	35.31	1390	34.22
1400	33.66	1420	32.74	1440	31.18	1460	30.92	1500	30.92

TOTAL VOLUME THIS HYDROGRAPH = 127.35(Ac.Ft)

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Program Package Serial Number: 2083
08/21/16 FILE: PR25 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 2
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 25 SOIL DATA FILE:
Northlake Phase 1, Prop. 25-yr CLEAR, NATURAL HYD.
HYDROGRAPH AT 1 102A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	.20	200	.21	300	.22	400	.23
500	.24	600	.26	700	.29	800	.32	900	.54
1000	1.26	1050	2.11	1100	3.33	1110	4.70	1120	5.53
1130	6.97	1131	7.18	1132	7.39	1133	7.76	1134	8.12
1135	8.49	1136	8.65	1137	9.12	1138	9.43	1139	9.74
1140	10.05	1141	10.83	1142	11.30	1143	11.77	1144	12.24
1145	13.51	1146	14.46	1147	15.42	1148	16.21	1149	22.27
1150	27.57	1151	32.58	1152	37.75	1153	43.08	1154	37.75
1155	31.61	1156	25.16	1157	18.27	1158	11.30	1159	9.43
1160	8.18	1161	7.27	1162	6.52	1163	6.06	1164	5.46
1165	5.15	1166	4.85	1167	4.55	1168	4.26	1169	4.12
1170	3.82	1171	3.68	1172	3.53	1173	3.39	1174	3.24
1175	3.10	1176	2.95	1177	2.95	1178	2.66	1179	2.66
1180	2.52	1181	2.52	1182	2.37	1183	2.37	1184	2.23
1185	2.23	1186	2.08	1187	2.08	1188	1.93	1189	1.93
1190	1.93	1191	1.79	1192	1.64	1193	1.79	1194	1.64
1195	1.50	1196	1.64	1197	1.64	1198	1.50	1199	1.50
1200	1.50	1201	1.35	1202	1.35	1203	1.21	1204	1.21
1205	1.21	1206	1.21	1207	1.04	1208	1.21	1209	1.21
1210	1.04	1211	1.04	1212	1.04	1213	1.04	1214	.87
1215	.87	1216	.87	1217	.87	1218	.70	1219	.87
1220	.87	1221	.70	1222	.70	1223	.70	1224	.52
1225	.52	1226	.70	1227	.70	1228	.70	1229	.70
1230	.52	1231	.35	1232	.35	1233	.35	1234	.35
1235	.52	1236	.52	1237	.52	1238	.35	1239	.35
1240	.35	1241	.35	1242	.33	1243	.35	1244	.35
1245	.33	1246	.33	1247	.33	1248	.33	1249	.33
1250	.33	1251	.33	1252	.33	1253	.33	1254	.31
1255	.33	1256	.31	1257	.33	1258	.31	1259	.31
1260	.31	1261	.31	1262	.29	1263	.31	1264	.31
1265	.29	1266	.31	1267	.31	1268	.29	1269	.31
1270	.31	1271	.29	1272	.29	1273	.31	1274	.29
1275	.29	1276	.29	1277	.29	1278	.27	1279	.29
1280	.29	1281	.29	1282	.29	1283	.29	1284	.27
1285	.27	1286	.27	1287	.27	1288	.27	1289	.27
1290	.27	1291	.27	1292	.27	1293	.27	1294	.27
1295	.27	1296	.27	1297	.27	1298	.27	1299	.27
1300	.27	1310	.26	1320	.25	1330	.25	1340	.24
1350	.24	1360	.23	1370	.23	1380	.22	1390	.21
1400	.22	1420	.20	1440	.20	1460	.00	1500	.00

TOTAL VOLUME THIS HYDROGRAPH = 1.92(Ac.Ft)

Program Package Serial Number: 2083
12/07/16 FILE: pr10 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE: C:\civild\scr_soilx_34.dat
Northlake Phase 1, Prop. 10-yr CLEAR

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM RAIN ZONE	DAY 4 PCT IMPV
1	1A	40.9	46.88	40.9	46.88	0	0.	.00000	.00	.00	0.	94	16	A29	.01
1	2A	50.6	64.78	91.5	111.66	2	1320.	.10000	.00	.00	0.	94	13	A29	.01
1	3A	48.8	62.47	140.3	172.11	2	960.	.10000	.00	.00	0.	94	13	A29	.01
1	4A	37.8	50.53	178.1	219.27	2	1272.	.08000	.00	.00	0.	94	12	A29	.01
1	5A	46.9	57.77	225.0	272.05	0	0.	.00000	.00	.00	0.	94	14	A29	.01
1	6A	.0	.00	225.0	272.05	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	7A	.0	.00	225.0	272.05	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	8B	55.4	74.05	55.4	74.05	1	1656.	.12000	.00	.00	0.	94	12	A29	.01
1	9B	51.0	62.82	106.4	128.35	0	0.	.00000	.00	.00	0.	94	14	A29	.01
1	10AB	106.4	128.35	331.4	400.40	2	1663.	.08000	.00	.00	0.	94	0	A29	.00
1	11A	46.3	55.10	377.7	447.24	0	0.	.00000	.00	.00	0.	94	15	A29	.01
1	12A	46.7	55.58	424.4	498.55	0	0.	.00000	.00	.00	0.	94	15	A29	.01
1	13A	55.0	67.75	479.4	559.96	2	1584.	.04000	.00	.00	0.	94	14	A29	.01
1	14A	52.8	65.04	532.2	609.16	0	0.	.00000	.00	.00	0.	94	14	A29	.01
1	15A	52.6	60.30	584.8	662.04	2	1085.	.05000	.00	.00	0.	94	16	A29	.01
1	16A	23.5	31.41	608.3	677.46	0	0.	.00000	.00	.00	0.	94	12	A29	.01
1	17A	.0	.00	608.3	677.46	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	18A	.0	.00	608.3	677.46	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	19C	26.0	38.57	26.0	38.57	2	1584.	.09000	.00	.00	0.	94	10	A29	.01
1	20C	48.7	52.27	74.7	88.19	0	0.	.00000	.00	.00	0.	94	18	A29	.01
1	21AC	74.7	88.19	683.0	756.11	2	1337.	.05000	.00	.00	0.	94	0	A29	.00
1	22A	49.7	49.00	732.7	797.35	0	0.	.00000	.00	.00	0.	94	21	A29	.01
1	23A	.0	.00	732.7	797.35	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	24A	.0	.00	732.7	797.35	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	25D	45.0	53.56	45.0	53.56	0	0.	.00000	.00	.00	0.	94	15	A29	.01
1	26D	31.1	37.01	76.1	90.57	2	1020.	.10000	.00	.00	0.	94	15	A29	.01
1	27D	49.3	56.51	125.4	146.12	2	1290.	.10000	.00	.00	0.	94	16	A29	.01
1	28D	47.5	50.98	172.9	195.57	0	0.	.00000	.00	.00	0.	94	18	A29	.01
1	29D	29.2	35.97	202.1	230.36	2	1232.	.10000	.00	.00	0.	94	14	A29	.01
1	30D	48.6	64.96	250.7	287.76	2	1423.	.08000	.00	.00	0.	94	12	A29	.01
1	31D	41.1	45.52	291.8	329.13	0	0.	.00000	.00	.00	0.	94	17	A29	.01
1	32AD	291.8	329.13	1024.5	1111.48	2	827.	.03000	.00	.00	0.	94	0	A29	.00
1	33A	.0	.00	1024.5	1107.61	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	34A	.0	.00	1024.5	1107.61	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	35A	41.3	45.75	1065.8	1147.29	2	488.	.04000	.00	.00	0.	94	17	A29	.01
1	36A	46.4	55.22	1112.2	1187.23	2	1107.	.02000	.00	.00	0.	94	15	A29	.01
1	37A	26.0	34.75	1138.2	1190.76	0	0.	.00000	.00	.00	0.	94	12	A29	.01
1	38A	64.1	65.05	1202.3	1247.03	2	1195.	.01000	.00	.00	0.	94	20	A29	.01
1	39A	56.1	64.31	1258.4	1265.77	4	175.	.02000	7.75	.00	0.	94	16	A29	.01
1	40A	.0	.00	1258.4	1265.09	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	41A	.0	.00	1258.4	1265.09	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	42E	37.8	41.92	37.8	41.92	4	1519.	.03000	2.00	.00	0.	94	17	A29	.02
1	43F	59.1	58.27	59.1	58.27	0	0.	.00000	.00	.00	0.	94	21	A29	.01
1	44F	52.1	62.01	111.2	120.05	4	161.	.06000	2.75	.00	0.	94	15	A29	.01
1	45EF	111.2	119.95	149.0	159.20	4	1818.	.06000	3.00	.00	0.	94	0	A29	.00
1	46AE	149.0	158.45	1407.4	1393.18	5	625.	.02000	11.00	.00	0.	94	0	A29	.00
1	47A	.0	.00	1407.4	1392.75	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	48A	.0	.00	1407.4	1392.75	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	49A	.0	.00	1407.4	1392.75	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	50A	10.8	16.84	1418.2	1395.33	5	618.	.02000	11.00	.00	0.	94	9	A29	.01
1	51A	13.3	21.98	1431.5	1394.66	5	728.	.02000	11.00	.00	0.	94	8	A29	.01
1	52A	11.9	21.05	1443.4	1396.14	5	795.	.02000	11.00	.00	0.	94	7	A29	.01
1	53A	15.4	24.01	1458.8	1396.15	5	823.	.02000	11.00	.00	0.	94	9	A29	.01
1	54A	9.7	17.15	1468.5	1394.50	5	443.	.02000	11.00	.00	0.	94	7	A29	.01
1	55B	56.4	84.63	56.4	84.63	4	1197.	.05000	2.50	.00	0.	94	10	A29	.15
1	56AB	56.4	83.51	1524.9	1408.85	4	1344.	.05000	7.00	.00	0.	94	0	A29	.00
1	57A	20.8	30.88	1545.7	1409.28	4	449.	.05000	7.00	.00	0.	94	10	A29	.02
1	58A	7.0	13.46	1552.7	1408.59	4	680.	.05000	7.00	.00	0.	94	6	A29	.01
1	59A	9.6	20.62	1562.3	1407.76	4	1215.	.05000	7.00	.00	0.	94	5	A29	.01
1	60A	4.2	6.55	1566.5	1405.39	4	567.	.05000	7.00	.00	0.	94	9	A29	.01
1	61A	44.3	52.72	1610.8	1413.37	4	803.	.05000	7.00	.00	0.	94	15	A29	.01
1	62A	37.9	48.52	1648.7	1417.41	4	642.	.05000	7.00	.00	0.	94	13	A29	.01
1	63A	.0	.00	1648.7	1416.34	0	0.	.00000	.00	.00	0.	94	99	A29	.00

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1	64A	.0	.00	1648.7	1416.34	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	65C	40.4	50.48	40.4	50.48	4	664.	.06000	2.00	.00	0.	94	16	A29	.75
1	66C	39.8	34.96	80.2	85.22	4	1491.	.06000	2.50	.00	0.	94	30	A29	.50
1	67C	51.0	53.39	131.2	138.20	0	0.	.00000	.00	.00	0.	94	22	A29	.60
1	68C	34.8	30.61	166.0	168.79	4	880.	.06000	3.00	.00	0.	94	29	A29	.40
1	69C	13.1	18.34	179.1	185.11	4	832.	.06000	3.25	.00	0.	94	12	A29	.50
1	70C	63.7	59.46	242.8	244.18	4	566.	.06000	3.50	.00	0.	94	29	A29	.75
1	71C	10.0	14.00	252.8	256.38	4	27.	.06000	3.50	.00	0.	94	12	A29	.50
1	72C	.0	.00	252.8	256.37	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	73D	7.0	11.23	7.0	11.23	4	1814.	.06000	2.00	.00	0.	94	9	A29	.40
1	74D	3.4	4.51	10.4	15.10	4	2106.	.02000	2.00	.00	0.	94	14	A29	.70
1	75D	23.6	25.97	34.0	38.61	4	1753.	.02000	2.25	.00	0.	94	20	A29	.60
1	76D	29.3	34.13	63.3	68.88	4	255.	.02000	2.75	.00	0.	94	19	A29	.86
1	77D	.0	.00	63.3	68.79	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	78E	15.8	17.16	15.8	17.16	4	670.	.05000	2.00	.00	0.	94	20	A29	.50
1	79E	17.4	19.49	33.2	36.55	4	1024.	.05000	2.00	.00	0.	94	17	A29	.10
1	80E	5.0	6.63	38.2	42.89	4	81.	.05000	2.00	.00	0.	94	14	A29	.70
1	81DE	38.2	42.89	101.5	109.73	4	404.	.05000	2.75	.00	0.	94	0	A29	.00
1	82CD	101.5	109.73	354.3	365.92	4	947.	.05000	4.25	.00	0.	94	0	A29	.00
1	83C	.0	.00	354.3	365.18	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	84F	21.4	27.78	21.4	27.78	4	1656.	.06000	2.00	.00	0.	94	14	A29	.50
1	85F	27.1	36.46	48.5	63.20	4	1070.	.06000	2.25	.00	0.	94	13	A29	.50
1	86F	14.6	21.39	63.1	82.98	4	16.	.06000	2.50	.00	0.	94	11	A29	.50
1	87CF	63.1	82.94	417.4	442.41	4	585.	.05000	4.50	.00	0.	94	0	A29	.00
1	88C	34.4	40.48	451.8	480.79	4	523.	.05000	4.75	.00	0.	94	17	A29	.50
1	89C	23.7	25.16	475.5	504.46	4	449.	.20000	3.75	.00	0.	94	22	A29	.70
1	90C	6.9	10.25	482.4	510.17	0	0.	.00000	.00	.00	0.	94	10	A29	.02
1	91C	.0	.00	482.4	510.17	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	92C	.0	.00	482.4	510.17	4	85.	.05000	4.75	.00	0.	94	99	A29	.00
1	93C	2.8	6.02	485.2	510.95	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	94C	.0	.00	485.2	510.95	4	85.	.05000	4.75	.00	0.	94	99	A29	.00
1	95C	1.9	4.08	487.1	511.60	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	96C	.0	.00	487.1	511.60	4	76.	.05000	4.75	.00	0.	94	99	A29	.00
1	97C	1.2	2.58	488.3	512.00	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	98C	.0	.00	488.3	512.00	4	283.	.05000	4.75	.00	0.	94	99	A29	.00
1	99C	4.3	8.27	492.6	513.51	0	0.	.00000	.00	.00	0.	94	6	A29	.02
1	100C	.0	.00	492.6	513.51	4	51.	.05000	4.75	.00	0.	94	99	A29	.00
1	101AC	492.6	513.47	2141.3	1740.60	4	36.	.05000	7.50	.00	0.	94	0	A29	.00
1	102A	16.0	30.77	2157.3	1742.88	0	0.	.00000	.00	.00	0.	94	6	A29	.01

♀
Program Package Serial Number: 2083
12/07/16 FILE: pr10 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units
PAGE 3

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F06

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE:
Northlake Phase 1, Prop. 10-yr CLEAR, NATURAL HYD.
HYDROGRAPH AT 1 64A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	17.26	200	17.63	300	18.50	400	19.53
500	20.67	600	22.17	700	24.04	800	26.50	900	29.98
1000	43.18	1050	84.37	1100	182.83	1110	213.69	1120	256.39
1130	317.23	1131	324.26	1132	331.47	1133	339.27	1134	347.35
1135	355.71	1136	364.39	1137	373.49	1138	383.06	1139	392.99
1140	403.29	1141	414.30	1142	426.29	1143	439.00	1144	452.34
1145	466.74	1146	482.51	1147	499.42	1148	517.47	1149	540.12
1150	569.31	1151	603.33	1152	641.68	1153	684.79	1154	729.24
1155	772.61	1156	815.48	1157	857.04	1158	896.91	1159	935.12
1160	972.15	1161	1008.25	1162	1041.01	1163	1070.72	1164	1098.93
1165	1126.38	1166	1156.35	1167	1193.03	1168	1235.14	1169	1279.00
1170	1321.70	1171	1358.54	1172	1387.90	1173	1407.90	1174	1416.34
1175	1411.59	1176	1392.75	1177	1359.31	1178	1311.15	1179	1252.55
1180	1188.45	1181	1120.48	1182	1051.22	1183	982.22	1184	915.57
1185	852.85	1186	794.61	1187	740.58	1188	690.16	1189	643.02
1190	599.20	1191	559.19	1192	522.95	1193	490.44	1194	462.22
1195	436.74	1196	413.78	1197	392.38	1198	371.17	1199	351.31
1200	333.37	1201	317.11	1202	301.12	1203	286.14	1204	272.13
1205	259.28	1206	247.82	1207	236.88	1208	226.56	1209	216.88
1210	208.03	1211	199.89	1212	192.24	1213	185.19	1214	179.31
1215	173.93	1216	168.74	1217	163.56	1218	158.34	1219	153.11
1220	147.93	1221	142.83	1222	137.85	1223	133.01	1224	128.33
1225	123.80	1226	119.44	1227	115.25	1228	111.23	1229	107.37
1230	103.67	1231	100.13	1232	96.78	1233	93.62	1234	90.70
1235	88.07	1236	85.76	1237	83.95	1238	82.37	1239	80.79
1240	79.13	1241	77.36	1242	75.50	1243	73.61	1244	71.73
1245	69.86	1246	68.01	1247	66.21	1248	64.43	1249	62.71
1250	61.03	1251	59.39	1252	57.80	1253	56.26	1254	54.77
1255	53.34	1256	51.97	1257	50.65	1258	49.39	1259	48.19
1260	47.06	1261	45.99	1262	45.00	1263	44.09	1264	43.29
1265	42.60	1266	41.97	1267	41.39	1268	40.82	1269	40.25
1270	39.69	1271	39.13	1272	38.59	1273	38.05	1274	37.53
1275	37.03	1276	36.54	1277	36.06	1278	35.61	1279	35.17
1280	34.75	1281	34.35	1282	33.96	1283	33.57	1284	33.21
1285	32.86	1286	32.53	1287	32.20	1288	31.88	1289	31.59
1290	31.30	1291	31.03	1292	30.76	1293	30.51	1294	30.27
1295	30.06	1296	29.90	1297	29.77	1298	29.63	1299	29.49
1300	29.34	1310	27.85	1320	26.63	1330	25.56	1340	24.60
1350	23.79	1360	23.04	1370	22.39	1380	21.77	1390	21.17
1400	20.66	1420	19.78	1440	18.99	1460	17.26	1500	17.26

TOTAL VOLUME THIS HYDROGRAPH = 146.52(Ac.Ft)

Program Package Serial Number: 2083
08/08/16 FILE: pr10 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 4
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE:
Northlake Phase 1, Prop. 10-yr CLEAR, BASIN A HYD.
HYDROGRAPH AT 1 90C STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	25.22	200	26.25	300	27.68	400	29.13
500	30.99	600	33.35	700	36.36	800	40.30	900	46.10
1000	57.13	1050	77.65	1100	108.48	1110	121.15	1120	142.20
1130	168.85	1131	171.89	1132	174.99	1133	178.23	1134	181.60
1135	185.11	1136	188.72	1137	192.57	1138	196.66	1139	200.95
1140	205.54	1141	210.68	1142	216.33	1143	222.31	1144	228.62
1145	235.78	1146	243.88	1147	252.78	1148	262.45	1149	276.18
1150	294.61	1151	317.31	1152	345.09	1153	377.26	1154	409.10
1155	438.13	1156	463.34	1157	483.17	1158	497.58	1159	506.12
1160	510.17	1161	509.86	1162	505.91	1163	497.99	1164	487.49
1165	474.09	1166	458.07	1167	439.41	1168	420.19	1169	401.09
1170	381.71	1171	361.50	1172	341.10	1173	320.59	1174	299.70
1175	279.12	1176	260.30	1177	243.45	1178	227.80	1179	213.75
1180	200.74	1181	188.32	1182	176.59	1183	165.25	1184	154.48
1185	144.40	1186	135.56	1187	127.84	1188	121.03	1189	115.27
1190	110.23	1191	105.83	1192	102.01	1193	98.70	1194	95.76
1195	93.02	1196	90.58	1197	88.29	1198	86.15	1199	84.12
1200	82.26	1201	80.53	1202	78.86	1203	77.18	1204	75.68
1205	74.26	1206	72.87	1207	71.44	1208	70.06	1209	68.81
1210	67.57	1211	66.36	1212	65.18	1213	64.09	1214	63.01
1215	61.95	1216	61.00	1217	60.11	1218	59.19	1219	58.35
1220	57.59	1221	56.85	1222	56.17	1223	55.48	1224	54.82
1225	54.20	1226	53.62	1227	53.07	1228	52.56	1229	52.09
1230	51.63	1231	51.17	1232	50.76	1233	50.35	1234	49.94
1235	49.55	1236	49.20	1237	48.87	1238	48.51	1239	48.18
1240	47.89	1241	47.58	1242	47.25	1243	46.94	1244	46.65
1245	46.36	1246	46.09	1247	45.82	1248	45.55	1249	45.29
1250	45.01	1251	44.73	1252	44.47	1253	44.23	1254	43.97
1255	43.74	1256	43.51	1257	43.28	1258	43.04	1259	42.78
1260	42.59	1261	42.37	1262	42.12	1263	41.90	1264	41.70
1265	41.46	1266	41.23	1267	41.02	1268	40.80	1269	40.61
1270	40.43	1271	40.23	1272	40.04	1273	39.86	1274	39.71
1275	39.53	1276	39.36	1277	39.20	1278	39.02	1279	38.87
1280	38.72	1281	38.56	1282	38.39	1283	38.24	1284	38.10
1285	37.93	1286	37.76	1287	37.60	1288	37.43	1289	37.27
1290	37.12	1291	36.93	1292	36.76	1293	36.62	1294	36.48
1295	36.33	1296	36.16	1297	36.01	1298	35.88	1299	35.77
1300	35.67	1310	34.69	1320	33.74	1330	32.70	1340	31.56
1350	30.68	1360	30.00	1370	29.40	1380	28.82	1390	27.99
1400	27.46	1420	26.67	1440	25.46	1460	25.14	1500	25.14

TOTAL VOLUME THIS HYDROGRAPH = 101.08(Ac.Ft)

Program Package Serial Number: 2083

08/19/16 FILE: PR10 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 2

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 10 SOIL DATA FILE:

Northlake Phase 1, Prop. 10-yr CLEAR, NATURAL HYD.

HYDROGRAPH AT 1 102A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	.16	200	.17	300	.18	400	.19
500	.20	600	.21	700	.23	800	.26	900	.30
1000	.49	1050	1.29	1100	2.28	1110	3.39	1120	4.04
1130	5.19	1131	5.33	1132	5.48	1133	5.72	1134	5.97
1135	6.22	1136	6.46	1137	6.77	1138	7.08	1139	7.28
1140	7.49	1141	8.00	1142	8.52	1143	8.84	1144	9.16
1145	10.00	1146	10.96	1147	11.59	1148	12.12	1149	16.21
1150	20.30	1151	23.78	1152	27.26	1153	30.77	1154	30.77
1155	26.61	1156	22.15	1157	17.60	1158	12.87	1159	8.10
1160	6.77	1161	5.85	1162	5.13	1163	4.72	1164	4.22
1165	3.93	1166	3.63	1167	3.33	1168	3.24	1169	2.94
1170	2.84	1171	2.64	1172	2.45	1173	2.45	1174	2.25
1175	2.15	1176	2.05	1177	1.96	1178	1.86	1179	1.76
1180	1.66	1181	1.66	1182	1.56	1183	1.46	1184	1.46
1185	1.36	1186	1.36	1187	1.27	1188	1.17	1189	1.17
1190	1.17	1191	1.05	1192	.93	1193	.93	1194	.93
1195	.81	1196	.81	1197	.81	1198	.81	1199	.70
1200	.70	1201	.70	1202	.58	1203	.46	1204	.46
1205	.46	1206	.46	1207	.35	1208	.35	1209	.46
1210	.35	1211	.35	1212	.33	1213	.35	1214	.33
1215	.32	1216	.33	1217	.32	1218	.32	1219	.32
1220	.32	1221	.32	1222	.31	1223	.31	1224	.31
1225	.30	1226	.31	1227	.31	1228	.31	1229	.31
1230	.30	1231	.30	1232	.28	1233	.28	1234	.28
1235	.28	1236	.30	1237	.30	1238	.28	1239	.28
1240	.28	1241	.28	1242	.27	1243	.27	1244	.28
1245	.27	1246	.27	1247	.26	1248	.27	1249	.27
1250	.26	1251	.27	1252	.26	1253	.27	1254	.26
1255	.26	1256	.26	1257	.26	1258	.26	1259	.25
1260	.26	1261	.25	1262	.25	1263	.25	1264	.25
1265	.25	1266	.25	1267	.25	1268	.25	1269	.25
1270	.25	1271	.25	1272	.23	1273	.25	1274	.25
1275	.23	1276	.23	1277	.23	1278	.23	1279	.23
1280	.23	1281	.23	1282	.23	1283	.23	1284	.23
1285	.22	1286	.22	1287	.22	1288	.22	1289	.22
1290	.22	1291	.22	1292	.22	1293	.22	1294	.22
1295	.22	1296	.22	1297	.22	1298	.22	1299	.22
1300	.22	1310	.21	1320	.21	1330	.20	1340	.19
1350	.19	1360	.19	1370	.19	1380	.18	1390	.17
1400	.18	1420	.17	1440	.16	1460	.00	1500	.00

TOTAL VOLUME THIS HYDROGRAPH = 1.36(Ac.Ft)

Program Package Serial Number: 2083
12/07/16 FILE: pr5 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE: C:\civild\scr_soilx_34.dat
Northlake Phase 1, Prop. 5-yr CLEAR

LOCATION		SUBAREA AREA(Ac)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM RAIN ZONE	DAY 4 PCT IMPV
1	1A	40.9	33.42	40.9	33.42	0	0.	.00000	.00	.00	0.	94	19	A29	.01
1	2A	50.6	45.64	91.5	79.05	2	1320.	.10000	.00	.00	0.	94	16	A29	.01
1	3A	48.8	44.01	140.3	121.64	2	960.	.10000	.00	.00	0.	94	16	A29	.01
1	4A	37.8	36.73	178.1	156.34	2	1272.	.08000	.00	.00	0.	94	14	A29	.01
1	5A	46.9	40.82	225.0	193.92	0	0.	.00000	.00	.00	0.	94	17	A29	.01
1	6A	.0	.00	225.0	193.92	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	7A	.0	.00	225.0	193.92	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	8B	55.4	51.95	55.4	51.95	1	1656.	.12000	.00	.00	0.	94	15	A29	.01
1	9B	51.0	44.38	106.4	90.54	0	0.	.00000	.00	.00	0.	94	17	A29	.01
1	10AB	106.4	90.54	331.4	284.46	2	1663.	.08000	.00	.00	0.	94	0	A29	.00
1	11A	46.3	38.99	377.7	318.45	0	0.	.00000	.00	.00	0.	94	18	A29	.01
1	12A	46.7	39.33	424.4	354.44	0	0.	.00000	.00	.00	0.	94	18	A29	.01
1	13A	55.0	47.87	479.4	398.87	2	1584.	.04000	.00	.00	0.	94	17	A29	.01
1	14A	52.8	45.95	532.2	433.88	0	0.	.00000	.00	.00	0.	94	17	A29	.01
1	15A	52.6	42.97	584.8	472.76	2	1085.	.05000	.00	.00	0.	94	19	A29	.01
1	16A	23.5	22.04	608.3	485.95	0	0.	.00000	.00	.00	0.	94	15	A29	.01
1	17A	.0	.00	608.3	485.95	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	18A	.0	.00	608.3	485.95	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	19C	26.0	28.87	26.0	28.87	2	1584.	.09000	.00	.00	0.	94	11	A29	.01
1	20C	48.7	36.49	74.7	63.70	0	0.	.00000	.00	.00	0.	94	22	A29	.01
1	21AC	74.7	63.70	683.0	541.26	2	1337.	.05000	.00	.00	0.	94	0	A29	.00
1	22A	49.7	35.40	732.7	571.36	0	0.	.00000	.00	.00	0.	94	24	A29	.01
1	23A	.0	.00	732.7	571.36	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	24A	.0	.00	732.7	571.36	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	25D	45.0	39.16	45.0	39.16	0	0.	.00000	.00	.00	0.	94	17	A29	.01
1	26D	31.1	26.19	76.1	65.35	2	1020.	.10000	.00	.00	0.	94	18	A29	.01
1	27D	49.3	41.52	125.4	106.40	2	1290.	.10000	.00	.00	0.	94	18	A29	.01
1	28D	47.5	35.59	172.9	141.10	0	0.	.00000	.00	.00	0.	94	22	A29	.01
1	29D	29.2	25.41	202.1	165.66	2	1232.	.10000	.00	.00	0.	94	17	A29	.01
1	30D	48.6	45.57	250.7	207.00	2	1423.	.08000	.00	.00	0.	94	15	A29	.01
1	31D	41.1	32.65	291.8	236.70	0	0.	.00000	.00	.00	0.	94	20	A29	.01
1	32AD	291.8	236.70	1024.5	799.31	2	827.	.03000	.00	.00	0.	94	0	A29	.00
1	33A	.0	.00	1024.5	796.57	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	34A	.0	.00	1024.5	796.57	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	35A	41.3	32.81	1065.8	824.79	2	488.	.04000	.00	.00	0.	94	20	A29	.01
1	36A	46.4	40.38	1112.2	853.58	2	1107.	.02000	.00	.00	0.	94	17	A29	.01
1	37A	26.0	24.38	1138.2	858.33	0	0.	.00000	.00	.00	0.	94	15	A29	.01
1	38A	64.1	45.65	1202.3	898.26	2	1195.	.01000	.00	.00	0.	94	24	A29	.01
1	39A	56.1	44.56	1258.4	917.11	4	175.	.02000	7.00	.00	0.	94	20	A29	.01
1	40A	.0	.00	1258.4	916.67	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	41A	.0	.00	1258.4	916.67	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	42E	37.8	30.09	37.8	30.09	4	1519.	.03000	2.00	.00	0.	94	20	A29	.02
1	43F	59.1	41.13	59.1	41.13	0	0.	.00000	.00	.00	0.	94	25	A29	.01
1	44F	52.1	45.34	111.2	86.40	4	161.	.06000	2.50	.00	0.	94	17	A29	.01
1	45EF	111.2	86.37	149.0	115.22	4	1818.	.06000	2.75	.00	0.	94	0	A29	.00
1	46AE	149.0	114.78	1407.4	1006.93	4	625.	.02000	7.25	.00	0.	94	0	A29	.00
1	47A	.0	.00	1407.4	1005.24	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	48A	.0	.00	1407.4	1005.24	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	49A	.0	.00	1407.4	1005.24	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	50A	10.8	12.69	1418.2	1006.87	4	618.	.02000	7.25	.00	0.	94	10	A29	.01
1	51A	13.3	16.44	1431.5	1007.28	4	728.	.02000	7.25	.00	0.	94	9	A29	.01
1	52A	11.9	15.63	1443.4	1006.65	4	795.	.02000	7.25	.00	0.	94	8	A29	.01
1	53A	15.4	18.10	1458.8	1006.26	4	823.	.02000	7.25	.00	0.	94	10	A29	.01
1	54A	9.7	12.74	1468.5	1005.00	4	443.	.02000	7.25	.00	0.	94	8	A29	.01
1	55B	56.4	55.96	56.4	55.96	4	1197.	.05000	2.25	.00	0.	94	14	A29	.15
1	56AB	56.4	55.65	1524.9	1013.50	4	1344.	.05000	6.00	.00	0.	94	0	A29	.00
1	57A	20.8	23.12	1545.7	1011.70	4	449.	.05000	6.00	.00	0.	94	11	A29	.02
1	58A	7.0	9.85	1552.7	1010.94	4	680.	.05000	6.00	.00	0.	94	7	A29	.01
1	59A	9.6	16.47	1562.3	1010.83	4	1215.	.05000	6.00	.00	0.	94	5	A29	.01
1	60A	4.2	4.66	1566.5	1008.31	4	567.	.05000	6.00	.00	0.	94	11	A29	.01
1	61A	44.3	37.31	1610.8	1011.74	4	803.	.05000	6.00	.00	0.	94	18	A29	.01
1	62A	37.9	34.18	1648.7	1013.85	4	642.	.05000	6.00	.00	0.	94	16	A29	.01
1	63A	.0	.00	1648.7	1012.47	0	0.	.00000	.00	.00	0.	94	99	A29	.00

								PR5								
1	64A	.0	.00	1648.7	1012.47	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	65C	40.4	37.61	40.4	37.61	4	664.	.06000	2.00	.00	0.	94	19	A29	.75
1	66C	39.8	27.92	80.2	65.41	4	1491.	.06000	2.25	.00	0.	94	30	A29	.50
1	67C	51.0	40.26	131.2	105.32	0	0.	.00000	.00	.00	0.	94	25	A29	.60
1	68C	34.8	23.85	166.0	129.17	4	880.	.06000	2.75	.00	0.	94	30	A29	.40
1	69C	13.1	13.67	179.1	141.73	4	832.	.06000	3.00	.00	0.	94	14	A29	.50
1	70C	63.7	47.24	242.8	188.78	4	566.	.06000	3.25	.00	0.	94	30	A29	.75
1	71C	10.0	10.44	252.8	197.95	4	27.	.06000	3.25	.00	0.	94	14	A29	.50
1	72C	.0	.00	252.8	197.93	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	73D	7.0	8.60	7.0	8.60	4	1814.	.06000	2.00	.00	0.	94	10	A29	.40
1	74D	3.4	3.42	10.4	11.53	4	2106.	.02000	2.00	.00	0.	94	16	A29	.70
1	75D	23.6	19.42	34.0	29.29	4	1753.	.02000	2.00	.00	0.	94	23	A29	.60
1	76D	29.3	25.86	63.3	52.32	4	255.	.02000	2.50	.00	0.	94	22	A29	.86
1	77D	.0	.00	63.3	52.29	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	78E	15.8	12.75	15.8	12.75	4	670.	.05000	2.00	.00	0.	94	23	A29	.50
1	79E	17.4	14.06	33.2	26.74	4	1024.	.05000	2.00	.00	0.	94	20	A29	.10
1	80E	5.0	4.87	38.2	31.47	4	81.	.05000	2.00	.00	0.	94	17	A29	.70
1	81DE	38.2	31.46	101.5	82.41	4	404.	.05000	2.50	.00	0.	94	0	A29	.00
1	82CD	101.5	82.35	354.3	279.86	4	947.	.05000	3.75	.00	0.	94	0	A29	.00
1	83C	.0	.00	354.3	279.52	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	84F	21.4	20.21	21.4	20.21	4	1656.	.06000	2.00	.00	0.	94	17	A29	.50
1	85F	27.1	27.39	48.5	46.77	4	1070.	.06000	2.00	.00	0.	94	15	A29	.50
1	86F	14.6	16.45	63.1	62.03	4	16.	.06000	2.25	.00	0.	94	12	A29	.50
1	87CF	63.1	62.03	417.4	337.74	4	585.	.05000	4.00	.00	0.	94	0	A29	.00
1	88C	34.4	29.94	451.8	365.90	4	523.	.05000	4.25	.00	0.	94	20	A29	.50
1	89C	23.7	19.08	475.5	383.95	4	449.	.20000	3.25	.00	0.	94	25	A29	.70
1	90C	6.9	7.30	482.4	388.63	0	0.	.00000	.00	.00	0.	94	12	A29	.02
1	91C	.0	.00	482.4	388.63	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	92C	.0	.00	482.4	388.63	4	85.	.05000	4.25	.00	0.	94	99	A29	.00
1	93C	2.8	4.30	485.2	389.20	0	0.	.00000	.00	.00	0.	94	6	A29	.02
1	94C	.0	.00	485.2	389.20	4	85.	.05000	4.25	.00	0.	94	99	A29	.00
1	95C	1.9	3.26	487.1	389.57	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	96C	.0	.00	487.1	389.57	4	76.	.05000	4.25	.00	0.	94	99	A29	.00
1	97C	1.2	2.06	488.3	389.84	0	0.	.00000	.00	.00	0.	94	5	A29	.02
1	98C	.0	.00	488.3	389.84	4	283.	.05000	4.25	.00	0.	94	99	A29	.00
1	99C	4.3	6.60	492.6	390.81	0	0.	.00000	.00	.00	0.	94	6	A29	.02
1	100C	.0	.00	492.6	390.81	4	51.	.05000	4.25	.00	0.	94	99	A29	.00
1	101AC	492.6	390.78	2141.3	1244.12	4	36.	.05000	6.50	.00	0.	94	0	A29	.00
1	102A	16.0	21.01	2157.3	1245.50	0	0.	.00000	.00	.00	0.	94	8	A29	.01

♀
Program Package Serial Number: 2083
12/07/16 FILE: pr5 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units
PAGE 3

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE:
Northlake Phase 1, Prop. 5-yr CLEAR, NATURAL HYD.
HYDROGRAPH AT 1 64A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	14.12	200	14.44	300	15.16	400	15.96
500	16.90	600	18.11	700	19.63	800	21.67	900	24.54
1000	29.24	1050	40.21	1100	95.87	1110	118.32	1120	150.61
1130	197.14	1131	202.48	1132	207.94	1133	213.72	1134	219.76
1135	226.15	1136	232.79	1137	239.76	1138	247.15	1139	254.86
1140	262.75	1141	270.95	1142	279.77	1143	289.15	1144	299.13
1145	309.98	1146	321.90	1147	334.55	1148	347.79	1149	363.54
1150	383.20	1151	405.92	1152	431.61	1153	460.59	1154	490.84
1155	520.64	1156	550.21	1157	579.13	1158	607.26	1159	634.52
1160	660.87	1161	686.12	1162	710.19	1163	732.97	1164	754.71
1165	774.66	1166	794.14	1167	814.41	1168	835.16	1169	856.16
1170	878.54	1171	900.92	1172	922.95	1173	944.53	1174	964.06
1175	980.79	1176	993.99	1177	1004.08	1178	1009.97	1179	1012.47
1180	1009.95	1181	994.26	1182	960.25	1183	912.71	1184	860.23
1185	806.26	1186	754.35	1187	704.30	1188	656.67	1189	611.60
1190	569.48	1191	530.32	1192	493.96	1193	460.44	1194	429.63
1195	401.13	1196	375.06	1197	351.35	1198	329.40	1199	309.66
1200	291.57	1201	274.82	1202	259.57	1203	244.94	1204	231.53
1205	219.58	1206	208.62	1207	197.96	1208	188.13	1209	178.71
1210	169.71	1211	161.20	1212	153.31	1213	146.29	1214	139.72
1215	133.43	1216	127.44	1217	121.86	1218	116.90	1219	112.42
1220	108.11	1221	103.93	1222	99.96	1223	96.34	1224	93.24
1225	90.14	1226	87.10	1227	84.07	1228	81.09	1229	78.20
1230	75.40	1231	72.70	1232	70.10	1233	67.61	1234	65.23
1235	62.94	1236	60.75	1237	58.67	1238	56.69	1239	54.79
1240	53.01	1241	51.32	1242	49.73	1243	48.22	1244	46.81
1245	45.49	1246	44.26	1247	43.13	1248	42.09	1249	41.18
1250	40.40	1251	39.84	1252	39.28	1253	38.73	1254	38.14
1255	37.55	1256	36.94	1257	36.34	1258	35.76	1259	35.18
1260	34.62	1261	34.08	1262	33.56	1263	33.06	1264	32.57
1265	32.11	1266	31.66	1267	31.23	1268	30.82	1269	30.43
1270	30.06	1271	29.70	1272	29.35	1273	29.00	1274	28.67
1275	28.36	1276	28.07	1277	27.80	1278	27.55	1279	27.31
1280	27.09	1281	26.88	1282	26.68	1283	26.48	1284	26.29
1285	26.10	1286	25.92	1287	25.74	1288	25.57	1289	25.40
1290	25.23	1291	25.07	1292	24.92	1293	24.77	1294	24.62
1295	24.48	1296	24.34	1297	24.21	1298	24.10	1299	24.00
1300	23.90	1310	22.92	1320	21.93	1330	21.14	1340	20.37
1350	19.65	1360	19.11	1370	18.50	1380	17.99	1390	17.48
1400	17.04	1420	16.27	1440	15.58	1460	14.12	1500	14.12

TOTAL VOLUME THIS HYDROGRAPH = 106.85(Ac.Ft)

Program Package Serial Number: 2083
08/08/16 FILE: pr5 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 4
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE:
Northlake Phase 1, Prop. 5-yr CLEAR, BASIN A HYD.
HYDROGRAPH AT 1 90C STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	20.62	200	21.46	300	22.63	400	23.82
500	25.35	600	27.27	700	29.73	800	32.95	900	37.68
1000	45.49	1050	57.43	1100	82.62	1110	92.50	1120	108.36
1130	129.81	1131	132.23	1132	134.67	1133	137.23	1134	139.88
1135	142.59	1136	145.36	1137	148.32	1138	151.51	1139	154.83
1140	158.33	1141	162.17	1142	166.35	1143	170.80	1144	175.58
1145	180.95	1146	186.96	1147	193.56	1148	200.71	1149	210.61
1150	223.63	1151	239.54	1152	258.93	1153	281.47	1154	304.09
1155	325.28	1156	344.24	1157	359.69	1158	371.80	1159	380.26
1160	386.01	1161	388.63	1162	388.42	1163	386.17	1164	381.82
1165	375.69	1166	367.87	1167	358.44	1168	348.20	1169	336.57
1170	323.45	1171	310.17	1172	297.11	1173	283.66	1174	269.36
1175	254.72	1176	239.96	1177	224.78	1178	209.64	1179	195.52
1180	182.39	1181	169.69	1182	157.45	1183	145.73	1184	134.82
1185	124.78	1186	115.78	1187	107.76	1188	101.04	1189	95.10
1190	90.16	1191	85.83	1192	82.11	1193	78.99	1194	76.18
1195	73.66	1196	71.35	1197	69.24	1198	67.24	1199	65.41
1200	63.73	1201	62.18	1202	60.73	1203	59.37	1204	58.09
1205	56.94	1206	55.88	1207	54.85	1208	53.90	1209	53.04
1210	52.22	1211	51.47	1212	50.78	1213	50.15	1214	49.55
1215	48.95	1216	48.41	1217	47.90	1218	47.38	1219	46.91
1220	46.46	1221	46.00	1222	45.56	1223	45.15	1224	44.76
1225	44.36	1226	43.98	1227	43.61	1228	43.26	1229	42.92
1230	42.55	1231	42.20	1232	41.88	1233	41.55	1234	41.22
1235	40.92	1236	40.63	1237	40.35	1238	40.06	1239	39.78
1240	39.51	1241	39.25	1242	38.99	1243	38.75	1244	38.51
1245	38.26	1246	38.02	1247	37.77	1248	37.54	1249	37.35
1250	37.15	1251	36.94	1252	36.71	1253	36.50	1254	36.28
1255	36.08	1256	35.90	1257	35.70	1258	35.51	1259	35.31
1260	35.12	1261	34.92	1262	34.71	1263	34.55	1264	34.39
1265	34.19	1266	34.01	1267	33.84	1268	33.66	1269	33.48
1270	33.32	1271	33.16	1272	33.00	1273	32.87	1274	32.72
1275	32.57	1276	32.42	1277	32.27	1278	32.13	1279	32.01
1280	31.89	1281	31.75	1282	31.61	1283	31.47	1284	31.35
1285	31.22	1286	31.09	1287	30.95	1288	30.80	1289	30.67
1290	30.54	1291	30.40	1292	30.27	1293	30.15	1294	30.01
1295	29.89	1296	29.79	1297	29.68	1298	29.56	1299	29.44
1300	29.33	1310	28.48	1320	27.71	1330	26.86	1340	25.95
1350	25.18	1360	24.61	1370	24.10	1380	23.64	1390	22.98
1400	22.53	1420	21.85	1440	20.90	1460	20.56	1500	20.56

TOTAL VOLUME THIS HYDROGRAPH = 81.09(Ac.Ft)

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Program Package Serial Number: 2083

08/19/16 FILE: PR5 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 2

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 5 SOIL DATA FILE:

Northlake Phase 1, Prop. 5-yr CLEAR, NATURAL HYD.

HYDROGRAPH AT 1 102A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	.13	200	.14	300	.15	400	.15
500	.16	600	.18	700	.19	800	.21	900	.24
1000	.29	1050	.54	1100	1.45	1110	2.36	1120	2.89
1130	3.81	1131	3.90	1132	3.98	1133	4.13	1134	4.27
1135	4.42	1136	4.56	1137	4.83	1138	5.11	1139	5.30
1140	5.49	1141	5.80	1142	6.12	1143	6.43	1144	6.75
1145	7.25	1146	7.82	1147	8.39	1148	8.91	1149	11.37
1150	13.87	1151	16.31	1152	18.81	1153	21.01	1154	20.94
1155	20.54	1156	20.01	1157	17.17	1158	14.27	1159	11.37
1160	8.39	1161	5.43	1162	4.49	1163	3.94	1164	3.46
1165	3.16	1166	2.86	1167	2.55	1168	2.37	1169	2.19
1170	2.07	1171	1.89	1172	1.77	1173	1.65	1174	1.53
1175	1.47	1176	1.35	1177	1.28	1178	1.16	1179	1.09
1180	1.02	1181	.95	1182	.87	1183	.80	1184	.73
1185	.66	1186	.66	1187	.59	1188	.51	1189	.44
1190	.44	1191	.37	1192	.34	1193	.34	1194	.33
1195	.33	1196	.33	1197	.33	1198	.32	1199	.32
1200	.32	1201	.31	1202	.31	1203	.30	1204	.30
1205	.30	1206	.30	1207	.29	1208	.29	1209	.29
1210	.28	1211	.29	1212	.28	1213	.28	1214	.27
1215	.27	1216	.27	1217	.26	1218	.26	1219	.26
1220	.26	1221	.26	1222	.26	1223	.26	1224	.25
1225	.25	1226	.26	1227	.25	1228	.25	1229	.25
1230	.24	1231	.24	1232	.24	1233	.24	1234	.23
1235	.23	1236	.23	1237	.23	1238	.23	1239	.23
1240	.23	1241	.23	1242	.23	1243	.23	1244	.23
1245	.22	1246	.23	1247	.22	1248	.22	1249	.22
1250	.22	1251	.22	1252	.21	1253	.22	1254	.21
1255	.22	1256	.21	1257	.21	1258	.21	1259	.20
1260	.21	1261	.20	1262	.20	1263	.20	1264	.20
1265	.20	1266	.20	1267	.20	1268	.20	1269	.20
1270	.20	1271	.20	1272	.20	1273	.20	1274	.20
1275	.20	1276	.20	1277	.19	1278	.19	1279	.20
1280	.20	1281	.19	1282	.19	1283	.19	1284	.19
1285	.19	1286	.19	1287	.18	1288	.18	1289	.18
1290	.18	1291	.18	1292	.18	1293	.18	1294	.18
1295	.18	1296	.18	1297	.18	1298	.18	1299	.18
1300	.18	1310	.18	1320	.17	1330	.16	1340	.16
1350	.16	1360	.15	1370	.15	1380	.15	1390	.14
1400	.15	1420	.14	1440	.13	1460	.00	1500	.00

TOTAL VOLUME THIS HYDROGRAPH = .99(Ac.Ft)

Program Package Serial Number: 2083
12/07/16 FILE: PR2 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 1
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE: C:\civild\scr_soilx_34.dat
Northlake Phase 1, Prop. 2-yr CLEAR

LOCATION		SUBAREA AREA(AC)	SUBAREA Q(CFS)	TOTAL AREA(Ac)	TOTAL Q(CFS)	CONV TYPE	CONV LNGTH(Ft)	CONV SLOPE	CONV SIZE(Ft)	CONV Z	CONTROL Q(CFS)	SOIL NAME	TC	STORM RAIN ZONE	DAY 4 PCT IMPV
1	1A	40.9	14.58	40.9	14.58	0	0.	.00000	.00	.00	0.	94	30	A29	.01
1	2A	50.6	20.94	91.5	35.47	2	1320.	.10000	.00	.00	0.	94	24	A29	.01
1	3A	48.8	20.20	140.3	55.21	2	960.	.10000	.00	.00	0.	94	24	A29	.01
1	4A	37.8	17.06	178.1	71.43	2	1272.	.08000	.00	.00	0.	94	21	A29	.01
1	5A	46.9	17.98	225.0	88.36	0	0.	.00000	.00	.00	0.	94	27	A29	.01
1	6A	.0	.00	225.0	88.36	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	7A	.0	.00	225.0	88.36	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	8B	55.4	23.56	55.4	23.56	1	1656.	.12000	.00	.00	0.	94	23	A29	.01
1	9B	51.0	20.04	106.4	41.29	0	0.	.00000	.00	.00	0.	94	26	A29	.01
1	10AB	106.4	41.29	331.4	129.64	2	1663.	.08000	.00	.00	0.	94	0	A29	.00
1	11A	46.3	16.91	377.7	144.63	0	0.	.00000	.00	.00	0.	94	29	A29	.01
1	12A	46.7	17.06	424.4	160.85	0	0.	.00000	.00	.00	0.	94	29	A29	.01
1	13A	55.0	21.62	479.4	180.92	2	1584.	.04000	.00	.00	0.	94	26	A29	.01
1	14A	52.8	20.24	532.2	197.15	0	0.	.00000	.00	.00	0.	94	27	A29	.01
1	15A	52.6	18.75	584.8	214.30	2	1085.	.05000	.00	.00	0.	94	30	A29	.01
1	16A	23.5	10.29	608.3	221.50	0	0.	.00000	.00	.00	0.	94	22	A29	.01
1	17A	.0	.00	608.3	221.50	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	18A	.0	.00	608.3	221.50	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	19C	26.0	13.37	26.0	13.37	2	1584.	.09000	.00	.00	0.	94	17	A29	.01
1	20C	48.7	17.36	74.7	30.07	0	0.	.00000	.00	.00	0.	94	30	A29	.01
1	21AC	74.7	30.07	683.0	247.79	2	1337.	.05000	.00	.00	0.	94	0	A29	.00
1	22A	49.7	17.72	732.7	262.27	0	0.	.00000	.00	.00	0.	94	30	A29	.01
1	23A	.0	.00	732.7	262.27	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	24A	.0	.00	732.7	262.27	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	25D	45.0	16.84	45.0	16.84	0	0.	.00000	.00	.00	0.	94	28	A29	.01
1	26D	31.1	11.36	76.1	28.19	2	1020.	.10000	.00	.00	0.	94	29	A29	.01
1	27D	49.3	18.01	125.4	46.03	2	1290.	.10000	.00	.00	0.	94	29	A29	.01
1	28D	47.5	16.93	172.9	62.50	0	0.	.00000	.00	.00	0.	94	30	A29	.01
1	29D	29.2	11.19	202.1	73.42	2	1232.	.10000	.00	.00	0.	94	27	A29	.01
1	30D	48.6	20.67	250.7	92.66	2	1423.	.08000	.00	.00	0.	94	23	A29	.01
1	31D	41.1	14.65	291.8	106.16	0	0.	.00000	.00	.00	0.	94	30	A29	.01
1	32AD	291.8	106.16	1024.5	364.28	2	827.	.03000	.00	.00	0.	94	0	A29	.00
1	33A	.0	.00	1024.5	363.53	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	34A	.0	.00	1024.5	363.53	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	35A	41.3	14.72	1065.8	376.08	2	488.	.04000	.00	.00	0.	94	30	A29	.01
1	36A	46.4	17.79	1112.2	390.19	2	1107.	.02000	.00	.00	0.	94	27	A29	.01
1	37A	26.0	11.06	1138.2	393.79	0	0.	.00000	.00	.00	0.	94	23	A29	.01
1	38A	64.1	22.85	1202.3	412.16	2	1195.	.01000	.00	.00	0.	94	30	A29	.01
1	39A	56.1	20.00	1258.4	422.66	4	175.	.02000	5.25	.00	0.	94	30	A29	.01
1	40A	.0	.00	1258.4	422.46	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	41A	.0	.00	1258.4	422.46	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	42E	37.8	13.54	37.8	13.54	4	1519.	.03000	2.00	.00	0.	94	30	A29	.02
1	43F	59.1	21.07	59.1	21.07	0	0.	.00000	.00	.00	0.	94	30	A29	.01
1	44F	52.1	19.97	111.2	41.02	4	161.	.06000	2.00	.00	0.	94	27	A29	.01
1	45EF	111.2	41.02	149.0	54.23	4	1818.	.06000	2.00	.00	0.	94	0	A29	.00
1	46AE	149.0	53.97	1407.4	465.49	4	625.	.02000	5.50	.00	0.	94	0	A29	.00
1	47A	.0	.00	1407.4	465.11	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	48A	.0	.00	1407.4	465.11	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	49A	.0	.00	1407.4	465.11	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	50A	10.8	6.03	1418.2	465.34	4	618.	.02000	5.50	.00	0.	94	15	A29	.01
1	51A	13.3	8.06	1431.5	465.18	4	728.	.02000	5.50	.00	0.	94	13	A29	.01
1	52A	11.9	7.98	1443.4	464.78	4	795.	.02000	5.50	.00	0.	94	11	A29	.01
1	53A	15.4	8.60	1458.8	464.33	4	823.	.02000	5.50	.00	0.	94	15	A29	.01
1	54A	9.7	6.17	1468.5	463.65	4	443.	.02000	5.50	.00	0.	94	12	A29	.01
1	55B	56.4	26.74	56.4	26.74	4	1197.	.05000	2.00	.00	0.	94	21	A29	.15
1	56AB	56.4	26.67	1524.9	466.71	4	1344.	.05000	4.50	.00	0.	94	0	A29	.00
1	57A	20.8	10.73	1545.7	465.61	4	449.	.05000	4.50	.00	0.	94	17	A29	.02
1	58A	7.0	4.70	1552.7	465.65	4	680.	.05000	4.50	.00	0.	94	11	A29	.01
1	59A	9.6	10.24	1562.3	465.27	4	1215.	.05000	4.50	.00	0.	94	5	A29	.01
1	60A	4.2	2.25	1566.5	464.28	4	567.	.05000	4.50	.00	0.	94	16	A29	.01
1	61A	44.3	16.58	1610.8	464.87	4	803.	.05000	4.50	.00	0.	94	28	A29	.01
1	62A	37.9	15.69	1648.7	464.97	4	642.	.05000	4.50	.00	0.	94	24	A29	.01
1	63A	.0	.00	1648.7	464.39	0	0.	.00000	.00	.00	0.	94	99	A29	.00

								PR2							
1	64A	.0	.00	1648.7	464.39	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	65C	40.4	20.76	40.4	20.76	4	664.	.06000	2.00	.00	0.	94	26	A29	.75
1	66C	39.8	17.37	80.2	38.11	4	1491.	.06000	2.00	.00	0.	94	30	A29	.50
1	67C	51.0	23.09	131.2	61.11	0	0.	.00000	.00	.00	0.	94	30	A29	.60
1	68C	34.8	14.62	166.0	75.71	4	880.	.06000	2.25	.00	0.	94	30	A29	.40
1	69C	13.1	7.16	179.1	82.48	4	832.	.06000	2.50	.00	0.	94	20	A29	.50
1	70C	63.7	30.40	242.8	112.59	4	566.	.06000	2.75	.00	0.	94	30	A29	.75
1	71C	10.0	5.46	252.8	117.63	4	27.	.06000	2.75	.00	0.	94	20	A29	.50
1	72C	.0	.00	252.8	117.63	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	73D	7.0	4.50	7.0	4.50	4	1814.	.06000	2.00	.00	0.	94	14	A29	.40
1	74D	3.4	1.83	10.4	6.16	4	2106.	.02000	2.00	.00	0.	94	23	A29	.70
1	75D	23.6	10.68	34.0	16.06	4	1753.	.02000	2.00	.00	0.	94	30	A29	.60
1	76D	29.3	14.77	63.3	29.61	4	255.	.02000	2.00	.00	0.	94	29	A29	.86
1	77D	.0	.00	63.3	29.61	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	78E	15.8	6.90	15.8	6.90	4	670.	.05000	2.00	.00	0.	94	30	A29	.50
1	79E	17.4	6.46	33.2	13.34	4	1024.	.05000	2.00	.00	0.	94	30	A29	.10
1	80E	5.0	2.69	38.2	15.95	4	81.	.05000	2.00	.00	0.	94	23	A29	.70
1	81DE	38.2	15.95	101.5	45.00	4	404.	.05000	2.00	.00	0.	94	0	A29	.00
1	82CD	101.5	45.00	354.3	161.98	4	947.	.05000	3.25	.00	0.	94	0	A29	.00
1	83C	.0	.00	354.3	161.89	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	84F	21.4	10.57	21.4	10.57	4	1656.	.06000	2.00	.00	0.	94	24	A29	.50
1	85F	27.1	14.40	48.5	24.67	4	1070.	.06000	2.00	.00	0.	94	21	A29	.50
1	86F	14.6	8.42	63.1	32.76	4	16.	.06000	2.00	.00	0.	94	18	A29	.50
1	87CF	63.1	32.75	417.4	193.63	4	585.	.05000	3.25	.00	0.	94	0	A29	.00
1	88C	34.4	15.31	451.8	208.45	4	523.	.05000	3.50	.00	0.	94	29	A29	.50
1	89C	23.7	11.12	475.5	219.16	4	449.	.20000	2.75	.00	0.	94	30	A29	.70
1	90C	6.9	3.56	482.4	222.03	0	0.	.00000	.00	.00	0.	94	17	A29	.02
1	91C	.0	.00	482.4	222.03	0	0.	.00000	.00	.00	0.	94	99	A29	.00
1	92C	.0	.00	482.4	222.03	4	85.	.05000	3.50	.00	0.	94	99	A29	.00
1	93C	2.8	2.11	485.2	222.32	0	0.	.00000	.00	.00	0.	94	9	A29	.02
1	94C	.0	.00	485.2	222.32	4	85.	.05000	3.50	.00	0.	94	99	A29	.00
1	95C	1.9	1.80	487.1	222.46	0	0.	.00000	.00	.00	0.	94	6	A29	.02
1	96C	.0	.00	487.1	222.46	4	76.	.05000	3.50	.00	0.	94	99	A29	.00
1	97C	1.2	1.14	488.3	222.54	0	0.	.00000	.00	.00	0.	94	6	A29	.02
1	98C	.0	.00	488.3	222.54	4	283.	.05000	3.50	.00	0.	94	99	A29	.00
1	99C	4.3	3.24	492.6	222.92	0	0.	.00000	.00	.00	0.	94	9	A29	.02
1	100C	.0	.00	492.6	222.92	4	51.	.05000	3.50	.00	0.	94	99	A29	.00
1	101AC	492.6	222.90	2141.3	592.17	4	36.	.05000	5.00	.00	0.	94	0	A29	.00
1	102A	16.0	10.73	2157.3	592.43	0	0.	.00000	.00	.00	0.	94	11	A29	.01

♀

Program Package Serial Number: 2083
12/07/16 FILE: PR2 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units
PAGE 3

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE:
Northlake Phase 1, Prop. 2-yr CLEAR, NATURAL HYD.
HYDROGRAPH AT 1 64A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	9.36	200	9.55	300	10.02	400	10.55
500	11.16	600	11.97	700	13.00	800	14.31	900	16.18
1000	19.15	1050	22.13	1100	27.43	1110	29.30	1120	34.64
1130	45.70	1131	47.07	1132	48.49	1133	49.98	1134	51.58
1135	53.29	1136	55.12	1137	57.11	1138	59.28	1139	61.60
1140	64.01	1141	66.57	1142	69.37	1143	72.45	1144	75.80
1145	79.51	1146	83.64	1147	88.16	1148	93.04	1149	98.84
1150	106.18	1151	114.83	1152	124.68	1153	135.97	1154	148.05
1155	160.20	1156	172.37	1157	184.57	1158	196.70	1159	208.96
1160	221.41	1161	234.05	1162	246.88	1163	259.78	1164	272.52
1165	284.83	1166	296.58	1167	307.79	1168	318.60	1169	329.10
1170	339.38	1171	349.88	1172	360.83	1173	371.88	1174	382.76
1175	393.62	1176	404.17	1177	413.68	1178	422.18	1179	430.06
1180	437.18	1181	443.25	1182	448.36	1183	452.93	1184	457.10
1185	460.41	1186	462.79	1187	464.27	1188	464.39	1189	462.13
1190	455.60	1191	443.75	1192	426.69	1193	407.57	1194	387.06
1195	367.54	1196	348.96	1197	331.35	1198	314.56	1199	298.48
1200	283.05	1201	268.21	1202	253.97	1203	240.30	1204	227.23
1205	214.75	1206	202.91	1207	191.64	1208	180.94	1209	170.90
1210	161.43	1211	152.52	1212	144.23	1213	136.47	1214	129.21
1215	122.45	1216	116.04	1217	110.06	1218	104.55	1219	99.45
1220	94.70	1221	90.12	1222	85.87	1223	82.00	1224	78.47
1225	75.09	1226	71.81	1227	68.70	1228	65.81	1229	63.18
1230	60.82	1231	58.67	1232	56.59	1233	54.57	1234	52.64
1235	50.83	1236	49.15	1237	47.61	1238	46.21	1239	44.81
1240	43.33	1241	41.87	1242	40.47	1243	39.15	1244	37.90
1245	36.72	1246	35.62	1247	34.57	1248	33.58	1249	32.68
1250	31.86	1251	31.10	1252	30.40	1253	29.74	1254	29.12
1255	28.56	1256	28.00	1257	27.45	1258	26.97	1259	26.46
1260	25.97	1261	25.49	1262	25.03	1263	24.59	1264	24.17
1265	23.77	1266	23.39	1267	23.02	1268	22.67	1269	22.35
1270	22.04	1271	21.74	1272	21.48	1273	21.23	1274	20.99
1275	20.77	1276	20.54	1277	20.33	1278	20.11	1279	19.90
1280	19.70	1281	19.51	1282	19.33	1283	19.16	1284	19.01
1285	18.87	1286	18.74	1287	18.59	1288	18.44	1289	18.29
1290	18.15	1291	18.00	1292	17.87	1293	17.73	1294	17.61
1295	17.48	1296	17.36	1297	17.24	1298	17.13	1299	17.02
1300	16.91	1310	15.95	1320	15.18	1330	14.51	1340	13.92
1350	13.40	1360	12.95	1370	12.53	1380	12.17	1390	11.84
1400	11.55	1420	11.03	1440	10.55	1460	9.57	1500	9.36

TOTAL VOLUME THIS HYDROGRAPH = 56.96(Ac.Ft)

Program Package Serial Number: 2083
08/08/16 FILE: pr2 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 4
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE:
Northlake Phase 1, Prop. 2-yr CLEAR, BASIN A HYD.
HYDROGRAPH AT 1 90C STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	13.67	200	14.22	300	14.99	400	15.78
500	16.79	600	18.06	700	19.68	800	21.81	900	24.94
1000	30.10	1050	36.72	1100	47.07	1110	50.29	1120	57.76
1130	71.38	1131	72.95	1132	74.50	1133	76.14	1134	77.83
1135	79.56	1136	81.34	1137	83.19	1138	85.12	1139	87.13
1140	89.23	1141	91.45	1142	93.83	1143	96.38	1144	99.09
1145	102.08	1146	105.38	1147	108.97	1148	112.85	1149	118.00
1150	124.56	1151	132.39	1152	141.88	1153	153.08	1154	164.70
1155	176.12	1156	186.94	1157	196.47	1158	204.37	1159	210.67
1160	215.41	1161	218.66	1162	220.72	1163	221.81	1164	222.03
1165	221.65	1166	220.42	1167	218.58	1168	216.16	1169	213.08
1170	209.37	1171	205.32	1172	200.61	1173	195.39	1174	189.72
1175	183.60	1176	177.30	1177	171.10	1178	164.76	1179	157.64
1180	149.90	1181	141.61	1182	132.28	1183	122.20	1184	112.18
1185	102.37	1186	92.77	1187	84.10	1188	76.38	1189	69.83
1190	64.32	1191	59.72	1192	56.06	1193	53.13	1194	50.74
1195	48.80	1196	47.19	1197	45.87	1198	44.66	1199	43.58
1200	42.60	1201	41.70	1202	40.88	1203	40.09	1204	39.36
1205	38.69	1206	38.06	1207	37.44	1208	36.88	1209	36.36
1210	35.86	1211	35.38	1212	34.92	1213	34.48	1214	34.06
1215	33.64	1216	33.24	1217	32.86	1218	32.49	1219	32.14
1220	31.79	1221	31.46	1222	31.14	1223	30.83	1224	30.53
1225	30.24	1226	29.96	1227	29.71	1228	29.46	1229	29.22
1230	28.97	1231	28.72	1232	28.48	1233	28.26	1234	28.03
1235	27.79	1236	27.57	1237	27.38	1238	27.18	1239	26.97
1240	26.79	1241	26.61	1242	26.43	1243	26.24	1244	26.06
1245	25.90	1246	25.72	1247	25.55	1248	25.39	1249	25.23
1250	25.07	1251	24.92	1252	24.78	1253	24.64	1254	24.51
1255	24.37	1256	24.23	1257	24.09	1258	23.96	1259	23.82
1260	23.70	1261	23.57	1262	23.43	1263	23.30	1264	23.18
1265	23.05	1266	22.93	1267	22.81	1268	22.69	1269	22.58
1270	22.46	1271	22.35	1272	22.24	1273	22.14	1274	22.03
1275	21.93	1276	21.82	1277	21.72	1278	21.62	1279	21.52
1280	21.44	1281	21.34	1282	21.25	1283	21.16	1284	21.07
1285	20.98	1286	20.89	1287	20.80	1288	20.70	1289	20.62
1290	20.52	1291	20.43	1292	20.35	1293	20.25	1294	20.17
1295	20.09	1296	20.01	1297	19.93	1298	19.86	1299	19.78
1300	19.70	1310	19.06	1320	18.51	1330	17.98	1340	17.37
1350	16.84	1360	16.41	1370	16.07	1380	15.75	1390	15.35
1400	15.02	1420	14.57	1440	13.95	1460	13.63	1500	13.63

TOTAL VOLUME THIS HYDROGRAPH = 52.12(Ac.Ft)

♀

Program Package Serial Number: 2083

08/18/16 FILE: pr2 INPUT DATA: English Units RAINFALL SOIL FILE: English (In) OUTPUT DATA: English Units PAGE 2

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PROG F0601M

Version 11, MODIFIED RATIONAL METHOD HYDROLOGY - STORM YEAR = 2 SOIL DATA FILE:

Northlake Phase 1, Prop. 2-yr CLEAR, NATURAL HYD.

HYDROGRAPH AT 1 102A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	.00	100	.09	200	.09	300	.10	400	.10
500	.11	600	.12	700	.13	800	.14	900	.16
1000	.20	1050	.24	1100	.31	1110	.66	1120	1.10
1130	1.70	1131	1.80	1132	1.84	1133	1.91	1134	1.98
1135	2.05	1136	2.12	1137	2.25	1138	2.37	1139	2.50
1140	2.63	1141	2.85	1142	3.02	1143	3.19	1144	3.34
1145	3.63	1146	3.95	1147	4.27	1148	4.51	1149	5.74
1150	6.99	1151	8.20	1152	9.39	1153	10.58	1154	10.73
1155	10.73	1156	10.48	1157	10.14	1158	9.76	1159	9.39
1160	7.96	1161	6.53	1162	5.11	1163	3.72	1164	2.29
1165	1.85	1166	1.53	1167	1.27	1168	1.08	1169	.88
1170	.70	1171	.56	1172	.42	1173	.35	1174	.33
1175	.32	1176	.31	1177	.31	1178	.30	1179	.29
1180	.28	1181	.28	1182	.27	1183	.27	1184	.26
1185	.26	1186	.26	1187	.25	1188	.24	1189	.24
1190	.24	1191	.24	1192	.23	1193	.23	1194	.23
1195	.22	1196	.22	1197	.22	1198	.22	1199	.22
1200	.21	1201	.21	1202	.21	1203	.20	1204	.20
1205	.20	1206	.20	1207	.19	1208	.19	1209	.19
1210	.19	1211	.19	1212	.19	1213	.19	1214	.19
1215	.18	1216	.18	1217	.18	1218	.18	1219	.18
1220	.18	1221	.18	1222	.17	1223	.17	1224	.17
1225	.17	1226	.17	1227	.17	1228	.17	1229	.17
1230	.16	1231	.16	1232	.16	1233	.16	1234	.16
1235	.16	1236	.16	1237	.16	1238	.15	1239	.15
1240	.15	1241	.16	1242	.15	1243	.15	1244	.15
1245	.15	1246	.15	1247	.15	1248	.15	1249	.15
1250	.15	1251	.15	1252	.14	1253	.15	1254	.14
1255	.14	1256	.14	1257	.14	1258	.14	1259	.14
1260	.14	1261	.14	1262	.13	1263	.14	1264	.13
1265	.13	1266	.13	1267	.13	1268	.13	1269	.13
1270	.13	1271	.13	1272	.13	1273	.13	1274	.13
1275	.13	1276	.13	1277	.13	1278	.13	1279	.13
1280	.13	1281	.13	1282	.13	1283	.13	1284	.12
1285	.12	1286	.12	1287	.12	1288	.12	1289	.12
1290	.12	1291	.12	1292	.12	1293	.12	1294	.12
1295	.12	1296	.12	1297	.12	1298	.12	1299	.12
1300	.12	1310	.12	1320	.11	1330	.11	1340	.10
1350	.10	1360	.10	1370	.10	1380	.10	1390	.09
1400	.10	1420	.09	1440	.09	1460	.00	1500	.00

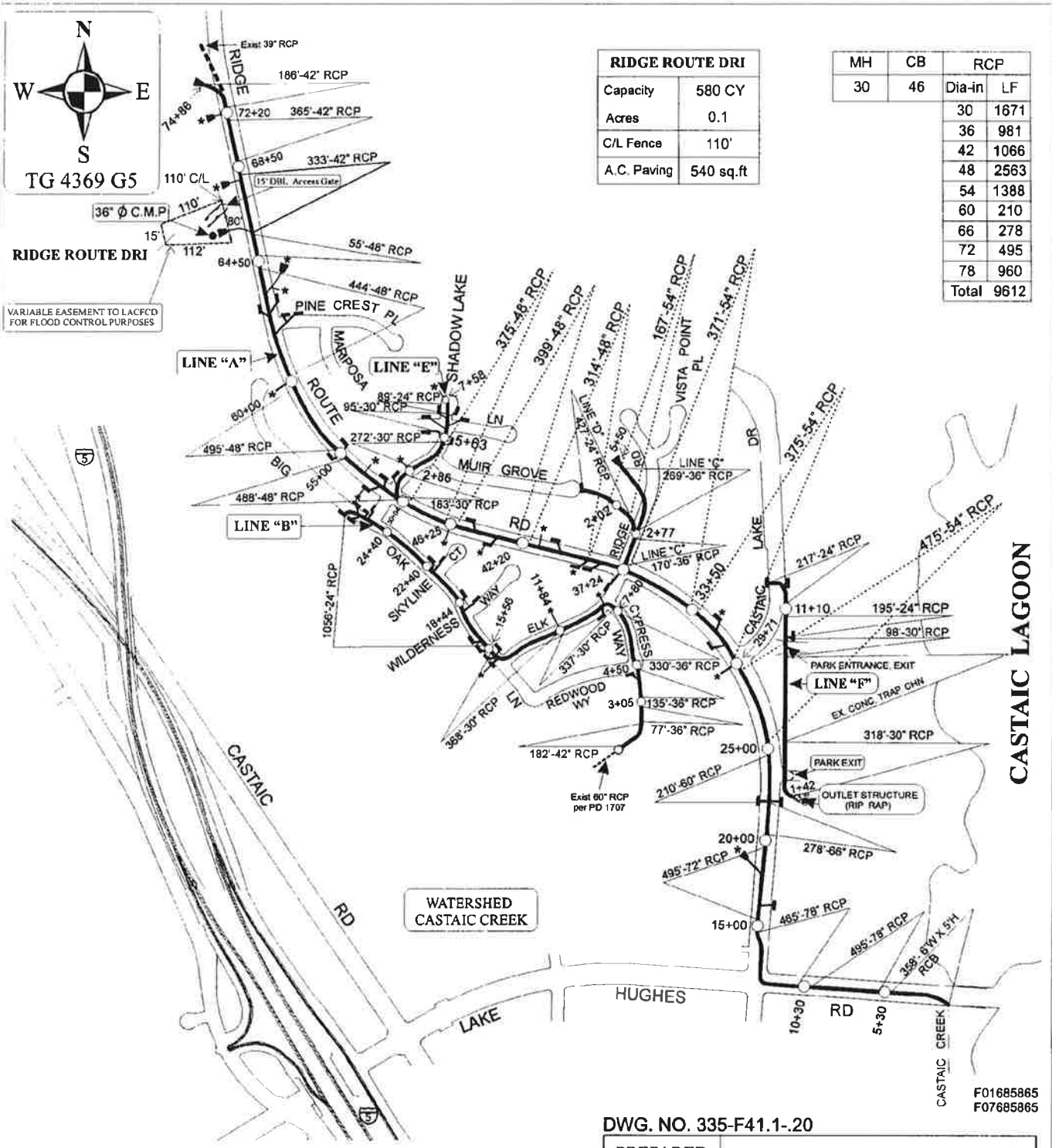
TOTAL VOLUME THIS HYDROGRAPH = .54(Ac.Ft)

TC Calculator Results

VTM 73336, Northlake Phase 1
Proposed Condition

LID Clear Frequency

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)	Volume (ac-ft)
LID	200A	8.0	0.65	LID	94	2279	0.03	1.2	55	0.23	0.22	0.66	1.2	0.49
LID	202A	6.3	0.5	LID	94	1372	0.036	1.2	41	0.27	0.30	0.60	1	0.27
LID	2b	4.8	0.91	LID	94	642	0.13	1.2	16	0.40	0.46	0.86	1.6	0.37
LID	3a	1.5	0.85	50	94	240	0.01	5.8	5	3.46	0.89	0.9	4.7	0.58
LID	3b	0.2	1.0	50	94	250	0.12	5.8	5	3.46	0.89	0.9	0.62	0.08



RIDGE ROUTE DRI	
Capacity	580 CY
Acres	0.1
C/L Fence	110'
A.C. Paving	540 sq.ft

MH	CB	RCP	
30	46	Dia-in	LF
		30	1671
		36	981
		42	1066
		48	2563
		54	1388
		60	210
		66	278
		72	495
		78	960
		Total	9612

DWG. NO. 335-F41.1-.20

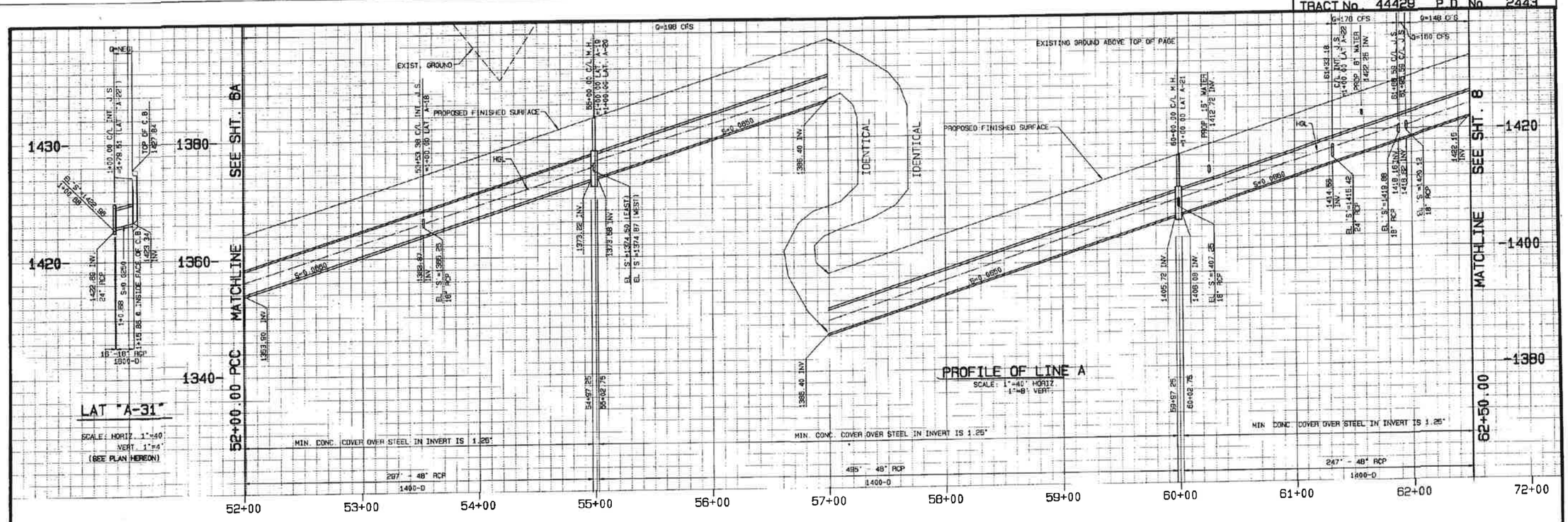
LEGEND

PROJECT	ITEM	EXISTING
———	Storm Drain	- - - - - -
— ■ —	Catch Basin	▭
○	Manhole	○
▼	Inlet	▽

An * by any Structure Denotes that it is not Maintained by LACFCD.

PREPARED SH	LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
DATE 03/07/2005	**PD 2443**
SCALE N/A	**CASTAIC**

STORM DRAIN PLANS IN
TRACT No. 44429 P.D No. 2443

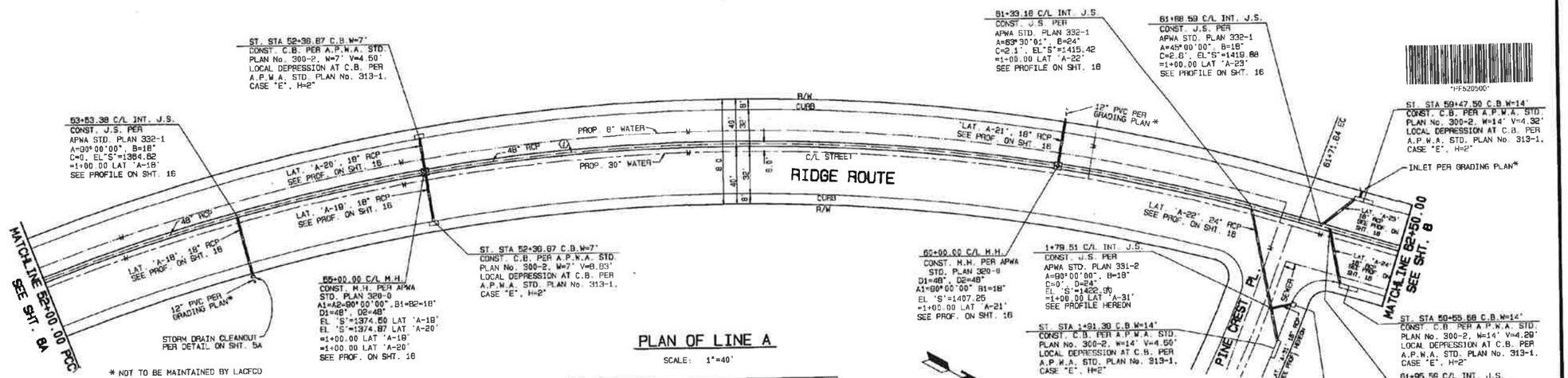


LAT "A-31"

SCALE: HORIZ. 1"=40'
VERT. 1"=4'
(SEE PLAN HEREON)

PROFILE OF LINE A

SCALE: 1"=40' HORIZ.
1"=8' VERT.



PLAN OF LINE A

SCALE: 1"=40'

C/L STORM DRAIN CURVE DATA				
	DELTA	RADIUS	LENGTH	TANGENT
(1)	38°14'07"	1458.00'	971.83'	504.89'

NO.	REVISION	REVISED BY	APPROVED BY	DATE

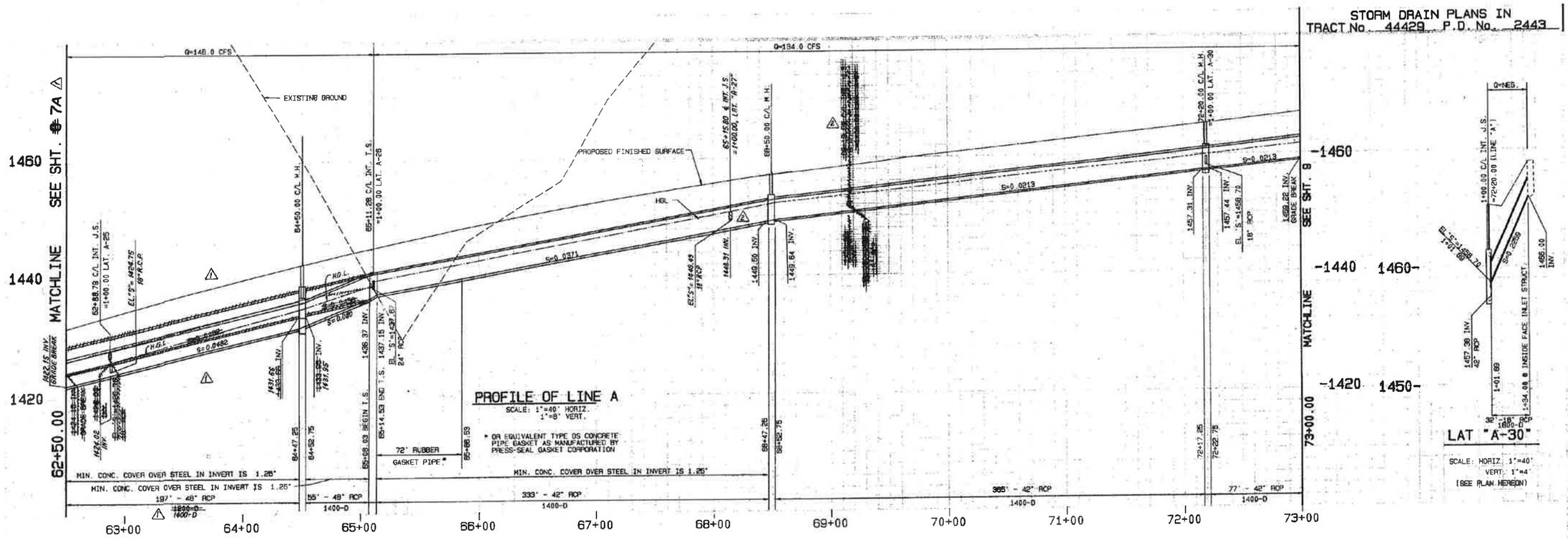
PREPARED BY:
SIKAND ENGINEERING ASSOCIATES
15230 BURBANK BLVD.
VAN NUYS, CA. 91411
(818)-787-8550
SIGNATURE: _____ R.C.E. NO. 37953

COUNTY OF LOS ANGELES, CALIFORNIA
HARRY W. STONE DIRECTOR OF PUBLIC WORKS

CHECKED BY: _____ LAND DEVELOPMENT DIVISION R.C.E. NO. 46641 DATE: 12-7-98
OFFICE OF THE DIRECTOR OF PUBLIC WORKS

SHT 7A OF 20 SHTS

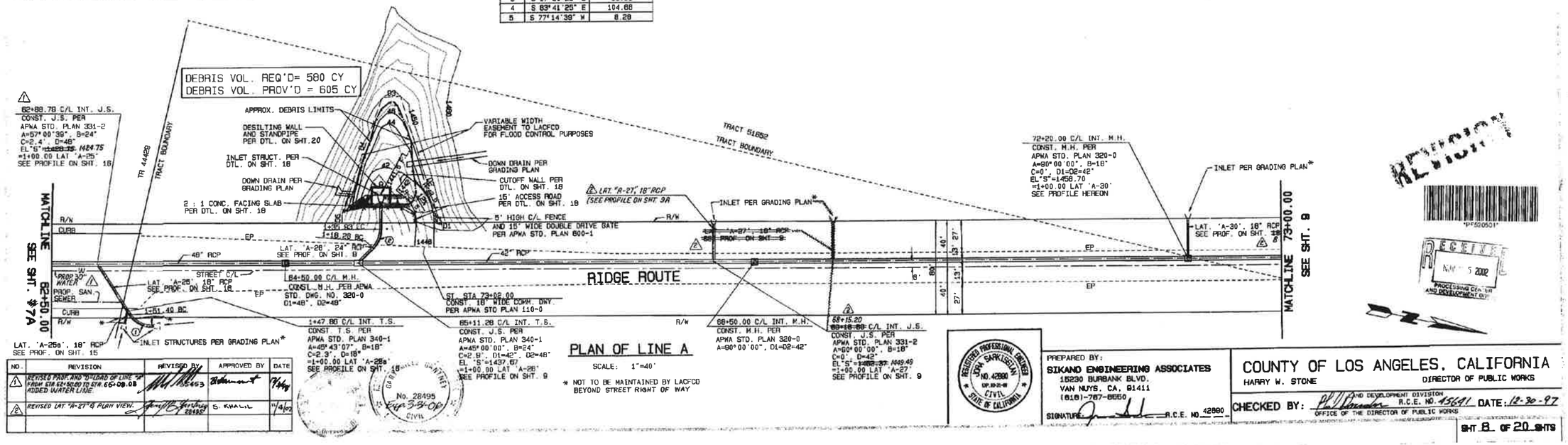
STORM DRAIN PLANS IN
TRACT No. 44429 P.D. No. 2443



C/L STORM DRAIN CURVE DATA				
	DELTA	RADIUS	LENGTH	TANGENT
①	56°51'02"	22.50'	23.50'	12.95'
②	49°59'59"	22.50'	17.67	9.32'

EASEMENT CURVE DATA			
	DELTA	RADIUS	LENGTH
①	18°45'08"	17.50'	4.81'
②	11°01'26"	27.50'	5.29

EASEMENT DATA		
D NO.	BEARING	DISTANCE
1	S 80°06'24" W	5.56
2	S 80°07'21" W	107.74
3	S 17°30'28" E	15.81
4	S 83°41'25" E	104.66
5	S 77°14'39" W	8.28



PLAN OF LINE A

SCALE: 1"=40'

* NOT TO BE MAINTAINED BY LACFCD BEYOND STREET RIGHT OF WAY

NO.	REVISION	REVISED BY	APPROVED BY	DATE
1	REVISED PAVE AND "D" LOAD OF LINE "A" FROM STA 62+50.00 TO STA 65+09.03 ADDED WATER LINE.	[illegible] 28495	[illegible]	9/96
2	REVISED LAT "A-27" & PLAN VIEW.	[illegible] 28495	S. KHALIL	11/4/97

REGISTERED PROFESSIONAL ENGINEER JOHN SARKISSIAN NO. 42880 EXP. 12-31-98 CIVIL STATE OF CALIFORNIA

PREPARED BY:
SIKAND ENGINEERING ASSOCIATES
15233 BURBANK BLVD.
VAN NUYS, CA. 91411
(818)-787-8050
SIGNATURE [illegible] R.C.E. NO. 42880

COUNTY OF LOS ANGELES, CALIFORNIA
HARRY W. STONE
DIRECTOR OF PUBLIC WORKS

CHECKED BY: [illegible] LAND DEVELOPMENT DIVISION R.C.E. NO. 43691 DATE: 12-30-97
OFFICE OF THE DIRECTOR OF PUBLIC WORKS

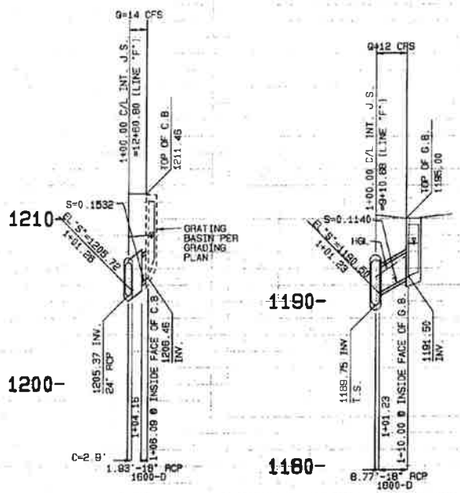
SHT 8 OF 20 SHTS

RECEIVED NOV 5 2002 PROCESSING CENTER AND DEVELOPMENT DEPT.

DRN 335-F41 1-20

S:\KOND\44429\GC\F_dr\pln\SHT-08

STORM DRAIN PLANS IN
TRACT No. 44429 P.D. No. 2443

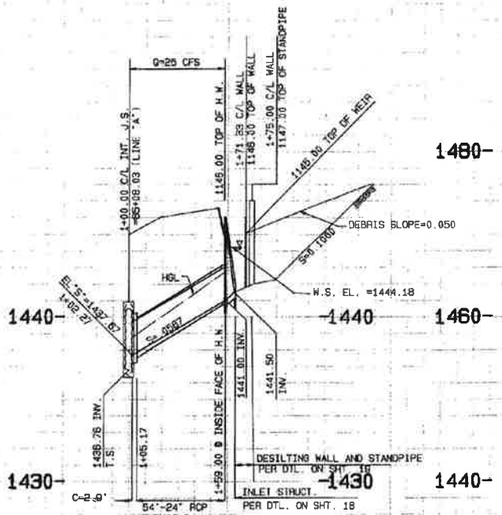


LAT "F-1"

SCALE: HORIZ. 1"=20'
VERT. 1"=4'
(SEE PLAN ON SHEET 18A)

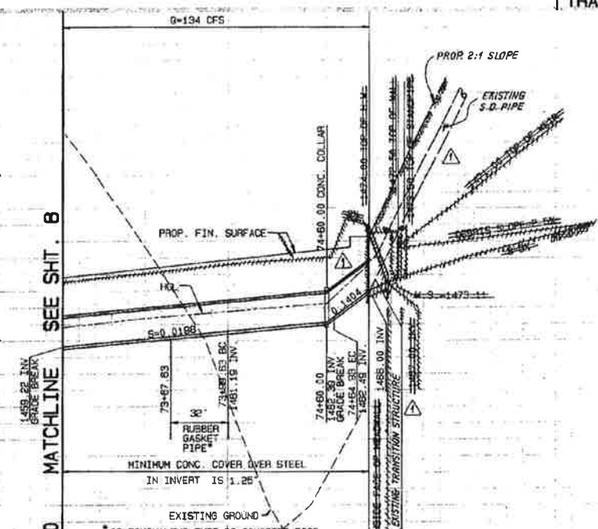
LAT "F-2"

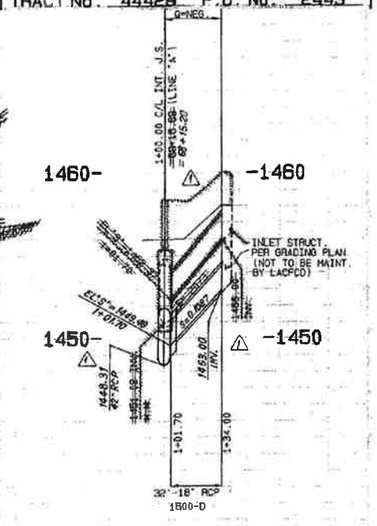
SCALE: HORIZ. 1"=20'
VERT. 1"=4'
(SEE PLAN ON SHEET 18A)



LAT "A-26"

SCALE: HORIZ. 1"=40'
VERT. 1"=4'
(SEE PLAN ON SHEET 8)





⚠LAT "A-27"

SCALE: HORIZ. 1"=20'
VERT. 1"=4'
(SEE PLAN ON SHEET 8)

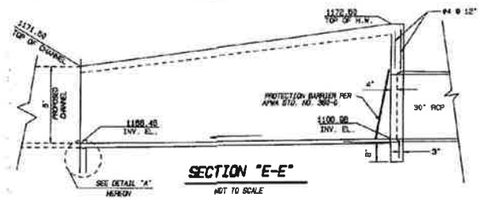
DEBRIS VOL. REQ'D = 3500 CY
DEBRIS VOL. PROV'D = 3650 CY

C/L STORM DRAIN CURVE DATA

	DELTA	RADIUS	LENGTH	TANGENT
ⓐ	63°08'22"	45.00'	69.30'	38.81'

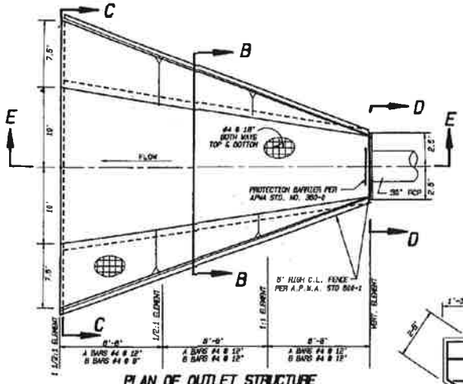
EASEMENT CURVE DATA

	DELTA	RADIUS	LENGTH
ⓐ	10°15'58"	40.00	7.17



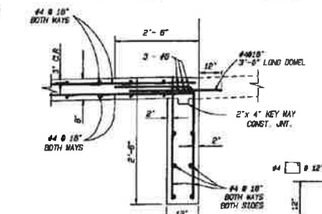
SECTION "E-E"

NOT TO SCALE



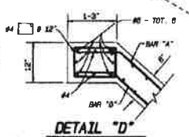
PLAN OF OUTLET STRUCTURE FOR LINE 'F'

NOT TO SCALE



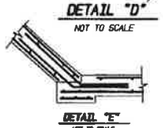
DETAIL "A"

NOT TO SCALE



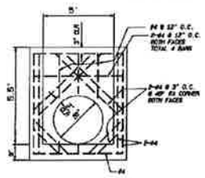
DETAIL "D"

NOT TO SCALE



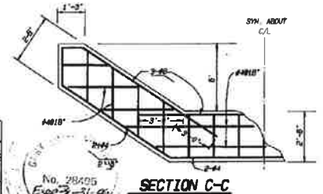
DETAIL "E"

NOT TO SCALE



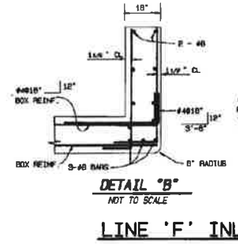
SECTION "D-D"

NOT TO SCALE



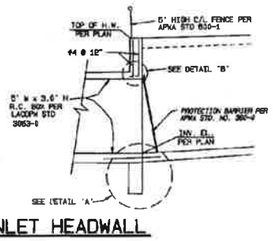
SECTION C-C

NO SCALE



DETAIL "B"

NOT TO SCALE

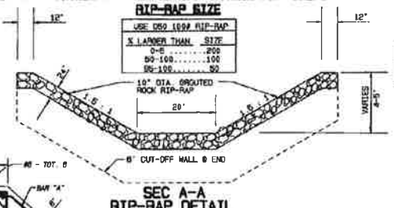


LINE 'F' INLET HEADWALL

NOT TO SCALE

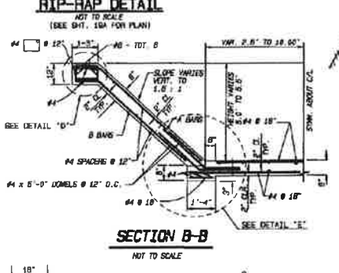
RIP-RAP SIZE

USE D50 1099 RIP-RAP	
% LARGER THAN	SIZE
0-5	.200
50-100	.100
85-100	.50



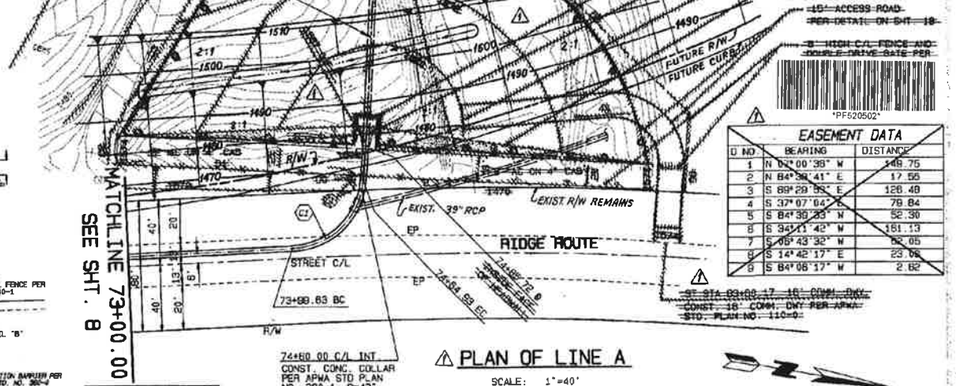
SEC A-A
RIP-RAP DETAIL

NOT TO SCALE
(SEE SHT. 18A FOR PLAN)



SECTION B-B

NOT TO SCALE



⚠ PLAN OF LINE A

SCALE: 1"=40'

74+60.00 C/L INT
CONST. CONC. COLLAR PER APWA STD PLAN NO. 380-1, D=42"

VARIABLE WIDTH EASEMENT TO LACFCD FOR FLOOD CONTROL PURPOSES
DESILTING WALL AND STANDPIPE PER DETAIL ON SHT. 20
INLET STRUCTURE PER DETAIL ON SHT. 18
CUTOFF WALL PER DETAIL ON SHT. 18
3 - 1 CONCRETE FACING SLAB PER DETAIL ON SHT. 18
15' ACCESS ROAD PER DETAIL ON SHT. 18
6' HIGH C/L FENCE AND DOUBLE DRIVE GATE PER

PF520502

EASEMENT DATA

⚠ NO	BEARING	DISTANCE
1	N 0°00'39" W	149.75
2	N 84°38'41" E	17.55
3	S 89°29'55" E	126.48
4	S 37°07'04" E	79.84
5	S 84°38'25" W	52.38
6	S 34°11'43" W	151.19
7	S 45°43'32" W	82.05
8	S 14°42'17" E	23.06
9	S 84°08'17" W	2.82

⚠ 9" STA 03+00.17 16' PRIVATE DRAIN CONST. 18" CONC. ENT. PER APWA STD. PLAN NO. 110-0

NO.	REVISION	REVISED BY	APPROVED BY	DATE
⚠	REVISED DEBRIS BASIN & LAT "A-27" REVISED LINE "A" IN PLAN & PROFILE		S. KWAN	4/6/92

PREPARED BY:
SIKAND ENGINEERING ASSOCIATES
15230 BURBANK BLVD.
VAN NUYS, CA. 91411
(818)-787-8550
SIGNATURE: R.C.E. NO. 29452

COUNTY OF LOS ANGELES, CALIFORNIA
HARRY W. STONE — DIRECTOR OF PUBLIC WORKS

CHECKED BY: LAND DEVELOPMENT DIVISION R.C.E. NO. 35691 DATE: 12-7-92
OFFICE OF THE DIRECTOR OF PUBLIC WORKS

SHT 9A OF 20 SHTS

Section 5

DPV & Bulking Calculation (Subarea)

VTM No. 73336, Northlake Phase 1

Existing Condition, Design Frequency (50-yr)

Node Number	DPA Zone	Total Area (ac)	$DP_{Tributary\ Area}$ (ac)	$DP_{Tributary\ Area}$ (mi^2)	Bulking Rate	Qb (cfs)	Qbb (cfs)	DP Rate (cy/mi^2)	Subarea DPV (cy)
1A	3	40.9	40.9	0.064	1.620	81.8	132.5	140,000	8,947
2A	3	50.6	50.6	0.079	1.620	111.8	181.1	140,000	11,069
3A	3	48.8	48.8	0.076	1.620	107.8	174.6	140,000	10,675
4A	3	37.8	37.8	0.059	1.620	87.6	141.9	140,000	8,269
5A	3	46.9	46.9	0.073	1.620	98.3	159.2	140,000	10,259
8B	3	55.4	55.4	0.087	1.620	122.4	198.3	140,000	12,119
9B	3	51.0	51.0	0.080	1.620	106.8	173.0	140,000	11,156
11A	3	46.3	46.3	0.072	1.620	92.6	150.0	140,000	10,128
12A	3	46.7	46.7	0.073	1.620	93.4	151.3	140,000	10,216
13A	3	55.0	55.0	0.086	1.620	115.2	186.6	140,000	12,031
14A	3	52.8	52.8	0.083	1.620	110.6	179.2	140,000	11,550
15A	3	52.6	52.6	0.082	1.620	105.2	170.4	140,000	11,506
16A	3	23.5	23.5	0.037	1.620	51.9	84.1	140,000	5,141
19C	3	26.0	26.0	0.041	1.620	68.0	110.2	140,000	5,688
20C	3	48.7	48.7	0.076	1.620	90.1	146.0	140,000	10,653
22A	3	49.7	49.7	0.078	1.620	89.0	144.2	140,000	10,872
25D	3	45.0	45.0	0.070	1.620	94.3	152.8	140,000	9,844
26D	3	31.1	31.1	0.049	1.620	62.2	100.8	140,000	6,803
27D	3	49.3	49.3	0.077	1.620	98.6	159.7	140,000	10,784
28D	3	47.5	47.5	0.074	1.620	87.9	142.4	140,000	10,391
29D	3	29.2	29.2	0.046	1.620	61.2	99.1	140,000	6,388
30D	3	48.6	48.6	0.076	1.620	107.4	174.0	140,000	10,631
31D	3	41.1	41.1	0.064	1.620	78.9	127.8	140,000	8,991
35A	3	41.3	41.3	0.065	1.620	79.3	128.5	140,000	9,034
36A	3	46.4	46.4	0.073	1.620	97.2	157.5	140,000	10,150
37A	3	26.8	26.8	0.042	1.620	59.2	95.9	140,000	5,863
38A	3	64.1	64.1	0.100	1.620	114.8	186.0	140,000	14,022
39A	3	41.6	41.6	0.065	1.620	87.2	141.3	140,000	9,100
42E	5	61.9	61.9	0.097	1.465	103.5	151.6	82,000	7,931
43E	5	50.1	50.1	0.078	1.465	100.2	146.8	82,000	6,419
44E	5	64.4	64.4	0.101	1.465	115.3	168.9	82,000	8,251
46A	5	47.5	47.5	0.074	1.465	91.2	133.6	82,000	6,086
47A	5	38.8	38.8	0.061	1.465	63.0	92.3	82,000	4,971
48A	5	38.8	38.8	0.061	1.465	64.9	95.1	82,000	4,971
49A	5	25.9	25.9	0.040	1.465	63.5	93.0	82,000	3,318
50A	5	68.3	68.3	0.107	1.465	114.2	167.3	82,000	8,751
53F	5	45.6	45.6	0.071	1.465	91.2	133.6	82,000	5,843
54F	5	53.1	53.1	0.083	1.465	95.1	139.3	82,000	6,803
56A	5	46.0	46.0	0.072	1.465	85.1	124.7	82,000	5,894
57A	5	50.8	50.8	0.079	1.465	91.0	133.3	82,000	6,509
60B	5	53.0	53.0	0.083	1.465	86.0	126.0	82,000	6,791
61B	5	38.3	38.3	0.060	1.465	84.6	123.9	82,000	4,907
63A	5	47.7	47.7	0.075	1.465	91.6	134.2	82,000	6,112
64A	5	50.0	50.0	0.078	1.465	104.8	153.5	82,000	6,406
65A	5	45.7	45.7	0.071	1.465	105.9	155.1	82,000	5,855
66A	5	38.3	38.3	0.060	1.465	88.7	129.9	82,000	4,907
OP1	5	4.0	4.0	0.006	1.465	7.9	11.6	82,000	513
OP5	5	2.5	2.5	0.004	1.465	12.6	18.5	82,000	320

Debris Production Calculation

VTM 73336, Northlake Phase 1
Existing Condition

Outlet at Node 66A: DPA Zones 3 and 5for entire watershed boundary
See Appendix P-2:

Subscript 1 =	**DPA 3**				
Subscript 2 =	**DPA 5**				
A1 =	**1,244.7**	ac	=	**1.945**	mi^2
A2 =	**864.2**	ac	=	**1.350**	mi^2
A1+A2=	**2,108.9**	ac	=	**3.295**	mi^2
$DPR1_{(A1+A2)}$ =	**48,000**	cy/mi^2			
$DPR1_{(A1)}$ =	**53,000**	cy/mi^2			
$DPR2_{(A1+A2)}$ =	**28,500**	cy/mi^2			
$DPR2_{(A2)}$ =	**38,000**	cy/mi^2			

$DPR1_{(A1+A2)}$ x A1[A1/(A1+A2)] + $DPR1_{(A1)}$ x A1[A2/(A1+A2)] = **97,337** cy

+

$DPR2_{(A1+A2)}$ x A2[A2/(A1+A2)] + $DPR2_{(A2)}$ x A2[A1/(A1+A2)] = **46,055** cy

Total DPV = **143,392** cy

Bulking Calculation

VTM 73336, Northlake Phase 1

Existing Condition

Outlet at Node 66A: DPA Zones 3 and 5for entire watershed boundary

See Appendix P-5:

Subscript 1 =	**DPA 3**				
Subscript 2 =	**DPA 5**				
Q =	**2,899.2**	cfs	(Burned)		
A1 =	**1,244.7**	ac	=	**1.945**	mi^2
A2 =	**864.2**	ac	=	**1.350**	mi^2
A1+A2=	**2,108.9**	ac	=	**3.295**	mi^2
$BF1_{(A1+A2)}$ =	**1.442**				
$BF1_{(A1)}$ =	**1.455**				
$BF2_{(A1+A2)}$ =	**1.325**				
$BF2_{(A2)}$ =	**1.345**				

$BF1_{(A1+A2)}$ x [QA1/(A1+A2)][A1/(A1+A2)] + $BF1_{(A1)}$ x [QA1/(A1+A2)][A2/(A1+A2)] = **2,476.59** cfs

+

$BF2_{(A1+A2)}$ x [QA2/(A1+A2)][A2/(A1+A2)] + $BF2_{(A2)}$ x [QA2/(A1+A2)][A1/(A1+A2)] = **1,588.20** cfs

Burned & Bulked Q = 4,064.78 cfs

DPV & Bulking Calculation (Subarea)

VTM No. 73336, Northlake Phase 1

Proposed Condition, Design Frequency (50 & 25-yr mixed)

Node Number	DPA Zone	Total Area (ac)	$DP_{Tributary\ Area}$ (ac)	$DP_{Tributary\ Area}$ (mi^2)	Bulking Rate	Qb (cfs)	Qbb (cfs)	DP Rate (cy/mi^2)	Subarea DPV (cy)
1A	3	40.9	40.9	0.064	1.620	81.8	132.5	140,000	8,947
2A	3	50.6	50.6	0.079	1.620	111.8	181.1	140,000	11,069
3A	3	48.8	48.8	0.076	1.620	107.8	174.6	140,000	10,675
4A	3	37.8	37.8	0.059	1.620	87.6	141.9	140,000	8,269
5A	3	46.9	46.9	0.073	1.620	98.3	159.2	140,000	10,259
6A	3	225.0	225.0	0.352	1.510	463.3	699.6	82,000	28,828
8B	3	55.4	55.4	0.087	1.620	122.4	198.3	140,000	12,119
9B	3	51.0	51.0	0.080	1.620	106.8	173.0	140,000	11,156
10AB	3	331.4	331.4	0.518	1.490	676.5	1008.0	72,000	37,283
11A	3	46.3	46.3	0.072	1.620	92.6	150.0	140,000	10,128
12A	3	46.7	46.7	0.073	1.620	93.4	151.3	140,000	10,216
13A	3	55.0	55.0	0.086	1.620	115.2	186.6	140,000	12,031
14A	3	52.8	52.8	0.083	1.620	110.6	179.2	140,000	11,550
15A	3	52.6	52.6	0.082	1.620	105.2	170.4	140,000	11,506
16A	3	23.5	23.5	0.037	1.620	51.9	84.1	140,000	5,141
17A	3	608.3	608.3	0.950	1.470	1144.9	1683.0	62,000	58,929
19C	3	26.0	26.0	0.041	1.620	68.0	110.2	140,000	5,688
20C	3	48.7	48.7	0.076	1.620	90.1	146.0	140,000	10,653
22A	3	49.7	49.7	0.078	1.620	89.0	144.2	140,000	10,872
23A	3	732.7	732.7	1.145	1.470	1347.2	1980.4	60,000	68,691
25D	3	45.0	45.0	0.070	1.620	94.3	152.8	140,000	9,844
26D	3	31.1	31.1	0.049	1.620	62.2	100.8	140,000	6,803
27D	3	49.3	49.3	0.077	1.620	98.6	159.7	140,000	10,784
28D	3	47.5	47.5	0.074	1.620	87.9	142.4	140,000	10,391
29D	3	29.2	29.2	0.046	1.620	61.2	99.1	140,000	6,388
30D	3	48.6	48.6	0.076	1.620	107.4	174.0	140,000	10,631
31D	3	41.1	41.1	0.064	1.620	78.9	127.8	140,000	8,991
33A	3	1024.5	1024.5	1.601	1.460	1882.7	2748.7	56,000	89,644
35A	3	41.3	41.3	0.065	1.620	79.3	128.5	140,000	9,034
36A	3	46.4	46.4	0.073	1.620	97.2	157.5	140,000	10,150
37A	3	26.0	26.0	0.041	1.620	57.4	93.0	140,000	5,688
38A	3	64.1	64.1	0.100	1.620	114.8	186.0	140,000	14,022
39A	3	56.1	48.0	0.075	1.620	112.2	171.7	140,000	10,500
40A	3	1258.4	1250.3	1.954	1.495	2140.5	3193.2	53,000	103,540
42E	5	37.8	29.7	0.046	1.465	72.6	99.1	82,000	3,805
43F	5	59.1	56.2	0.088	1.465	102.1	147.2	82,000	7,201
44F	5	52.1	37.3	0.058	1.465	109.2	145.6	82,000	4,779
	5	111.2	111.2	0.174	1.431	211.2	302.2	65,000	11,294
50A	5	10.8	10.8	0.017	1.465	28.2	41.3	82,000	1,384
51A	5	13.3	13.3	0.021	1.465	37.7	55.2	82,000	1,704
52A	5	11.9	11.9	0.019	1.465	37.5	54.9	82,000	1,525
53A	5	15.4	14.5	0.023	1.465	40.3	57.9	82,000	1,858
54A	5	9.7	9.7	0.015	1.465	27.5	40.3	82,000	1,243
55B	5	56.4	27.7	0.043	1.465	130.9	160.8	82,000	3,549
57A	5	20.8	20.8	0.033	1.465	54.4	79.7	82,000	2,665
58A	5	7.0	7.0	0.011	1.465	22.1	32.4	82,000	897
59A	5	9.6	9.6	0.015	1.465	30.3	44.4	82,000	1,230
60A	5	4.2	4.2	0.007	1.465	11.0	16.1	82,000	538
61A	5	44.3	44.3	0.069	1.465	92.8	136.0	82,000	5,676
62A	5	37.9	37.9	0.059	1.465	83.7	122.6	82,000	4,856
102A	5	16.0	16.0	0.025	1.465	51.4	75.3	82,000	2,050

DPV & Bulking Calculations (Junction & Outlet)

VTM 73336, Northlake Phase 1

Proposed Condition, Design Frequency (50- & 25-yr Mixed)

Pre-RETARDING

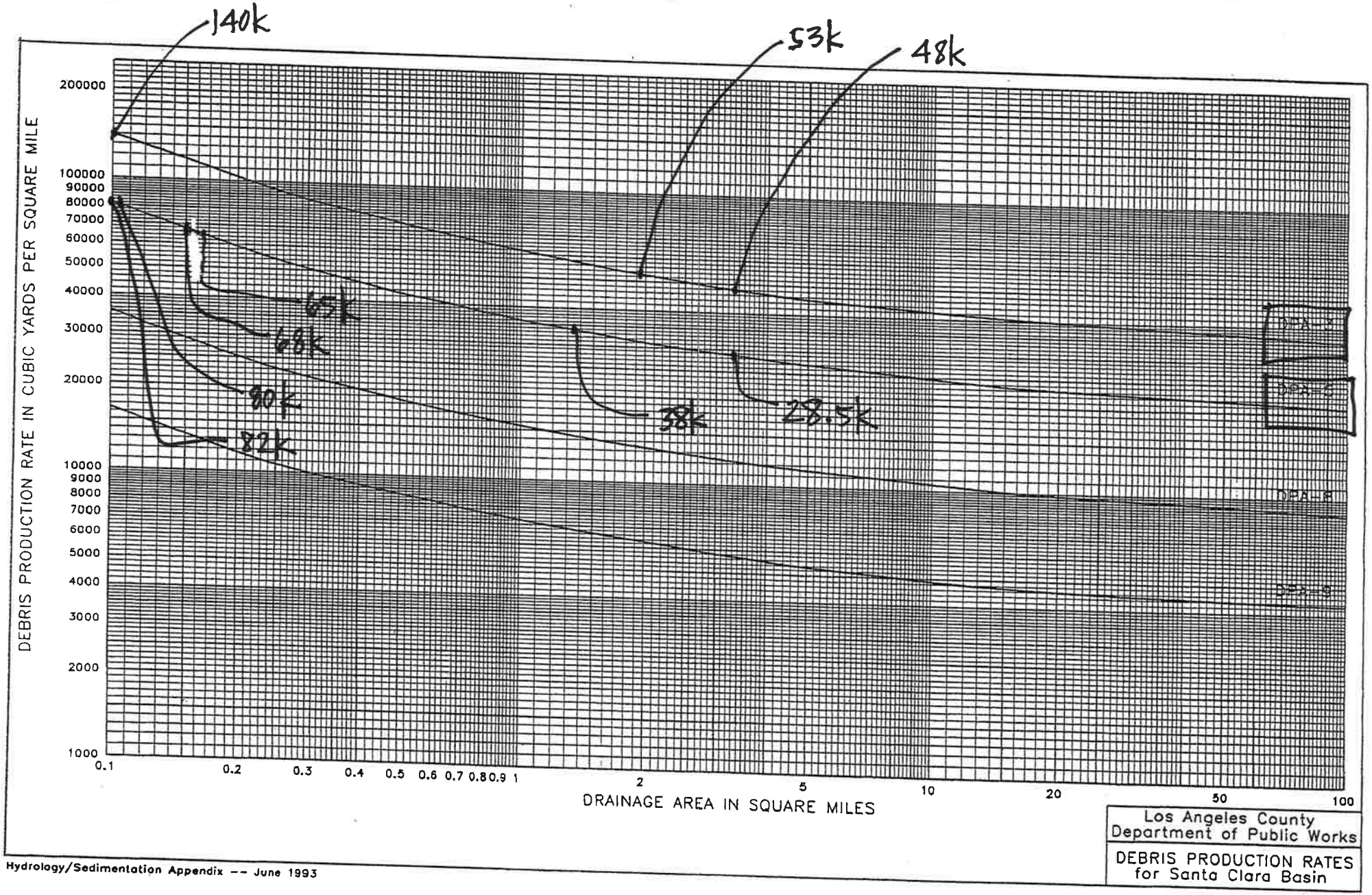
Junction Number	ΣQ_{BURN} (cfs)	ΣA (ac)	ΣA (mi^2)	Au (ac)	Au (mi^2)	Ad (ac)	Ad (mi^2)	$BF1_A$	$BF1_{Au}$	ΣQbb (cfs)	DP Rate (cy/mi^2)	DPV (cy)
102A/Outlet	2906.1	2157.3	3.371	16.0	0.025	2141.3	3.346	1.325	1.465	2916.1	82,000	2,050

Post-RETARDING

Junction Number	ΣQ_{BURN} (cfs)	ΣA (ac)	ΣA (mi^2)	Au (ac)	Au (mi^2)	Ad (ac)	Ad (mi^2)	$BF1_A$	$BF1_{Au}$	ΣQbb (cfs)	DP Rate (cy/mi^2)	DPV (cy)
102A/Outlet	2730.5	2157.3	3.371	16.0	0.025	2141.3	3.346	1.325	1.465	2739.9	82,000	2,050

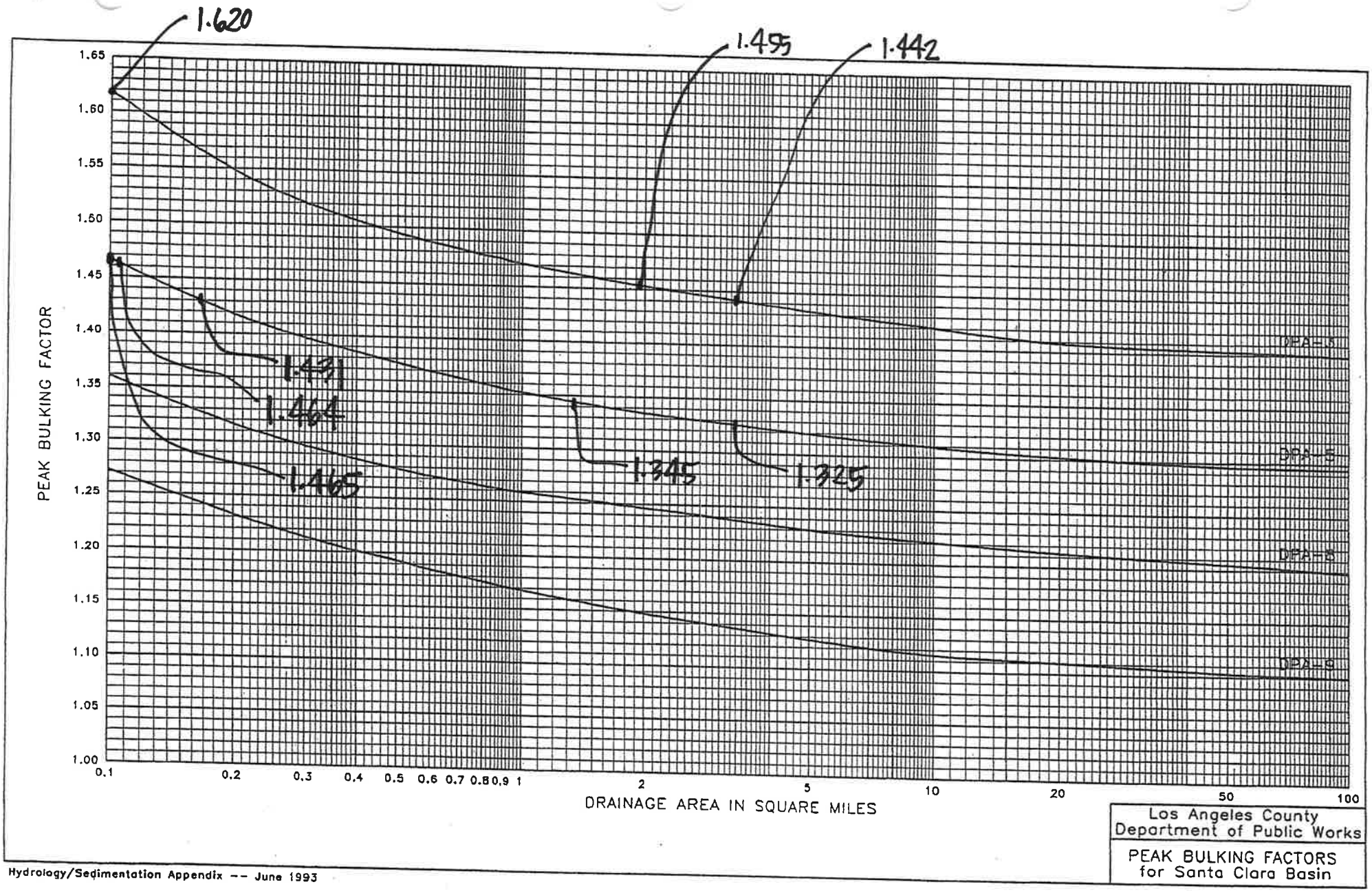
Legend:

ΣQ_{BURN}	---	Burned Flow Rate, cfs
A	---	Total Area, ac
Au	---	Undeveloped Area, ac
Ad	---	Developed Area, ac
$BF1_A$	---	Bulking Factor for **A** (See Chart P-5)
$BF1_{Au}$	---	Bulking Factor for **Au** (See Chart P-5)
Qbb	---	Burned & Bulked Flow Rate, cfs (for DPA Zone 5)
		Qbb = $BF1_A$ x [QaxAu/A][Au/A)] + $BF1_{Au}$ x [QaxAu/A)][Ad/A] + [QaxAd/A]
DP Rate	---	Debris Production Rate for **Au**, cy/mi^2 (See Chart P-2)
DPV	---	Debris Production Volume, cy
		DPV = Au x DP Rate



Los Angeles County
Department of Public Works

DEBRIS PRODUCTION RATES
for Santa Clara Basin



Los Angeles County
Department of Public Works

PEAK BULKING FACTORS
for Santa Clara Basin

Debris Basin Volume Calculation

VTM 73336, Northlake Phase 1
Proposed Condition

Node 39A

Elevation	Area (ft^2)	Volume (ft^3)	Volume (cy)	Capacity (cy)
1592	-	-	-	-
1593	41,220	20,610	763	763
1594	87,700	64,460	2,387	3,151
1598	220,040	615,480	22,796	25,946
1602	360,200	1,160,480	42,981	68,927
1605	466,689	1,240,334	45,938	114,865

Debris Production Volume Required (c.y.) = **103,540**
Basin Capacity Provided (c.y.) = **114,865**
Debris Cone Elevation = **1,600.5**

Elevation	Volume
1602	68927
X	103540
1605	1605
X=	**1600.5**

Node 42E

Elevation	Area (ft^2)	Volume (ft^3)	Volume (cy)	Capacity (cy)
1775	-	-	-	-
1776	5,086	2,543.00	94	94
1778	23,969	29,055.00	1,076	1,170
1780	27,600	51,569.00	1,910	3,080
1782	31,394	58,994.00	2,185	5,265

Debris Production Volume Required (c.y.) = **3,805**
Basin Capacity Provided (c.y.) = **5,265**
Debris Cone Elevation = **1,780.7**

Elevation	Volume
1780	3080
X	3805
1782	5265
X=	**1780.7**

Node 44F

Elevation	Area (ft^2)	Volume (ft^3)	Volume (cy)	Capacity (cy)
1717	-	-	-	-
1720	57,869	86,803.50	3,215	3,215
1724	73,453	262,644.00	9,728	12,943

Debris Production Volume Required (c.y.) = **11,294**
Basin Capacity Provided (c.y.) = **12,943**
Debris Cone Elevation = **1,723.3**

Elevation	Volume
1720	3215
X	11294
1724	12943
X=	**1723.3**

Node 50A

Elevation	Area (ft^2)	Volume (ft^3)	Volume (cy)	Capacity (cy)
1576	-	-	-	-
1577	5,190	2,595.00	96	96
1578	12,650	8,920.00	330	426
1579	14,200	13,425.00	497	924
1580	16,100	15,150.00	561	1,485
1583	20,970	55,605.00	2,059	3,544

Debris Production Volume Required (c.y.) = **1,384**
Basin Capacity Provided (c.y.) = **3,544**
Debris Cone Elevation = **1,579.8**

Elevation	Volume
1579	924
X	1384
1580	1485
X=	**1579.8**

Node 51A

Elevation	Area (ft^2)	Volume (ft^3)	Volume (cy)	Capacity (cy)
1555.5	-	-	-	-
1556	3,075	768.75	28	28
1557	7,770	5,422.50	201	229
1558	11,850	9,810.00	363	593
1560	14,435	26,285.00	974	1,566
1562	16,650	31,085.00	1,151	2,717

Debris Production Volume Required (c.y.) = **1,704**
Basin Capacity Provided (c.y.) = **2,717**
Debris Cone Elevation = **1,560.2**

Elevation	Volume
1560	1566
X	1704
1562	2717
X=	**1560.2**

Node 52A

Elevation	Area (ft^2)	Volume (ft^3)	Volume (cy)	Capacity (cy)
1529.5	-	-	-	-
1530	480	120.00	4	4
1531	2,340	1,410.00	52	57
1532	6,085	4,212.50	156	213
1534	7,640	13,725.00	508	721
1536	9,880	17,520.00	649	1,370
1536.5	11,740	5,405.00	200	1,570

Debris Production Volume Required (c.y.) = **1,525**
Basin Capacity Provided (c.y.) = **1,570**
Debris Cone Elevation = **1,536.4**

Elevation	Volume
1536	1370
X	1525
1537	1570
X=	**1536.4**

Node 53A

Elevation	Area (ft^2)	Volume (ft^3)	Volume (cy)	Capacity (cy)
1493	-	-	-	-
1494	5,980	2,990.00	111	111
1495	11,440	8,710.00	323	433
1496	13,040	12,240.00	453	887
1498	15,900	28,940.00	1,072	1,959
1499	18,770	17,335.00	642	2,601

Debris Production Volume Required (c.y.) = **1,858**
Basin Capacity Provided (c.y.) = **2,601**
Debris Cone Elevation = **1,497.8**

Elevation	Volume
1496	887
X	1858
1498	1959
X=	**1497.8**

Node 54A

Elevation	Area (ft^2)	Volume (ft^3)	Volume (cy)	Capacity (cy)
1482	-	-	-	-
1484	19,920	19,920.00	738	738
1486	29,100	49,020.00	1,816	2,553
1488	30,058	59,158.00	2,191	4,744

Debris Production Volume Required (c.y.) = **1,243**
Basin Capacity Provided (c.y.) = **4,744**
Debris Cone Elevation = **1,484.6**

Elevation	Volume
1484	738
X	1243
1486	2553
X=	**1484.6**

Node 55B

Elevation	Area (ft^2)	Volume (ft^3)	Volume (cy)	Capacity (cy)
1556	-	-	-	-
1558	28,150	28,150.00	1,043	1,043
1560	48,940	77,090.00	2,855	3,898

Debris Production Volume Required (c.y.) = **3,549**
Basin Capacity Provided (c.y.) = **3,898**
Debris Cone Elevation = **1,559.8**

Elevation	Volume
1558	1043
X	3549
1560	3898
X=	**1559.8**

Node 57A

Elevation	Area (ft^2)	Volume (ft^3)	Volume (cy)	Capacity (cy)
1513	-	-	-	-
1514	6,440	3,220.00	119	119
1516	17,100	23,540.00	872	991
1518	20,860	37,960.00	1,406	2,397
1520	24,400	45,260.00	1,676	4,073

Debris Production Volume Required (c.y.) = **2,665**
Basin Capacity Provided (c.y.) = **4,073**
Debris Cone Elevation = **1,518.3**

Elevation	Volume
1518	2397
X	2665
1520	4073
X=	**1518.3**

Node 58A

Elevation	Area (ft^2)	Volume (ft^3)	Volume (cy)	Capacity (cy)
1416.5	-	-	-	-
1417	2,130	532.50	20	20
1418	8,100	5,115.00	189	209
1420	9,890	17,990.00	666	875
1422	12,020	21,910.00	811	1,687

Debris Production Volume Required (c.y.) = **897**
Basin Capacity Provided (c.y.) = **1,687**
Debris Cone Elevation = **1,420.1**

Elevation	Volume
1420	875
X	897
1422	1687
X=	**1420.1**

Node 59A

Elevation	Area (ft^2)	Volume (ft^3)	Volume (cy)	Capacity (cy)
1421	-	-	-	-
1422	4,043	2,021.50	75	75
1424	9,900	13,943.00	516	591
1426	14,900	24,800.00	919	1,510

Debris Production Volume Required (c.y.) = **1,230**
Basin Capacity Provided (c.y.) = **1,510**
Debris Cone Elevation = **1,425.4**

Elevation	Volume
1424	591
X	1230
1426	1510
X=	**1425.4**

Node 60A

Elevation	Area (ft^2)	Volume		Capacity (cy)
		(ft^3)	(cy)	
1285	-	-	-	-
1286	13,733	6,866.50	254	254
1287	17,590	15,661.50	580	834
		Debris Production Volume Required (c.y.) =		**538**
		Basin Capacity Provided (c.y.) =		**834**
		Debris Cone Elevation =		**1,286.5**

Elevation	Volume
1286	254
X	538
1287	834
X=	**1286.5**

Node 61A

Elevation	Area (ft^2)	Volume		Capacity (cy)
		(ft^3)	(cy)	
1276	-	-	-	-
1278	19,576	19,576.00	725	725
1284	28,341	143,751.00	5,324	6,049
		Debris Production Volume Required (c.y.) =		**5,676**
		Basin Capacity Provided (c.y.) =		**6,049**
		Debris Cone Elevation =		**1,283.6**

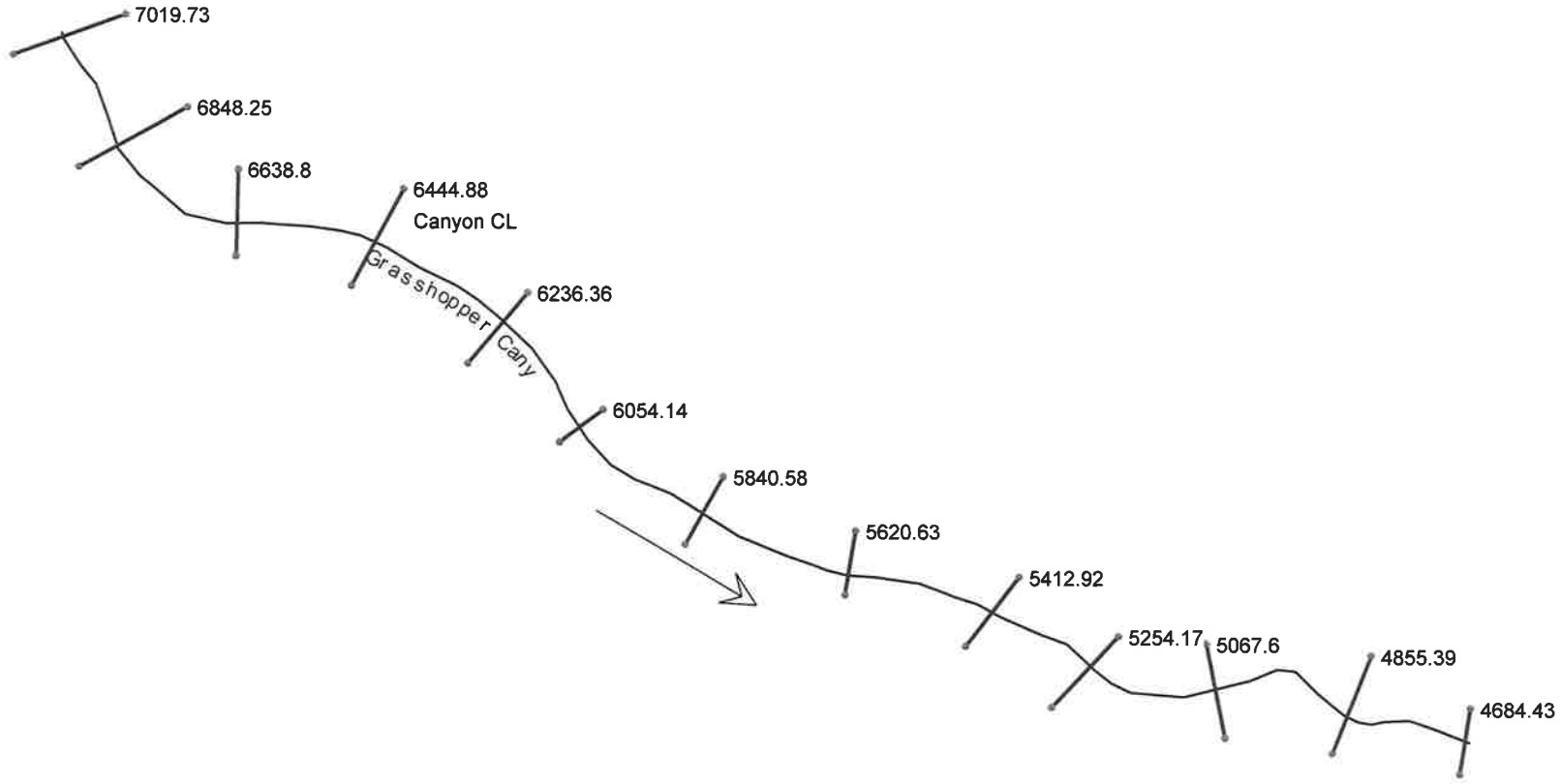
Elevation	Volume
1278	725
X	5676
1284	6049
X=	**1283.6**

Node 62A

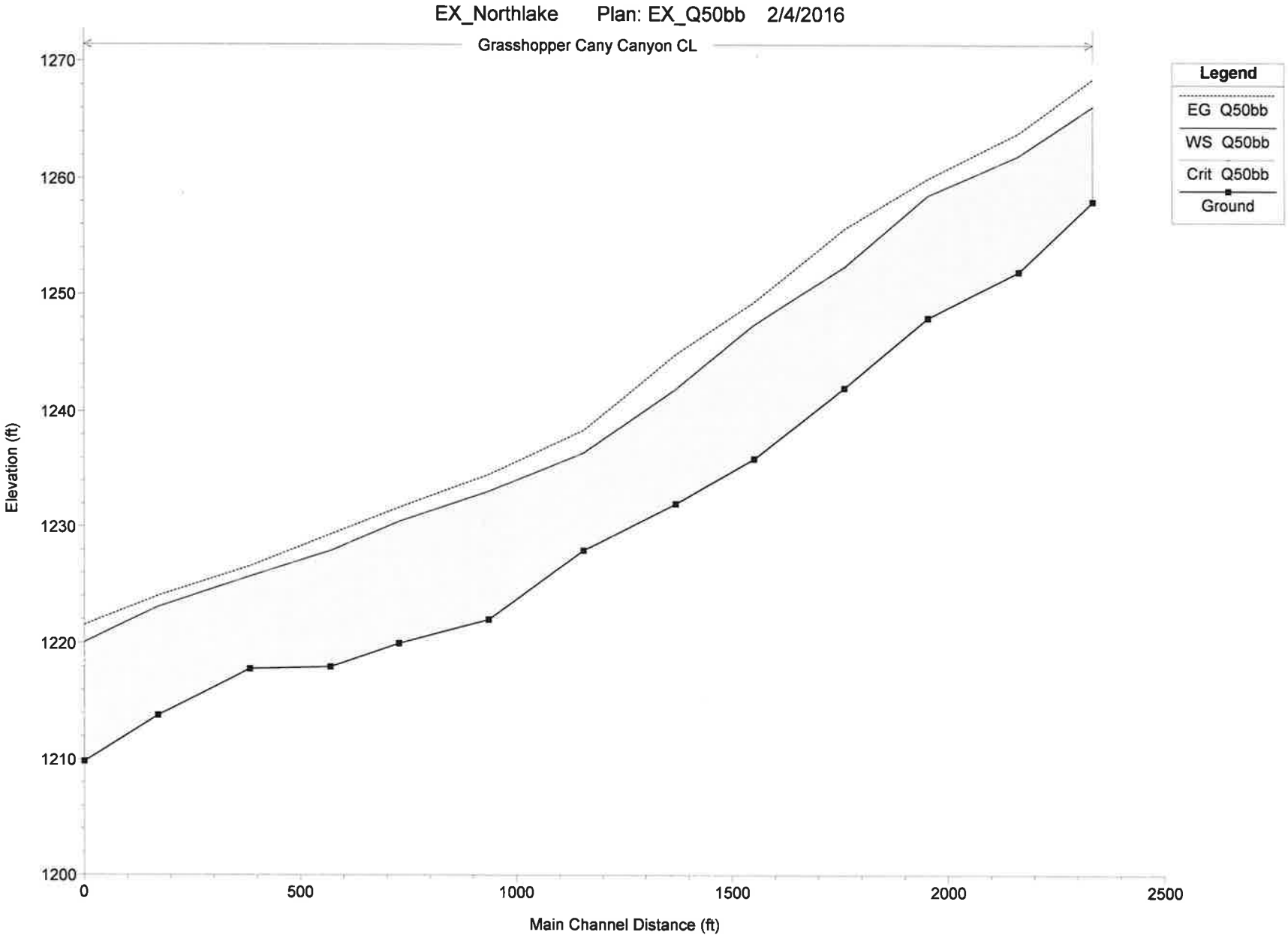
Elevation	Area (ft^2)	Volume		Capacity (cy)
		(ft^3)	(cy)	
1245	-	-	-	-
1246	20,600	10,300.00	381	381
1252	28,451	147,153.00	5,450	5,832
		Debris Production Volume Required (c.y.) =		**4,856**
		Basin Capacity Provided (c.y.) =		**5,832**
		Debris Cone Elevation =		**1,251.3**

Elevation	Volume
1246	381
X	4856
1252	5450
X=	**1251.3**

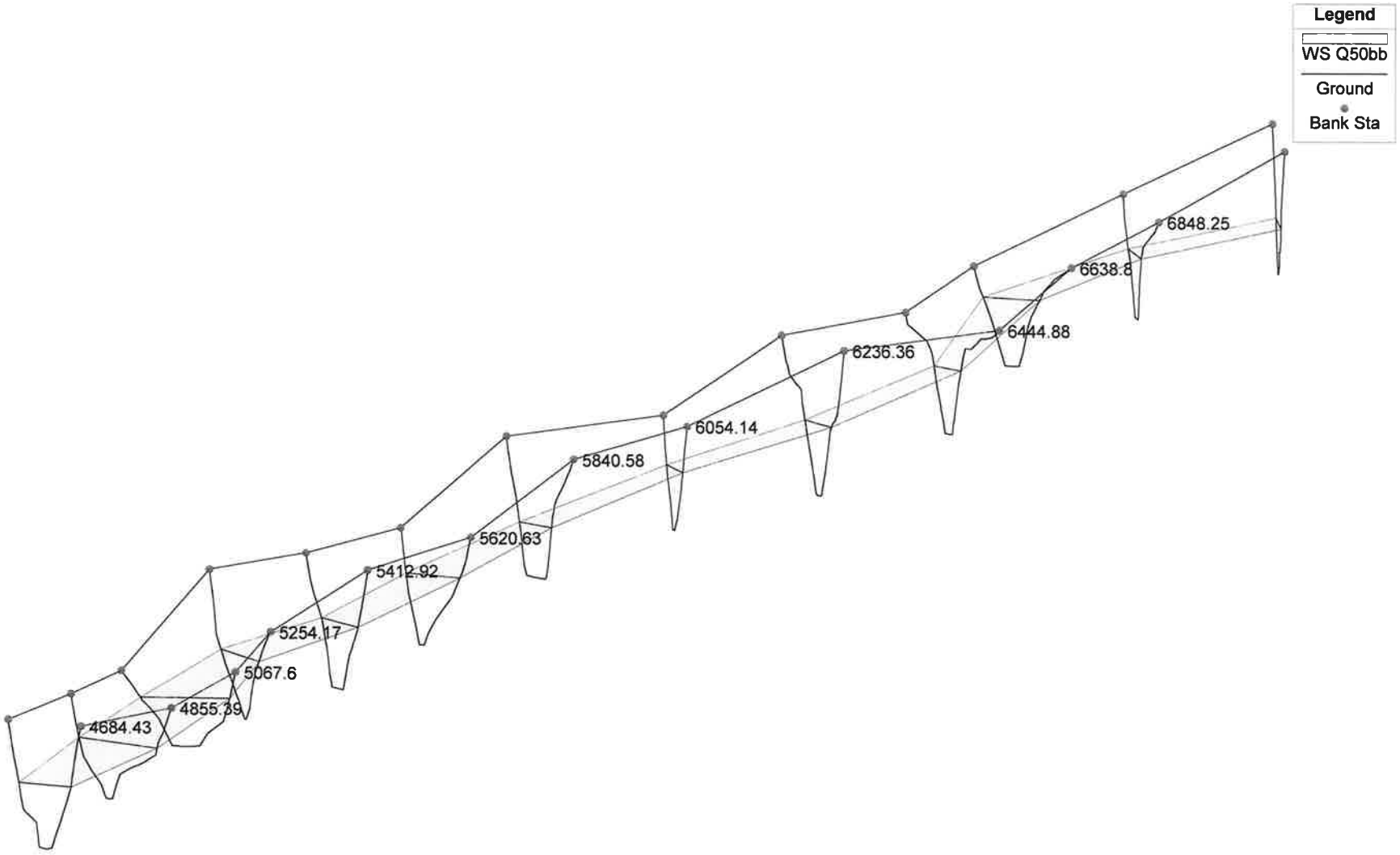
Section 6



EXISTING CONDITION

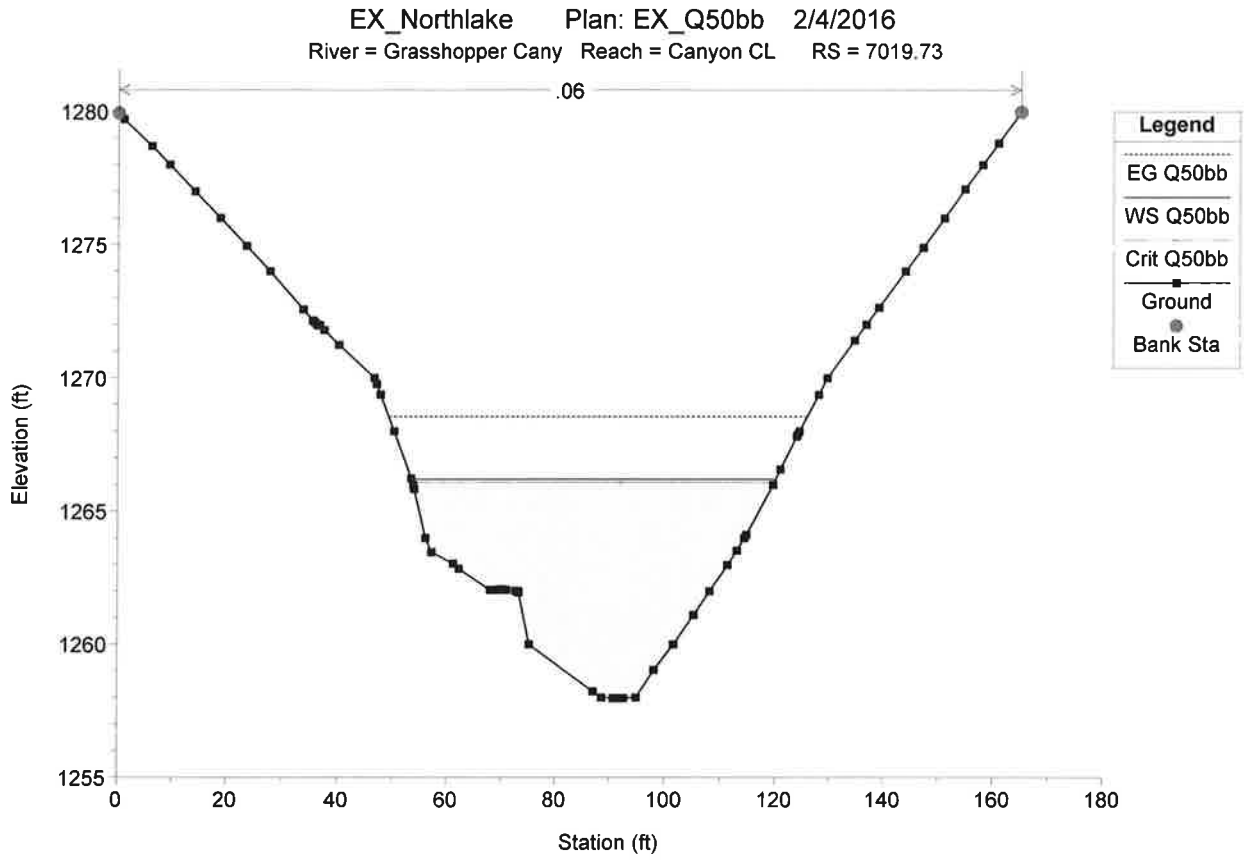

EX_Northlake Plan: EX_Q50bb 2/4/2016
Grasshopper Cany Canyon CL
Legend
EG Q50bb
WS Q50bb
Crit Q50bb
Ground
Elevation (ft)
1270
1260
1250
1240
1230
1220
1210
1200
0
500
1000
1500
2000
2500
Main Channel Distance (ft)

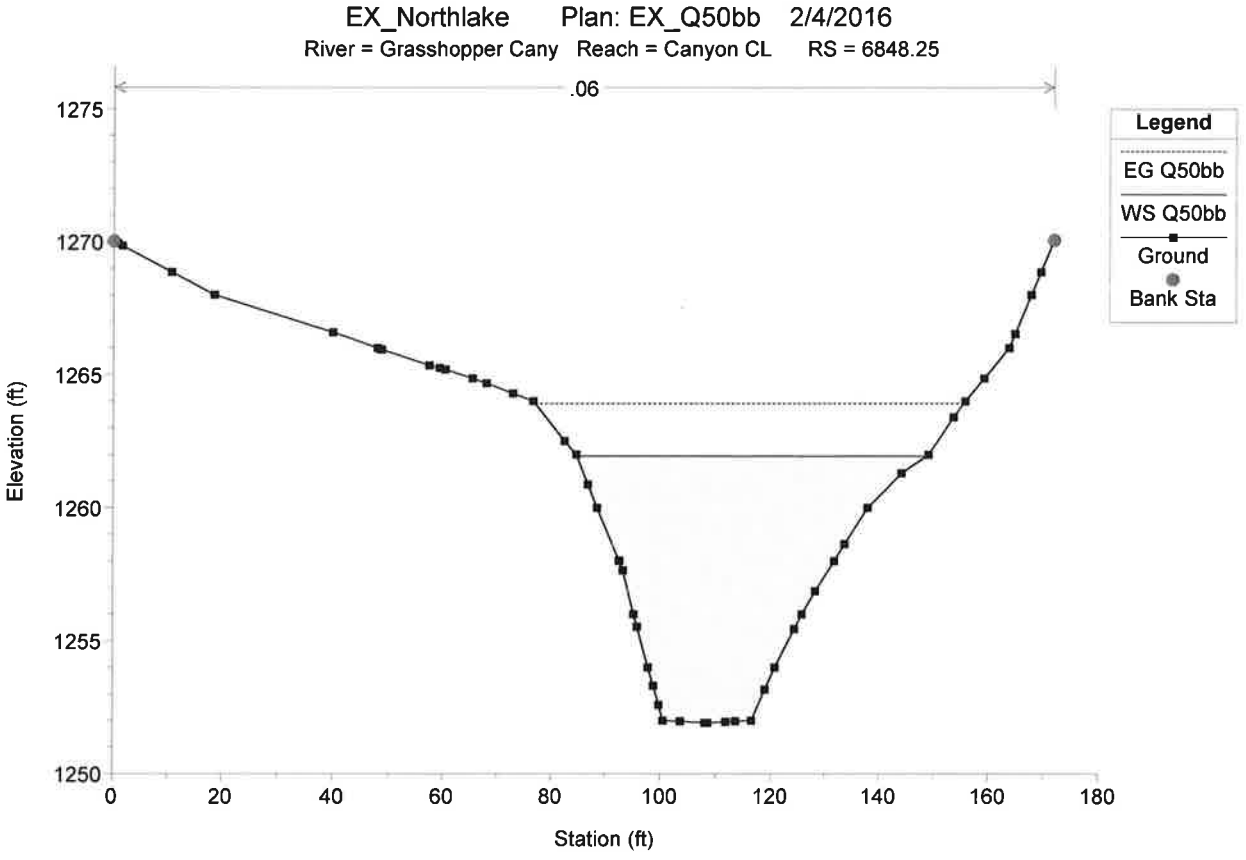
EX_Northlake Plan: EX_Q50bb 2/4/2016



HEC-RAS Plan: EX_Q50bb River: Grasshopper Cany Reach: Canyon CL Profile: Q50bb

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Canyon CL	7019.73	Q50bb	4064.80	1257.97	1266.20	1266.09	1268.54	0.031074	12.29	330.62	66.63	0.97
Canyon CL	6848.25	Q50bb	4064.80	1251.91	1261.94		1263.91	0.022616	11.27	360.55	63.85	0.84
Canyon CL	6638.8	Q50bb	4064.80	1247.94	1258.50		1259.96	0.014873	9.70	419.04	68.41	0.69
Canyon CL	6444.88	Q50bb	4064.80	1241.98	1252.34	1252.34	1255.60	0.033919	14.50	280.29	43.15	1.00
Canyon CL	6236.36	Q50bb	4064.80	1235.88	1247.39		1249.32	0.018201	11.14	364.88	54.10	0.76
Canyon CL	6054.14	Q50bb	4064.80	1231.96	1241.91	1241.91	1244.85	0.032975	13.75	295.69	50.77	1.00
Canyon CL	5840.58	Q50bb	4064.80	1227.93	1236.38		1238.36	0.018187	11.28	360.22	51.68	0.75
Canyon CL	5620.63	Q50bb	4064.80	1222.00	1233.06		1234.53	0.015432	9.75	416.75	69.01	0.70
Canyon CL	5412.92	Q50bb	4064.80	1219.99	1230.43		1231.67	0.011811	8.92	455.75	70.91	0.62
Canyon CL	5254.17	Q50bb	4064.80	1218.00	1227.91		1229.35	0.018246	9.62	422.50	83.81	0.76
Canyon CL	5067.6	Q50bb	4064.80	1217.84	1225.69		1226.59	0.010948	7.63	533.06	103.53	0.59
Canyon CL	4855.39	Q50bb	4064.80	1213.80	1223.08		1224.03	0.013355	7.82	520.02	112.74	0.64
Canyon CL	4684.43	Q50bb	4064.80	1209.82	1220.07	1218.49	1221.55	0.015005	9.78	415.55	66.45	0.69


EX_Northlake Plan: EX_Q50bb 2/4/2016
River = Grasshopper Cany Reach = Canyon CL RS = 7019.73
.06
Legend
EG Q50bb
WS Q50bb
Crit Q50bb
Ground
Bank Sta
Elevation (ft)
Station (ft)
1280
1275
1270
1265
1260
1255
0
20
40
60
80
100
120
140
160
180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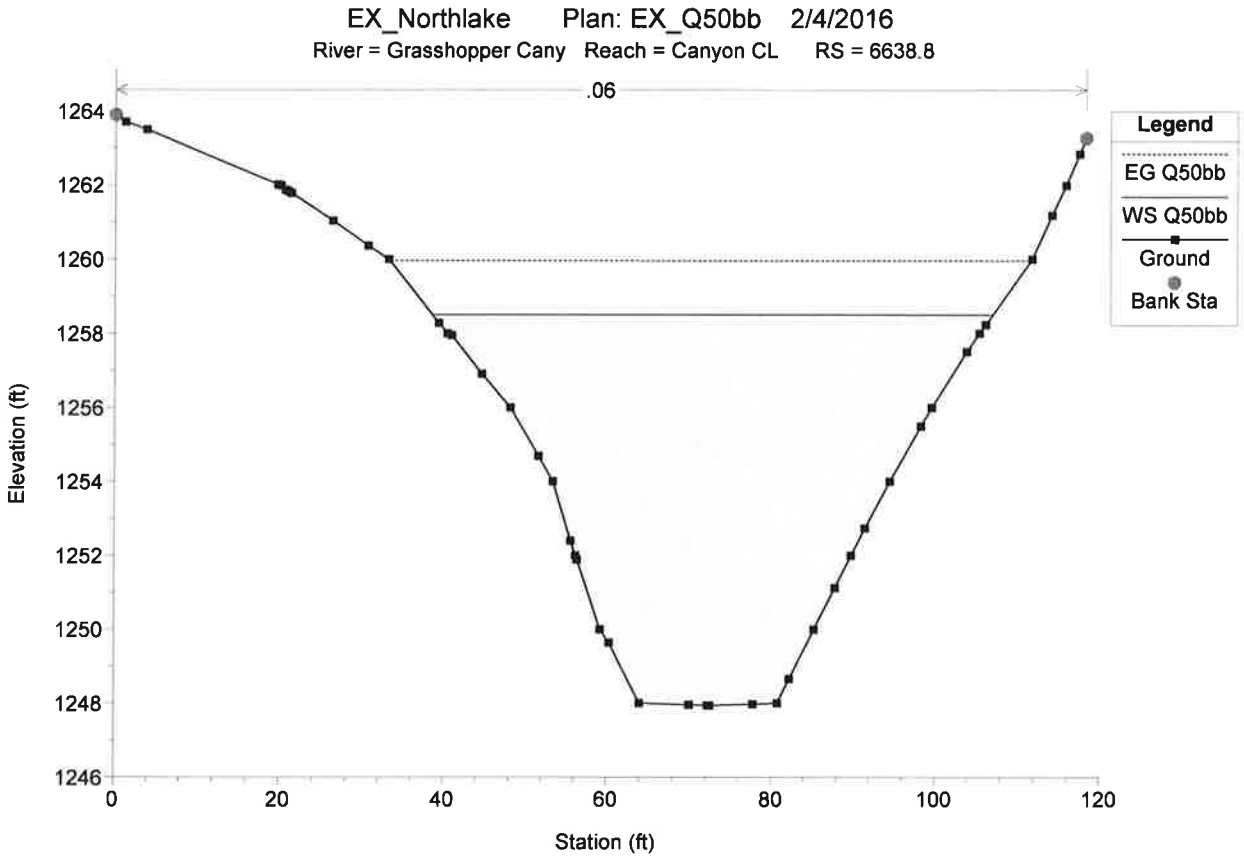
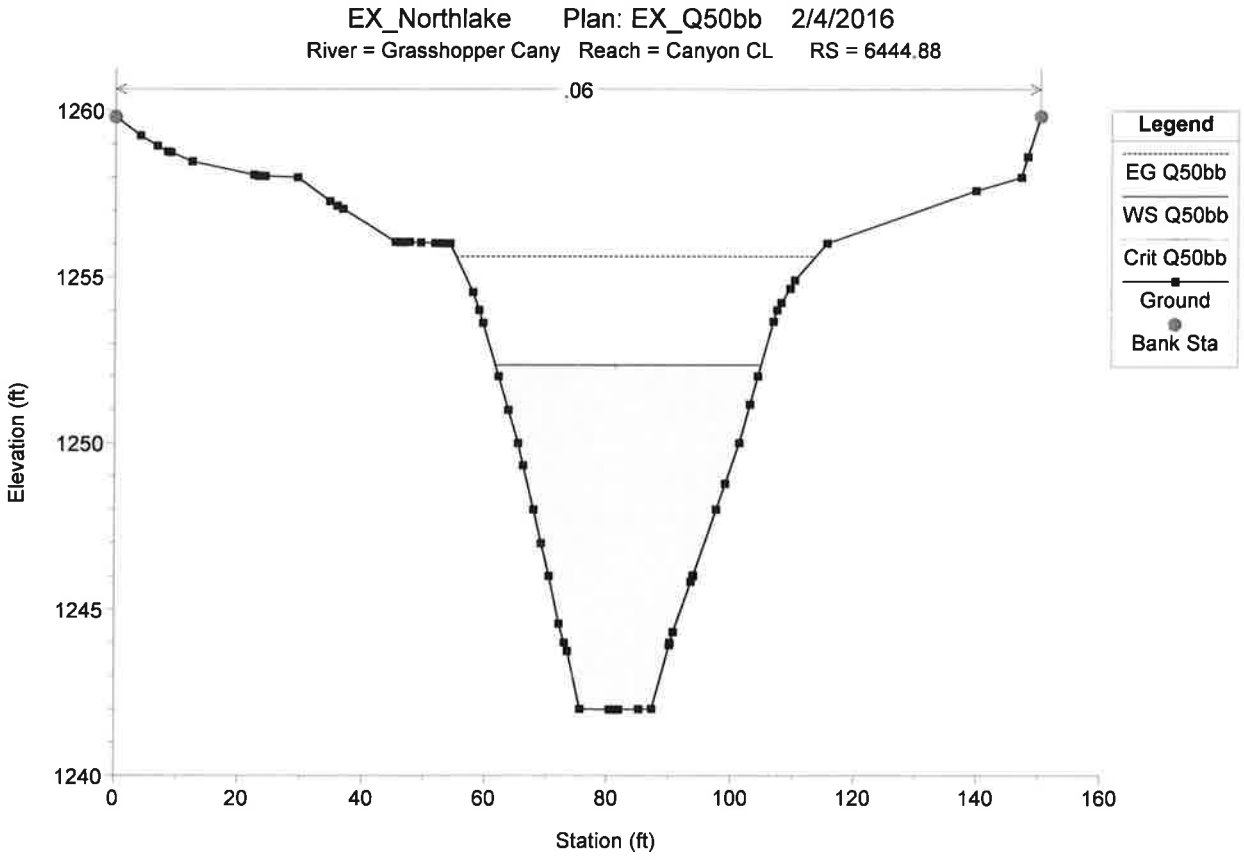
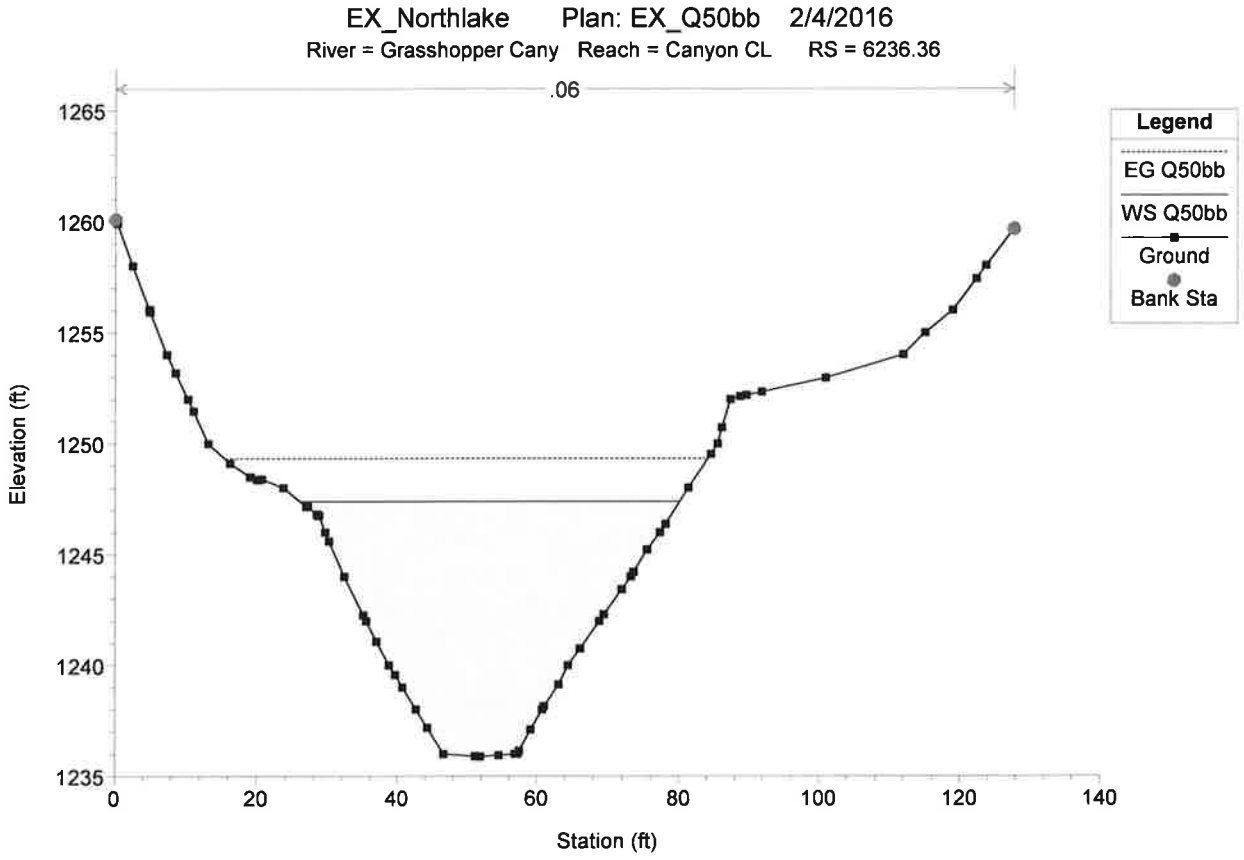
River = Grasshopper Cany Reach = Canyon CL RS = 6848.25
.06
Legend
EG Q50bb
WS Q50bb
Ground
Bank Sta
Elevation (ft)
Station (ft)
1275
1270
1265
1260
1255
1250
0
20
40
60
80
100
120
140
160
180


EX_Northlake Plan: EX_Q50bb 2/4/2016
River = Grasshopper Cany Reach = Canyon CL RS = 6638.8
.06
Legend
EG Q50bb
WS Q50bb
Ground
Bank Sta
Elevation (ft)
Station (ft)
1264
1262
1260
1258
1256
1254
1252
1250
1248
1246
0
20
40
60
80
100
120


EX_Northlake Plan: EX_Q50bb 2/4/2016
River = Grasshopper Cany Reach = Canyon CL RS = 6444.88
.06
Legend
EG Q50bb
WS Q50bb
Crit Q50bb
Ground
Bank Sta
Elevation (ft)
Station (ft)
1260
1255
1250
1245
1240
0
20
40
60
80
100
120
140
160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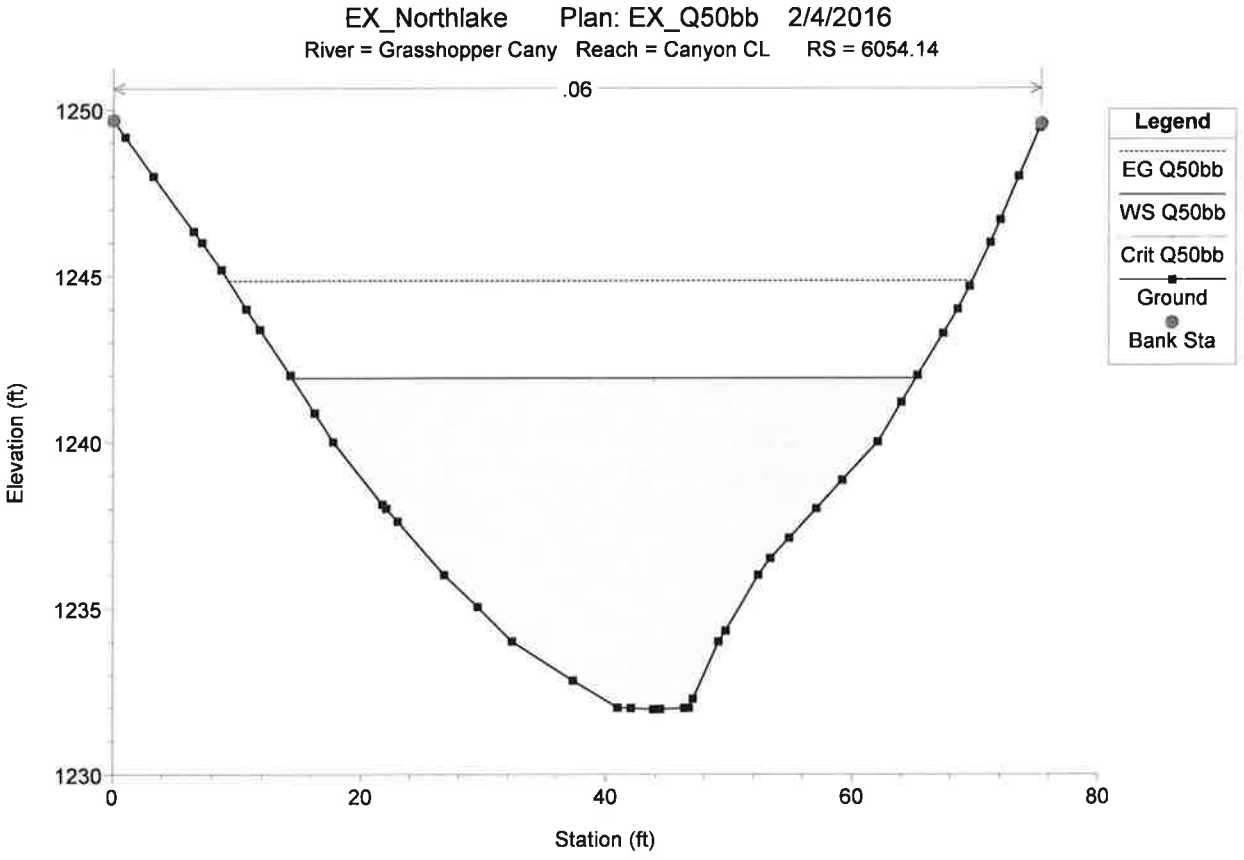
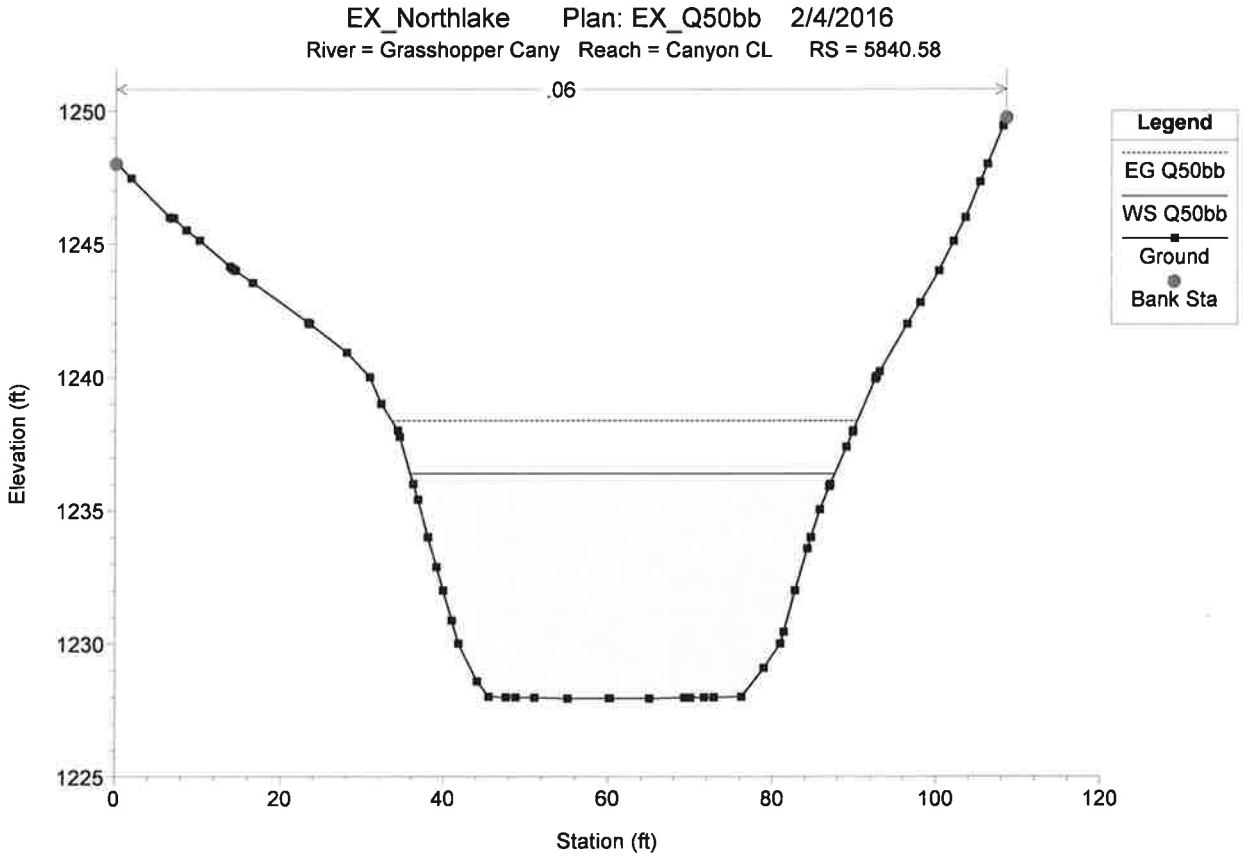
River = Grasshopper Cany Reach = Canyon CL RS = 6236.36
.06
Legend
EG Q50bb
WS Q50bb
Ground
Bank Sta
Elevation (ft)
Station (ft)
1265
1260
1255
1250
1245
1240
1235
0
20
40
60
80
100
120
140


EX_Northlake Plan: EX_Q50bb 2/4/2016
River = Grasshopper Cany Reach = Canyon CL RS = 6054.14
.06
Legend
EG Q50bb
WS Q50bb
Crit Q50bb
Ground
Bank Sta
Elevation (ft)
Station (ft)
1250
1245
1240
1235
1230
0
20
40
60
80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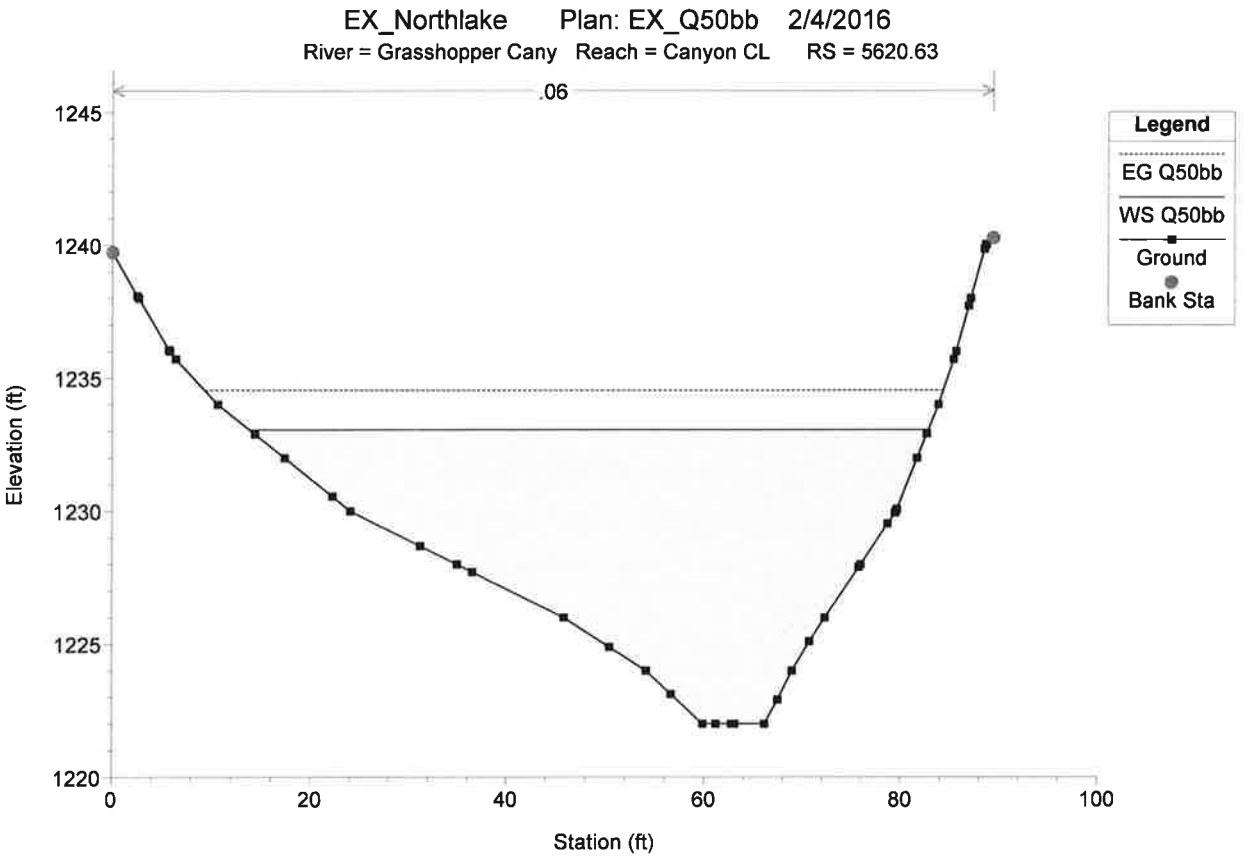
River = Grasshopper Cany Reach = Canyon CL RS = 5840.58
.06
Legend
EG Q50bb
WS Q50bb
Ground
Bank Sta
Elevation (ft)
Station (ft)
1250
1245
1240
1235
1230
1225
0
20
40
60
80
100
120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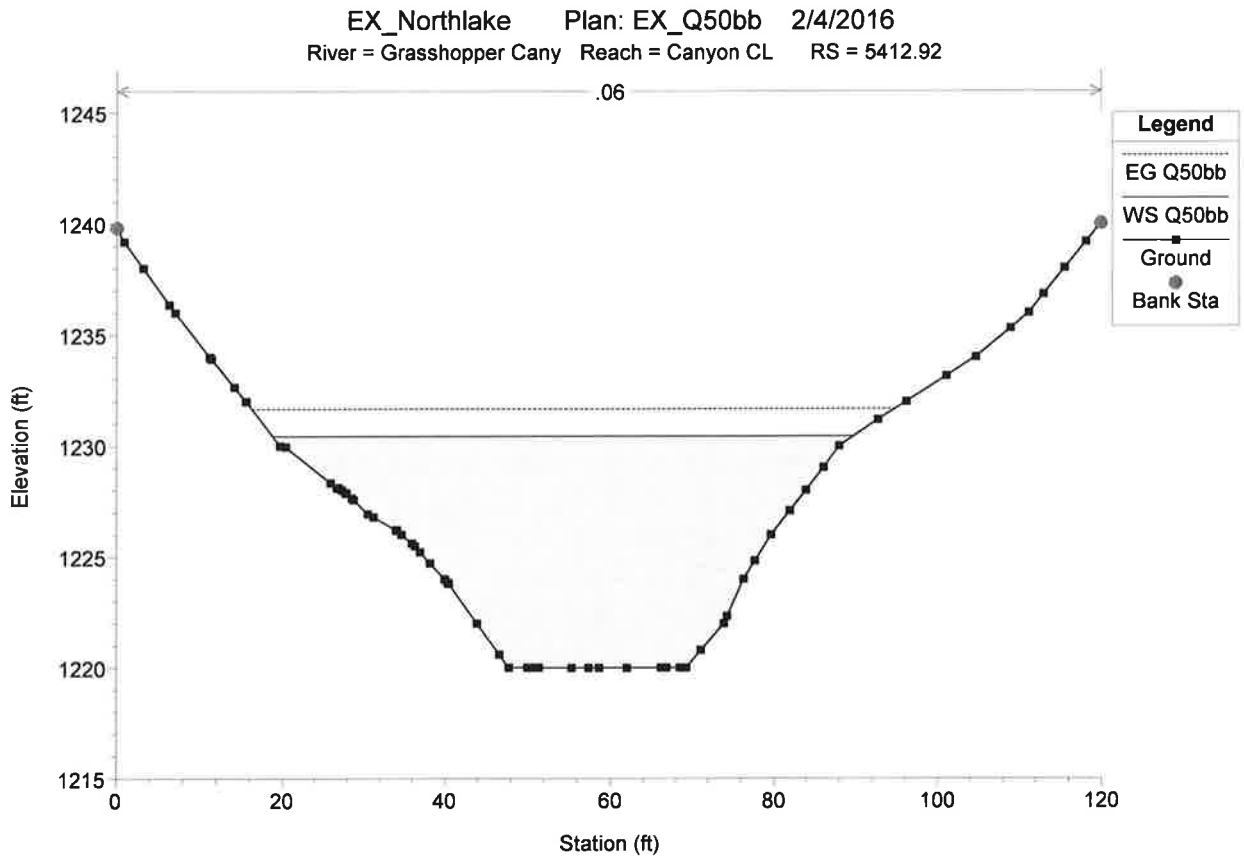
.06
Legend
EG Q50bb
WS Q50bb
Ground
Bank Sta
Elevation (ft)
Station (ft)
1245
1240
1235
1230
1225
1220
0
20
40
60
80
100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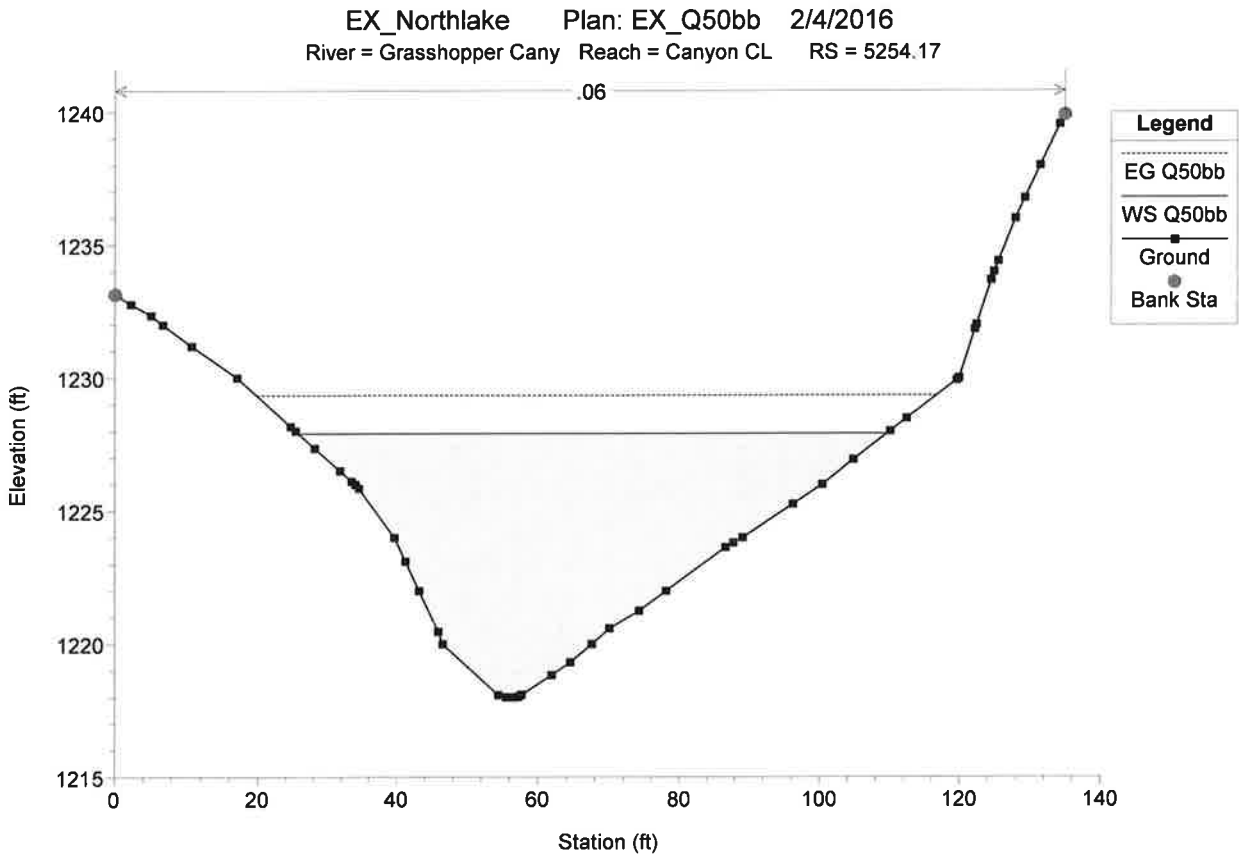
River = Grasshopper Cany Reach = Canyon CL RS = 5412.92
.06
Legend
EG Q50bb
WS Q50bb
Ground
Bank Sta
Elevation (ft)
Station (ft)
1245
1240
1235
1230
1225
1220
1215
0
20
40
60
80
100
120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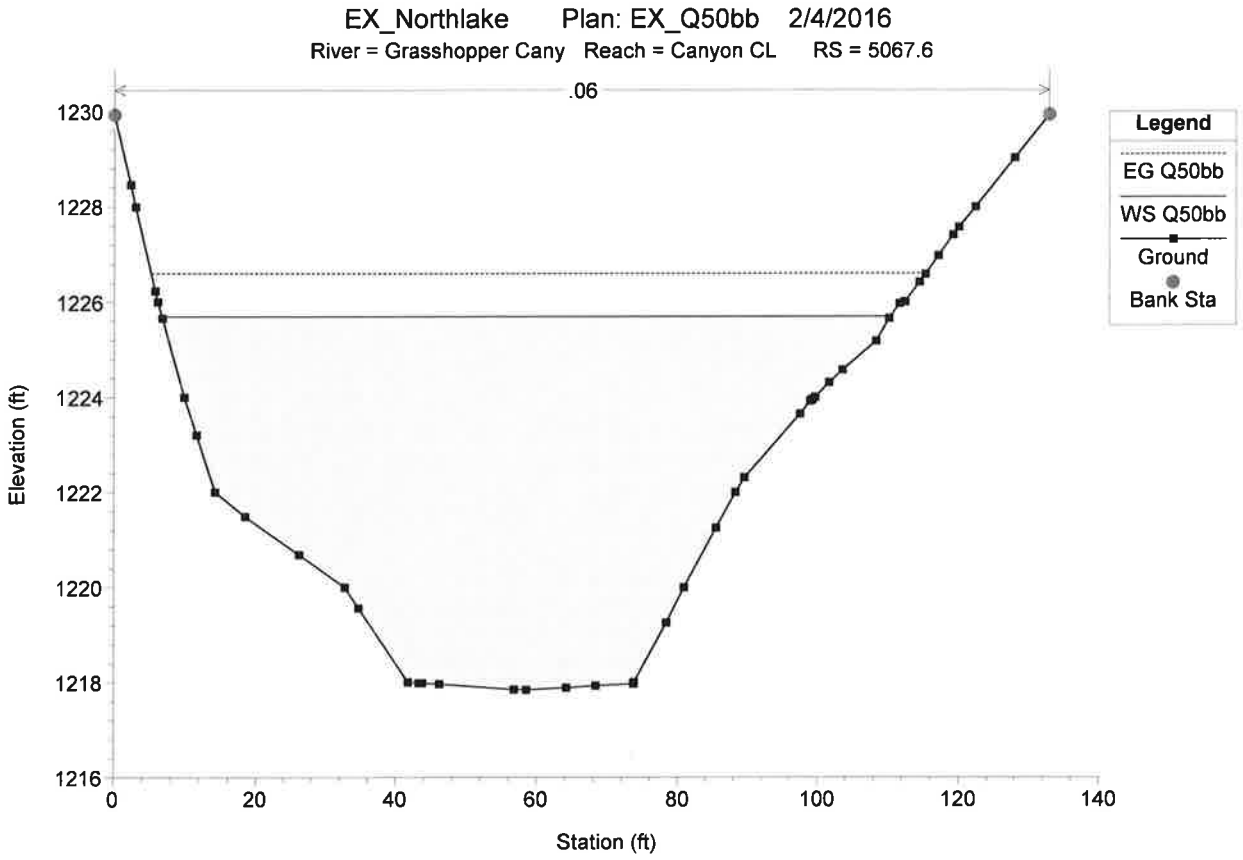
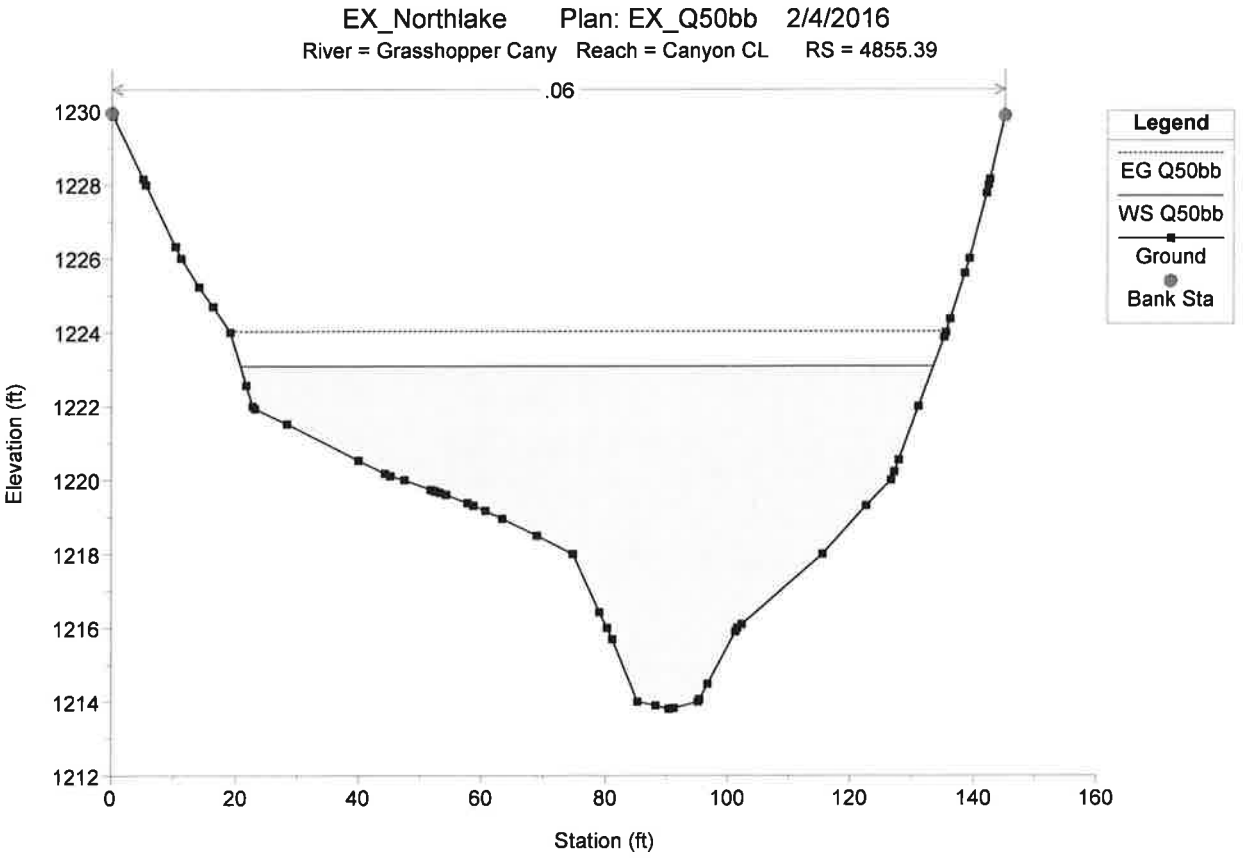
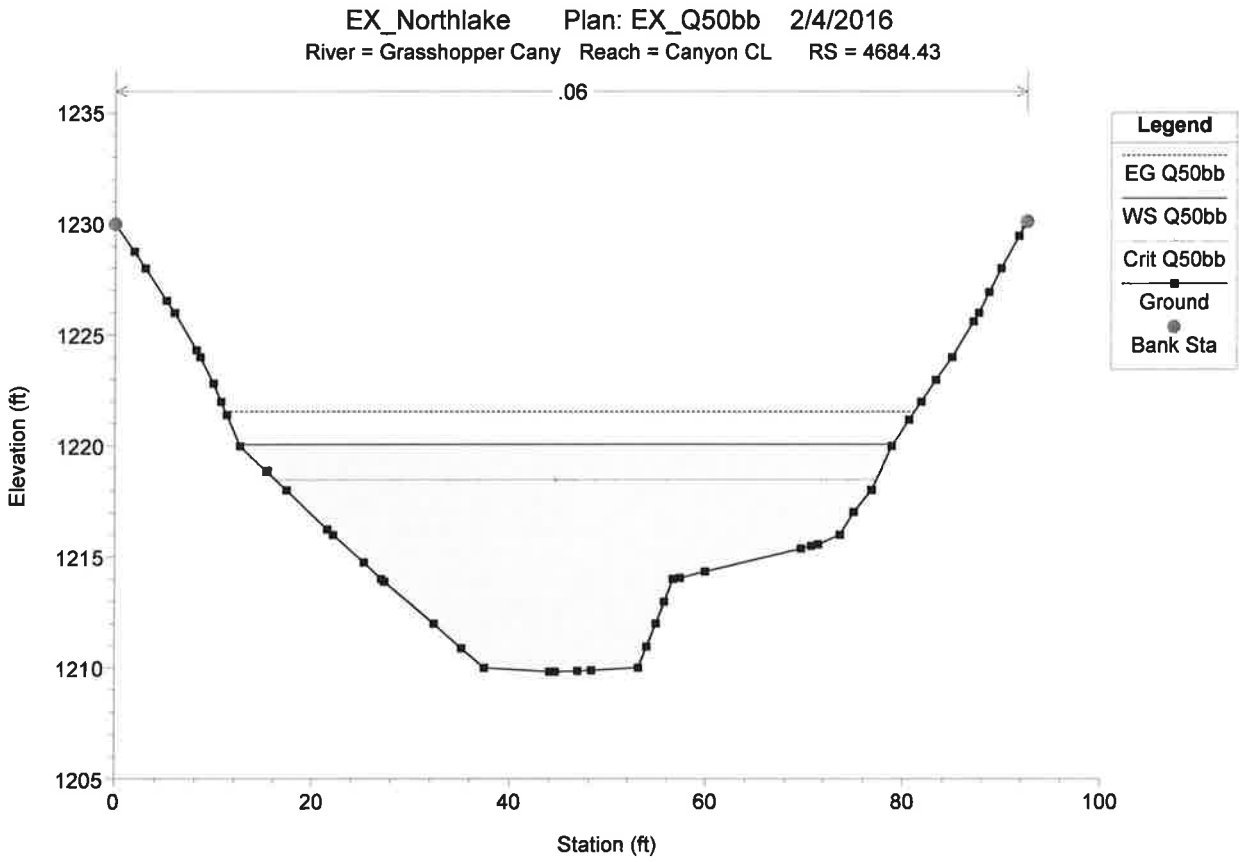
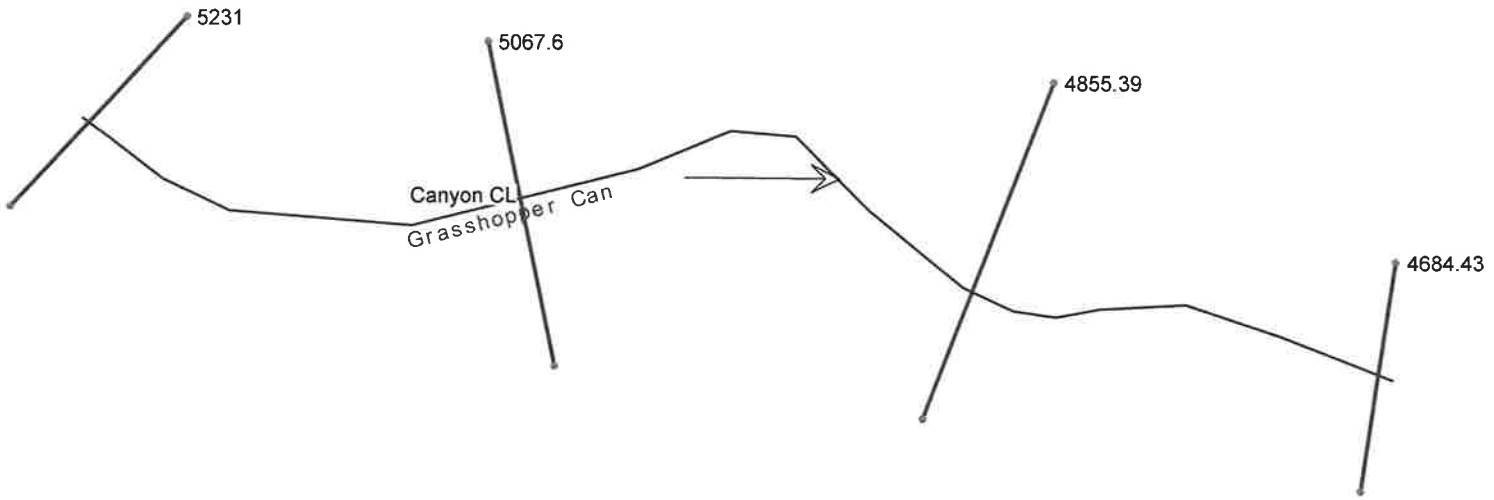
River = Grasshopper Cany Reach = Canyon CL RS = 5254.17
.06
Legend
EG Q50bb
WS Q50bb
Ground
Bank Sta
Elevation (ft)
Station (ft)
1240
1235
1230
1225
1220
1215
0
20
40
60
80
100
120
140

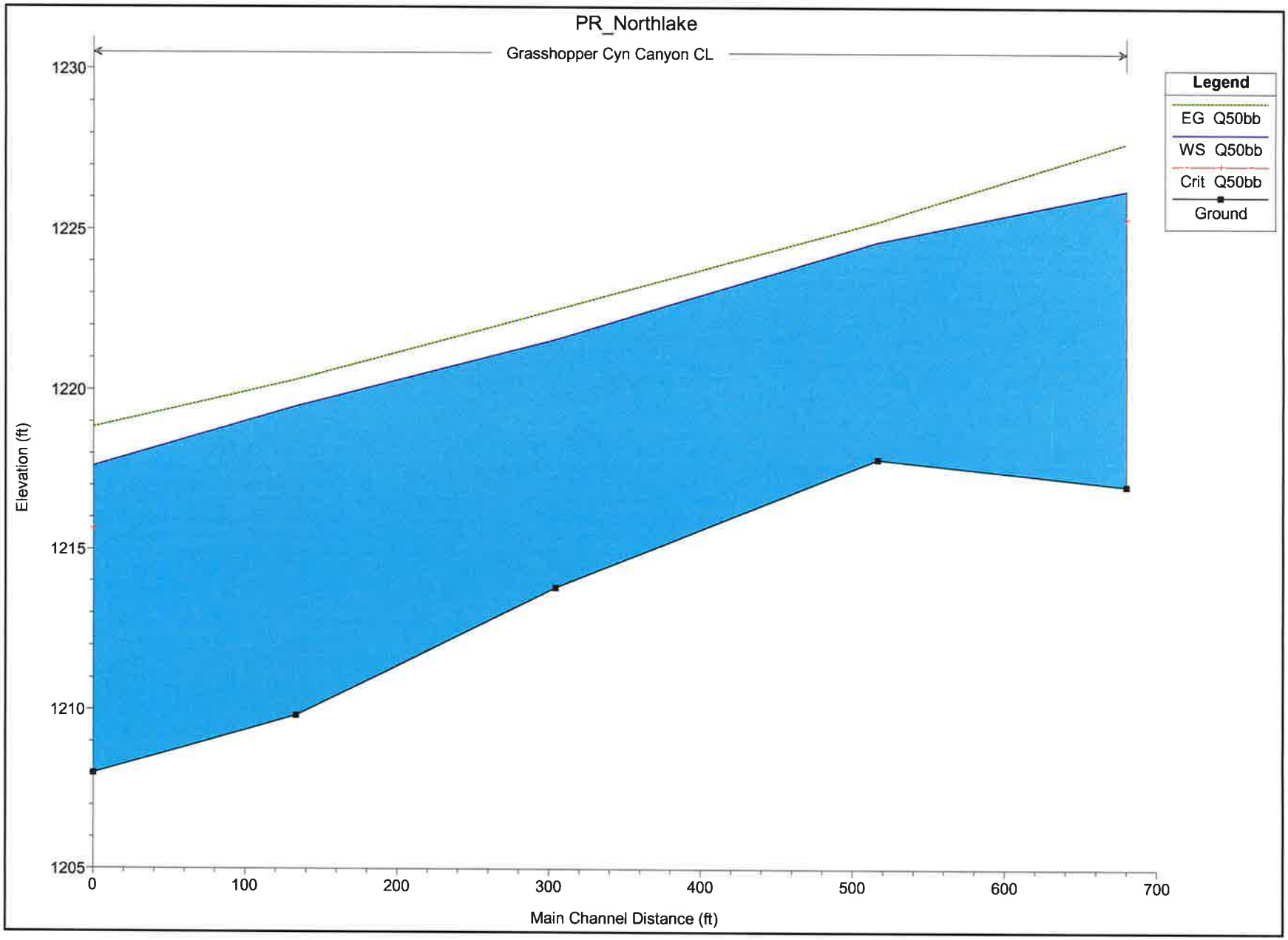

EX_Northlake Plan: EX_Q50bb 2/4/2016
River = Grasshopper Cany Reach = Canyon CL RS = 5067.6
.06
Legend
EG Q50bb
WS Q50bb
Ground
Bank Sta
Elevation (ft)
Station (ft)
1230
1228
1226
1224
1222
1220
1218
1216
0
20
40
60
80
100
120
140


EX_Northlake Plan: EX_Q50bb 2/4/2016
River = Grasshopper Cany Reach = Canyon CL RS = 4855.39
.06
Legend
EG Q50bb
WS Q50bb
Ground
Bank Sta
Elevation (ft)
Station (ft)
1230
1228
1226
1224
1222
1220
1218
1216
1214
1212
0
20
40
60
80
100
120
140
160


EX_Northlake Plan: EX_Q50bb 2/4/2016
River = Grasshopper Cany Reach = Canyon CL RS = 4684.43
.06
Legend
EG Q50bb
WS Q50bb
Crit Q50bb
Ground
Bank Sta
Elevation (ft)
1235
1230
1225
1220
1215
1210
1205
0
20
40
60
80
100
Station (ft)

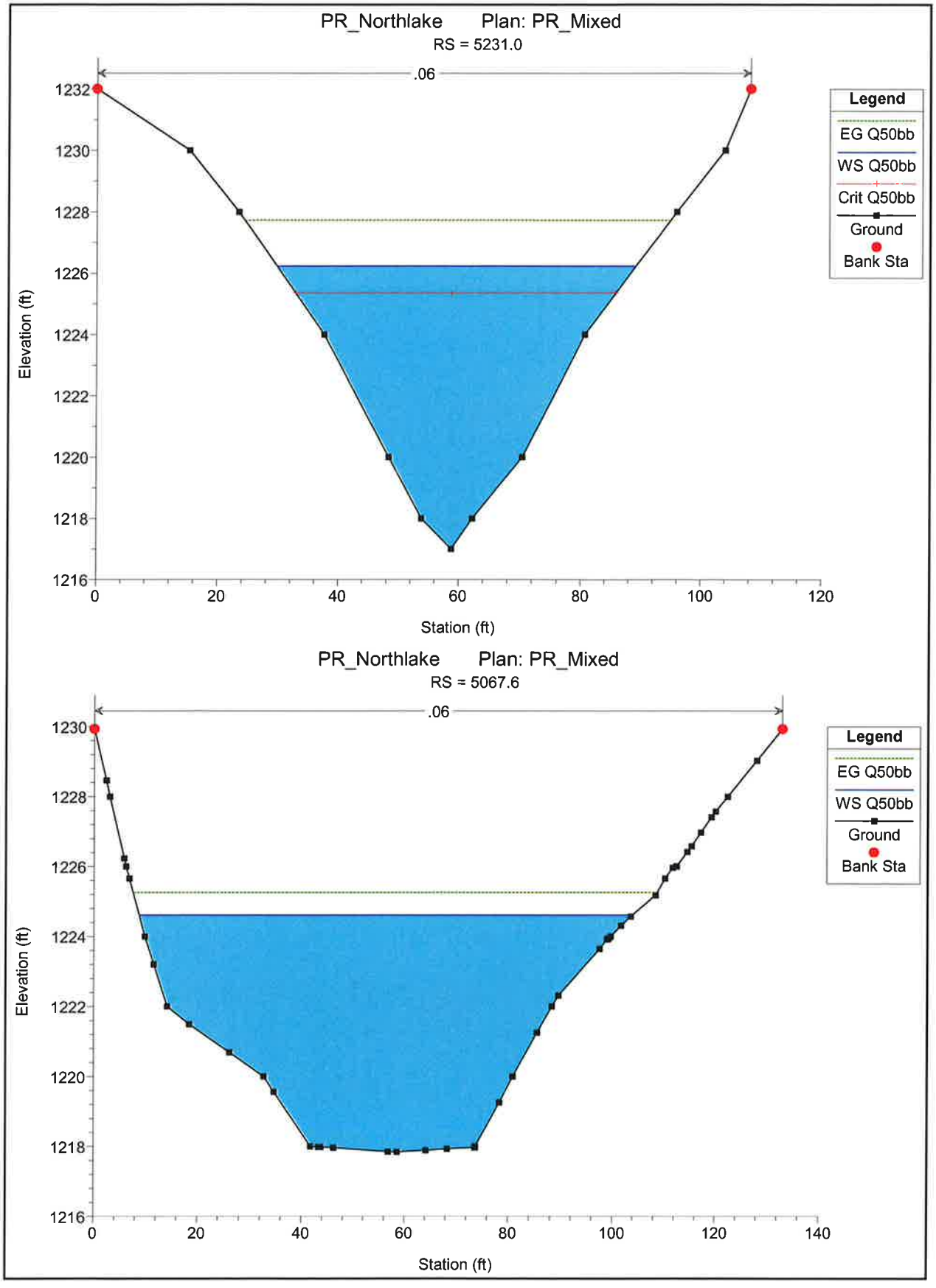


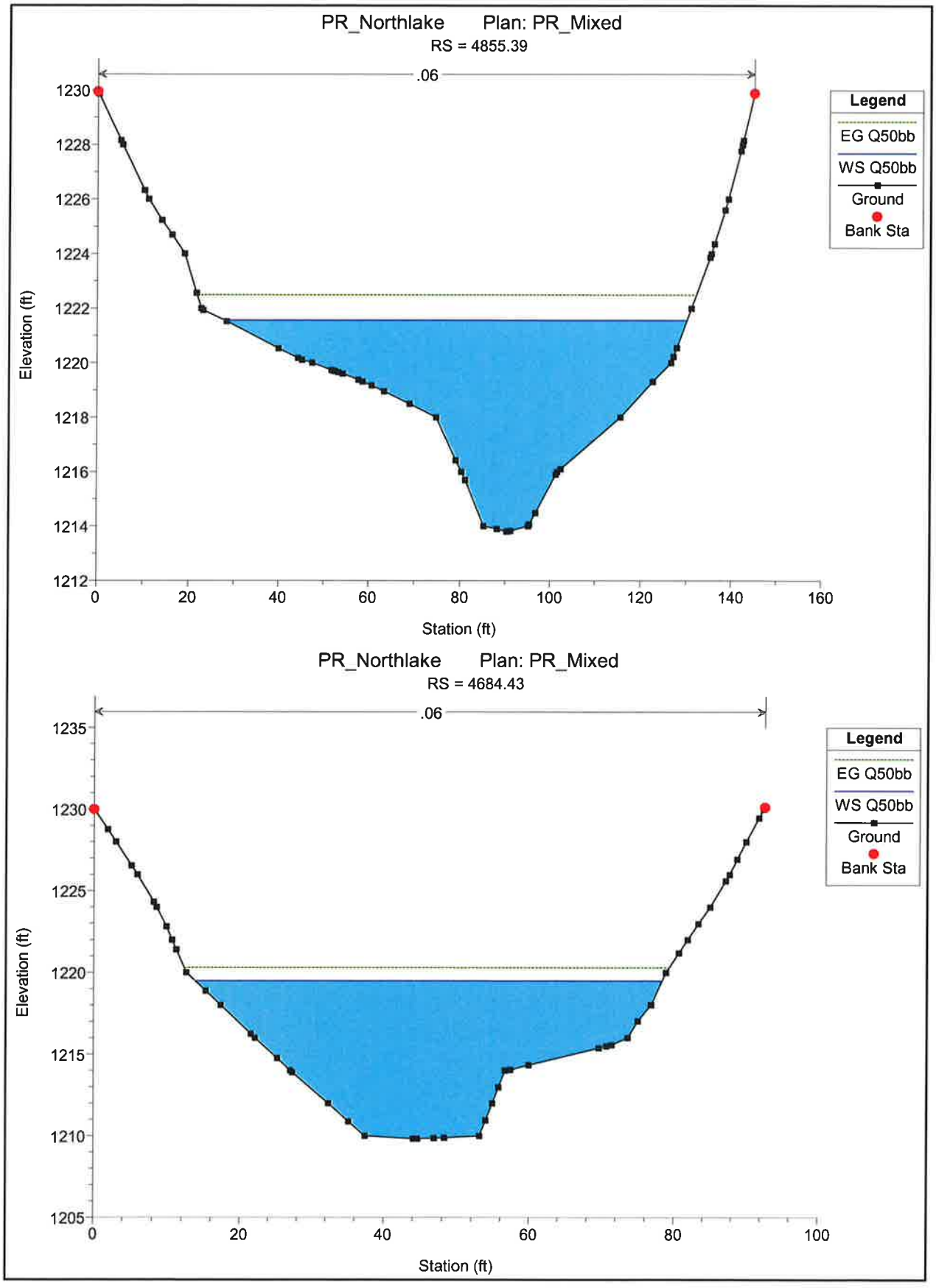
PROPOSED CONDITION

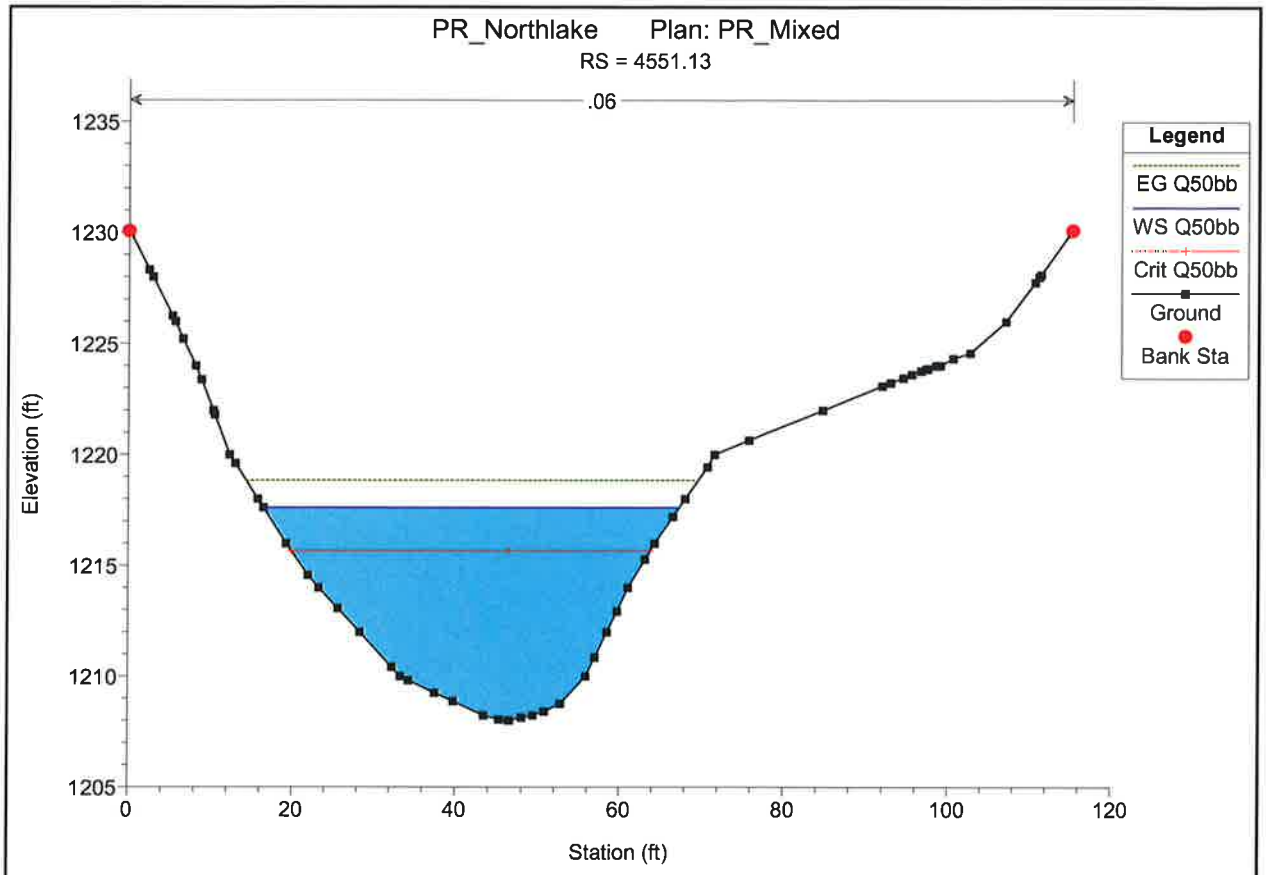

PR_Northlake
Grasshopper Cyn Canyon CL
Legend
EG Q50bb
WS Q50bb
Crit Q50bb
Ground
Elevation (ft)
1230
1225
1220
1215
1210
1205
0
100
200
300
400
500
600
700
Main Channel Distance (ft)

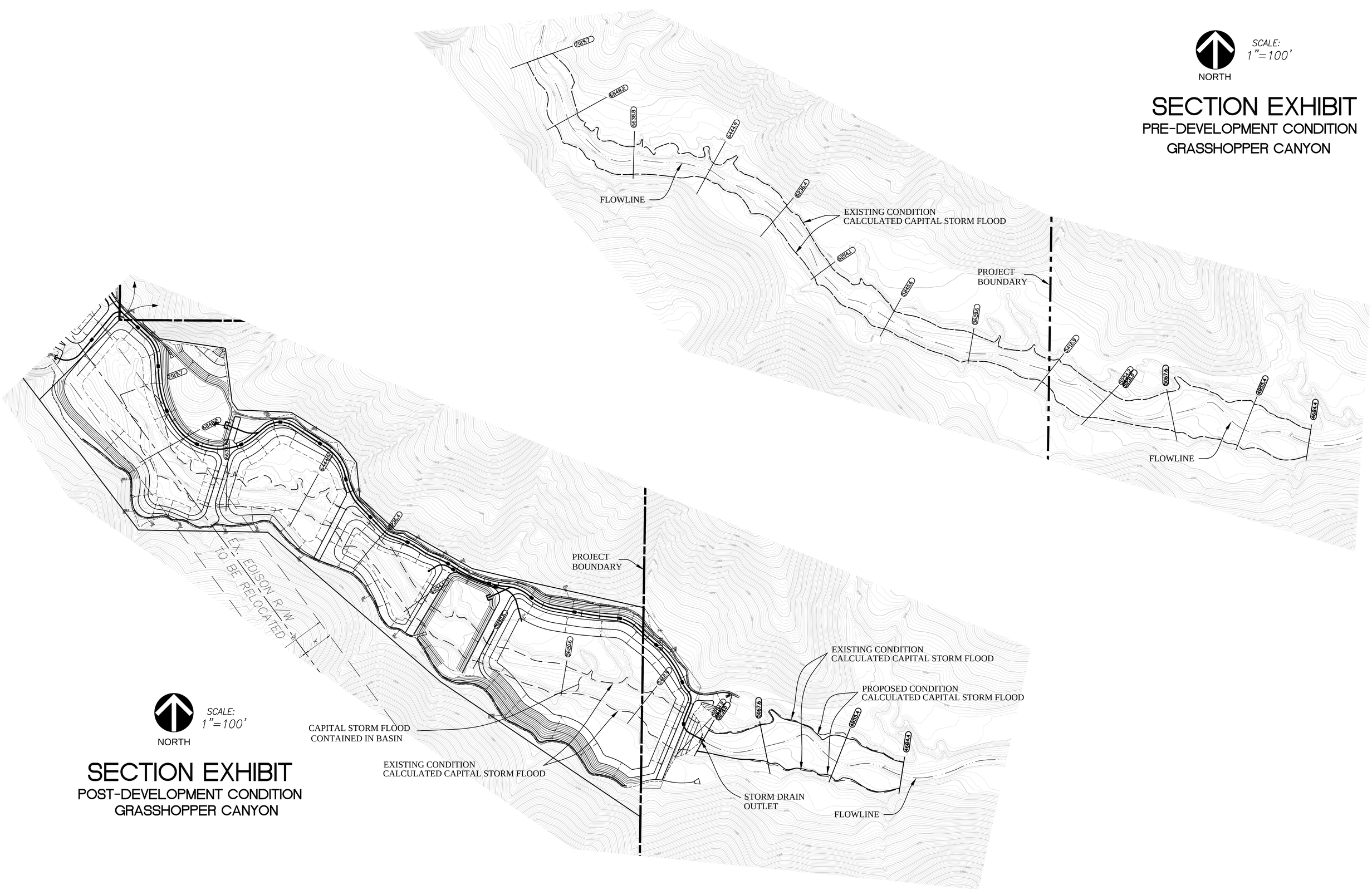
HEC-RAS Plan: PR_Mixed River: Grasshopper Cyn Reach: Canyon CL Profile: Q50bb

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Canyon CL	5231.0	Q50bb	2739.90	1217.00	1226.23	1225.36	1227.73	0.021327	9.82	279.06	59.49	0.80
Canyon CL	5067.6	Q50bb	2739.90	1217.84	1224.61		1225.26	0.009384	6.44	425.70	95.19	0.54
Canyon CL	4855.39	Q50bb	2739.90	1213.80	1221.57		1222.49	0.018924	7.71	355.21	102.43	0.73
Canyon CL	4684.43	Q50bb	2739.90	1209.82	1219.50		1220.31	0.008959	7.25	378.03	64.57	0.53
Canyon CL	4551.13	Q50bb	2739.90	1208.00	1217.62	1215.67	1218.84	0.013011	8.88	308.45	50.86	0.64


PR_Northlake Plan: PR_Mixed
RS = 5231.0
.06
Elevation (ft)
Station (ft)
Legend
EG Q50bb
WS Q50bb
Crit Q50bb
Ground
Bank Sta
PR_Northlake Plan: PR_Mixed
RS = 5067.6
.06
Elevation (ft)
Station (ft)
Legend
EG Q50bb
WS Q50bb
Ground
Bank Sta


PR_Northlake Plan: PR_Mixed
RS = 4855.39
.06
Legend
EG Q50bb
WS Q50bb
Ground
Bank Sta
Elevation (ft)
Station (ft)
PR_Northlake Plan: PR_Mixed
RS = 4684.43
.06
Legend
EG Q50bb
WS Q50bb
Ground
Bank Sta
Elevation (ft)
Station (ft)


PR_Northlake Plan: PR_Mixed
RS = 4551.13
.06
Legend
EG Q50bb
WS Q50bb
Crit Q50bb
Ground
Bank Sta
Elevation (ft)
1235
1230
1225
1220
1215
1210
1205
0
20
40
60
80
100
120
Station (ft)



SECTION EXHIBIT

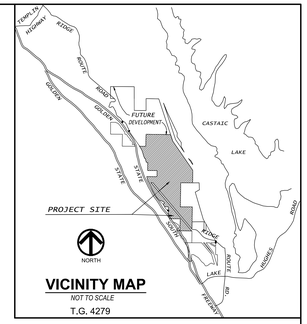
PRE-DEVELOPMENT CONDITION
GRASSHOPPER CANYON

SECTION EXHIBIT

POST-DEVELOPMENT CONDITION
GRASSHOPPER CANYON

HYDROLOGIC SUMMARY

Node Number	Area (ac)	Qb (cfs)	Tc (min)	Freq (yrs)	Qbb (cfs)	DPV (cy)
1A	40.9	81.8	12	50	132.5	8,947
2A	50.6	111.8	10	50	181.1	11,069
3A	48.8	107.8	10	50	174.6	10,675
4A	37.8	87.6	9	50	141.9	8,269
5A	46.9	98.3	11	50	159.2	10,259
8B	55.4	122.4	10	50	198.3	12,119
9B	51.0	106.8	11	50	173.0	11,156
11A	46.3	92.6	12	50	150.0	10,128
12A	46.7	93.4	12	50	151.3	10,216
13A	55.0	115.2	11	50	186.6	12,031
14A	52.8	110.6	11	50	179.2	11,550
15A	52.6	105.2	12	50	170.4	11,506
16A	23.5	51.9	10	50	84.1	5,141
19C	26.0	68.0	7	50	110.2	5,688
20C	48.7	90.1	14	50	146.0	10,653
22A	49.7	89.0	15	50	144.2	10,872
25D	45.0	94.3	11	50	152.8	9,844
26D	31.1	62.2	12	50	100.8	6,803
27D	49.3	98.6	12	50	159.7	10,784
28D	47.5	87.9	14	50	142.4	10,391
29D	29.2	61.2	11	50	99.1	6,388
30D	48.6	107.4	10	50	174.0	10,631
31D	41.1	78.9	13	50	127.8	8,991
35A	41.3	79.3	13	50	128.5	9,034
36A	46.4	97.2	11	50	157.5	10,150
37A	26.8	59.2	10	50	95.9	5,863
38A	64.1	114.8	15	50	186.0	14,022
39A	41.6	87.2	11	50	141.3	9,100
42E	61.9	103.5	17	50	151.6	7,931
43E	50.1	100.2	12	50	146.8	6,419
44E	64.4	115.3	15	50	168.9	8,251
46A	47.5	91.2	13	50	133.6	6,086
47A	38.8	63.0	16	50	92.3	4,971
48A	38.8	64.9	17	50	95.1	4,971
49A	25.9	63.5	8	50	93.0	3,318
50A	68.3	114.2	17	50	167.3	8,751
53E	45.6	91.2	12	50	133.6	5,843
54F	53.1	95.1	15	50	139.3	6,803
56A	46.0	85.1	14	50	124.7	5,894
57A	50.8	91.0	15	50	133.3	6,509
60B	53.0	86.0	18	50	126.0	6,791
61B	38.3	64.6	10	50	123.9	4,907
63A	47.7	91.6	13	50	134.2	6,112
64A	50.0	104.8	11	50	153.5	6,406
65A	45.7	105.9	9	50	155.1	5,855
66A	38.3	88.7	9	50	129.9	4,907
OP1	2.5	7.9	5	50	11.6	513
OP5	4.0	12.6	5	50	18.5	320



VICINITY MAP
NOT TO SCALE
T.G. 4279

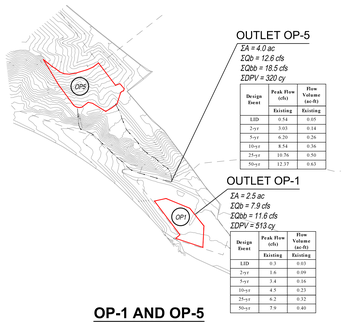
LEGEND

- MAIN DRAINAGE BOUNDARY
- SUB-AREA BOUNDARY
- FLOW LINE
- ON PARCEL (OP) LOCATIONS
- TRACT BOUNDARY

(34) & (134C) .... LOCATION NAMES
A .... AREA IN ACRES, Ac
Qb .... 50-YR, BURNED DESIGN FLOW IN CUBIC FEET PER SECOND, cfs
Qbb .... 50-YR, BURNED & BULKED DESIGN FLOW IN CUBIC FEET PER SECOND, cfs
DPV .... DEBRIS PRODUCTION VOLUME IN CUBIC YARDS, cy
Σ .... TOTAL

HYDROLOGY CRITERIA

- *DESIGN STORM FREQUENCY: 50-YR FOR UNDEVELOPED NATURAL AREAS*
- *DPA ZONE = 3 AND 5*
- *BASIN NAME = SANTA CLARA*
- *SOIL TYPE NUMBER = 094*
- *PEAK BULKING FACTOR:*
  DPA ZONE 3 = 1.620 (FOR AREAS 64 Ac. OR UNDER)
  DPA ZONE 5 = 1.465 (FOR AREAS 64 Ac. OR UNDER)
- *DEBRIS PRODUCTION RATE:*
  DPA ZONE 3 = 218.75 Cy / Ac (FOR AREAS 64 Ac. OR UNDER)
  DPA ZONE 5 = 128.125 Cy / Ac (FOR AREAS 64 Ac. OR UNDER)
- *ISOHYET = 5.8" (50-YR, 24-HOUR)*
- *% IMPERVIOUSNESS: 1% FOR UNDEVELOPED / NATURAL AREAS*



OUTLET OP-5
ΣA = 4.0 ac
ΣQb = 12.6 cfs
ΣQbb = 18.5 cfs
ΣDPV = 320 cy

Design Event	Peak Flow (cfs)	Flow Volume (ac-ft)
	Existing	Existing
LID	0.54	0.05
2-yr	3.63	0.14
5-yr	6.20	0.24
10-yr	8.54	0.36
25-yr	10.76	0.50
50-yr	12.57	0.63

OUTLET OP-1
ΣA = 2.5 ac
ΣQb = 7.9 cfs
ΣQbb = 11.6 cfs
ΣDPV = 513 cy

Design Event	Peak Flow (cfs)	Flow Volume (ac-ft)
	Existing	Existing
LID	0.3	0.03
2-yr	1.6	0.09
5-yr	2.4	0.16
10-yr	4.5	0.23
25-yr	6.2	0.32
50-yr	7.9	0.40

OP-1 AND OP-5

HYDROLOGY STUDY APPROVED
CHECKED BY _____ RCE NO. 82680 DATE 6/7/2017
APPROVED BY _____ DATE 6/7/2017
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION

OUTLET
ΣA = 2108.9 ac
ΣQb = 2899.2 cfs
ΣQbb = 4084.8 cfs
ΣDPV = 143,392 cy

OP-1 AND OP-5 SEE LEFT

EXISTING CONDITION
DRAINAGE CONCEPT
FOR VESTING TENTATIVE TRACT NO. 73336
(NORTHLAKE)
IN THE UNINCORPORATED TERRITORY OF LOS ANGELES COUNTY

NORTH
SCALE: 1"=400'

PREPARED FOR :
Northlake Associates, LLC
1999 AVENUE OF THE STARS, SUITE 2850, LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

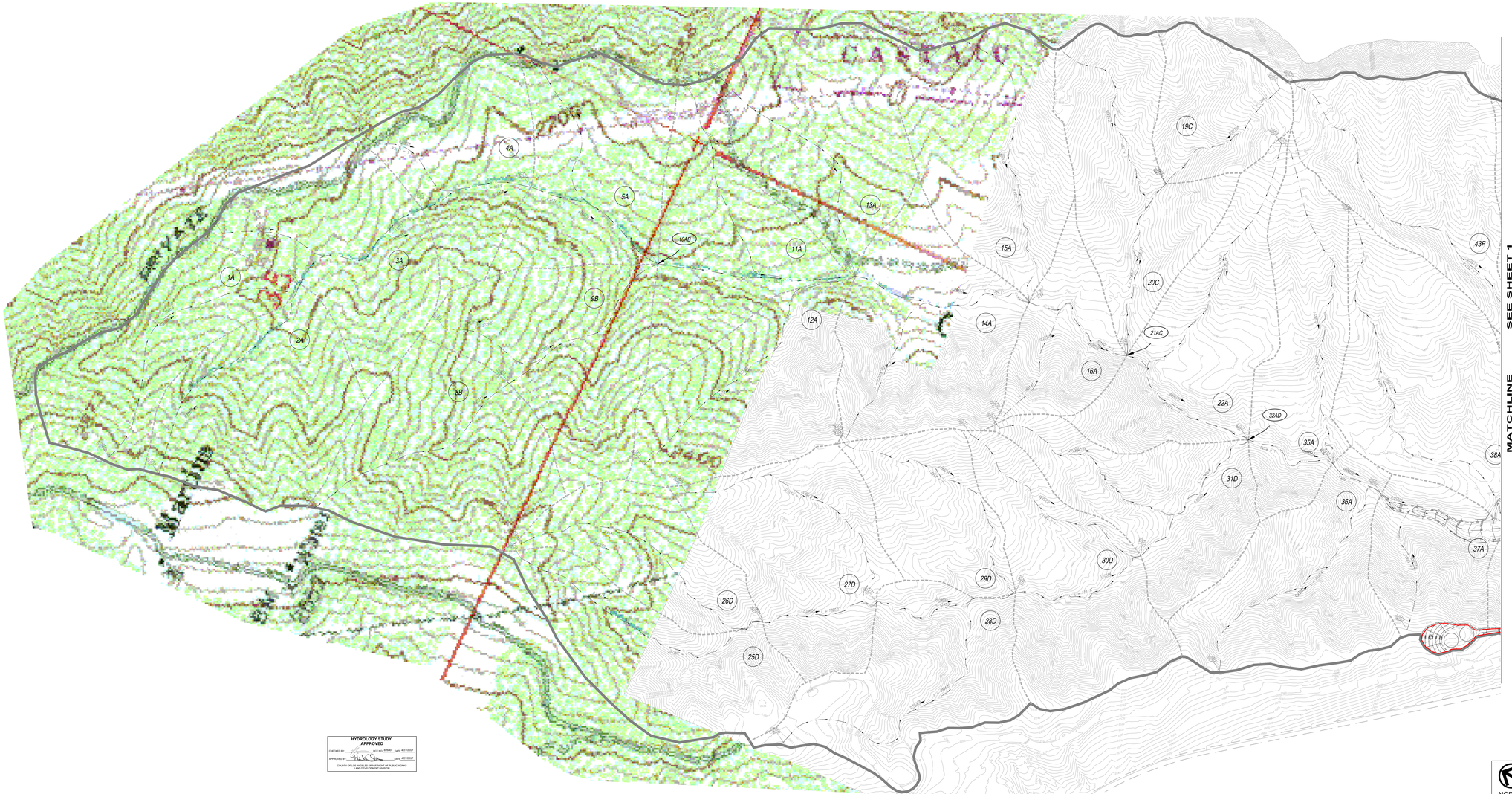
DATE: 02/21/2017 W.O. NO.: 5090-033-35

PREPARED BY :
SIKAND Engineering | Planning | Surveying
15230 Burbank Blvd. #100, Van Nuys, CA 91411
Phone - (818) 787- 8550, Fax - (818) 901-7451
www.sikand.com, E-mail: info$@$sikand.com

REGISTERED PROFESSIONAL ENGINEER No.49041 Exp. 09-30-2019 CIVIL STATE OF CALIFORNIA

SHEET **1** OF **1** SHEETS

Plotted: 11/06/2017 11:41:41 By: Daniel
P:\projects\5090-033-35\Engineering\Exhibits\5090-033-35 EX-1 HYDROLOGY 10-31-17\5090-033-35.dwg



MATCHLINE SEE SHEET 1

LEGEND

- MAIN DRAINAGE BOUNDARY
- SUB-AREA BOUNDARY
- FLOW LINE
- PROPOSED STORM DRAIN
- TRACT BOUNDARY
- (M) & (VNC) — LOCATION NAMES
- A — AREA IN ACRES, Ac
- Qb — 50-YR, BURNED DESIGN FLOW IN CUBIC FEET PER SECOND, cfs
- Qbb — 50-YR, BURNED & BULKED DESIGN FLOW IN CUBIC FEET PER SECOND, cfs
- Qd — 50-YR OR 25-YR, DESIGN FLOW IN CUBIC FEET PER SECOND, cfs
- Qb+d — MIXED 25- & 50-YR, BURNED DESIGN FLOW IN CUBIC FEET PER SECOND, cfs
- Qbb+d — MIXED 25- & 50-YR, BURNED & BULKED DESIGN FLOW IN CUBIC FEET PER SECOND, cfs
- Qpm — WATER QUALITY FLOW IN CUBIC FEET PER SECOND, cfs
- Vm — WATER QUALITY VOLUME IN CUBIC YARDS, cu-ft
- DPV — DEBRIS PRODUCTION VOLUME IN CUBIC YARDS, cy
- Σ — TOTAL
- 1 — DESILTING BASIN WITH PAVED VEHICULAR ACCESS & TITLE FEE LOT (TO BE PUBLICLY MAINTAINED)
- 2 — DEBRIS CARRYING PAVED DITCH WITH 3% MIN SLOPE, OR OTHERWISE SHOWN, & SELF-CLEANING VELOCITY (TO BE PRIVATELY MAINTAINED)

HYDROLOGY STUDY
APPROVED

CHECKED BY: _____ RCE NO. 32680 DATE 4/27/2017

APPROVED BY: _____ DATE 4/27/2017

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION

PROPOSED CONDITION

DRAINAGE CONCEPT

FOR VESTING TENTATIVE TRACT NO. 73336

(NORTHLAKE PHASE 1)

IN THE UNINCORPORATED TERRITORY OF LOS ANGELES COUNTY

NORTH

SCALE: 1"=200'

PREPARED FOR:
Northlake Associates, LLC
1999 AVENUE OF THE STARS, SUITE 3050, LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

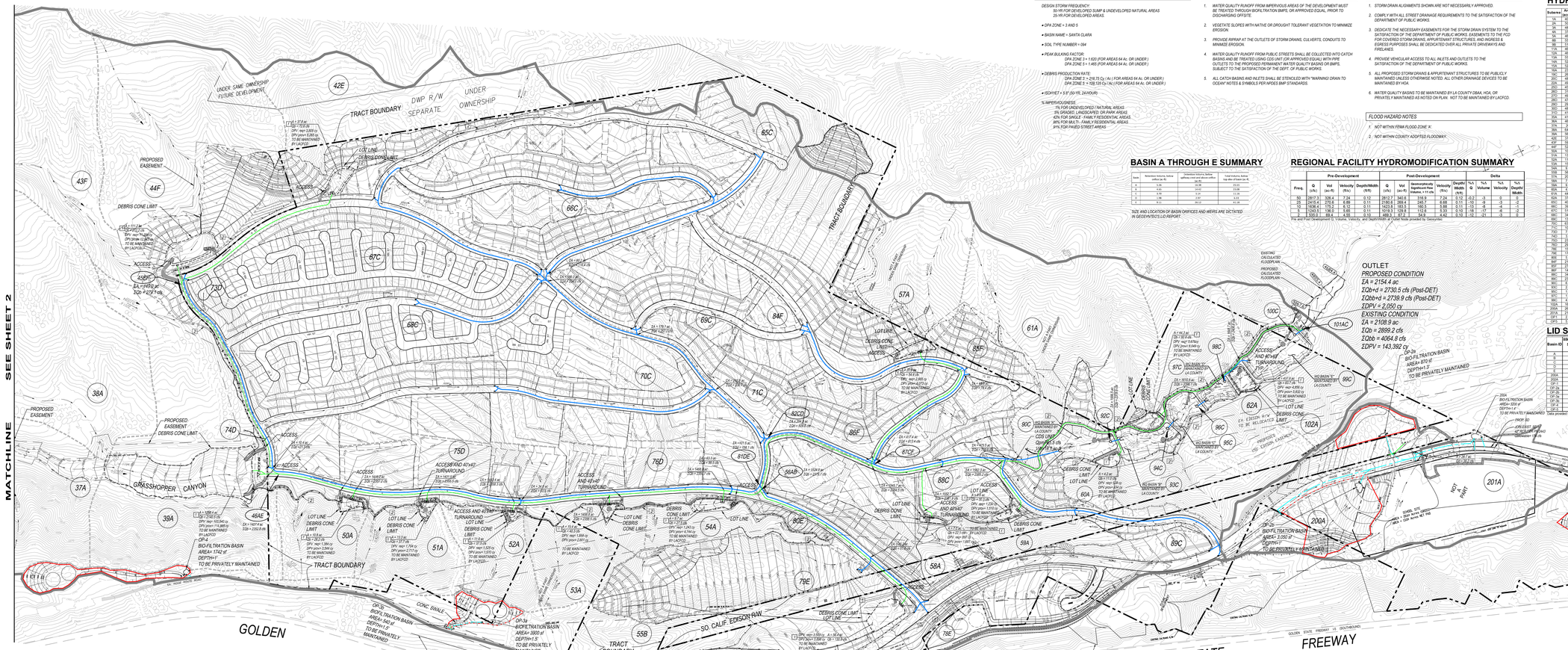
DATE: 03/15/2017

W.O. NO.: 5090-033-35

PREPARED BY:
SIKAND
Engineering / Planning / Surveying
15230 Burbank Blvd. #100, Van Nuys, CA 91411
Phone: (818) 787- 8550, Fax: (818) 901-7451
www.sikand.com, E-mail: info@sikand.com

REGISTERED CIVIL ENGINEER No.45041 Exp. 06-30-2018 CIVIL STATE OF CALIFORNIA

SHEET **2** OF **2** SHEETS



HYDROLOGY CRITERIA

DESIGN STORM FREQUENCY:
50-YR FOR DEVELOPED SUMP & UNDEVELOPED NATURAL AREAS
25-YR FOR DEVELOPED AREAS.

- DPA ZONE = 3 AND 5
- BASIN NAME = SANTA CLARA
- SOIL TYPE NUMBER = 094
- PEAK BULKING FACTOR:
  DPA ZONE 3 = 1.620 (FOR AREAS 64 Ac. OR UNDER)
  DPA ZONE 5 = 1.485 (FOR AREAS 64 Ac. OR UNDER)
- DEBRIS PRODUCTION RATE:
  DPA ZONE 3 = 216.75 Cy / Ac (FOR AREAS 64 Ac. OR UNDER)
  DPA ZONE 5 = 198.125 Cy / Ac (FOR AREAS 64 Ac. OR UNDER)
- ISOHYET = 9.5" (50-YR, 24-HOUR)
- % IMPERVIOUSNESS:
  1% FOR UNDEVELOPED ("NATURAL) AREAS
  5% (BASIN C, LANDSCAPED) OR PARK AREAS
  42% FOR SINGLE - FAMILY RESIDENTIAL AREAS
  84% FOR MULTI - FAMILY RESIDENTIAL AREAS
  91% FOR PAVED STREET AREAS

BEST MANAGEMENT PRACTICES (BMPS) LIST

1. WATER QUALITY RUNOFF FROM IMPERVIOUS AREAS OF THE DEVELOPMENT MUST BE TREATED THROUGH BIOFILTRATION BMPS, OR APPROVED EQUAL, PRIOR TO DISCHARGING OFFSITE.
2. VEGETATE SLOPES WITH NATIVE OR DROUGHT TOLERANT VEGETATION TO MINIMIZE EROSION.
3. PROVIDE RIPRAP AT THE OUTLETS OF STORM DRAINS, CULVERTS, CONDUITS TO MINIMIZE EROSION.
4. WATER QUALITY RUNOFF FROM PUBLIC STREETS SHALL BE COLLECTED INTO CATCH BASINS AND BE TREATED USING CDS UNIT (OR APPROVED EQUAL) WITH PIPE OUTLETS TO THE PROPOSED PERMANENT WATER QUALITY BASINS OR BMPS, SUBJECT TO THE SATISFACTION OF THE DEPT. OF PUBLIC WORKS.
5. ALL CATCH BASINS AND INLETS SHALL BE STENCILED WITH "WARNING! DRAIN TO OCEAN" NOTES & SYMBOLS PER NPDES BMP STANDARDS.

GENERAL NOTES

1. STORM DRAIN ALIGNMENTS SHOWN ARE NOT NECESSARILY APPROVED.
2. COMPLY WITH ALL STREET DRAINAGE REQUIREMENTS TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
3. DEDICATE THE NECESSARY EASEMENTS FOR THE STORM DRAIN SYSTEM TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS. EASEMENTS TO THE PCC FOR CONSTRUCTION, STORM DRAINS, APPURTENANT STRUCTURES, AND INGRESS & EGRESS PURPOSES SHALL BE DEDICATED OVER ALL PRIVATE DRIVEWAYS AND FIRELANES.
4. PROVIDE VEHICULAR ACCESS TO ALL INLETS AND OUTLETS TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
5. ALL PROPOSED STORM DRAINS & APPURTENANT STRUCTURES TO BE PUBLICLY MAINTAINED UNLESS OTHERWISE NOTED. ALL OTHER DRAINAGE DEVICES TO BE MAINTAINED BY HOA.
6. WATER QUALITY BASINS TO BE MAINTAINED BY LA COUNTY DBAA, HOA, OR PRIVATELY MAINTAINED AS NOTED ON PLAN. NOT TO BE MAINTAINED BY LACFCD.

FLOOD HAZARD NOTES

1. NOT WITHIN FEMA FLOOD ZONE 'A'.
2. NOT WITHIN COUNTY ADOPTED FLOODWAY.

HYDROLOGIC SUMMARY

Subarea	Area (acres)	Qb (cfs)	Qd (cfs)	Tc-calculated (min.)	Frequency	Qbb (cfs)	DPV (cy)
1A	40.8	81.8		12	50	130.1	8,580
2A	49.8	107.8		10	50	154.6	10,470
3A	49.8	107.8		10	50	154.6	10,470
4A	31.8	67.6		9	50	141.9	8,269
5A	40.9	98.5		11	50	158.2	10,059
8B	55.4	122.4		10	50	196.5	12,119
10A	46.3	104.4		10	50	166.0	10,758
11A	45.3	93.8		12	50	150.0	10,038
12A	46.7	93.4		12	50	151.3	10,216
13A	70.5	113.2		11	50	186.6	13,031
14A	52.8	110.6		11	50	179.2	11,550
15A	52.8	110.6		11	50	179.2	11,550
16A	31.9	51.9		10	50	84.1	5,141
19C	26.2	68		7	50	110.2	5,688
20C	40.7	90.1		14	50	146.0	10,003
22A	49.7	88		15	50	144.2	10,472
23A	49.7	88		15	50	144.2	10,472
25C	51.2	108.2		7	50	168.8	11,861
27C	49.3	98.6		12	50	159.7	10,744
28C	47.3	97.9		14	50	142.4	10,591
29C	29.2	61.2		11	50	99.1	6,568
30C	47.5	98.3		11	50	159.2	10,617
31C	41.7	79.3		13	50	127.8	9,901
35A	41.3	79.3		13	50	126.3	9,034
36A	45.2	97.2		11	50	157.5	10,726
37A	28	57.4		10	50	93.0	5,688
38A	64.1	114.8		15	50	186.2	14,230
39A	56.1	112.2		12	50	171.1	10,500
40A	56.1	112.2		12	50	171.1	10,500
43F	50.1	102.1		10	50	167.2	7,201
44F	52.1	108.2		11	50	168.8	4,779
45A	10.8	29.2		7	50	45.2	1,594
51A	11.3	37.7		6	50	55.2	1,104
52A	11.3	37.7		6	50	55.2	1,104
53A	15.4	49.3		8	50	67.8	1,958
54A	8.7	22.5		8	50	40.3	1,243
55B	16.4	130.9		8	50	166.8	1,749
57A	20.8	54.4		7	50	79.7	2,065
58A	8.2	20.5		7	50	30.1	1,104
59A	6.9	50.1		5	50	44.4	930
60A	4.2	11.2		7	50	16.1	539
61A	48.3	92.8		15	50	136.0	5,675
62A	31.9	83.7		15	50	120.6	4,898
66C	11.1		69.2	15	25		
67C	9.6		49.4	15	25		
67C	51.0		70.3	18	25		
68C	14.5		43.6	24	25		
69C	13.1		25.8	15	25		
70C	10.1		19.7	15	25		
71C	7.0		18.2	7	25		
72C	7.0		18.2	7	25		
73D	7.0		6.2	12	25		
74D	23.6		35.9	17	25		
75D	21.8		32.5	17	25		
76D	13.8		23.8	17	25		
77D	7.8		16.1	7	25		
78E	8.6		8.1	12	25		
79E	21.4		38.3	12	25		
80E	14.8		30.5	7	25		
81CE	14.8		49.3	9	25		
82CD	14.8		49.3	9	25		
83C	8.9		17.7	7	25		
84C	1.9		8.7	5	25		
85C	1.9		3.9	5	25		
86C	1.9		3.9	5	25		
88C	8.3		7.3	5	25		
100A	16.2	50.6		5	50	75.3	2,050
200A	26.2		36.2	15	25		
201A	21.1		40.8	8	25		
202A	48.0		81.1	8	25		
OP1	11.5		19.5	8	50		

BASIN A THROUGH E SUMMARY

Basin	Retention Volume, Basins A through E (cy)	Detention Volume, Below spillway crest and above outflow pipe (cy)	Total Volume, Basins A through E (cy)
A	1.34	32.36	33.69
B	4.55	14.42	19.08
C	0.70	5.14	11.39
D	1.98	2.67	4.65
E	0.00	26.53	26.53

SIZE AND LOCATION OF BASIN ORIFICES AND WEIRS ARE DICTATED IN GEOSYNTEC'S LID REPORT.

REGIONAL FACILITY HYDROMODIFICATION SUMMARY

Freq.	Pre-Development Q (cfs)	Pre-Development Vol (ac-ft)	Pre-Development Velocity (ft/s)	Pre-Development Depth/Width (ft/ft)	Post-Development Q (cfs)	Post-Development Vol (ac-ft)	Post-Development Semi-point Significant Flow Volume, = 11 cfs	Post-Development Velocity (ft/s)	Post-Development Depth/ Width (ft/ft)	Delta Q	Delta % Q	Delta Volume	Delta % Volume	Delta Velocity	Delta % Velocity	Delta Depth/ Width	Delta % Depth/ Width
50	2817.3	358.4	7.24	0.13	2817.3	360.8	318.9	7.24	0.12	-0.2	-0	0	0	0	0	0	0
25	2458.2	316.2	6.85	0.12	2458.2	318.5	282.1	6.85	0.11	-0.1	-0	0	0	0	0	0	0
10	1918.4	250.6	6.33	0.11	1918.4	252.5	224.5	6.33	0.11	-0.1	-0	0	0	0	0	0	0
5	1243.5	166.0	5.65	0.11	1018.5	129.8	112.6	5.53	0.10	-15	-17	-45	-21	-0.1	-2	-0	-3
2	533.0	69.4	4.55	0.10	488.2	67.2	54.9	4.42	0.10	-3	-6	-2	-3	-0.1	-2	-0	-3

Pre and Post Development Q, Volume, Velocity, and Depth/Width at Outlet Node provided by Geosyntec.

LID SUMMARY

Basin ID	85th Percentile Storm Size (in)	95th Percentile Storm Size	Hydromod Design Criteria	Project Design Storm (in)	Project Design Storm Volume (CF)
A	1.2	2.4	Clear Flow Frequency	1.2	228,907
B	1.2	2.4	Clear Flow Frequency	1.2	107,357
C	1.2	2.4	Clear Flow Frequency	1.2	160,368
D	1.2	2.4	Clear Flow Frequency	1.2	86,335
E	1.2	2.4	Clear Flow Frequency	1.2	306,319
200A	1.2	2.4	Clear Flow Frequency	1.2	21,922
201A	1.2	2.4	Clear Flow Frequency	1.2	51,303
OP-1	1.2	2.4	Clear Flow Frequency	1.2	11,712
OP-2a	1.2	2.4	Clear Flow Frequency	1.2	5,918
OP-3a	1.2	2.4	Clear Flow Frequency	1.2	16,177
OP-3b	1.2	2.4	Clear Flow Frequency	1.2	25,476
OP-4	1.2	2.4	Clear Flow Frequency	1.2	7,335
OP-5	1.2	2.4	Clear Flow Frequency	1.2	9,228
OP-6	1.2	2.4	Clear Flow Frequency	1.2	1,405

Data provided by Geosyntec. Refer to Geosyntec's LID report for calculations.

OUTLET PROPOSED CONDITION

ΣA = 2154.4 ac
ΣQbb+d = 2730.5 cfs (Post-DET)
ΣQbb+d = 2739.9 cfs (Post-DET)
ΣDPV = 2,050 cy

EXISTING CONDITION

ΣA = 2108.9 ac
ΣQb = 2899.2 cfs
ΣQbb = 4064.8 cfs
ΣDPV = 143,392 cy

PROPOSED CONDITION

ΣA = 48.0 ac
ΣQd = 81.1 cfs
ΣDPV = 0 cy
Qdesign=134 cfs per PD 2443

PROPOSED CONDITION

ΣA = 2.5 ac
ΣQd = 7.8 cfs
ΣQbb = 7.8 cfs
ΣDPV = 0 cy

EXISTING CONDITION

ΣA = 2.5 ac
ΣQb = 7.9 cfs
ΣQbb = 11.6 cfs
ΣDPV = 513 cy

PROPOSED CONDITION

ΣA = 5.0 ac
ΣQd = 15.5 cfs
ΣQbb = 15.5 cfs
ΣDPV = 0 cy

OUTLET OP-5 EXISTING CONDITION

ΣA = 4.0 ac
ΣQb = 12.6 cfs
ΣQbb = 18.5 cfs
ΣDPV = 320 cy

OP-1
BIO-FILTRATION BASIN AREA= 20,940 sf
DEPTH=1.5'
TO BE PRIVATELY MAINTAINED

BMP SUMMARY

Basin ID	Qpm (cfs)	SWQDv (Ac-ft)	1.5*SWQDv (Ac-ft)	Biofiltration Provided (Ac-ft)	Storage Provided (Ac-ft)	Total Vol Provided (Ac-ft)
OP-2a	7.7	0.13	0.20	0.20	0.00	0.20
OP-4	1.5	0.19	0.29	0.00	0.04	0.20

Q and SWQDv Data provided by Geosyntec. Refer to Geosyntec's LID Report for calculations.

Basin ID	Qpm (cfs)	SWQDv (Ac-ft)	1.5*SWQDv (Ac-ft)	Biofiltration Provided (Ac-ft)	Storage Provided (Ac-ft)	Total Vol Provided (Ac-ft)
OP-3b	1.6	0.27	0.39	0.39	0.07	0.39
OP-3a	4.7	0.58	0.87	0.75	0.13	0.88
OP-5	10.5	0.48	0.72	0.55	0.00	0.55
200A	7.0	0.69	0.74	0.64	0.00	0.74
201A	1.0	0.32	0.48	0.41	0.07	0.48

OUTLET OP-5 HYDROMODIFICATION SUMMARY

Design Event	Peak Flow (cfs) Existing	Peak Flow (cfs) Proposed	Peak Flow (cfs) % difference	Flow Volume (ac-ft) Existing	Flow Volume (ac-ft) Proposed	Flow Volume (ac-ft) % difference (total Volume)	Flow Volume (ac-ft) Existing (Geosyntec ally Significant Flow Volume, = 0.145 cfs)	Flow Volume (ac-ft) Proposed (Geosyntec ally Significant Flow Volume, = 0.145 cfs)	Flow Volume (ac-ft) % difference (Geosyntec ally Significant Flow Volume)
LSD	0.54	0.06	-89%	0.05	0.16	221%	0.01	0.00	-100%
2-yr	3.03	0.09	-97%	0.14	0.36	162%	0.07	0.00	-100%
5-yr	6.20	0.12	-98%	0.26	0.59	130%	0.17	0.00	-100%
10-yr	8.54	0.63	-92%	0.36	0.76	113%	0.26	0.12	-55%
25-yr	10.76	6.15	-43%	0.50	0.99	96%	0.41	0.33	-21%
50-yr	12.37	9.45	-24%	0.63	1.18	87%	0.54	0.54	-0.1%

Basin ID	Qpm (cfs)	SWQDv (Ac-ft)	Total Vol Provided (Ac-ft)
OP-5	10.5	0.48	0.55

Q and SWQDv Data provided by Geosyntec. Refer to Geosyntec's LID report for calculations.

OUTLET OP-1 HYDROMODIFICATION SUMMARY

Design Event	Peak Flow (cfs) Existing	Peak Flow (cfs) Proposed	Peak Flow (cfs) % difference	Flow Volume (ac-ft) Existing	Flow Volume (ac-ft) Proposed	Flow Volume (ac-ft) % difference (Total Volume)	Flow Volume (ac-ft) Existing (Geosyntec ally Significant Flow Volume, = 0.145 cfs)	Flow Volume (ac-ft) Proposed (Geosyntec ally Significant Flow Volume, = 0.145 cfs)	Flow Volume (ac-ft) % difference (Geosyntec ally Significant Flow Volume)
LSD	0.3	0.07	-77%	0.03	0.20	513%	0.00	0.00	0%
2-yr	1.6	0.10	-94%	0.09	0.39	331%	0.01	0.00	-100%
5-yr	3.4	0.13	-96%	0.16	0.48	200%	0.02	0.00	-100%
10-yr	4.5	0.14	-97%	0.23	0.73	224%	0.73	0.16	0.00
25-yr	6.2	0.33	-95%	0.32	0.96	182%	0.78	0.23	0.29
50-yr	7.9	1.27	-84%	0.48	1.63	117%	0.73	0.33	0.52

Basin ID	Qpm (cfs)	SWQDv (Ac-ft)	Total Vol Provided (Ac-ft)
OP-1	7.9	0.47	0.48

Q and SWQDv Data provided by Geosyntec. Refer to Geosyntec's LID report for calculations.

HYDROLOGY STUDY APPROVED

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION

CHECKED BY: _____ for M.C. 83563 Date 8/27/2021
APPROVED BY: _____ Date 8/27/2021

LOW FLOW DIVERSION TYPICAL SECTION (BASINS OP-2a, AND OP-2b)

NOT TO SCALE

NOTES:
1. NOT USED
2. PERFORATED 6" MIN PVC PIPE UNDERDRAIN SYSTEM.
3. CHOKING GRAVEL LAYER.
4. 3" PLANTING MIX.

LOW FLOW DIVERSION TYPICAL SECTION (BASIN OP-4)

NOT TO SCALE

NOTES:
1. OVERFLOW DEVICE, VERTICAL RISER OR EQUIVALENT.
2. PERFORATED 6" MIN PVC PIPE UNDERDRAIN SYSTEM.
3. CHOKING GRAVEL LAYER.
4. 3" PLANTING MIX.



LEGEND

- MAIN DRAINAGE BOUNDARY
- SUB-AREA BOUNDARY
- FLOW LINE
- PROPOSED STORM DRAIN- DEVELOPED AREAS
- PROPOSED STORM DRAIN- NATURAL AREAS
- PROPOSED BMP LINE- WQ FLOW
- ON-PARCEL BMP TREATMENT
- TRACT BOUNDARY

34 & UNC ... LOCATION NAMES
A ... AREA IN ACRES, Ac
Qb ... 50-YR, BURNED DESIGN FLOW IN CUBIC FEET PER SECOND, cfs
Qbb ... 50-YR, BURNED & BULKED DESIGN FLOW IN CUBIC FEET PER SECOND, cfs
Qd ... 50-YR OR 25-YR, DESIGN FLOW IN CUBIC FEET PER SECOND, cfs
Qbb+d ... MIXED 25- & 50-YR, BURNED DESIGN FLOW IN CUBIC FEET PER SECOND, cfs
Qbb+d ... MIXED 25- & 50-YR, BURNED & BULKED DESIGN FLOW IN CUBIC FEET PER SECOND, cfs
Qpm ... WATER QUALITY FLOW IN CUBIC FEET PER SECOND, cfs
Vm ... WATER QUALITY VOLUME IN CUBIC YARDS, cy-ft
DPV ... DEBRIS PRODUCTION VOLUME IN CUBIC YARDS, cy
Σ ... TOTAL
1 ... DESILTING BASIN WITH PAVED VEHICULAR ACCESS & TITLE FEE COT (TO BE PUBLIC) MAINTAINED
2 ... DEBRIS CARRYING PAVED DITCH WITH 5% MIN SLOPE, OR OTHERWISE SHOWN, & SELF-CLEANING VELOCITY (TO BE PRIVATELY MAINTAINED)

PROPOSED CONDITION
DRAINAGE CONCEPT
FOR VESTING TENTATIVE TRACT NO. 73336
(NORTHLAKE PHASE 1)
IN THE UNINCORPORATED TERRITORY OF LOS ANGELES COUNTY

NORTH
SCALE: 1"=200'
DATE: 03/16/2017

PREPARED FOR:
Northlake Associates, LLC
1999 AVENUE OF THE STARS, SUITE 2800, LOS ANGELES, CA 90067
ATTN: JOHN ARVIN
(310) 824-2200

W.O. NO.: 5090-033-35

PREPARED BY:
SIKAND
Engineering Planning Surveying
15230 Burbank Blvd. #100, Van Nuys, CA 91411
Phone: (818) 787- 8550, Fax: (818) 901-7451
www.sikand.com, E-mail: info@sikand.com

REGISTERED CIVIL ENGINEER No.49041 Exp. 06-30-2019 STATE OF CALIFORNIA

SHEET 1 OF 2 SHEETS

APPENDIX E

CALEEMOD MODEL OUTPUTS

Northlake Creek Avoidance Alternative

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government (Civic Center)	44.00	1000sqft	1.01	44,000.00	0
Elementary School	628.00	Student	23.00	52,502.92	0
Other Asphalt Surfaces	2.00	Acre	2.00	87,120.00	0
Other Asphalt Surfaces	71.00	Acre	71.00	3,092,760.00	0
City Park	26.00	Acre	26.00	1,132,560.00	0
Single Family Housing	1,650.00	Dwelling Unit	264.00	2,970,000.00	4719
Single Family Housing	165.00	Dwelling Unit	26.40	297,000.00	472

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	392.72	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Northlake Creek Avoidance Alternative - Los Angeles-South Coast County, Summer

Project Characteristics - Based on DEIR inputs

Land Use - Based on PD for CAA

Construction Phase - Based on data request

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No demolition phase

Off-road Equipment - Based on data request

Off-road Equipment - Based on data request

Off-road Equipment - Based on data request

Off-road Equipment -

Off-road Equipment - Based on data request

Off-road Equipment - Based on data request

Trips and VMT - Based on proportion of default to adjusted worker and vendor trips from the DEIR and applied to the CalEEMod default values for the CAA.

Grading -

Vehicle Trips - Based on VMT and DEIR

Woodstoves - No wood fireplaces

Energy Use -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	550.00	1,935.00
tblConstructionPhase	NumDays	7,750.00	1,565.00
tblConstructionPhase	NumDays	7,750.00	781.00
tblConstructionPhase	NumDays	775.00	652.00
tblConstructionPhase	NumDays	775.00	1,304.00

tblConstructionPhase	NumDays	775.00	521.00
tblConstructionPhase	NumDays	300.00	261.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	1,542.75	455.00
tblFireplaces	NumberNoFireplace	181.50	1,360.00
tblFireplaces	NumberWood	90.75	0.00
tblGrading	AcresOfGrading	18,256.00	1,937.50
tblGrading	AcresOfGrading	652.00	3,260.00
tblGrading	AcresOfGrading	260.50	1,302.50
tblGrading	MaterialExported	0.00	8,279,040.00
tblLandUse	LotAcreage	1.21	23.00
tblLandUse	LotAcreage	53.57	26.40
tblLandUse	LotAcreage	535.71	264.00
tblOffRoadEquipment	HorsePower	212.00	600.00
tblOffRoadEquipment	HorsePower	212.00	436.00
tblOffRoadEquipment	HorsePower	212.00	100.00
tblOffRoadEquipment	HorsePower	212.00	290.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	25.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	392.72
tblTripsAndVMT	VendorTripNumber	917.00	47.00
tblTripsAndVMT	VendorTripNumber	917.00	19.00
tblTripsAndVMT	WorkerTripNumber	95.00	20.00

tblTripsAndVMT	WorkerTripNumber	15.00	8.00
tblTripsAndVMT	WorkerTripNumber	8.00	11.00
tblTripsAndVMT	WorkerTripNumber	2,501.00	262.00
tblTripsAndVMT	WorkerTripNumber	500.00	52.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	2,501.00	131.00
tblVehicleTrips	CC_TL	8.40	1.07
tblVehicleTrips	CNW_TL	6.90	1.07
tblVehicleTrips	CW_TL	16.60	1.07
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	8.70	13.24
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	13.24
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	13.24
tblVehicleTrips	HW_TTP	40.20	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	22.75	53.80
tblVehicleTrips	ST_TR	0.00	0.91
tblVehicleTrips	ST_TR	9.91	9.30
tblVehicleTrips	SU_TR	16.74	53.80
tblVehicleTrips	SU_TR	0.00	0.91
tblVehicleTrips	SU_TR	8.62	8.10
tblVehicleTrips	WD_TR	1.89	53.80
tblVehicleTrips	WD_TR	1.29	1.62
tblVehicleTrips	WD_TR	27.92	0.91

tblVehicleTrips	WD_TR	9.52	8.96
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	65.0929	1,102.5924	435.4986	1.9012	161.1172	26.7478	187.8650	52.2440	24.6796	76.9236	0.0000	200,845.9813	200,845.9813	28.6692	0.0000	201,562.7102
2019	57.0790	984.7950	394.0620	1.8522	90.9513	22.2900	113.2414	29.5238	20.5724	50.0962	0.0000	195,053.7260	195,053.7260	27.6151	0.0000	195,744.1024
2020	68.9008	941.0281	407.1711	1.9168	94.9648	21.4935	116.4583	30.5911	19.8599	50.4510	0.0000	200,244.2608	200,244.2608	28.2499	0.0000	200,950.5094
2021	17.4591	49.4651	49.4241	0.1105	12.5734	2.2437	14.8172	4.6377	2.0915	6.7291	0.0000	10,864.8102	10,864.8102	1.8128	0.0000	10,910.1297
2022	16.8080	43.1771	47.5612	0.1091	12.5735	1.8637	14.4372	4.6377	1.7383	6.3760	0.0000	10,725.1417	10,725.1417	1.7946	0.0000	10,770.0061
2023	16.3101	37.7047	45.8709	0.1074	12.5735	1.5766	14.1501	4.6377	1.4710	6.1087	0.0000	10,556.5550	10,556.5550	1.7712	0.0000	10,600.8337
2024	14.3533	18.6322	28.9825	0.0738	3.8107	0.7043	4.5150	1.0175	0.6656	1.6831	0.0000	7,293.1079	7,293.1079	0.7632	0.0000	7,312.1870
2025	16.1563	35.6748	50.3491	0.1155	12.7970	1.3663	14.1633	4.6970	1.2721	5.9691	0.0000	11,338.6689	11,338.6689	2.0193	0.0000	11,389.1514
2026	15.6227	33.4285	45.4804	0.0950	11.1535	1.3527	12.5062	4.2570	1.2596	5.5166	0.0000	9,240.2861	9,240.2861	1.9473	0.0000	9,288.9673
2027	15.2419	30.4540	39.1137	0.0850	11.0641	1.2251	12.2891	4.2333	1.1421	5.3755	0.0000	8,271.8932	8,271.8932	1.6738	0.0000	8,313.7386
2028	1.7866	13.9575	19.6612	0.0433	1.5859	0.5381	2.1240	0.4234	0.5060	0.9293	0.0000	4,217.8777	4,217.8777	0.6488	0.0000	4,234.0972
Maximum	**68.9008**	**1,102.5924**	**435.4986**	**1.9168**	**161.1172**	**26.7478**	**187.8650**	**52.2440**	**24.6796**	**76.9236**	**0.0000**	**200,845.9813**	**200,845.9813**	**28.6692**	**0.0000**	**201,562.7102**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	65.0929	1,102.5924	435.4986	1.9012	130.9873	26.7478	157.7351	37.5945	24.6796	62.2741	0.0000	200,845.9812	200,845.9812	28.6692	0.0000	201,562.7102
2019	57.0790	984.7950	394.0620	1.8522	71.8418	22.2900	94.1319	20.9320	20.5724	41.5044	0.0000	195,053.7259	195,053.7259	27.6151	0.0000	195,744.1024
2020	68.9008	941.0281	407.1711	1.9168	75.8553	21.4935	97.3488	21.9994	19.8599	41.8593	0.0000	200,244.2607	200,244.2607	28.2499	0.0000	200,950.5094
2021	17.4591	49.4651	49.4241	0.1105	7.2827	2.2437	9.5264	2.4438	2.0915	4.5353	0.0000	10,864.8102	10,864.8102	1.8128	0.0000	10,910.1297
2022	16.8080	43.1771	47.5612	0.1091	7.2827	1.8637	9.1464	2.4438	1.7383	4.1822	0.0000	10,725.1417	10,725.1417	1.7946	0.0000	10,770.0061
2023	16.3101	37.7047	45.8709	0.1074	7.2827	1.5766	8.8594	2.4438	1.4710	3.9148	0.0000	10,556.5550	10,556.5550	1.7712	0.0000	10,600.8337
2024	14.3533	18.6322	28.9825	0.0738	3.8107	0.7043	4.5150	1.0175	0.6656	1.6831	0.0000	7,293.1079	7,293.1079	0.7632	0.0000	7,312.1870
2025	16.1563	35.6748	50.3491	0.1155	7.5063	1.3663	8.8725	2.5031	1.2721	3.7752	0.0000	11,338.6689	11,338.6689	2.0193	0.0000	11,389.1514
2026	15.6227	33.4285	45.4804	0.0950	5.8627	1.3527	7.2154	2.0632	1.2596	3.3227	0.0000	9,240.2861	9,240.2861	1.9473	0.0000	9,288.9673
2027	15.2419	30.4540	39.1137	0.0850	5.7733	1.2251	6.9984	2.0394	1.1421	3.1816	0.0000	8,271.8932	8,271.8932	1.6738	0.0000	8,313.7386
2028	1.7866	13.9575	19.6612	0.0433	1.5859	0.5381	2.1240	0.4234	0.5060	0.9293	0.0000	4,217.8777	4,217.8777	0.6488	0.0000	4,234.0972
Maximum	**68.9008**	**1,102.5924**	**435.4986**	**1.9168**	**130.9873**	**26.7478**	**157.7351**	**37.5945**	**24.6796**	**62.2741**	**0.0000**	**200,845.9812**	**200,845.9812**	**28.6692**	**0.0000**	**201,562.7102**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**23.54**	**0.00**	**19.76**	**31.93**	**0.00**	**20.82**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	80.1354	16.8192	156.1000	0.1043		2.0508	2.0508		2.0508	2.0508	0.0000	19,540.3794	19,540.3794	0.6280	0.3533	19,661.3607
Energy	1.5030	12.8602	5.5842	0.0820		1.0385	1.0385		1.0385	1.0385		16,396.5999	16,396.5999	0.3143	0.3006	16,494.0367
Mobile	28.6141	132.7080	419.9395	1.8773	181.4944	1.2559	182.7503	48.5535	1.1664	49.7200		191,856.5884	191,856.5884	7.9469		192,055.2601
Total	**110.2525**	**162.3873**	**581.6237**	**2.0636**	**181.4944**	**4.3451**	**185.8396**	**48.5535**	**4.2557**	**52.8092**	**0.0000**	**227,793.5677**	**227,793.5677**	**8.8891**	**0.6539**	**228,210.6575**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	80.1354	16.8192	156.1000	0.1043		2.0508	2.0508		2.0508	2.0508	0.0000	19,540.3794	19,540.3794	0.6280	0.3533	19,661.3607
Energy	1.5030	12.8602	5.5842	0.0820		1.0385	1.0385		1.0385	1.0385		16,396.5999	16,396.5999	0.3143	0.3006	16,494.0367
Mobile	28.6141	132.7080	419.9395	1.8773	181.4944	1.2559	182.7503	48.5535	1.1664	49.7200		191,856.5884	191,856.5884	7.9469		192,055.2601
Total	**110.2525**	**162.3873**	**581.6237**	**2.0636**	**181.4944**	**4.3451**	**185.8396**	**48.5535**	**4.2557**	**52.8092**	**0.0000**	**227,793.5677**	**227,793.5677**	**8.8891**	**0.6539**	**228,210.6575**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2018	12/31/2018	5	261	
2	Grading	Grading	7/1/2018	12/29/2020	5	652	
3	Fine Grading 1	Grading	10/1/2018	9/28/2023	5	1304	
4	Utilities 1	Trenching	2/1/2019	12/30/2020	5	499	
5	Building Construction	Building Construction	1/1/2020	12/30/2025	5	1565	
6	Architectural Coating	Architectural Coating	8/1/2020	12/31/2027	5	1935	
7	Utilities 2	Trenching	7/1/2025	2/26/2026	5	173	
8	Fine Grading 2	Grading	10/1/2025	9/29/2027	5	521	
9	Building Construction 2	Building Construction	1/1/2026	12/28/2028	5	781	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1937.5

Acres of Paving: 73

Residential Indoor: 6,615,675; Residential Outdoor: 2,205,225; Non-Residential Indoor: 144,754; Non-Residential Outdoor: 48,251; Striped Parking Area: 190,793 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40

Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Crawler Tractors	3	8.00	600	0.43
Grading	Crawler Tractors	2	8.00	436	0.43
Grading	Crawler Tractors	2	8.00	100	0.43
Grading	Crawler Tractors	2	8.00	290	0.43
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	25	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Fine Grading 1	Excavators	2	8.00	158	0.38
Fine Grading 1	Graders	1	8.00	187	0.41
Fine Grading 1	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading 1	Scrapers	0	8.00	367	0.48
Fine Grading 1	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Utilities 1	Excavators	1	6.00	158	0.38
Utilities 1	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Utilities 2	Excavators	1	6.00	158	0.38
Utilities 2	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Fine Grading 2	Excavators	2	8.00	158	0.38
Fine Grading 2	Graders	1	8.00	187	0.41

Fine Grading 2	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading 2	Scrapers	0	8.00	367	0.48
Fine Grading 2	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 2	Cranes	1	7.00	231	0.29
Building Construction 2	Forklifts	3	8.00	89	0.20
Building Construction 2	Generator Sets	1	8.00	84	0.74
Building Construction 2	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 2	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	38	20.00	0.00	1,034,880.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading 1	6	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utilities 1	3	11.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	262.00	47.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	52.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utilities 2	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading 2	6	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	9	131.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708		3,831.6239	3,831.6239	1.1928		3,861.4448
Total	**4.5627**	**48.1988**	**22.4763**	**0.0380**	**18.0663**	**2.5769**	**20.6432**	**9.9307**	**2.3708**	**12.3014**		**3,831.6239**	**3,831.6239**	**1.1928**		**3,861.4448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0995	0.0751	0.9721	2.2700e-003	0.2012	1.7900e-003	0.2030	0.0534	1.6500e-003	0.0550		225.6642	225.6642	8.4600e-003		225.8758
Total	**0.0995**	**0.0751**	**0.9721**	**2.2700e-003**	**0.2012**	**1.7900e-003**	**0.2030**	**0.0534**	**1.6500e-003**	**0.0550**		**225.6642**	**225.6642**	**8.4600e-003**		**225.8758**

3.2 Site Preparation - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448
Total	**4.5627**	**48.1988**	**22.4763**	**0.0380**	**7.0458**	**2.5769**	**9.6228**	**3.8730**	**2.3708**	**6.2437**	**0.0000**	**3,831.6239**	**3,831.6239**	**1.1928**		**3,861.4448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0995	0.0751	0.9721	2.2700e-003	0.2012	1.7900e-003	0.2030	0.0534	1.6500e-003	0.0550		225.6642	225.6642	8.4600e-003		225.8758
Total	**0.0995**	**0.0751**	**0.9721**	**2.2700e-003**	**0.2012**	**1.7900e-003**	**0.2030**	**0.0534**	**1.6500e-003**	**0.0550**		**225.6642**	**225.6642**	**8.4600e-003**		**225.8758**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					22.6537	0.0000	22.6537	10.4884	0.0000	10.4884			0.0000			0.0000
Off-Road	41.7253	510.2829	286.9201	0.5391		20.7005	20.7005		19.0445	19.0445		54,261.8472	54,261.8472	16.8925		54,684.1585
Total	**41.7253**	**510.2829**	**286.9201**	**0.5391**	**22.6537**	**20.7005**	**43.3542**	**10.4884**	**19.0445**	**29.5329**		**54,261.8472**	**54,261.8472**	**16.8925**		**54,684.1585**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	15.7545	512.7803	106.1020	1.2865	111.2097	1.9507	113.1604	28.0921	1.8662	29.9583		138,980.9822	138,980.9822	9.5677		139,220.1734
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1105	0.0834	1.0802	2.5200e-003	0.2236	1.9900e-003	0.2256	0.0593	1.8400e-003	0.0611		250.7380	250.7380	9.4000e-003		250.9731
Total	**15.8650**	**512.8637**	**107.1821**	**1.2890**	**111.4333**	**1.9526**	**113.3859**	**28.1514**	**1.8681**	**30.0194**		**139,231.7202**	**139,231.7202**	**9.5771**		**139,471.1465**

3.3 Grading - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8349	0.0000	8.8349	4.0905	0.0000	4.0905			0.0000			0.0000
Off-Road	41.7253	510.2829	286.9200	0.5391		20.7005	20.7005		19.0445	19.0445	0.0000	54,261.8471	54,261.8471	16.8925		54,684.1584
Total	**41.7253**	**510.2829**	**286.9200**	**0.5391**	**8.8349**	**20.7005**	**29.5354**	**4.0905**	**19.0445**	**23.1350**	**0.0000**	**54,261.8471**	**54,261.8471**	**16.8925**		**54,684.1584**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	15.7545	512.7803	106.1020	1.2865	111.2097	1.9507	113.1604	28.0921	1.8662	29.9583		138,980.9822	138,980.9822	9.5677		139,220.1734
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1105	0.0834	1.0802	2.5200e-003	0.2236	1.9900e-003	0.2256	0.0593	1.8400e-003	0.0611		250.7380	250.7380	9.4000e-003		250.9731
Total	**15.8650**	**512.8637**	**107.1821**	**1.2890**	**111.4333**	**1.9526**	**113.3859**	**28.1514**	**1.8681**	**30.0194**		**139,231.7202**	**139,231.7202**	**9.5771**		**139,471.1465**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					22.6537	0.0000	22.6537	10.4884	0.0000	10.4884			0.0000			0.0000
Off-Road	38.8159	464.2972	265.3755	0.5390		18.8007	18.8007		17.2966	17.2966		53,376.9270	53,376.9270	16.8879		53,799.1243
Total	**38.8159**	**464.2972**	**265.3755**	**0.5390**	**22.6537**	**18.8007**	**41.4543**	**10.4884**	**17.2966**	**27.7850**		**53,376.9270**	**53,376.9270**	**16.8879**		**53,799.1243**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	14.9152	486.1446	103.6508	1.2682	59.1884	1.7839	60.9723	15.3233	1.7067	17.0300		137,218.6999	137,218.6999	9.4501		137,454.9521
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0999	0.0734	0.9643	2.4400e-003	0.2236	1.9300e-003	0.2255	0.0593	1.7800e-003	0.0611		242.5906	242.5906	8.3300e-003		242.7989
Total	**15.0151**	**486.2181**	**104.6151**	**1.2706**	**59.4119**	**1.7858**	**61.1978**	**15.3826**	**1.7085**	**17.0910**		**137,461.2905**	**137,461.2905**	**9.4584**		**137,697.7510**

3.3 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8349	0.0000	8.8349	4.0905	0.0000	4.0905			0.0000			0.0000
Off-Road	38.8159	464.2972	265.3755	0.5390		18.8007	18.8007		17.2966	17.2966	0.0000	53,376.9270	53,376.9270	16.8879		53,799.1243
Total	**38.8159**	**464.2972**	**265.3755**	**0.5390**	**8.8349**	**18.8007**	**27.6356**	**4.0905**	**17.2966**	**21.3871**	**0.0000**	**53,376.9270**	**53,376.9270**	**16.8879**		**53,799.1243**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	14.9152	486.1446	103.6508	1.2682	59.1884	1.7839	60.9723	15.3233	1.7067	17.0300		137,218.6999	137,218.6999	9.4501		137,454.9521
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0999	0.0734	0.9643	2.4400e-003	0.2236	1.9300e-003	0.2255	0.0593	1.7800e-003	0.0611		242.5906	242.5906	8.3300e-003		242.7989
Total	**15.0151**	**486.2181**	**104.6151**	**1.2706**	**59.4119**	**1.7858**	**61.1978**	**15.3826**	**1.7085**	**17.0910**		**137,461.2905**	**137,461.2905**	**9.4584**		**137,697.7510**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					22.6537	0.0000	22.6537	10.4884	0.0000	10.4884			0.0000			0.0000
Off-Road	36.4364	425.9466	247.6808	0.5391		17.2078	17.2078		15.8312	15.8312		52,216.9923	52,216.9923	16.8880		52,639.1931
Total	**36.4364**	**425.9466**	**247.6808**	**0.5391**	**22.6537**	**17.2078**	**39.8615**	**10.4884**	**15.8312**	**26.3196**		**52,216.9923**	**52,216.9923**	**16.8880**		**52,639.1931**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	13.8645	456.3959	101.1331	1.2537	59.3912	1.4567	60.8478	15.3732	1.3936	16.7668		135,840.9863	135,840.9863	9.2462		136,072.1413
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0920	0.0655	0.8757	2.3600e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		235.2226	235.2226	7.4200e-003		235.4080
Total	**13.9565**	**456.4614**	**102.0088**	**1.2560**	**59.6147**	**1.4585**	**61.0732**	**15.4325**	**1.3953**	**16.8278**		**136,076.2088**	**136,076.2088**	**9.2536**		**136,307.5493**

3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8349	0.0000	8.8349	4.0905	0.0000	4.0905			0.0000			0.0000
Off-Road	36.4364	425.9466	247.6808	0.5391		17.2078	17.2078		15.8312	15.8312	0.0000	52,216.9922	52,216.9922	16.8880		52,639.1931
Total	**36.4364**	**425.9466**	**247.6808**	**0.5391**	**8.8349**	**17.2078**	**26.0428**	**4.0905**	**15.8312**	**19.9217**	**0.0000**	**52,216.9922**	**52,216.9922**	**16.8880**		**52,639.1931**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	13.8645	456.3959	101.1331	1.2537	59.3912	1.4567	60.8478	15.3732	1.3936	16.7668		135,840.9863	135,840.9863	9.2462		136,072.1413
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0920	0.0655	0.8757	2.3600e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		235.2226	235.2226	7.4200e-003		235.4080
Total	**13.9565**	**456.4614**	**102.0088**	**1.2560**	**59.6147**	**1.4585**	**61.0732**	**15.4325**	**1.3953**	**16.8278**		**136,076.2088**	**136,076.2088**	**9.2536**		**136,307.5493**

3.4 Fine Grading 1 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	2.7963	31.1387	17.5159	0.0317		1.5152	1.5152		1.3940	1.3940		3,194.8307	3,194.8307	0.9946		3,219.6956
Total	**2.7963**	**31.1387**	**17.5159**	**0.0317**	**8.6733**	**1.5152**	**10.1885**	**3.5965**	**1.3940**	**4.9905**		**3,194.8307**	**3,194.8307**	**0.9946**		**3,219.6956**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0442	0.0334	0.4321	1.0100e-003	0.0894	8.0000e-004	0.0902	0.0237	7.4000e-004	0.0245		100.2952	100.2952	3.7600e-003		100.3892
Total	**0.0442**	**0.0334**	**0.4321**	**1.0100e-003**	**0.0894**	**8.0000e-004**	**0.0902**	**0.0237**	**7.4000e-004**	**0.0245**		**100.2952**	**100.2952**	**3.7600e-003**		**100.3892**

3.4 Fine Grading 1 - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	2.7963	31.1387	17.5159	0.0317		1.5152	1.5152		1.3940	1.3940	0.0000	3,194.8307	3,194.8307	0.9946		3,219.6956
Total	**2.7963**	**31.1387**	**17.5159**	**0.0317**	**3.3826**	**1.5152**	**4.8978**	**1.4026**	**1.3940**	**2.7966**	**0.0000**	**3,194.8307**	**3,194.8307**	**0.9946**		**3,219.6956**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0442	0.0334	0.4321	1.0100e-003	0.0894	8.0000e-004	0.0902	0.0237	7.4000e-004	0.0245		100.2952	100.2952	3.7600e-003		100.3892
Total	**0.0442**	**0.0334**	**0.4321**	**1.0100e-003**	**0.0894**	**8.0000e-004**	**0.0902**	**0.0237**	**7.4000e-004**	**0.0245**		**100.2952**	**100.2952**	**3.7600e-003**		**100.3892**

3.4 Fine Grading 1 - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	2.7963	31.1387	17.5159	0.0317		1.5152	1.5152		1.3940	1.3940	0.0000	3,194.8307	3,194.8307	0.9946		3,219.6956
Total	**2.7963**	**31.1387**	**17.5159**	**0.0317**	**3.3826**	**1.5152**	**4.8978**	**1.4026**	**1.3940**	**2.7966**	**0.0000**	**3,194.8307**	**3,194.8307**	**0.9946**		**3,219.6956**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0442	0.0334	0.4321	1.0100e-003	0.0894	8.0000e-004	0.0902	0.0237	7.4000e-004	0.0245		100.2952	100.2952	3.7600e-003		100.3892
Total	**0.0442**	**0.0334**	**0.4321**	**1.0100e-003**	**0.0894**	**8.0000e-004**	**0.0902**	**0.0237**	**7.4000e-004**	**0.0245**		**100.2952**	**100.2952**	**3.7600e-003**		**100.3892**

3.4 Fine Grading 1 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	2.6084	28.6925	17.2539	0.0317		1.3707	1.3707		1.2610	1.2610		3,140.3905	3,140.3905	0.9936		3,165.2302
Total	**2.6084**	**28.6925**	**17.2539**	**0.0317**	**8.6733**	**1.3707**	**10.0440**	**3.5965**	**1.2610**	**4.8575**		**3,140.3905**	**3,140.3905**	**0.9936**		**3,165.2302**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196
Total	**0.0400**	**0.0294**	**0.3857**	**9.7000e-004**	**0.0894**	**7.7000e-004**	**0.0902**	**0.0237**	**7.1000e-004**	**0.0244**		**97.0362**	**97.0362**	**3.3300e-003**		**97.1196**

3.4 Fine Grading 1 - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	2.6084	28.6925	17.2539	0.0317		1.3707	1.3707		1.2610	1.2610	0.0000	3,140.3905	3,140.3905	0.9936		3,165.2302
Total	**2.6084**	**28.6925**	**17.2539**	**0.0317**	**3.3826**	**1.3707**	**4.7533**	**1.4026**	**1.2610**	**2.6636**	**0.0000**	**3,140.3905**	**3,140.3905**	**0.9936**		**3,165.2302**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196
Total	**0.0400**	**0.0294**	**0.3857**	**9.7000e-004**	**0.0894**	**7.7000e-004**	**0.0902**	**0.0237**	**7.1000e-004**	**0.0244**		**97.0362**	**97.0362**	**3.3300e-003**		**97.1196**

3.4 Fine Grading 1 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	2.4643	26.6934	17.0411	0.0317		1.2572	1.2572		1.1566	1.1566		3,071.8350	3,071.8350	0.9935		3,096.6724
Total	**2.4643**	**26.6934**	**17.0411**	**0.0317**	**8.6733**	**1.2572**	**9.9305**	**3.5965**	**1.1566**	**4.7531**		**3,071.8350**	**3,071.8350**	**0.9935**		**3,096.6724**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0368	0.0262	0.3503	9.4000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		94.0890	94.0890	2.9700e-003		94.1632
Total	**0.0368**	**0.0262**	**0.3503**	**9.4000e-004**	**0.0894**	**7.5000e-004**	**0.0902**	**0.0237**	**6.9000e-004**	**0.0244**		**94.0890**	**94.0890**	**2.9700e-003**		**94.1632**

3.4 Fine Grading 1 - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	2.4643	26.6934	17.0411	0.0317		1.2572	1.2572		1.1566	1.1566	0.0000	3,071.8350	3,071.8350	0.9935		3,096.6724
Total	**2.4643**	**26.6934**	**17.0411**	**0.0317**	**3.3826**	**1.2572**	**4.6398**	**1.4026**	**1.1566**	**2.5592**	**0.0000**	**3,071.8350**	**3,071.8350**	**0.9935**		**3,096.6724**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0368	0.0262	0.3503	9.4000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		94.0890	94.0890	2.9700e-003		94.1632
Total	**0.0368**	**0.0262**	**0.3503**	**9.4000e-004**	**0.0894**	**7.5000e-004**	**0.0902**	**0.0237**	**6.9000e-004**	**0.0244**		**94.0890**	**94.0890**	**2.9700e-003**		**94.1632**

3.4 Fine Grading 1 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	2.3323	24.9943	16.8691	0.0317		1.1526	1.1526		1.0604	1.0604		3,071.2204	3,071.2204	0.9933		3,096.0528
Total	**2.3323**	**24.9943**	**16.8691**	**0.0317**	**8.6733**	**1.1526**	**9.8259**	**3.5965**	**1.0604**	**4.6569**		**3,071.2204**	**3,071.2204**	**0.9933**		**3,096.0528**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687
Total	**0.0343**	**0.0236**	**0.3222**	**9.1000e-004**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.7000e-004**	**0.0244**		**91.1016**	**91.1016**	**2.6800e-003**		**91.1687**

3.4 Fine Grading 1 - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	2.3323	24.9943	16.8691	0.0317		1.1526	1.1526		1.0604	1.0604	0.0000	3,071.2204	3,071.2204	0.9933		3,096.0528
Total	**2.3323**	**24.9943**	**16.8691**	**0.0317**	**3.3826**	**1.1526**	**4.5352**	**1.4026**	**1.0604**	**2.4630**	**0.0000**	**3,071.2204**	**3,071.2204**	**0.9933**		**3,096.0528**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687
Total	**0.0343**	**0.0236**	**0.3222**	**9.1000e-004**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.7000e-004**	**0.0244**		**91.1016**	**91.1016**	**2.6800e-003**		**91.1687**

3.4 Fine Grading 1 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	1.9864	20.9565	16.2899	0.0317		0.9366	0.9366		0.8617	0.8617		3,070.8227	3,070.8227	0.9932		3,095.6519
Total	**1.9864**	**20.9565**	**16.2899**	**0.0317**	**8.6733**	**0.9366**	**9.6100**	**3.5965**	**0.8617**	**4.4582**		**3,070.8227**	**3,070.8227**	**0.9932**		**3,095.6519**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0321	0.0213	0.2973	8.8000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		87.8970	87.8970	2.4300e-003		87.9576
Total	**0.0321**	**0.0213**	**0.2973**	**8.8000e-004**	**0.0894**	**7.0000e-004**	**0.0901**	**0.0237**	**6.4000e-004**	**0.0244**		**87.8970**	**87.8970**	**2.4300e-003**		**87.9576**

3.4 Fine Grading 1 - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	1.9864	20.9565	16.2899	0.0317		0.9366	0.9366		0.8617	0.8617	0.0000	3,070.8227	3,070.8227	0.9932		3,095.6519
Total	**1.9864**	**20.9565**	**16.2899**	**0.0317**	**3.3826**	**0.9366**	**4.3192**	**1.4026**	**0.8617**	**2.2644**	**0.0000**	**3,070.8227**	**3,070.8227**	**0.9932**		**3,095.6519**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0321	0.0213	0.2973	8.8000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		87.8970	87.8970	2.4300e-003		87.9576
Total	**0.0321**	**0.0213**	**0.2973**	**8.8000e-004**	**0.0894**	**7.0000e-004**	**0.0901**	**0.0237**	**6.4000e-004**	**0.0244**		**87.8970**	**87.8970**	**2.4300e-003**		**87.9576**

3.4 Fine Grading 1 - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	1.7482	17.9488	15.7771	0.0317		0.7749	0.7749		0.7129	0.7129		3,071.2201	3,071.2201	0.9933		3,096.0525
Total	**1.7482**	**17.9488**	**15.7771**	**0.0317**	**8.6733**	**0.7749**	**9.4483**	**3.5965**	**0.7129**	**4.3094**		**3,071.2201**	**3,071.2201**	**0.9933**		**3,096.0525**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0302	0.0193	0.2738	8.5000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.3000e-004	0.0243		84.6786	84.6786	2.1900e-003		84.7332
Total	**0.0302**	**0.0193**	**0.2738**	**8.5000e-004**	**0.0894**	**6.8000e-004**	**0.0901**	**0.0237**	**6.3000e-004**	**0.0243**		**84.6786**	**84.6786**	**2.1900e-003**		**84.7332**

3.4 Fine Grading 1 - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	1.7482	17.9488	15.7771	0.0317		0.7749	0.7749		0.7129	0.7129	0.0000	3,071.2201	3,071.2201	0.9933		3,096.0525
Total	**1.7482**	**17.9488**	**15.7771**	**0.0317**	**3.3826**	**0.7749**	**4.1575**	**1.4026**	**0.7129**	**2.1156**	**0.0000**	**3,071.2201**	**3,071.2201**	**0.9933**		**3,096.0525**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0302	0.0193	0.2738	8.5000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.3000e-004	0.0243		84.6786	84.6786	2.1900e-003		84.7332
Total	**0.0302**	**0.0193**	**0.2738**	**8.5000e-004**	**0.0894**	**6.8000e-004**	**0.0901**	**0.0237**	**6.3000e-004**	**0.0243**		**84.6786**	**84.6786**	**2.1900e-003**		**84.7332**

3.5 Utilities 1 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5448	5.5175	5.9014	8.5300e-003		0.3311	0.3311		0.3046	0.3046		844.6570	844.6570	0.2672		851.3380
Total	**0.5448**	**5.5175**	**5.9014**	**8.5300e-003**		**0.3311**	**0.3311**		**0.3046**	**0.3046**		**844.6570**	**844.6570**	**0.2672**		**851.3380**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0404	0.5304	1.3400e-003	0.1230	1.0600e-003	0.1240	0.0326	9.8000e-004	0.0336		133.4248	133.4248	4.5800e-003		133.5394
Total	**0.0550**	**0.0404**	**0.5304**	**1.3400e-003**	**0.1230**	**1.0600e-003**	**0.1240**	**0.0326**	**9.8000e-004**	**0.0336**		**133.4248**	**133.4248**	**4.5800e-003**		**133.5394**

3.5 Utilities 1 - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5448	5.5175	5.9014	8.5300e-003		0.3311	0.3311		0.3046	0.3046	0.0000	844.6570	844.6570	0.2672		851.3380
Total	**0.5448**	**5.5175**	**5.9014**	**8.5300e-003**		**0.3311**	**0.3311**		**0.3046**	**0.3046**	**0.0000**	**844.6570**	**844.6570**	**0.2672**		**851.3380**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0404	0.5304	1.3400e-003	0.1230	1.0600e-003	0.1240	0.0326	9.8000e-004	0.0336		133.4248	133.4248	4.5800e-003		133.5394
Total	**0.0550**	**0.0404**	**0.5304**	**1.3400e-003**	**0.1230**	**1.0600e-003**	**0.1240**	**0.0326**	**9.8000e-004**	**0.0336**		**133.4248**	**133.4248**	**4.5800e-003**		**133.5394**

3.5 Utilities 1 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4980	4.9672	5.8704	8.5300e-003		0.2873	0.2873		0.2643	0.2643		826.2416	826.2416	0.2672		832.9222
Total	**0.4980**	**4.9672**	**5.8704**	**8.5300e-003**		**0.2873**	**0.2873**		**0.2643**	**0.2643**		**826.2416**	**826.2416**	**0.2672**		**832.9222**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0506	0.0360	0.4816	1.3000e-003	0.1230	1.0300e-003	0.1240	0.0326	9.5000e-004	0.0336		129.3724	129.3724	4.0800e-003		129.4744
Total	**0.0506**	**0.0360**	**0.4816**	**1.3000e-003**	**0.1230**	**1.0300e-003**	**0.1240**	**0.0326**	**9.5000e-004**	**0.0336**		**129.3724**	**129.3724**	**4.0800e-003**		**129.4744**

3.5 Utilities 1 - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4980	4.9672	5.8704	8.5300e-003		0.2873	0.2873		0.2643	0.2643	0.0000	826.2416	826.2416	0.2672		832.9222
Total	**0.4980**	**4.9672**	**5.8704**	**8.5300e-003**		**0.2873**	**0.2873**		**0.2643**	**0.2643**	**0.0000**	**826.2416**	**826.2416**	**0.2672**		**832.9222**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0506	0.0360	0.4816	1.3000e-003	0.1230	1.0300e-003	0.1240	0.0326	9.5000e-004	0.0336		129.3724	129.3724	4.0800e-003		129.4744
Total	**0.0506**	**0.0360**	**0.4816**	**1.3000e-003**	**0.1230**	**1.0300e-003**	**0.1240**	**0.0326**	**9.5000e-004**	**0.0336**		**129.3724**	**129.3724**	**4.0800e-003**		**129.4744**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1672	4.9995	1.3099	0.0122	0.3009	0.0235	0.3244	0.0866	0.0225	0.1091		1,302.0161	1,302.0161	0.0795		1,304.0024
Worker	1.2057	0.8578	11.4715	0.0309	2.9285	0.0245	2.9530	0.7767	0.0226	0.7992		3,081.4157	3,081.4157	0.0972		3,083.8445
Total	**1.3729**	**5.8573**	**12.7815**	**0.0431**	**3.2294**	**0.0480**	**3.2774**	**0.8633**	**0.0451**	**0.9084**		**4,383.4318**	**4,383.4318**	**0.1766**		**4,387.8469**

3.6 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1672	4.9995	1.3099	0.0122	0.3009	0.0235	0.3244	0.0866	0.0225	0.1091		1,302.0161	1,302.0161	0.0795		1,304.0024
Worker	1.2057	0.8578	11.4715	0.0309	2.9285	0.0245	2.9530	0.7767	0.0226	0.7992		3,081.4157	3,081.4157	0.0972		3,083.8445
Total	**1.3729**	**5.8573**	**12.7815**	**0.0431**	**3.2294**	**0.0480**	**3.2774**	**0.8633**	**0.0451**	**0.9084**		**4,383.4318**	**4,383.4318**	**0.1766**		**4,387.8469**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1429	4.5632	1.1929	0.0121	0.3009	9.3300e-003	0.3102	0.0866	8.9200e-003	0.0956		1,291.9390	1,291.9390	0.0761		1,293.8418
Worker	1.1231	0.7720	10.5527	0.0300	2.9285	0.0237	2.9522	0.7767	0.0218	0.7985		2,983.5770	2,983.5770	0.0879		2,985.7748
Total	**1.2659**	**5.3352**	**11.7456**	**0.0420**	**3.2294**	**0.0330**	**3.2624**	**0.8633**	**0.0307**	**0.8940**		**4,275.5160**	**4,275.5160**	**0.1640**		**4,279.6166**

3.6 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1429	4.5632	1.1929	0.0121	0.3009	9.3300e-003	0.3102	0.0866	8.9200e-003	0.0956		1,291.9390	1,291.9390	0.0761		1,293.8418
Worker	1.1231	0.7720	10.5527	0.0300	2.9285	0.0237	2.9522	0.7767	0.0218	0.7985		2,983.5770	2,983.5770	0.0879		2,985.7748
Total	**1.2659**	**5.3352**	**11.7456**	**0.0420**	**3.2294**	**0.0330**	**3.2624**	**0.8633**	**0.0307**	**0.8940**		**4,275.5160**	**4,275.5160**	**0.1640**		**4,279.6166**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1341	4.3395	1.1287	0.0120	0.3009	8.1600e-003	0.3091	0.0866	7.8000e-003	0.0944		1,280.6837	1,280.6837	0.0735		1,282.5210
Worker	1.0520	0.6973	9.7360	0.0289	2.9285	0.0229	2.9515	0.7767	0.0211	0.7978		2,878.6263	2,878.6263	0.0795		2,880.6126
Total	**1.1861**	**5.0368**	**10.8647**	**0.0409**	**3.2295**	**0.0311**	**3.2605**	**0.8633**	**0.0289**	**0.8922**		**4,159.3099**	**4,159.3099**	**0.1529**		**4,163.1336**

3.6 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1341	4.3395	1.1287	0.0120	0.3009	8.1600e-003	0.3091	0.0866	7.8000e-003	0.0944		1,280.6837	1,280.6837	0.0735		1,282.5210
Worker	1.0520	0.6973	9.7360	0.0289	2.9285	0.0229	2.9515	0.7767	0.0211	0.7978		2,878.6263	2,878.6263	0.0795		2,880.6126
Total	**1.1861**	**5.0368**	**10.8647**	**0.0409**	**3.2295**	**0.0311**	**3.2605**	**0.8633**	**0.0289**	**0.8922**		**4,159.3099**	**4,159.3099**	**0.1529**		**4,163.1336**

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0995	3.2927	1.0194	0.0116	0.3009	3.8000e-003	0.3047	0.0866	3.6400e-003	0.0903		1,240.3649	1,240.3649	0.0651		1,241.9931
Worker	0.9879	0.6309	8.9660	0.0278	2.9285	0.0223	2.9508	0.7767	0.0205	0.7972		2,773.2228	2,773.2228	0.0716		2,775.0137
Total	**1.0874**	**3.9235**	**9.9853**	**0.0394**	**3.2295**	**0.0261**	**3.2555**	**0.8633**	**0.0242**	**0.8875**		**4,013.5877**	**4,013.5877**	**0.1368**		**4,017.0068**

3.6 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0995	3.2927	1.0194	0.0116	0.3009	3.8000e-003	0.3047	0.0866	3.6400e-003	0.0903		1,240.3649	1,240.3649	0.0651		1,241.9931
Worker	0.9879	0.6309	8.9660	0.0278	2.9285	0.0223	2.9508	0.7767	0.0205	0.7972		2,773.2228	2,773.2228	0.0716		2,775.0137
Total	**1.0874**	**3.9235**	**9.9853**	**0.0394**	**3.2295**	**0.0261**	**3.2555**	**0.8633**	**0.0242**	**0.8875**		**4,013.5877**	**4,013.5877**	**0.1368**		**4,017.0068**

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0971	3.2801	0.9883	0.0115	0.3009	3.7600e-003	0.3047	0.0866	3.5900e-003	0.0902		1,235.3312	1,235.3312	0.0642		1,236.9362
Worker	0.9345	0.5753	8.3584	0.0270	2.9285	0.0220	2.9505	0.7767	0.0202	0.7969		2,687.2771	2,687.2771	0.0657		2,688.9201
Total	**1.0316**	**3.8554**	**9.3467**	**0.0385**	**3.2295**	**0.0257**	**3.2552**	**0.8633**	**0.0238**	**0.8871**		**3,922.6083**	**3,922.6083**	**0.1299**		**3,925.8563**

3.6 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0971	3.2801	0.9883	0.0115	0.3009	3.7600e-003	0.3047	0.0866	3.5900e-003	0.0902		1,235.3312	1,235.3312	0.0642		1,236.9362
Worker	0.9345	0.5753	8.3584	0.0270	2.9285	0.0220	2.9505	0.7767	0.0202	0.7969		2,687.2771	2,687.2771	0.0657		2,688.9201
Total	**1.0316**	**3.8554**	**9.3467**	**0.0385**	**3.2295**	**0.0257**	**3.2552**	**0.8633**	**0.0238**	**0.8871**		**3,922.6083**	**3,922.6083**	**0.1299**		**3,925.8563**

3.6 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0946	3.2523	0.9629	0.0115	0.3009	3.7000e-003	0.3046	0.0866	3.5300e-003	0.0902		1,228.5245	1,228.5245	0.0633		1,230.1069
Worker	0.8874	0.5264	7.7630	0.0259	2.9285	0.0215	2.9500	0.7767	0.0198	0.7965		2,583.1496	2,583.1496	0.0600		2,584.6484
Total	**0.9820**	**3.7787**	**8.7260**	**0.0374**	**3.2295**	**0.0252**	**3.2547**	**0.8633**	**0.0233**	**0.8866**		**3,811.6741**	**3,811.6741**	**0.1233**		**3,814.7553**

3.6 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0946	3.2523	0.9629	0.0115	0.3009	3.7000e-003	0.3046	0.0866	3.5300e-003	0.0902		1,228.5245	1,228.5245	0.0633		1,230.1069
Worker	0.8874	0.5264	7.7630	0.0259	2.9285	0.0215	2.9500	0.7767	0.0198	0.7965		2,583.1496	2,583.1496	0.0600		2,584.6484
Total	**0.9820**	**3.7787**	**8.7260**	**0.0374**	**3.2295**	**0.0252**	**3.2547**	**0.8633**	**0.0233**	**0.8866**		**3,811.6741**	**3,811.6741**	**0.1233**		**3,814.7553**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**11.7261**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2393	0.1702	2.2768	6.1400e-003	0.5812	4.8600e-003	0.5861	0.1542	4.4800e-003	0.1586		611.5787	611.5787	0.0193		612.0607
Total	**0.2393**	**0.1702**	**2.2768**	**6.1400e-003**	**0.5812**	**4.8600e-003**	**0.5861**	**0.1542**	**4.4800e-003**	**0.1586**		**611.5787**	**611.5787**	**0.0193**		**612.0607**

3.7 Architectural Coating - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**11.7261**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2393	0.1702	2.2768	6.1400e-003	0.5812	4.8600e-003	0.5861	0.1542	4.4800e-003	0.1586		611.5787	611.5787	0.0193		612.0607
Total	**0.2393**	**0.1702**	**2.2768**	**6.1400e-003**	**0.5812**	**4.8600e-003**	**0.5861**	**0.1542**	**4.4800e-003**	**0.1586**		**611.5787**	**611.5787**	**0.0193**		**612.0607**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**11.7028**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2229	0.1532	2.0944	5.9400e-003	0.5812	4.7000e-003	0.5859	0.1542	4.3300e-003	0.1585		592.1603	592.1603	0.0175		592.5965
Total	**0.2229**	**0.1532**	**2.0944**	**5.9400e-003**	**0.5812**	**4.7000e-003**	**0.5859**	**0.1542**	**4.3300e-003**	**0.1585**		**592.1603**	**592.1603**	**0.0175**		**592.5965**

3.7 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**11.7028**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2229	0.1532	2.0944	5.9400e-003	0.5812	4.7000e-003	0.5859	0.1542	4.3300e-003	0.1585		592.1603	592.1603	0.0175		592.5965
Total	**0.2229**	**0.1532**	**2.0944**	**5.9400e-003**	**0.5812**	**4.7000e-003**	**0.5859**	**0.1542**	**4.3300e-003**	**0.1585**		**592.1603**	**592.1603**	**0.0175**		**592.5965**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**11.6884**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2088	0.1384	1.9323	5.7300e-003	0.5812	4.5500e-003	0.5858	0.1542	4.1900e-003	0.1583		571.3304	571.3304	0.0158		571.7246
Total	**0.2088**	**0.1384**	**1.9323**	**5.7300e-003**	**0.5812**	**4.5500e-003**	**0.5858**	**0.1542**	**4.1900e-003**	**0.1583**		**571.3304**	**571.3304**	**0.0158**		**571.7246**

3.7 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**11.6884**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2088	0.1384	1.9323	5.7300e-003	0.5812	4.5500e-003	0.5858	0.1542	4.1900e-003	0.1583		571.3304	571.3304	0.0158		571.7246
Total	**0.2088**	**0.1384**	**1.9323**	**5.7300e-003**	**0.5812**	**4.5500e-003**	**0.5858**	**0.1542**	**4.1900e-003**	**0.1583**		**571.3304**	**571.3304**	**0.0158**		**571.7246**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**11.6756**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1961	0.1252	1.7795	5.5200e-003	0.5812	4.4200e-003	0.5857	0.1542	4.0700e-003	0.1582		550.4106	550.4106	0.0142		550.7661
Total	**0.1961**	**0.1252**	**1.7795**	**5.5200e-003**	**0.5812**	**4.4200e-003**	**0.5857**	**0.1542**	**4.0700e-003**	**0.1582**		**550.4106**	**550.4106**	**0.0142**		**550.7661**

3.7 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**11.6756**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1961	0.1252	1.7795	5.5200e-003	0.5812	4.4200e-003	0.5857	0.1542	4.0700e-003	0.1582		550.4106	550.4106	0.0142		550.7661
Total	**0.1961**	**0.1252**	**1.7795**	**5.5200e-003**	**0.5812**	**4.4200e-003**	**0.5857**	**0.1542**	**4.0700e-003**	**0.1582**		**550.4106**	**550.4106**	**0.0142**		**550.7661**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**11.6647**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1855	0.1142	1.6589	5.3500e-003	0.5812	4.3600e-003	0.5856	0.1542	4.0100e-003	0.1582		533.3527	533.3527	0.0130		533.6788
Total	**0.1855**	**0.1142**	**1.6589**	**5.3500e-003**	**0.5812**	**4.3600e-003**	**0.5856**	**0.1542**	**4.0100e-003**	**0.1582**		**533.3527**	**533.3527**	**0.0130**		**533.6788**

3.7 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**11.6647**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1855	0.1142	1.6589	5.3500e-003	0.5812	4.3600e-003	0.5856	0.1542	4.0100e-003	0.1582		533.3527	533.3527	0.0130		533.6788
Total	**0.1855**	**0.1142**	**1.6589**	**5.3500e-003**	**0.5812**	**4.3600e-003**	**0.5856**	**0.1542**	**4.0100e-003**	**0.1582**		**533.3527**	**533.3527**	**0.0130**		**533.6788**

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**11.6548**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1761	0.1045	1.5408	5.1400e-003	0.5812	4.2700e-003	0.5855	0.1542	3.9300e-003	0.1581		512.6862	512.6862	0.0119		512.9837
Total	**0.1761**	**0.1045**	**1.5408**	**5.1400e-003**	**0.5812**	**4.2700e-003**	**0.5855**	**0.1542**	**3.9300e-003**	**0.1581**		**512.6862**	**512.6862**	**0.0119**		**512.9837**

3.7 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**11.6548**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1761	0.1045	1.5408	5.1400e-003	0.5812	4.2700e-003	0.5855	0.1542	3.9300e-003	0.1581		512.6862	512.6862	0.0119		512.9837
Total	**0.1761**	**0.1045**	**1.5408**	**5.1400e-003**	**0.5812**	**4.2700e-003**	**0.5855**	**0.1542**	**3.9300e-003**	**0.1581**		**512.6862**	**512.6862**	**0.0119**		**512.9837**

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**11.6548**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1681	0.0963	1.4408	4.9600e-003	0.5812	4.1200e-003	0.5854	0.1542	3.7900e-003	0.1579		494.8734	494.8734	0.0109		495.1462
Total	**0.1681**	**0.0963**	**1.4408**	**4.9600e-003**	**0.5812**	**4.1200e-003**	**0.5854**	**0.1542**	**3.7900e-003**	**0.1579**		**494.8734**	**494.8734**	**0.0109**		**495.1462**

3.7 Architectural Coating - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**11.6548**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1681	0.0963	1.4408	4.9600e-003	0.5812	4.1200e-003	0.5854	0.1542	3.7900e-003	0.1579		494.8734	494.8734	0.0109		495.1462
Total	**0.1681**	**0.0963**	**1.4408**	**4.9600e-003**	**0.5812**	**4.1200e-003**	**0.5854**	**0.1542**	**3.7900e-003**	**0.1579**		**494.8734**	**494.8734**	**0.0109**		**495.1462**

3.7 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**11.6548**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1602	0.0888	1.3512	4.8000e-003	0.5812	3.9000e-003	0.5851	0.1542	3.5800e-003	0.1577		479.1051	479.1051	0.0100		479.3556
Total	**0.1602**	**0.0888**	**1.3512**	**4.8000e-003**	**0.5812**	**3.9000e-003**	**0.5851**	**0.1542**	**3.5800e-003**	**0.1577**		**479.1051**	**479.1051**	**0.0100**		**479.3556**

3.7 Architectural Coating - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**11.6548**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1602	0.0888	1.3512	4.8000e-003	0.5812	3.9000e-003	0.5851	0.1542	3.5800e-003	0.1577		479.1051	479.1051	0.0100		479.3556
Total	**0.1602**	**0.0888**	**1.3512**	**4.8000e-003**	**0.5812**	**3.9000e-003**	**0.5851**	**0.1542**	**3.5800e-003**	**0.1577**		**479.1051**	**479.1051**	**0.0100**		**479.3556**

3.8 Utilities 2 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3235	2.9189	5.7890	8.5600e-003		0.1261	0.1261		0.1160	0.1160		828.3372	828.3372	0.2679		835.0347
Total	**0.3235**	**2.9189**	**5.7890**	**8.5600e-003**		**0.1261**	**0.1261**		**0.1160**	**0.1160**		**828.3372**	**828.3372**	**0.2679**		**835.0347**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0271	0.0161	0.2370	7.9000e-004	0.0894	6.6000e-004	0.0901	0.0237	6.0000e-004	0.0243		78.8748	78.8748	1.8300e-003		78.9206
Total	**0.0271**	**0.0161**	**0.2370**	**7.9000e-004**	**0.0894**	**6.6000e-004**	**0.0901**	**0.0237**	**6.0000e-004**	**0.0243**		**78.8748**	**78.8748**	**1.8300e-003**		**78.9206**

3.8 Utilities 2 - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3235	2.9189	5.7890	8.5600e-003		0.1261	0.1261		0.1160	0.1160	0.0000	828.3372	828.3372	0.2679		835.0347
Total	**0.3235**	**2.9189**	**5.7890**	**8.5600e-003**		**0.1261**	**0.1261**		**0.1160**	**0.1160**	**0.0000**	**828.3372**	**828.3372**	**0.2679**		**835.0347**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0271	0.0161	0.2370	7.9000e-004	0.0894	6.6000e-004	0.0901	0.0237	6.0000e-004	0.0243		78.8748	78.8748	1.8300e-003		78.9206
Total	**0.0271**	**0.0161**	**0.2370**	**7.9000e-004**	**0.0894**	**6.6000e-004**	**0.0901**	**0.0237**	**6.0000e-004**	**0.0243**		**78.8748**	**78.8748**	**1.8300e-003**		**78.9206**

3.8 Utilities 2 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3235	2.9189	5.7890	8.5600e-003		0.1261	0.1261		0.1160	0.1160		828.3372	828.3372	0.2679		835.0347
Total	**0.3235**	**2.9189**	**5.7890**	**8.5600e-003**		**0.1261**	**0.1261**		**0.1160**	**0.1160**		**828.3372**	**828.3372**	**0.2679**		**835.0347**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0259	0.0148	0.2217	7.6000e-004	0.0894	6.3000e-004	0.0901	0.0237	5.8000e-004	0.0243		76.1344	76.1344	1.6800e-003		76.1763
Total	**0.0259**	**0.0148**	**0.2217**	**7.6000e-004**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.8000e-004**	**0.0243**		**76.1344**	**76.1344**	**1.6800e-003**		**76.1763**

3.8 Utilities 2 - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3235	2.9189	5.7890	8.5600e-003		0.1261	0.1261		0.1160	0.1160	0.0000	828.3372	828.3372	0.2679		835.0347
Total	**0.3235**	**2.9189**	**5.7890**	**8.5600e-003**		**0.1261**	**0.1261**		**0.1160**	**0.1160**	**0.0000**	**828.3372**	**828.3372**	**0.2679**		**835.0347**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0259	0.0148	0.2217	7.6000e-004	0.0894	6.3000e-004	0.0901	0.0237	5.8000e-004	0.0243		76.1344	76.1344	1.6800e-003		76.1763
Total	**0.0259**	**0.0148**	**0.2217**	**7.6000e-004**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.8000e-004**	**0.0243**		**76.1344**	**76.1344**	**1.6800e-003**		**76.1763**

3.9 Fine Grading 2 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	1.5576	15.2013	15.5699	0.0317		0.6294	0.6294		0.5790	0.5790		3,071.9872	3,071.9872	0.9935		3,096.8258
Total	**1.5576**	**15.2013**	**15.5699**	**0.0317**	**8.6733**	**0.6294**	**9.3027**	**3.5965**	**0.5790**	**4.1755**		**3,071.9872**	**3,071.9872**	**0.9935**		**3,096.8258**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0677	0.0402	0.5926	1.9800e-003	0.2236	1.6400e-003	0.2252	0.0593	1.5100e-003	0.0608		197.1870	197.1870	4.5800e-003		197.3014
Total	**0.0677**	**0.0402**	**0.5926**	**1.9800e-003**	**0.2236**	**1.6400e-003**	**0.2252**	**0.0593**	**1.5100e-003**	**0.0608**		**197.1870**	**197.1870**	**4.5800e-003**		**197.3014**

3.9 Fine Grading 2 - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	1.5576	15.2013	15.5699	0.0317		0.6294	0.6294		0.5790	0.5790	0.0000	3,071.9872	3,071.9872	0.9935		3,096.8258
Total	**1.5576**	**15.2013**	**15.5699**	**0.0317**	**3.3826**	**0.6294**	**4.0120**	**1.4026**	**0.5790**	**1.9817**	**0.0000**	**3,071.9872**	**3,071.9872**	**0.9935**		**3,096.8258**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0677	0.0402	0.5926	1.9800e-003	0.2236	1.6400e-003	0.2252	0.0593	1.5100e-003	0.0608		197.1870	197.1870	4.5800e-003		197.3014
Total	**0.0677**	**0.0402**	**0.5926**	**1.9800e-003**	**0.2236**	**1.6400e-003**	**0.2252**	**0.0593**	**1.5100e-003**	**0.0608**		**197.1870**	**197.1870**	**4.5800e-003**		**197.3014**

3.9 Fine Grading 2 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	1.5576	15.2013	15.5699	0.0317		0.6294	0.6294		0.5790	0.5790		3,071.9872	3,071.9872	0.9935		3,096.8258
Total	**1.5576**	**15.2013**	**15.5699**	**0.0317**	**8.6733**	**0.6294**	**9.3027**	**3.5965**	**0.5790**	**4.1755**		**3,071.9872**	**3,071.9872**	**0.9935**		**3,096.8258**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0646	0.0370	0.5542	1.9100e-003	0.2236	1.5900e-003	0.2251	0.0593	1.4600e-003	0.0608		190.3359	190.3359	4.2000e-003		190.4409
Total	**0.0646**	**0.0370**	**0.5542**	**1.9100e-003**	**0.2236**	**1.5900e-003**	**0.2251**	**0.0593**	**1.4600e-003**	**0.0608**		**190.3359**	**190.3359**	**4.2000e-003**		**190.4409**

3.9 Fine Grading 2 - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	1.5576	15.2013	15.5699	0.0317		0.6294	0.6294		0.5790	0.5790	0.0000	3,071.9872	3,071.9872	0.9935		3,096.8258
Total	**1.5576**	**15.2013**	**15.5699**	**0.0317**	**3.3826**	**0.6294**	**4.0120**	**1.4026**	**0.5790**	**1.9817**	**0.0000**	**3,071.9872**	**3,071.9872**	**0.9935**		**3,096.8258**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0646	0.0370	0.5542	1.9100e-003	0.2236	1.5900e-003	0.2251	0.0593	1.4600e-003	0.0608		190.3359	190.3359	4.2000e-003		190.4409
Total	**0.0646**	**0.0370**	**0.5542**	**1.9100e-003**	**0.2236**	**1.5900e-003**	**0.2251**	**0.0593**	**1.4600e-003**	**0.0608**		**190.3359**	**190.3359**	**4.2000e-003**		**190.4409**

3.9 Fine Grading 2 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	1.5576	15.2013	15.5699	0.0317		0.6294	0.6294		0.5790	0.5790		3,071.9872	3,071.9872	0.9935		3,096.8258
Total	**1.5576**	**15.2013**	**15.5699**	**0.0317**	**8.6733**	**0.6294**	**9.3027**	**3.5965**	**0.5790**	**4.1755**		**3,071.9872**	**3,071.9872**	**0.9935**		**3,096.8258**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0616	0.0342	0.5197	1.8500e-003	0.2236	1.5000e-003	0.2251	0.0593	1.3800e-003	0.0607		184.2712	184.2712	3.8500e-003		184.3675
Total	**0.0616**	**0.0342**	**0.5197**	**1.8500e-003**	**0.2236**	**1.5000e-003**	**0.2251**	**0.0593**	**1.3800e-003**	**0.0607**		**184.2712**	**184.2712**	**3.8500e-003**		**184.3675**

3.9 Fine Grading 2 - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	1.5576	15.2013	15.5699	0.0317		0.6294	0.6294		0.5790	0.5790	0.0000	3,071.9872	3,071.9872	0.9935		3,096.8258
Total	**1.5576**	**15.2013**	**15.5699**	**0.0317**	**3.3826**	**0.6294**	**4.0120**	**1.4026**	**0.5790**	**1.9817**	**0.0000**	**3,071.9872**	**3,071.9872**	**0.9935**		**3,096.8258**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0616	0.0342	0.5197	1.8500e-003	0.2236	1.5000e-003	0.2251	0.0593	1.3800e-003	0.0607		184.2712	184.2712	3.8500e-003		184.3675
Total	**0.0616**	**0.0342**	**0.5197**	**1.8500e-003**	**0.2236**	**1.5000e-003**	**0.2251**	**0.0593**	**1.3800e-003**	**0.0607**		**184.2712**	**184.2712**	**3.8500e-003**		**184.3675**

3.10 Building Construction 2 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0374	1.3025	0.3814	4.6000e-003	0.1217	1.4700e-003	0.1231	0.0350	1.4000e-003	0.0364		493.9952	493.9952	0.0252		494.6259
Worker	0.4234	0.2425	3.6297	0.0125	1.4643	0.0104	1.4747	0.3883	9.5600e-003	0.3979		1,246.7003	1,246.7003	0.0275		1,247.3876
Total	**0.4608**	**1.5450**	**4.0111**	**0.0171**	**1.5859**	**0.0119**	**1.5978**	**0.4234**	**0.0110**	**0.4343**		**1,740.6956**	**1,740.6956**	**0.0527**		**1,742.0135**

3.10 Building Construction 2 - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0374	1.3025	0.3814	4.6000e-003	0.1217	1.4700e-003	0.1231	0.0350	1.4000e-003	0.0364		493.9952	493.9952	0.0252		494.6259
Worker	0.4234	0.2425	3.6297	0.0125	1.4643	0.0104	1.4747	0.3883	9.5600e-003	0.3979		1,246.7003	1,246.7003	0.0275		1,247.3876
Total	**0.4608**	**1.5450**	**4.0111**	**0.0171**	**1.5859**	**0.0119**	**1.5978**	**0.4234**	**0.0110**	**0.4343**		**1,740.6956**	**1,740.6956**	**0.0527**		**1,742.0135**

3.10 Building Construction 2 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0367	1.2908	0.3751	4.5800e-003	0.1217	1.4400e-003	0.1231	0.0350	1.3800e-003	0.0364		491.6310	491.6310	0.0249		492.2526
Worker	0.4036	0.2237	3.4040	0.0121	1.4643	9.8100e-003	1.4741	0.3883	9.0300e-003	0.3974		1,206.9763	1,206.9763	0.0252		1,207.6073
Total	**0.4403**	**1.5145**	**3.7791**	**0.0167**	**1.5859**	**0.0113**	**1.5972**	**0.4234**	**0.0104**	**0.4338**		**1,698.6073**	**1,698.6073**	**0.0501**		**1,699.8599**

3.10 Building Construction 2 - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0367	1.2908	0.3751	4.5800e-003	0.1217	1.4400e-003	0.1231	0.0350	1.3800e-003	0.0364		491.6310	491.6310	0.0249		492.2526
Worker	0.4036	0.2237	3.4040	0.0121	1.4643	9.8100e-003	1.4741	0.3883	9.0300e-003	0.3974		1,206.9763	1,206.9763	0.0252		1,207.6073
Total	**0.4403**	**1.5145**	**3.7791**	**0.0167**	**1.5859**	**0.0113**	**1.5972**	**0.4234**	**0.0104**	**0.4338**		**1,698.6073**	**1,698.6073**	**0.0501**		**1,699.8599**

3.10 Building Construction 2 - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0360	1.2810	0.3700	4.5600e-003	0.1217	1.4200e-003	0.1231	0.0350	1.3500e-003	0.0364		489.6008	489.6008	0.0245		490.2140
Worker	0.3832	0.2068	3.2065	0.0118	1.4643	9.1000e-003	1.4734	0.3883	8.3700e-003	0.3967		1,171.8026	1,171.8026	0.0233		1,172.3852
Total	**0.4192**	**1.4878**	**3.5766**	**0.0163**	**1.5859**	**0.0105**	**1.5965**	**0.4234**	**9.7200e-003**	**0.4331**		**1,661.4034**	**1,661.4034**	**0.0478**		**1,662.5992**

3.10 Building Construction 2 - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0360	1.2810	0.3700	4.5600e-003	0.1217	1.4200e-003	0.1231	0.0350	1.3500e-003	0.0364		489.6008	489.6008	0.0245		490.2140
Worker	0.3832	0.2068	3.2065	0.0118	1.4643	9.1000e-003	1.4734	0.3883	8.3700e-003	0.3967		1,171.8026	1,171.8026	0.0233		1,172.3852
Total	**0.4192**	**1.4878**	**3.5766**	**0.0163**	**1.5859**	**0.0105**	**1.5965**	**0.4234**	**9.7200e-003**	**0.4331**		**1,661.4034**	**1,661.4034**	**0.0478**		**1,662.5992**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	28.6141	132.7080	419.9395	1.8773	181.4944	1.2559	182.7503	48.5535	1.1664	49.7200		191,856.5884	191,856.5884	7.9469		192,055.2601
Unmitigated	28.6141	132.7080	419.9395	1.8773	181.4944	1.2559	182.7503	48.5535	1.1664	49.7200		191,856.5884	191,856.5884	7.9469		192,055.2601

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1,398.80	1,398.80	1398.80	400,762	400,762
Elementary School	1,017.36	0.00	0.00	2,504,438	2,504,438
Government (Civic Center)	40.04	40.04	40.04	123,649	123,649
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	14,784.00	15,345.00	13365.00	70,658,702	70,658,702
Single Family Housing	1,478.40	1,534.50	1336.50	7,065,870	7,065,870
Total	18,718.60	18,318.34	16,140.34	80,753,422	80,753,422

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	1.07	1.07	1.07	33.00	48.00	19.00	66	28	6
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
Government (Civic Center)	16.60	8.40	6.90	75.00	20.00	5.00	50	34	16
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	13.24	13.24	13.24	100.00	0.00	0.00	100	0	0
Single Family Housing	13.24	13.24	13.24	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Elementary School	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Government (Civic Center)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Other Asphalt Surfaces	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Single Family Housing	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Northlake Creek Avoidance Alternative - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.5030	12.8602	5.5842	0.0820		1.0385	1.0385		1.0385	1.0385		16,396.5999	16,396.5999	0.3143	0.3006	16,494.0367
NaturalGas Unmitigated	1.5030	12.8602	5.5842	0.0820		1.0385	1.0385		1.0385	1.0385		16,396.5999	16,396.5999	0.3143	0.3006	16,494.0367

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1495.97	0.0161	0.1467	0.1232	8.8000e-004		0.0112	0.0112		0.0112	0.0112		175.9969	175.9969	3.3700e-003	3.2300e-003	177.0428
Government (Civic Center)	1254.9	0.0135	0.1230	0.1034	7.4000e-004		9.3500e-003	9.3500e-003		9.3500e-003	9.3500e-003		147.6358	147.6358	2.8300e-003	2.7100e-003	148.5131
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	12420	0.1339	1.1446	0.4871	7.3100e-003		0.0925	0.0925		0.0925	0.0925		1,461.1788	1,461.1788	0.0280	0.0268	1,469.8619
Single Family Housing	124200	1.3394	11.4459	4.8706	0.0731		0.9254	0.9254		0.9254	0.9254		14,611.7884	14,611.7884	0.2801	0.2679	14,698.6190
Total		**1.5030**	**12.8602**	**5.5842**	**0.0820**		**1.0385**	**1.0385**		**1.0385**	**1.0385**		**16,396.5999**	**16,396.5999**	**0.3143**	**0.3006**	**16,494.0367**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1.49597	0.0161	0.1467	0.1232	8.8000e-004		0.0112	0.0112		0.0112	0.0112		175.9969	175.9969	3.3700e-003	3.2300e-003	177.0428
Government (Civic Center)	1.2549	0.0135	0.1230	0.1034	7.4000e-004		9.3500e-003	9.3500e-003		9.3500e-003	9.3500e-003		147.6358	147.6358	2.8300e-003	2.7100e-003	148.5131
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	12.42	0.1339	1.1446	0.4871	7.3100e-003		0.0925	0.0925		0.0925	0.0925		1,461.1788	1,461.1788	0.0280	0.0268	1,469.8619
Single Family Housing	124.2	1.3394	11.4459	4.8706	0.0731		0.9254	0.9254		0.9254	0.9254		14,611.7884	14,611.7884	0.2801	0.2679	14,698.6190
Total		**1.5030**	**12.8602**	**5.5842**	**0.0820**		**1.0385**	**1.0385**		**1.0385**	**1.0385**		**16,396.5999**	**16,396.5999**	**0.3143**	**0.3006**	**16,494.0367**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	80.1354	16.8192	156.1000	0.1043		2.0508	2.0508		2.0508	2.0508	0.0000	19,540.3794	19,540.3794	0.6280	0.3533	19,661.3607
Unmitigated	80.1354	16.8192	156.1000	0.1043		2.0508	2.0508		2.0508	2.0508	0.0000	19,540.3794	19,540.3794	0.6280	0.3533	19,661.3607

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.0880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	67.7820					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.7665	15.0953	6.4235	0.0964		1.2205	1.2205		1.2205	1.2205	0.0000	19,270.5882	19,270.5882	0.3694	0.3533	19,385.1037
Landscaping	4.4988	1.7239	149.6764	7.9100e-003		0.8304	0.8304		0.8304	0.8304		269.7912	269.7912	0.2586		276.2570
Total	**80.1354**	**16.8192**	**156.1000**	**0.1043**		**2.0508**	**2.0508**		**2.0508**	**2.0508**	**0.0000**	**19,540.3794**	**19,540.3794**	**0.6280**	**0.3533**	**19,661.3607**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.0880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	67.7820					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.7665	15.0953	6.4235	0.0964		1.2205	1.2205		1.2205	1.2205	0.0000	19,270.5882	19,270.5882	0.3694	0.3533	19,385.1037
Landscaping	4.4988	1.7239	149.6764	7.9100e-003		0.8304	0.8304		0.8304	0.8304		269.7912	269.7912	0.2586		276.2570
Total	**80.1354**	**16.8192**	**156.1000**	**0.1043**		**2.0508**	**2.0508**		**2.0508**	**2.0508**	**0.0000**	**19,540.3794**	**19,540.3794**	**0.6280**	**0.3533**	**19,661.3607**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Northlake Creek Avoidance Alternative

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government (Civic Center)	44.00	1000sqft	1.01	44,000.00	0
Elementary School	628.00	Student	23.00	52,502.92	0
Other Asphalt Surfaces	2.00	Acre	2.00	87,120.00	0
Other Asphalt Surfaces	71.00	Acre	71.00	3,092,760.00	0
City Park	26.00	Acre	26.00	1,132,560.00	0
Single Family Housing	1,650.00	Dwelling Unit	264.00	2,970,000.00	4719
Single Family Housing	165.00	Dwelling Unit	26.40	297,000.00	472

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	392.72	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Northlake Creek Avoidance Alternative - Los Angeles-South Coast County, Winter

Project Characteristics - Based on DEIR inputs

Land Use - Based on PD for CAA

Construction Phase - Based on data request

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No demolition phase

Off-road Equipment - Based on data request

Off-road Equipment - Based on data request

Off-road Equipment - Based on data request

Off-road Equipment -

Off-road Equipment - Based on data request

Off-road Equipment - Based on data request

Trips and VMT - Based on proportion of default to adjusted worker and vendor trips from the DEIR and applied to the CalEEMod default values for the CAA.

Grading -

Vehicle Trips - Based on VMT and DEIR

Woodstoves - No wood fireplaces

Energy Use -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	550.00	1,935.00
tblConstructionPhase	NumDays	7,750.00	1,565.00
tblConstructionPhase	NumDays	7,750.00	781.00
tblConstructionPhase	NumDays	775.00	652.00
tblConstructionPhase	NumDays	775.00	1,304.00

tblConstructionPhase	NumDays	775.00	521.00
tblConstructionPhase	NumDays	300.00	261.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	1,542.75	455.00
tblFireplaces	NumberNoFireplace	181.50	1,360.00
tblFireplaces	NumberWood	90.75	0.00
tblGrading	AcresOfGrading	18,256.00	1,937.50
tblGrading	AcresOfGrading	652.00	3,260.00
tblGrading	AcresOfGrading	260.50	1,302.50
tblGrading	MaterialExported	0.00	8,279,040.00
tblLandUse	LotAcreage	1.21	23.00
tblLandUse	LotAcreage	53.57	26.40
tblLandUse	LotAcreage	535.71	264.00
tblOffRoadEquipment	HorsePower	212.00	600.00
tblOffRoadEquipment	HorsePower	212.00	436.00
tblOffRoadEquipment	HorsePower	212.00	100.00
tblOffRoadEquipment	HorsePower	212.00	290.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	25.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	392.72
tblTripsAndVMT	VendorTripNumber	917.00	47.00
tblTripsAndVMT	VendorTripNumber	917.00	19.00
tblTripsAndVMT	WorkerTripNumber	95.00	20.00

tblTripsAndVMT	WorkerTripNumber	15.00	8.00
tblTripsAndVMT	WorkerTripNumber	8.00	11.00
tblTripsAndVMT	WorkerTripNumber	2,501.00	262.00
tblTripsAndVMT	WorkerTripNumber	500.00	52.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	2,501.00	131.00
tblVehicleTrips	CC_TL	8.40	1.07
tblVehicleTrips	CNW_TL	6.90	1.07
tblVehicleTrips	CW_TL	16.60	1.07
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	8.70	13.24
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	13.24
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	13.24
tblVehicleTrips	HW_TTP	40.20	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	22.75	53.80
tblVehicleTrips	ST_TR	0.00	0.91
tblVehicleTrips	ST_TR	9.91	9.30
tblVehicleTrips	SU_TR	16.74	53.80
tblVehicleTrips	SU_TR	0.00	0.91
tblVehicleTrips	SU_TR	8.62	8.10
tblVehicleTrips	WD_TR	1.89	53.80
tblVehicleTrips	WD_TR	1.29	1.62
tblVehicleTrips	WD_TR	27.92	0.91

tblVehicleTrips	WD_TR	9.52	8.96
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	65.5184	1,109.6360	442.7064	1.8793	161.1172	26.7856	187.9028	52.2440	24.7158	76.9598	0.0000	198,486.8200	198,486.8200	29.0413	0.0000	199,212.8535
2019	57.4739	991.2970	400.9115	1.8304	90.9513	22.3235	113.2748	29.5238	20.6044	50.1282	0.0000	192,698.8834	192,698.8834	27.9743	0.0000	193,398.2404
2020	69.4245	947.0583	412.3529	1.8924	94.9648	21.5162	116.4810	30.5911	19.8817	50.4728	0.0000	197,626.9374	197,626.9374	28.5837	0.0000	198,341.5294
2021	17.6213	49.5572	48.4392	0.1080	12.5734	2.2440	14.8175	4.6377	2.0917	6.7294	0.0000	10,615.2048	10,615.2048	1.8113	0.0000	10,660.4883
2022	16.9639	43.2567	46.6375	0.1067	12.5735	1.8640	14.4374	4.6377	1.7386	6.3763	0.0000	10,483.2783	10,483.2783	1.7934	0.0000	10,528.1141
2023	16.4597	37.7722	44.9811	0.1051	12.5735	1.5768	14.1503	4.6377	1.4712	6.1089	0.0000	10,324.0025	10,324.0025	1.7695	0.0000	10,368.2394
2024	14.4954	18.6912	28.1669	0.0716	3.8107	0.7045	4.5152	1.0175	0.6658	1.6833	0.0000	7,071.7750	7,071.7750	0.7619	0.0000	7,090.8214
2025	16.3070	35.7335	49.5119	0.1132	12.7970	1.3664	14.1634	4.6970	1.2723	5.9692	0.0000	11,108.9914	11,108.9914	2.0178	0.0000	11,159.4375
2026	15.7130	33.4641	44.9768	0.0937	11.1535	1.3527	12.5062	4.2570	1.2596	5.5166	0.0000	9,109.9833	9,109.9833	1.9458	0.0000	9,158.6278
2027	15.3269	30.4849	38.6574	0.0838	11.0641	1.2251	12.2892	4.2333	1.1422	5.3755	0.0000	8,149.7104	8,149.7104	1.6726	0.0000	8,191.5256
2028	1.8404	13.9737	19.3938	0.0425	1.5859	0.5381	2.1241	0.4234	0.5060	0.9294	0.0000	4,136.5259	4,136.5259	0.6486	0.0000	4,152.7396
Maximum	**69.4245**	**1,109.6360**	**442.7064**	**1.8924**	**161.1172**	**26.7856**	**187.9028**	**52.2440**	**24.7158**	**76.9598**	**0.0000**	**198,486.8200**	**198,486.8200**	**29.0413**	**0.0000**	**199,212.8535**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	65.5184	1,109.6360	442.7064	1.8793	130.9873	26.7856	157.7729	37.5945	24.7158	62.3103	0.0000	198,486.8199	198,486.8199	29.0413	0.0000	199,212.8535
2019	57.4739	991.2970	400.9115	1.8304	71.8418	22.3235	94.1654	20.9320	20.6044	41.5364	0.0000	192,698.8834	192,698.8834	27.9743	0.0000	193,398.2403
2020	69.4245	947.0583	412.3529	1.8924	75.8553	21.5162	97.3715	21.9994	19.8817	41.8810	0.0000	197,626.9374	197,626.9374	28.5837	0.0000	198,341.5293
2021	17.6213	49.5572	48.4392	0.1080	7.2827	2.2440	9.5267	2.4438	2.0917	4.5355	0.0000	10,615.2048	10,615.2048	1.8113	0.0000	10,660.4883
2022	16.9639	43.2567	46.6375	0.1067	7.2827	1.8640	9.1467	2.4438	1.7386	4.1824	0.0000	10,483.2783	10,483.2783	1.7934	0.0000	10,528.1141
2023	16.4597	37.7722	44.9811	0.1051	7.2827	1.5768	8.8595	2.4438	1.4712	3.9150	0.0000	10,324.0025	10,324.0025	1.7695	0.0000	10,368.2394
2024	14.4954	18.6912	28.1669	0.0716	3.8107	0.7045	4.5152	1.0175	0.6658	1.6833	0.0000	7,071.7750	7,071.7750	0.7619	0.0000	7,090.8214
2025	16.3070	35.7335	49.5119	0.1132	7.5063	1.3664	8.8727	2.5031	1.2723	3.7754	0.0000	11,108.9914	11,108.9914	2.0178	0.0000	11,159.4375
2026	15.7130	33.4641	44.9768	0.0937	5.8627	1.3527	7.2155	2.0632	1.2596	3.3228	0.0000	9,109.9833	9,109.9833	1.9458	0.0000	9,158.6278
2027	15.3269	30.4849	38.6574	0.0838	5.7733	1.2251	6.9984	2.0394	1.1422	3.1816	0.0000	8,149.7104	8,149.7104	1.6726	0.0000	8,191.5256
2028	1.8404	13.9737	19.3938	0.0425	1.5859	0.5381	2.1241	0.4234	0.5060	0.9294	0.0000	4,136.5259	4,136.5259	0.6486	0.0000	4,152.7396
Maximum	**69.4245**	**1,109.6360**	**442.7064**	**1.8924**	**130.9873**	**26.7856**	**157.7729**	**37.5945**	**24.7158**	**62.3103**	**0.0000**	**198,486.8199**	**198,486.8199**	**29.0413**	**0.0000**	**199,212.8535**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**23.54**	**0.00**	**19.76**	**31.93**	**0.00**	**20.81**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	80.1354	16.8192	156.1000	0.1043		2.0508	2.0508		2.0508	2.0508	0.0000	19,540.3794	19,540.3794	0.6280	0.3533	19,661.3607
Energy	1.5030	12.8602	5.5842	0.0820		1.0385	1.0385		1.0385	1.0385		16,396.5999	16,396.5999	0.3143	0.3006	16,494.0367
Mobile	27.7734	135.8391	394.4732	1.7904	181.4944	1.2590	182.7534	48.5535	1.1694	49.7229		183,097.3301	183,097.3301	7.9197		183,295.3236
Total	**109.4118**	**165.5185**	**556.1574**	**1.9766**	**181.4944**	**4.3482**	**185.8427**	**48.5535**	**4.2587**	**52.8122**	**0.0000**	**219,034.3094**	**219,034.3094**	**8.8620**	**0.6539**	**219,450.7210**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	80.1354	16.8192	156.1000	0.1043		2.0508	2.0508		2.0508	2.0508	0.0000	19,540.3794	19,540.3794	0.6280	0.3533	19,661.3607
Energy	1.5030	12.8602	5.5842	0.0820		1.0385	1.0385		1.0385	1.0385		16,396.5999	16,396.5999	0.3143	0.3006	16,494.0367
Mobile	27.7734	135.8391	394.4732	1.7904	181.4944	1.2590	182.7534	48.5535	1.1694	49.7229		183,097.3301	183,097.3301	7.9197		183,295.3236
Total	**109.4118**	**165.5185**	**556.1574**	**1.9766**	**181.4944**	**4.3482**	**185.8427**	**48.5535**	**4.2587**	**52.8122**	**0.0000**	**219,034.3094**	**219,034.3094**	**8.8620**	**0.6539**	**219,450.7210**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2018	12/31/2018	5	261	
2	Grading	Grading	7/1/2018	12/29/2020	5	652	
3	Fine Grading 1	Grading	10/1/2018	9/28/2023	5	1304	
4	Utilities 1	Trenching	2/1/2019	12/30/2020	5	499	
5	Building Construction	Building Construction	1/1/2020	12/30/2025	5	1565	
6	Architectural Coating	Architectural Coating	8/1/2020	12/31/2027	5	1935	
7	Utilities 2	Trenching	7/1/2025	2/26/2026	5	173	
8	Fine Grading 2	Grading	10/1/2025	9/29/2027	5	521	
9	Building Construction 2	Building Construction	1/1/2026	12/28/2028	5	781	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1937.5

Acres of Paving: 73

Residential Indoor: 6,615,675; Residential Outdoor: 2,205,225; Non-Residential Indoor: 144,754; Non-Residential Outdoor: 48,251; Striped Parking Area: 190,793 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40

Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Crawler Tractors	3	8.00	600	0.43
Grading	Crawler Tractors	2	8.00	436	0.43
Grading	Crawler Tractors	2	8.00	100	0.43
Grading	Crawler Tractors	2	8.00	290	0.43
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	25	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Fine Grading 1	Excavators	2	8.00	158	0.38
Fine Grading 1	Graders	1	8.00	187	0.41
Fine Grading 1	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading 1	Scrapers	0	8.00	367	0.48
Fine Grading 1	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Utilities 1	Excavators	1	6.00	158	0.38
Utilities 1	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Utilities 2	Excavators	1	6.00	158	0.38
Utilities 2	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Fine Grading 2	Excavators	2	8.00	158	0.38
Fine Grading 2	Graders	1	8.00	187	0.41

Fine Grading 2	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading 2	Scrapers	0	8.00	367	0.48
Fine Grading 2	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 2	Cranes	1	7.00	231	0.29
Building Construction 2	Forklifts	3	8.00	89	0.20
Building Construction 2	Generator Sets	1	8.00	84	0.74
Building Construction 2	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 2	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	38	20.00	0.00	1,034,880.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading 1	6	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utilities 1	3	11.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	262.00	47.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	52.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utilities 2	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading 2	6	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	9	131.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708		3,831.6239	3,831.6239	1.1928		3,861.4448
Total	**4.5627**	**48.1988**	**22.4763**	**0.0380**	**18.0663**	**2.5769**	**20.6432**	**9.9307**	**2.3708**	**12.3014**		**3,831.6239**	**3,831.6239**	**1.1928**		**3,861.4448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1101	0.0831	0.8951	2.1400e-003	0.2012	1.7900e-003	0.2030	0.0534	1.6500e-003	0.0550		212.5037	212.5037	8.0000e-003		212.7036
Total	**0.1101**	**0.0831**	**0.8951**	**2.1400e-003**	**0.2012**	**1.7900e-003**	**0.2030**	**0.0534**	**1.6500e-003**	**0.0550**		**212.5037**	**212.5037**	**8.0000e-003**		**212.7036**

3.2 Site Preparation - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448
Total	**4.5627**	**48.1988**	**22.4763**	**0.0380**	**7.0458**	**2.5769**	**9.6228**	**3.8730**	**2.3708**	**6.2437**	**0.0000**	**3,831.6239**	**3,831.6239**	**1.1928**		**3,861.4448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1101	0.0831	0.8951	2.1400e-003	0.2012	1.7900e-003	0.2030	0.0534	1.6500e-003	0.0550		212.5037	212.5037	8.0000e-003		212.7036
Total	**0.1101**	**0.0831**	**0.8951**	**2.1400e-003**	**0.2012**	**1.7900e-003**	**0.2030**	**0.0534**	**1.6500e-003**	**0.0550**		**212.5037**	**212.5037**	**8.0000e-003**		**212.7036**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					22.6537	0.0000	22.6537	10.4884	0.0000	10.4884			0.0000			0.0000
Off-Road	41.7253	510.2829	286.9201	0.5391		20.7005	20.7005		19.0445	19.0445		54,261.8472	54,261.8472	16.8925		54,684.1585
Total	**41.7253**	**510.2829**	**286.9201**	**0.5391**	**22.6537**	**20.7005**	**43.3542**	**10.4884**	**19.0445**	**29.5329**		**54,261.8472**	**54,261.8472**	**16.8925**		**54,684.1585**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	16.1528	519.8033	113.5067	1.2650	111.2097	1.9885	113.1982	28.0921	1.9024	29.9945		136,655.4533	136,655.4533	9.9410		136,903.9788
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1223	0.0923	0.9945	2.3700e-003	0.2236	1.9900e-003	0.2256	0.0593	1.8400e-003	0.0611		236.1152	236.1152	8.8900e-003		236.3373
Total	**16.2751**	**519.8956**	**114.5012**	**1.2673**	**111.4333**	**1.9905**	**113.4238**	**28.1514**	**1.9043**	**30.0556**		**136,891.5685**	**136,891.5685**	**9.9499**		**137,140.3162**

3.3 Grading - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8349	0.0000	8.8349	4.0905	0.0000	4.0905			0.0000			0.0000
Off-Road	41.7253	510.2829	286.9200	0.5391		20.7005	20.7005		19.0445	19.0445	0.0000	54,261.8471	54,261.8471	16.8925		54,684.1584
Total	**41.7253**	**510.2829**	**286.9200**	**0.5391**	**8.8349**	**20.7005**	**29.5354**	**4.0905**	**19.0445**	**23.1350**	**0.0000**	**54,261.8471**	**54,261.8471**	**16.8925**		**54,684.1584**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	16.1528	519.8033	113.5067	1.2650	111.2097	1.9885	113.1982	28.0921	1.9024	29.9945		136,655.4533	136,655.4533	9.9410		136,903.9788
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1223	0.0923	0.9945	2.3700e-003	0.2236	1.9900e-003	0.2256	0.0593	1.8400e-003	0.0611		236.1152	236.1152	8.8900e-003		236.3373
Total	**16.2751**	**519.8956**	**114.5012**	**1.2673**	**111.4333**	**1.9905**	**113.4238**	**28.1514**	**1.9043**	**30.0556**		**136,891.5685**	**136,891.5685**	**9.9499**		**137,140.3162**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					22.6537	0.0000	22.6537	10.4884	0.0000	10.4884			0.0000			0.0000
Off-Road	38.8159	464.2972	265.3755	0.5390		18.8007	18.8007		17.2966	17.2966		53,376.9270	53,376.9270	16.8879		53,799.1243
Total	**38.8159**	**464.2972**	**265.3755**	**0.5390**	**22.6537**	**18.8007**	**41.4543**	**10.4884**	**17.2966**	**27.7850**		**53,376.9270**	**53,376.9270**	**16.8879**		**53,799.1243**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	15.2889	492.6313	110.6551	1.2466	59.1884	1.8174	61.0058	15.3233	1.7387	17.0620		134,891.4779	134,891.4779	9.8102		135,136.7338
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1108	0.0813	0.8850	2.2900e-003	0.2236	1.9300e-003	0.2255	0.0593	1.7800e-003	0.0611		228.4262	228.4262	7.8600e-003		228.6226
Total	**15.3996**	**492.7126**	**111.5400**	**1.2489**	**59.4119**	**1.8193**	**61.2312**	**15.3826**	**1.7405**	**17.1231**		**135,119.9041**	**135,119.9041**	**9.8181**		**135,365.3564**

3.3 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8349	0.0000	8.8349	4.0905	0.0000	4.0905			0.0000			0.0000
Off-Road	38.8159	464.2972	265.3755	0.5390		18.8007	18.8007		17.2966	17.2966	0.0000	53,376.9270	53,376.9270	16.8879		53,799.1243
Total	**38.8159**	**464.2972**	**265.3755**	**0.5390**	**8.8349**	**18.8007**	**27.6356**	**4.0905**	**17.2966**	**21.3871**	**0.0000**	**53,376.9270**	**53,376.9270**	**16.8879**		**53,799.1243**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	15.2889	492.6313	110.6551	1.2466	59.1884	1.8174	61.0058	15.3233	1.7387	17.0620		134,891.4779	134,891.4779	9.8102		135,136.7338
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1108	0.0813	0.8850	2.2900e-003	0.2236	1.9300e-003	0.2255	0.0593	1.7800e-003	0.0611		228.4262	228.4262	7.8600e-003		228.6226
Total	**15.3996**	**492.7126**	**111.5400**	**1.2489**	**59.4119**	**1.8193**	**61.2312**	**15.3826**	**1.7405**	**17.1231**		**135,119.9041**	**135,119.9041**	**9.8181**		**135,365.3564**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					22.6537	0.0000	22.6537	10.4884	0.0000	10.4884			0.0000			0.0000
Off-Road	36.4364	425.9466	247.6808	0.5391		17.2078	17.2078		15.8312	15.8312		52,216.9923	52,216.9923	16.8880		52,639.1931
Total	**36.4364**	**425.9466**	**247.6808**	**0.5391**	**22.6537**	**17.2078**	**39.8615**	**10.4884**	**15.8312**	**26.3196**		**52,216.9923**	**52,216.9923**	**16.8880**		**52,639.1931**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	14.2013	462.3033	107.4804	1.2321	59.3912	1.4790	60.8702	15.3732	1.4150	16.7882		133,501.7528	133,501.7528	9.5824		133,741.3124
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1022	0.0725	0.8020	2.2200e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		221.4841	221.4841	6.9800e-003		221.6586
Total	**14.3035**	**462.3758**	**108.2824**	**1.2343**	**59.6147**	**1.4809**	**61.0956**	**15.4325**	**1.4167**	**16.8492**		**133,723.2369**	**133,723.2369**	**9.5894**		**133,962.9710**

3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8349	0.0000	8.8349	4.0905	0.0000	4.0905			0.0000			0.0000
Off-Road	36.4364	425.9466	247.6808	0.5391		17.2078	17.2078		15.8312	15.8312	0.0000	52,216.9922	52,216.9922	16.8880		52,639.1931
Total	**36.4364**	**425.9466**	**247.6808**	**0.5391**	**8.8349**	**17.2078**	**26.0428**	**4.0905**	**15.8312**	**19.9217**	**0.0000**	**52,216.9922**	**52,216.9922**	**16.8880**		**52,639.1931**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	14.2013	462.3033	107.4804	1.2321	59.3912	1.4790	60.8702	15.3732	1.4150	16.7882		133,501.7528	133,501.7528	9.5824		133,741.3124
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1022	0.0725	0.8020	2.2200e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		221.4841	221.4841	6.9800e-003		221.6586
Total	**14.3035**	**462.3758**	**108.2824**	**1.2343**	**59.6147**	**1.4809**	**61.0956**	**15.4325**	**1.4167**	**16.8492**		**133,723.2369**	**133,723.2369**	**9.5894**		**133,962.9710**

3.4 Fine Grading 1 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	2.7963	31.1387	17.5159	0.0317		1.5152	1.5152		1.3940	1.3940		3,194.8307	3,194.8307	0.9946		3,219.6956
Total	**2.7963**	**31.1387**	**17.5159**	**0.0317**	**8.6733**	**1.5152**	**10.1885**	**3.5965**	**1.3940**	**4.9905**		**3,194.8307**	**3,194.8307**	**0.9946**		**3,219.6956**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0489	0.0369	0.3978	9.5000e-004	0.0894	8.0000e-004	0.0902	0.0237	7.4000e-004	0.0245		94.4461	94.4461	3.5500e-003		94.5349
Total	**0.0489**	**0.0369**	**0.3978**	**9.5000e-004**	**0.0894**	**8.0000e-004**	**0.0902**	**0.0237**	**7.4000e-004**	**0.0245**		**94.4461**	**94.4461**	**3.5500e-003**		**94.5349**

3.4 Fine Grading 1 - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	2.7963	31.1387	17.5159	0.0317		1.5152	1.5152		1.3940	1.3940	0.0000	3,194.8307	3,194.8307	0.9946		3,219.6956
Total	**2.7963**	**31.1387**	**17.5159**	**0.0317**	**3.3826**	**1.5152**	**4.8978**	**1.4026**	**1.3940**	**2.7966**	**0.0000**	**3,194.8307**	**3,194.8307**	**0.9946**		**3,219.6956**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0489	0.0369	0.3978	9.5000e-004	0.0894	8.0000e-004	0.0902	0.0237	7.4000e-004	0.0245		94.4461	94.4461	3.5500e-003		94.5349
Total	**0.0489**	**0.0369**	**0.3978**	**9.5000e-004**	**0.0894**	**8.0000e-004**	**0.0902**	**0.0237**	**7.4000e-004**	**0.0245**		**94.4461**	**94.4461**	**3.5500e-003**		**94.5349**

3.4 Fine Grading 1 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	2.6084	28.6925	17.2539	0.0317		1.3707	1.3707		1.2610	1.2610		3,140.3905	3,140.3905	0.9936		3,165.2302
Total	**2.6084**	**28.6925**	**17.2539**	**0.0317**	**8.6733**	**1.3707**	**10.0440**	**3.5965**	**1.2610**	**4.8575**		**3,140.3905**	**3,140.3905**	**0.9936**		**3,165.2302**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491
Total	**0.0443**	**0.0325**	**0.3540**	**9.2000e-004**	**0.0894**	**7.7000e-004**	**0.0902**	**0.0237**	**7.1000e-004**	**0.0244**		**91.3705**	**91.3705**	**3.1400e-003**		**91.4491**

3.4 Fine Grading 1 - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	2.6084	28.6925	17.2539	0.0317		1.3707	1.3707		1.2610	1.2610	0.0000	3,140.3905	3,140.3905	0.9936		3,165.2302
Total	**2.6084**	**28.6925**	**17.2539**	**0.0317**	**3.3826**	**1.3707**	**4.7533**	**1.4026**	**1.2610**	**2.6636**	**0.0000**	**3,140.3905**	**3,140.3905**	**0.9936**		**3,165.2302**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491
Total	**0.0443**	**0.0325**	**0.3540**	**9.2000e-004**	**0.0894**	**7.7000e-004**	**0.0902**	**0.0237**	**7.1000e-004**	**0.0244**		**91.3705**	**91.3705**	**3.1400e-003**		**91.4491**

3.4 Fine Grading 1 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	2.4643	26.6934	17.0411	0.0317		1.2572	1.2572		1.1566	1.1566		3,071.8350	3,071.8350	0.9935		3,096.6724
Total	**2.4643**	**26.6934**	**17.0411**	**0.0317**	**8.6733**	**1.2572**	**9.9305**	**3.5965**	**1.1566**	**4.7531**		**3,071.8350**	**3,071.8350**	**0.9935**		**3,096.6724**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0409	0.0290	0.3208	8.9000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		88.5936	88.5936	2.7900e-003		88.6634
Total	**0.0409**	**0.0290**	**0.3208**	**8.9000e-004**	**0.0894**	**7.5000e-004**	**0.0902**	**0.0237**	**6.9000e-004**	**0.0244**		**88.5936**	**88.5936**	**2.7900e-003**		**88.6634**

3.4 Fine Grading 1 - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	2.4643	26.6934	17.0411	0.0317		1.2572	1.2572		1.1566	1.1566	0.0000	3,071.8350	3,071.8350	0.9935		3,096.6724
Total	**2.4643**	**26.6934**	**17.0411**	**0.0317**	**3.3826**	**1.2572**	**4.6398**	**1.4026**	**1.1566**	**2.5592**	**0.0000**	**3,071.8350**	**3,071.8350**	**0.9935**		**3,096.6724**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0409	0.0290	0.3208	8.9000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		88.5936	88.5936	2.7900e-003		88.6634
Total	**0.0409**	**0.0290**	**0.3208**	**8.9000e-004**	**0.0894**	**7.5000e-004**	**0.0902**	**0.0237**	**6.9000e-004**	**0.0244**		**88.5936**	**88.5936**	**2.7900e-003**		**88.6634**

3.4 Fine Grading 1 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	2.3323	24.9943	16.8691	0.0317		1.1526	1.1526		1.0604	1.0604		3,071.2204	3,071.2204	0.9933		3,096.0528
Total	**2.3323**	**24.9943**	**16.8691**	**0.0317**	**8.6733**	**1.1526**	**9.8259**	**3.5965**	**1.0604**	**4.6569**		**3,071.2204**	**3,071.2204**	**0.9933**		**3,096.0528**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
Total	**0.0382**	**0.0261**	**0.2946**	**8.6000e-004**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.7000e-004**	**0.0244**		**85.7801**	**85.7801**	**2.5200e-003**		**85.8432**

3.4 Fine Grading 1 - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	2.3323	24.9943	16.8691	0.0317		1.1526	1.1526		1.0604	1.0604	0.0000	3,071.2204	3,071.2204	0.9933		3,096.0528
Total	**2.3323**	**24.9943**	**16.8691**	**0.0317**	**3.3826**	**1.1526**	**4.5352**	**1.4026**	**1.0604**	**2.4630**	**0.0000**	**3,071.2204**	**3,071.2204**	**0.9933**		**3,096.0528**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
Total	**0.0382**	**0.0261**	**0.2946**	**8.6000e-004**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.7000e-004**	**0.0244**		**85.7801**	**85.7801**	**2.5200e-003**		**85.8432**

3.4 Fine Grading 1 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	1.9864	20.9565	16.2899	0.0317		0.9366	0.9366		0.8617	0.8617		3,070.8227	3,070.8227	0.9932		3,095.6519
Total	**1.9864**	**20.9565**	**16.2899**	**0.0317**	**8.6733**	**0.9366**	**9.6100**	**3.5965**	**0.8617**	**4.4582**		**3,070.8227**	**3,070.8227**	**0.9932**		**3,095.6519**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0358	0.0236	0.2713	8.3000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		82.7656	82.7656	2.2800e-003		82.8225
Total	**0.0358**	**0.0236**	**0.2713**	**8.3000e-004**	**0.0894**	**7.0000e-004**	**0.0901**	**0.0237**	**6.4000e-004**	**0.0244**		**82.7656**	**82.7656**	**2.2800e-003**		**82.8225**

3.4 Fine Grading 1 - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	1.9864	20.9565	16.2899	0.0317		0.9366	0.9366		0.8617	0.8617	0.0000	3,070.8227	3,070.8227	0.9932		3,095.6519
Total	**1.9864**	**20.9565**	**16.2899**	**0.0317**	**3.3826**	**0.9366**	**4.3192**	**1.4026**	**0.8617**	**2.2644**	**0.0000**	**3,070.8227**	**3,070.8227**	**0.9932**		**3,095.6519**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0358	0.0236	0.2713	8.3000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		82.7656	82.7656	2.2800e-003		82.8225
Total	**0.0358**	**0.0236**	**0.2713**	**8.3000e-004**	**0.0894**	**7.0000e-004**	**0.0901**	**0.0237**	**6.4000e-004**	**0.0244**		**82.7656**	**82.7656**	**2.2800e-003**		**82.8225**

3.4 Fine Grading 1 - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	1.7482	17.9488	15.7771	0.0317		0.7749	0.7749		0.7129	0.7129		3,071.2201	3,071.2201	0.9933		3,096.0525
Total	**1.7482**	**17.9488**	**15.7771**	**0.0317**	**8.6733**	**0.7749**	**9.4483**	**3.5965**	**0.7129**	**4.3094**		**3,071.2201**	**3,071.2201**	**0.9933**		**3,096.0525**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0338	0.0213	0.2494	8.0000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.3000e-004	0.0243		79.7377	79.7377	2.0500e-003		79.7890
Total	**0.0338**	**0.0213**	**0.2494**	**8.0000e-004**	**0.0894**	**6.8000e-004**	**0.0901**	**0.0237**	**6.3000e-004**	**0.0243**		**79.7377**	**79.7377**	**2.0500e-003**		**79.7890**

3.4 Fine Grading 1 - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	1.7482	17.9488	15.7771	0.0317		0.7749	0.7749		0.7129	0.7129	0.0000	3,071.2201	3,071.2201	0.9933		3,096.0525
Total	**1.7482**	**17.9488**	**15.7771**	**0.0317**	**3.3826**	**0.7749**	**4.1575**	**1.4026**	**0.7129**	**2.1156**	**0.0000**	**3,071.2201**	**3,071.2201**	**0.9933**		**3,096.0525**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0338	0.0213	0.2494	8.0000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.3000e-004	0.0243		79.7377	79.7377	2.0500e-003		79.7890
Total	**0.0338**	**0.0213**	**0.2494**	**8.0000e-004**	**0.0894**	**6.8000e-004**	**0.0901**	**0.0237**	**6.3000e-004**	**0.0243**		**79.7377**	**79.7377**	**2.0500e-003**		**79.7890**

3.5 Utilities 1 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5448	5.5175	5.9014	8.5300e-003		0.3311	0.3311		0.3046	0.3046		844.6570	844.6570	0.2672		851.3380
Total	**0.5448**	**5.5175**	**5.9014**	**8.5300e-003**		**0.3311**	**0.3311**		**0.3046**	**0.3046**		**844.6570**	**844.6570**	**0.2672**		**851.3380**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0609	0.0447	0.4867	1.2600e-003	0.1230	1.0600e-003	0.1240	0.0326	9.8000e-004	0.0336		125.6344	125.6344	4.3200e-003		125.7424
Total	**0.0609**	**0.0447**	**0.4867**	**1.2600e-003**	**0.1230**	**1.0600e-003**	**0.1240**	**0.0326**	**9.8000e-004**	**0.0336**		**125.6344**	**125.6344**	**4.3200e-003**		**125.7424**

3.5 Utilities 1 - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5448	5.5175	5.9014	8.5300e-003		0.3311	0.3311		0.3046	0.3046	0.0000	844.6570	844.6570	0.2672		851.3380
Total	**0.5448**	**5.5175**	**5.9014**	**8.5300e-003**		**0.3311**	**0.3311**		**0.3046**	**0.3046**	**0.0000**	**844.6570**	**844.6570**	**0.2672**		**851.3380**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0609	0.0447	0.4867	1.2600e-003	0.1230	1.0600e-003	0.1240	0.0326	9.8000e-004	0.0336		125.6344	125.6344	4.3200e-003		125.7424
Total	**0.0609**	**0.0447**	**0.4867**	**1.2600e-003**	**0.1230**	**1.0600e-003**	**0.1240**	**0.0326**	**9.8000e-004**	**0.0336**		**125.6344**	**125.6344**	**4.3200e-003**		**125.7424**

3.5 Utilities 1 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4980	4.9672	5.8704	8.5300e-003		0.2873	0.2873		0.2643	0.2643		826.2416	826.2416	0.2672		832.9222
Total	**0.4980**	**4.9672**	**5.8704**	**8.5300e-003**		**0.2873**	**0.2873**		**0.2643**	**0.2643**		**826.2416**	**826.2416**	**0.2672**		**832.9222**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0562	0.0399	0.4411	1.2200e-003	0.1230	1.0300e-003	0.1240	0.0326	9.5000e-004	0.0336		121.8162	121.8162	3.8400e-003		121.9122
Total	**0.0562**	**0.0399**	**0.4411**	**1.2200e-003**	**0.1230**	**1.0300e-003**	**0.1240**	**0.0326**	**9.5000e-004**	**0.0336**		**121.8162**	**121.8162**	**3.8400e-003**		**121.9122**

3.5 Utilities 1 - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4980	4.9672	5.8704	8.5300e-003		0.2873	0.2873		0.2643	0.2643	0.0000	826.2416	826.2416	0.2672		832.9222
Total	**0.4980**	**4.9672**	**5.8704**	**8.5300e-003**		**0.2873**	**0.2873**		**0.2643**	**0.2643**	**0.0000**	**826.2416**	**826.2416**	**0.2672**		**832.9222**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0562	0.0399	0.4411	1.2200e-003	0.1230	1.0300e-003	0.1240	0.0326	9.5000e-004	0.0336		121.8162	121.8162	3.8400e-003		121.9122
Total	**0.0562**	**0.0399**	**0.4411**	**1.2200e-003**	**0.1230**	**1.0300e-003**	**0.1240**	**0.0326**	**9.5000e-004**	**0.0336**		**121.8162**	**121.8162**	**3.8400e-003**		**121.9122**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1748	4.9985	1.4447	0.0119	0.3009	0.0239	0.3248	0.0866	0.0229	0.1095		1,266.4106	1,266.4106	0.0847		1,268.5277
Worker	1.3389	0.9497	10.5065	0.0291	2.9285	0.0245	2.9530	0.7767	0.0226	0.7992		2,901.4414	2,901.4414	0.0915		2,903.7277
Total	**1.5136**	**5.9481**	**11.9512**	**0.0410**	**3.2294**	**0.0484**	**3.2778**	**0.8633**	**0.0454**	**0.9087**		**4,167.8520**	**4,167.8520**	**0.1761**		**4,172.2554**

3.6 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1748	4.9985	1.4447	0.0119	0.3009	0.0239	0.3248	0.0866	0.0229	0.1095		1,266.4106	1,266.4106	0.0847		1,268.5277
Worker	1.3389	0.9497	10.5065	0.0291	2.9285	0.0245	2.9530	0.7767	0.0226	0.7992		2,901.4414	2,901.4414	0.0915		2,903.7277
Total	**1.5136**	**5.9481**	**11.9512**	**0.0410**	**3.2294**	**0.0484**	**3.2778**	**0.8633**	**0.0454**	**0.9087**		**4,167.8520**	**4,167.8520**	**0.1761**		**4,172.2554**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1500	4.5538	1.3196	0.0118	0.3009	9.6300e-003	0.3105	0.0866	9.2100e-003	0.0958		1,256.5240	1,256.5240	0.0811		1,258.5519
Worker	1.2493	0.8545	9.6483	0.0282	2.9285	0.0237	2.9522	0.7767	0.0218	0.7985		2,809.2979	2,809.2979	0.0827		2,811.3645
Total	**1.3993**	**5.4083**	**10.9679**	**0.0400**	**3.2294**	**0.0333**	**3.2627**	**0.8633**	**0.0310**	**0.8943**		**4,065.8218**	**4,065.8218**	**0.1638**		**4,069.9164**

3.6 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1500	4.5538	1.3196	0.0118	0.3009	9.6300e-003	0.3105	0.0866	9.2100e-003	0.0958		1,256.5240	1,256.5240	0.0811		1,258.5519
Worker	1.2493	0.8545	9.6483	0.0282	2.9285	0.0237	2.9522	0.7767	0.0218	0.7985		2,809.2979	2,809.2979	0.0827		2,811.3645
Total	**1.3993**	**5.4083**	**10.9679**	**0.0400**	**3.2294**	**0.0333**	**3.2627**	**0.8633**	**0.0310**	**0.8943**		**4,065.8218**	**4,065.8218**	**0.1638**		**4,069.9164**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1408	4.3277	1.2491	0.0117	0.3009	8.4200e-003	0.3093	0.0866	8.0600e-003	0.0947		1,245.3603	1,245.3603	0.0783		1,247.3170
Worker	1.1733	0.7717	8.8864	0.0272	2.9285	0.0229	2.9515	0.7767	0.0211	0.7978		2,710.5720	2,710.5720	0.0746		2,712.4379
Total	**1.3141**	**5.0994**	**10.1355**	**0.0389**	**3.2295**	**0.0313**	**3.2608**	**0.8633**	**0.0292**	**0.8925**		**3,955.9323**	**3,955.9323**	**0.1529**		**3,959.7549**

3.6 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1408	4.3277	1.2491	0.0117	0.3009	8.4200e-003	0.3093	0.0866	8.0600e-003	0.0947		1,245.3603	1,245.3603	0.0783		1,247.3170
Worker	1.1733	0.7717	8.8864	0.0272	2.9285	0.0229	2.9515	0.7767	0.0211	0.7978		2,710.5720	2,710.5720	0.0746		2,712.4379
Total	**1.3141**	**5.0994**	**10.1355**	**0.0389**	**3.2295**	**0.0313**	**3.2608**	**0.8633**	**0.0292**	**0.8925**		**3,955.9323**	**3,955.9323**	**0.1529**		**3,959.7549**

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1046	3.2777	1.1100	0.0113	0.3009	4.0000e-003	0.3049	0.0866	3.8200e-003	0.0905		1,206.6842	1,206.6842	0.0689		1,208.4067
Worker	1.1054	0.6980	8.1683	0.0262	2.9285	0.0223	2.9508	0.7767	0.0205	0.7972		2,611.4079	2,611.4079	0.0672		2,613.0880
Total	**1.2100**	**3.9757**	**9.2783**	**0.0375**	**3.2295**	**0.0263**	**3.2557**	**0.8633**	**0.0243**	**0.8876**		**3,818.0921**	**3,818.0921**	**0.1361**		**3,821.4947**

3.6 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1046	3.2777	1.1100	0.0113	0.3009	4.0000e-003	0.3049	0.0866	3.8200e-003	0.0905		1,206.6842	1,206.6842	0.0689		1,208.4067
Worker	1.1054	0.6980	8.1683	0.0262	2.9285	0.0223	2.9508	0.7767	0.0205	0.7972		2,611.4079	2,611.4079	0.0672		2,613.0880
Total	**1.2100**	**3.9757**	**9.2783**	**0.0375**	**3.2295**	**0.0263**	**3.2557**	**0.8633**	**0.0243**	**0.8876**		**3,818.0921**	**3,818.0921**	**0.1361**		**3,821.4947**

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1020	3.2660	1.0763	0.0112	0.3009	3.9300e-003	0.3049	0.0866	3.7600e-003	0.0904		1,202.0042	1,202.0042	0.0679		1,203.7006
Worker	1.0490	0.6363	7.6044	0.0254	2.9285	0.0220	2.9505	0.7767	0.0202	0.7969		2,530.4059	2,530.4059	0.0616		2,531.9453
Total	**1.1510**	**3.9023**	**8.6807**	**0.0366**	**3.2295**	**0.0259**	**3.2553**	**0.8633**	**0.0240**	**0.8873**		**3,732.4101**	**3,732.4101**	**0.1294**		**3,735.6459**

3.6 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1020	3.2660	1.0763	0.0112	0.3009	3.9300e-003	0.3049	0.0866	3.7600e-003	0.0904		1,202.0042	1,202.0042	0.0679		1,203.7006
Worker	1.0490	0.6363	7.6044	0.0254	2.9285	0.0220	2.9505	0.7767	0.0202	0.7969		2,530.4059	2,530.4059	0.0616		2,531.9453
Total	**1.1510**	**3.9023**	**8.6807**	**0.0366**	**3.2295**	**0.0259**	**3.2553**	**0.8633**	**0.0240**	**0.8873**		**3,732.4101**	**3,732.4101**	**0.1294**		**3,735.6459**

3.6 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0994	3.2383	1.0488	0.0112	0.3009	3.8600e-003	0.3048	0.0866	3.6800e-003	0.0903		1,195.5590	1,195.5590	0.0668		1,197.2299
Worker	0.9992	0.5821	7.0559	0.0244	2.9285	0.0215	2.9500	0.7767	0.0198	0.7965		2,432.4521	2,432.4521	0.0561		2,433.8553
Total	**1.0986**	**3.8204**	**8.1047**	**0.0355**	**3.2295**	**0.0254**	**3.2548**	**0.8633**	**0.0235**	**0.8868**		**3,628.0111**	**3,628.0111**	**0.1230**		**3,631.0852**

3.6 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0994	3.2383	1.0488	0.0112	0.3009	3.8600e-003	0.3048	0.0866	3.6800e-003	0.0903		1,195.5590	1,195.5590	0.0668		1,197.2299
Worker	0.9992	0.5821	7.0559	0.0244	2.9285	0.0215	2.9500	0.7767	0.0198	0.7965		2,432.4521	2,432.4521	0.0561		2,433.8553
Total	**1.0986**	**3.8204**	**8.1047**	**0.0355**	**3.2295**	**0.0254**	**3.2548**	**0.8633**	**0.0235**	**0.8868**		**3,628.0111**	**3,628.0111**	**0.1230**		**3,631.0852**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**11.7261**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2657	0.1885	2.0853	5.7800e-003	0.5812	4.8600e-003	0.5861	0.1542	4.4800e-003	0.1586		575.8586	575.8586	0.0182		576.3124
Total	**0.2657**	**0.1885**	**2.0853**	**5.7800e-003**	**0.5812**	**4.8600e-003**	**0.5861**	**0.1542**	**4.4800e-003**	**0.1586**		**575.8586**	**575.8586**	**0.0182**		**576.3124**

3.7 Architectural Coating - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**11.7261**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2657	0.1885	2.0853	5.7800e-003	0.5812	4.8600e-003	0.5861	0.1542	4.4800e-003	0.1586		575.8586	575.8586	0.0182		576.3124
Total	**0.2657**	**0.1885**	**2.0853**	**5.7800e-003**	**0.5812**	**4.8600e-003**	**0.5861**	**0.1542**	**4.4800e-003**	**0.1586**		**575.8586**	**575.8586**	**0.0182**		**576.3124**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**11.7028**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2480	0.1696	1.9149	5.6000e-003	0.5812	4.7000e-003	0.5859	0.1542	4.3300e-003	0.1585		557.5706	557.5706	0.0164		557.9808
Total	**0.2480**	**0.1696**	**1.9149**	**5.6000e-003**	**0.5812**	**4.7000e-003**	**0.5859**	**0.1542**	**4.3300e-003**	**0.1585**		**557.5706**	**557.5706**	**0.0164**		**557.9808**

3.7 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**11.7028**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2480	0.1696	1.9149	5.6000e-003	0.5812	4.7000e-003	0.5859	0.1542	4.3300e-003	0.1585		557.5706	557.5706	0.0164		557.9808
Total	**0.2480**	**0.1696**	**1.9149**	**5.6000e-003**	**0.5812**	**4.7000e-003**	**0.5859**	**0.1542**	**4.3300e-003**	**0.1585**		**557.5706**	**557.5706**	**0.0164**		**557.9808**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**11.6884**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2329	0.1532	1.7637	5.4000e-003	0.5812	4.5500e-003	0.5858	0.1542	4.1900e-003	0.1583		537.9761	537.9761	0.0148		538.3464
Total	**0.2329**	**0.1532**	**1.7637**	**5.4000e-003**	**0.5812**	**4.5500e-003**	**0.5858**	**0.1542**	**4.1900e-003**	**0.1583**		**537.9761**	**537.9761**	**0.0148**		**538.3464**

3.7 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**11.6884**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2329	0.1532	1.7637	5.4000e-003	0.5812	4.5500e-003	0.5858	0.1542	4.1900e-003	0.1583		537.9761	537.9761	0.0148		538.3464
Total	**0.2329**	**0.1532**	**1.7637**	**5.4000e-003**	**0.5812**	**4.5500e-003**	**0.5858**	**0.1542**	**4.1900e-003**	**0.1583**		**537.9761**	**537.9761**	**0.0148**		**538.3464**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**11.6756**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2194	0.1385	1.6212	5.2000e-003	0.5812	4.4200e-003	0.5857	0.1542	4.0700e-003	0.1582		518.2947	518.2947	0.0133		518.6282
Total	**0.2194**	**0.1385**	**1.6212**	**5.2000e-003**	**0.5812**	**4.4200e-003**	**0.5857**	**0.1542**	**4.0700e-003**	**0.1582**		**518.2947**	**518.2947**	**0.0133**		**518.6282**

3.7 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**11.6756**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2194	0.1385	1.6212	5.2000e-003	0.5812	4.4200e-003	0.5857	0.1542	4.0700e-003	0.1582		518.2947	518.2947	0.0133		518.6282
Total	**0.2194**	**0.1385**	**1.6212**	**5.2000e-003**	**0.5812**	**4.4200e-003**	**0.5857**	**0.1542**	**4.0700e-003**	**0.1582**		**518.2947**	**518.2947**	**0.0133**		**518.6282**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**11.6647**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2082	0.1263	1.5093	5.0400e-003	0.5812	4.3600e-003	0.5856	0.1542	4.0100e-003	0.1582		502.2180	502.2180	0.0122		502.5235
Total	**0.2082**	**0.1263**	**1.5093**	**5.0400e-003**	**0.5812**	**4.3600e-003**	**0.5856**	**0.1542**	**4.0100e-003**	**0.1582**		**502.2180**	**502.2180**	**0.0122**		**502.5235**

3.7 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**11.6647**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2082	0.1263	1.5093	5.0400e-003	0.5812	4.3600e-003	0.5856	0.1542	4.0100e-003	0.1582		502.2180	502.2180	0.0122		502.5235
Total	**0.2082**	**0.1263**	**1.5093**	**5.0400e-003**	**0.5812**	**4.3600e-003**	**0.5856**	**0.1542**	**4.0100e-003**	**0.1582**		**502.2180**	**502.2180**	**0.0122**		**502.5235**

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**11.6548**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1983	0.1155	1.4004	4.8400e-003	0.5812	4.2700e-003	0.5855	0.1542	3.9300e-003	0.1581		482.7768	482.7768	0.0111		483.0552
Total	**0.1983**	**0.1155**	**1.4004**	**4.8400e-003**	**0.5812**	**4.2700e-003**	**0.5855**	**0.1542**	**3.9300e-003**	**0.1581**		**482.7768**	**482.7768**	**0.0111**		**483.0552**

3.7 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**11.6548**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1983	0.1155	1.4004	4.8400e-003	0.5812	4.2700e-003	0.5855	0.1542	3.9300e-003	0.1581		482.7768	482.7768	0.0111		483.0552
Total	**0.1983**	**0.1155**	**1.4004**	**4.8400e-003**	**0.5812**	**4.2700e-003**	**0.5855**	**0.1542**	**3.9300e-003**	**0.1581**		**482.7768**	**482.7768**	**0.0111**		**483.0552**

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**11.6548**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1899	0.1064	1.3083	4.6700e-003	0.5812	4.1200e-003	0.5854	0.1542	3.7900e-003	0.1579		466.0100	466.0100	0.0102		466.2652
Total	**0.1899**	**0.1064**	**1.3083**	**4.6700e-003**	**0.5812**	**4.1200e-003**	**0.5854**	**0.1542**	**3.7900e-003**	**0.1579**		**466.0100**	**466.0100**	**0.0102**		**466.2652**

3.7 Architectural Coating - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**11.6548**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1899	0.1064	1.3083	4.6700e-003	0.5812	4.1200e-003	0.5854	0.1542	3.7900e-003	0.1579		466.0100	466.0100	0.0102		466.2652
Total	**0.1899**	**0.1064**	**1.3083**	**4.6700e-003**	**0.5812**	**4.1200e-003**	**0.5854**	**0.1542**	**3.7900e-003**	**0.1579**		**466.0100**	**466.0100**	**0.0102**		**466.2652**

3.7 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**11.6548**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1815	0.0982	1.2258	4.5200e-003	0.5812	3.9000e-003	0.5851	0.1542	3.5800e-003	0.1577		451.1545	451.1545	9.3700e-003		451.3886
Total	**0.1815**	**0.0982**	**1.2258**	**4.5200e-003**	**0.5812**	**3.9000e-003**	**0.5851**	**0.1542**	**3.5800e-003**	**0.1577**		**451.1545**	**451.1545**	**9.3700e-003**		**451.3886**

3.7 Architectural Coating - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4839					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**11.6548**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1815	0.0982	1.2258	4.5200e-003	0.5812	3.9000e-003	0.5851	0.1542	3.5800e-003	0.1577		451.1545	451.1545	9.3700e-003		451.3886
Total	**0.1815**	**0.0982**	**1.2258**	**4.5200e-003**	**0.5812**	**3.9000e-003**	**0.5851**	**0.1542**	**3.5800e-003**	**0.1577**		**451.1545**	**451.1545**	**9.3700e-003**		**451.3886**

3.8 Utilities 2 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3235	2.9189	5.7890	8.5600e-003		0.1261	0.1261		0.1160	0.1160		828.3372	828.3372	0.2679		835.0347
Total	**0.3235**	**2.9189**	**5.7890**	**8.5600e-003**		**0.1261**	**0.1261**		**0.1160**	**0.1160**		**828.3372**	**828.3372**	**0.2679**		**835.0347**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0305	0.0178	0.2155	7.4000e-004	0.0894	6.6000e-004	0.0901	0.0237	6.0000e-004	0.0243		74.2734	74.2734	1.7100e-003		74.3162
Total	**0.0305**	**0.0178**	**0.2155**	**7.4000e-004**	**0.0894**	**6.6000e-004**	**0.0901**	**0.0237**	**6.0000e-004**	**0.0243**		**74.2734**	**74.2734**	**1.7100e-003**		**74.3162**

3.8 Utilities 2 - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3235	2.9189	5.7890	8.5600e-003		0.1261	0.1261		0.1160	0.1160	0.0000	828.3372	828.3372	0.2679		835.0347
Total	**0.3235**	**2.9189**	**5.7890**	**8.5600e-003**		**0.1261**	**0.1261**		**0.1160**	**0.1160**	**0.0000**	**828.3372**	**828.3372**	**0.2679**		**835.0347**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0305	0.0178	0.2155	7.4000e-004	0.0894	6.6000e-004	0.0901	0.0237	6.0000e-004	0.0243		74.2734	74.2734	1.7100e-003		74.3162
Total	**0.0305**	**0.0178**	**0.2155**	**7.4000e-004**	**0.0894**	**6.6000e-004**	**0.0901**	**0.0237**	**6.0000e-004**	**0.0243**		**74.2734**	**74.2734**	**1.7100e-003**		**74.3162**

3.8 Utilities 2 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3235	2.9189	5.7890	8.5600e-003		0.1261	0.1261		0.1160	0.1160		828.3372	828.3372	0.2679		835.0347
Total	**0.3235**	**2.9189**	**5.7890**	**8.5600e-003**		**0.1261**	**0.1261**		**0.1160**	**0.1160**		**828.3372**	**828.3372**	**0.2679**		**835.0347**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0292	0.0164	0.2013	7.2000e-004	0.0894	6.3000e-004	0.0901	0.0237	5.8000e-004	0.0243		71.6938	71.6938	1.5700e-003		71.7331
Total	**0.0292**	**0.0164**	**0.2013**	**7.2000e-004**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.8000e-004**	**0.0243**		**71.6938**	**71.6938**	**1.5700e-003**		**71.7331**

3.8 Utilities 2 - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3235	2.9189	5.7890	8.5600e-003		0.1261	0.1261		0.1160	0.1160	0.0000	828.3372	828.3372	0.2679		835.0347
Total	**0.3235**	**2.9189**	**5.7890**	**8.5600e-003**		**0.1261**	**0.1261**		**0.1160**	**0.1160**	**0.0000**	**828.3372**	**828.3372**	**0.2679**		**835.0347**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0292	0.0164	0.2013	7.2000e-004	0.0894	6.3000e-004	0.0901	0.0237	5.8000e-004	0.0243		71.6938	71.6938	1.5700e-003		71.7331
Total	**0.0292**	**0.0164**	**0.2013**	**7.2000e-004**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.8000e-004**	**0.0243**		**71.6938**	**71.6938**	**1.5700e-003**		**71.7331**

3.9 Fine Grading 2 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	1.5576	15.2013	15.5699	0.0317		0.6294	0.6294		0.5790	0.5790		3,071.9872	3,071.9872	0.9935		3,096.8258
Total	**1.5576**	**15.2013**	**15.5699**	**0.0317**	**8.6733**	**0.6294**	**9.3027**	**3.5965**	**0.5790**	**4.1755**		**3,071.9872**	**3,071.9872**	**0.9935**		**3,096.8258**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.0444	0.5386	1.8600e-003	0.2236	1.6400e-003	0.2252	0.0593	1.5100e-003	0.0608		185.6834	185.6834	4.2800e-003		185.7905
Total	**0.0763**	**0.0444**	**0.5386**	**1.8600e-003**	**0.2236**	**1.6400e-003**	**0.2252**	**0.0593**	**1.5100e-003**	**0.0608**		**185.6834**	**185.6834**	**4.2800e-003**		**185.7905**

3.9 Fine Grading 2 - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	1.5576	15.2013	15.5699	0.0317		0.6294	0.6294		0.5790	0.5790	0.0000	3,071.9872	3,071.9872	0.9935		3,096.8258
Total	**1.5576**	**15.2013**	**15.5699**	**0.0317**	**3.3826**	**0.6294**	**4.0120**	**1.4026**	**0.5790**	**1.9817**	**0.0000**	**3,071.9872**	**3,071.9872**	**0.9935**		**3,096.8258**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.0444	0.5386	1.8600e-003	0.2236	1.6400e-003	0.2252	0.0593	1.5100e-003	0.0608		185.6834	185.6834	4.2800e-003		185.7905
Total	**0.0763**	**0.0444**	**0.5386**	**1.8600e-003**	**0.2236**	**1.6400e-003**	**0.2252**	**0.0593**	**1.5100e-003**	**0.0608**		**185.6834**	**185.6834**	**4.2800e-003**		**185.7905**

3.9 Fine Grading 2 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	1.5576	15.2013	15.5699	0.0317		0.6294	0.6294		0.5790	0.5790		3,071.9872	3,071.9872	0.9935		3,096.8258
Total	**1.5576**	**15.2013**	**15.5699**	**0.0317**	**8.6733**	**0.6294**	**9.3027**	**3.5965**	**0.5790**	**4.1755**		**3,071.9872**	**3,071.9872**	**0.9935**		**3,096.8258**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0730	0.0409	0.5032	1.8000e-003	0.2236	1.5900e-003	0.2251	0.0593	1.4600e-003	0.0608		179.2346	179.2346	3.9300e-003		179.3328
Total	**0.0730**	**0.0409**	**0.5032**	**1.8000e-003**	**0.2236**	**1.5900e-003**	**0.2251**	**0.0593**	**1.4600e-003**	**0.0608**		**179.2346**	**179.2346**	**3.9300e-003**		**179.3328**

3.9 Fine Grading 2 - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	1.5576	15.2013	15.5699	0.0317		0.6294	0.6294		0.5790	0.5790	0.0000	3,071.9872	3,071.9872	0.9935		3,096.8258
Total	**1.5576**	**15.2013**	**15.5699**	**0.0317**	**3.3826**	**0.6294**	**4.0120**	**1.4026**	**0.5790**	**1.9817**	**0.0000**	**3,071.9872**	**3,071.9872**	**0.9935**		**3,096.8258**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0730	0.0409	0.5032	1.8000e-003	0.2236	1.5900e-003	0.2251	0.0593	1.4600e-003	0.0608		179.2346	179.2346	3.9300e-003		179.3328
Total	**0.0730**	**0.0409**	**0.5032**	**1.8000e-003**	**0.2236**	**1.5900e-003**	**0.2251**	**0.0593**	**1.4600e-003**	**0.0608**		**179.2346**	**179.2346**	**3.9300e-003**		**179.3328**

3.9 Fine Grading 2 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	1.5576	15.2013	15.5699	0.0317		0.6294	0.6294		0.5790	0.5790		3,071.9872	3,071.9872	0.9935		3,096.8258
Total	**1.5576**	**15.2013**	**15.5699**	**0.0317**	**8.6733**	**0.6294**	**9.3027**	**3.5965**	**0.5790**	**4.1755**		**3,071.9872**	**3,071.9872**	**0.9935**		**3,096.8258**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0698	0.0378	0.4714	1.7400e-003	0.2236	1.5000e-003	0.2251	0.0593	1.3800e-003	0.0607		173.5210	173.5210	3.6000e-003		173.6110
Total	**0.0698**	**0.0378**	**0.4714**	**1.7400e-003**	**0.2236**	**1.5000e-003**	**0.2251**	**0.0593**	**1.3800e-003**	**0.0607**		**173.5210**	**173.5210**	**3.6000e-003**		**173.6110**

3.9 Fine Grading 2 - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	1.5576	15.2013	15.5699	0.0317		0.6294	0.6294		0.5790	0.5790	0.0000	3,071.9872	3,071.9872	0.9935		3,096.8258
Total	**1.5576**	**15.2013**	**15.5699**	**0.0317**	**3.3826**	**0.6294**	**4.0120**	**1.4026**	**0.5790**	**1.9817**	**0.0000**	**3,071.9872**	**3,071.9872**	**0.9935**		**3,096.8258**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0698	0.0378	0.4714	1.7400e-003	0.2236	1.5000e-003	0.2251	0.0593	1.3800e-003	0.0607		173.5210	173.5210	3.6000e-003		173.6110
Total	**0.0698**	**0.0378**	**0.4714**	**1.7400e-003**	**0.2236**	**1.5000e-003**	**0.2251**	**0.0593**	**1.3800e-003**	**0.0607**		**173.5210**	**173.5210**	**3.6000e-003**		**173.6110**

3.10 Building Construction 2 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0393	1.2969	0.4154	4.4800e-003	0.1217	1.5200e-003	0.1232	0.0350	1.4600e-003	0.0365		480.8114	480.8114	0.0266		481.4767
Worker	0.4783	0.2681	3.2959	0.0118	1.4643	0.0104	1.4747	0.3883	9.5600e-003	0.3979		1,173.9867	1,173.9867	0.0257		1,174.6296
Total	**0.5176**	**1.5650**	**3.7113**	**0.0163**	**1.5859**	**0.0119**	**1.5978**	**0.4234**	**0.0110**	**0.4344**		**1,654.7981**	**1,654.7981**	**0.0523**		**1,656.1063**

3.10 Building Construction 2 - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0393	1.2969	0.4154	4.4800e-003	0.1217	1.5200e-003	0.1232	0.0350	1.4600e-003	0.0365		480.8114	480.8114	0.0266		481.4767
Worker	0.4783	0.2681	3.2959	0.0118	1.4643	0.0104	1.4747	0.3883	9.5600e-003	0.3979		1,173.9867	1,173.9867	0.0257		1,174.6296
Total	**0.5176**	**1.5650**	**3.7113**	**0.0163**	**1.5859**	**0.0119**	**1.5978**	**0.4234**	**0.0110**	**0.4344**		**1,654.7981**	**1,654.7981**	**0.0523**		**1,656.1063**

3.10 Building Construction 2 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0385	1.2852	0.4085	4.4600e-003	0.1217	1.4900e-003	0.1232	0.0350	1.4200e-003	0.0365		478.5632	478.5632	0.0262		479.2183
Worker	0.4573	0.2473	3.0880	0.0114	1.4643	9.8100e-003	1.4741	0.3883	9.0300e-003	0.3974		1,136.5622	1,136.5622	0.0236		1,137.1521
Total	**0.4958**	**1.5325**	**3.4965**	**0.0159**	**1.5859**	**0.0113**	**1.5972**	**0.4234**	**0.0105**	**0.4338**		**1,615.1254**	**1,615.1254**	**0.0498**		**1,616.3703**

3.10 Building Construction 2 - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0385	1.2852	0.4085	4.4600e-003	0.1217	1.4900e-003	0.1232	0.0350	1.4200e-003	0.0365		478.5632	478.5632	0.0262		479.2183
Worker	0.4573	0.2473	3.0880	0.0114	1.4643	9.8100e-003	1.4741	0.3883	9.0300e-003	0.3974		1,136.5622	1,136.5622	0.0236		1,137.1521
Total	**0.4958**	**1.5325**	**3.4965**	**0.0159**	**1.5859**	**0.0113**	**1.5972**	**0.4234**	**0.0105**	**0.4338**		**1,615.1254**	**1,615.1254**	**0.0498**		**1,616.3703**

3.10 Building Construction 2 - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0378	1.2754	0.4030	4.4400e-003	0.1217	1.4600e-003	0.1231	0.0350	1.4000e-003	0.0364		476.6449	476.6449	0.0258		477.2906
Worker	0.4352	0.2286	2.9062	0.0111	1.4643	9.1000e-003	1.4734	0.3883	8.3700e-003	0.3967		1,103.4066	1,103.4066	0.0218		1,103.9510
Total	**0.4730**	**1.5040**	**3.3091**	**0.0155**	**1.5859**	**0.0106**	**1.5965**	**0.4234**	**9.7700e-003**	**0.4331**		**1,580.0516**	**1,580.0516**	**0.0476**		**1,581.2416**

3.10 Building Construction 2 - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0378	1.2754	0.4030	4.4400e-003	0.1217	1.4600e-003	0.1231	0.0350	1.4000e-003	0.0364		476.6449	476.6449	0.0258		477.2906
Worker	0.4352	0.2286	2.9062	0.0111	1.4643	9.1000e-003	1.4734	0.3883	8.3700e-003	0.3967		1,103.4066	1,103.4066	0.0218		1,103.9510
Total	**0.4730**	**1.5040**	**3.3091**	**0.0155**	**1.5859**	**0.0106**	**1.5965**	**0.4234**	**9.7700e-003**	**0.4331**		**1,580.0516**	**1,580.0516**	**0.0476**		**1,581.2416**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	27.7734	135.8391	394.4732	1.7904	181.4944	1.2590	182.7534	48.5535	1.1694	49.7229		183,097.3301	183,097.3301	7.9197		183,295.3236
Unmitigated	27.7734	135.8391	394.4732	1.7904	181.4944	1.2590	182.7534	48.5535	1.1694	49.7229		183,097.3301	183,097.3301	7.9197		183,295.3236

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1,398.80	1,398.80	1398.80	400,762	400,762
Elementary School	1,017.36	0.00	0.00	2,504,438	2,504,438
Government (Civic Center)	40.04	40.04	40.04	123,649	123,649
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	14,784.00	15,345.00	13365.00	70,658,702	70,658,702
Single Family Housing	1,478.40	1,534.50	1336.50	7,065,870	7,065,870
Total	18,718.60	18,318.34	16,140.34	80,753,422	80,753,422

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	1.07	1.07	1.07	33.00	48.00	19.00	66	28	6
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
Government (Civic Center)	16.60	8.40	6.90	75.00	20.00	5.00	50	34	16
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	13.24	13.24	13.24	100.00	0.00	0.00	100	0	0
Single Family Housing	13.24	13.24	13.24	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Elementary School	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Government (Civic Center)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Other Asphalt Surfaces	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Single Family Housing	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Northlake Creek Avoidance Alternative - Los Angeles-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.5030	12.8602	5.5842	0.0820		1.0385	1.0385		1.0385	1.0385		16,396.5999	16,396.5999	0.3143	0.3006	16,494.0367
NaturalGas Unmitigated	1.5030	12.8602	5.5842	0.0820		1.0385	1.0385		1.0385	1.0385		16,396.5999	16,396.5999	0.3143	0.3006	16,494.0367

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1495.97	0.0161	0.1467	0.1232	8.8000e-004		0.0112	0.0112		0.0112	0.0112		175.9969	175.9969	3.3700e-003	3.2300e-003	177.0428
Government (Civic Center)	1254.9	0.0135	0.1230	0.1034	7.4000e-004		9.3500e-003	9.3500e-003		9.3500e-003	9.3500e-003		147.6358	147.6358	2.8300e-003	2.7100e-003	148.5131
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	12420	0.1339	1.1446	0.4871	7.3100e-003		0.0925	0.0925		0.0925	0.0925		1,461.1788	1,461.1788	0.0280	0.0268	1,469.8619
Single Family Housing	124200	1.3394	11.4459	4.8706	0.0731		0.9254	0.9254		0.9254	0.9254		14,611.7884	14,611.7884	0.2801	0.2679	14,698.6190
Total		**1.5030**	**12.8602**	**5.5842**	**0.0820**		**1.0385**	**1.0385**		**1.0385**	**1.0385**		**16,396.5999**	**16,396.5999**	**0.3143**	**0.3006**	**16,494.0367**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1.49597	0.0161	0.1467	0.1232	8.8000e-004		0.0112	0.0112		0.0112	0.0112		175.9969	175.9969	3.3700e-003	3.2300e-003	177.0428
Government (Civic Center)	1.2549	0.0135	0.1230	0.1034	7.4000e-004		9.3500e-003	9.3500e-003		9.3500e-003	9.3500e-003		147.6358	147.6358	2.8300e-003	2.7100e-003	148.5131
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	12.42	0.1339	1.1446	0.4871	7.3100e-003		0.0925	0.0925		0.0925	0.0925		1,461.1788	1,461.1788	0.0280	0.0268	1,469.8619
Single Family Housing	124.2	1.3394	11.4459	4.8706	0.0731		0.9254	0.9254		0.9254	0.9254		14,611.7884	14,611.7884	0.2801	0.2679	14,698.6190
Total		**1.5030**	**12.8602**	**5.5842**	**0.0820**		**1.0385**	**1.0385**		**1.0385**	**1.0385**		**16,396.5999**	**16,396.5999**	**0.3143**	**0.3006**	**16,494.0367**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	80.1354	16.8192	156.1000	0.1043		2.0508	2.0508		2.0508	2.0508	0.0000	19,540.3794	19,540.3794	0.6280	0.3533	19,661.3607
Unmitigated	80.1354	16.8192	156.1000	0.1043		2.0508	2.0508		2.0508	2.0508	0.0000	19,540.3794	19,540.3794	0.6280	0.3533	19,661.3607

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.0880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	67.7820					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.7665	15.0953	6.4235	0.0964		1.2205	1.2205		1.2205	1.2205	0.0000	19,270.5882	19,270.5882	0.3694	0.3533	19,385.1037
Landscaping	4.4988	1.7239	149.6764	7.9100e-003		0.8304	0.8304		0.8304	0.8304		269.7912	269.7912	0.2586		276.2570
Total	**80.1354**	**16.8192**	**156.1000**	**0.1043**		**2.0508**	**2.0508**		**2.0508**	**2.0508**	**0.0000**	**19,540.3794**	**19,540.3794**	**0.6280**	**0.3533**	**19,661.3607**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.0880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	67.7820					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.7665	15.0953	6.4235	0.0964		1.2205	1.2205		1.2205	1.2205	0.0000	19,270.5882	19,270.5882	0.3694	0.3533	19,385.1037
Landscaping	4.4988	1.7239	149.6764	7.9100e-003		0.8304	0.8304		0.8304	0.8304		269.7912	269.7912	0.2586		276.2570
Total	**80.1354**	**16.8192**	**156.1000**	**0.1043**		**2.0508**	**2.0508**		**2.0508**	**2.0508**	**0.0000**	**19,540.3794**	**19,540.3794**	**0.6280**	**0.3533**	**19,661.3607**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Northlake Creek Avoidance Alternative

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government (Civic Center)	44.00	1000sqft	1.01	44,000.00	0
Elementary School	628.00	Student	23.00	52,502.92	0
Other Asphalt Surfaces	2.00	Acre	2.00	87,120.00	0
Other Asphalt Surfaces	71.00	Acre	71.00	3,092,760.00	0
City Park	26.00	Acre	26.00	1,132,560.00	0
Single Family Housing	1,650.00	Dwelling Unit	264.00	2,970,000.00	4719
Single Family Housing	165.00	Dwelling Unit	26.40	297,000.00	472

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	392.72	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Northlake Creek Avoidance Alternative - Los Angeles-South Coast County, Annual

Project Characteristics - Based on DEIR inputs

Land Use - Based on PD for CAA

Construction Phase - Based on data request

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No demolition phase

Off-road Equipment - Based on data request

Off-road Equipment - Based on data request

Off-road Equipment - Based on data request

Off-road Equipment -

Off-road Equipment - Based on data request

Off-road Equipment - Based on data request

Trips and VMT - Based on proportion of default to adjusted worker and vendor trips from the DEIR and applied to the CalEEMod default values for the CAA.

Grading -

Vehicle Trips - Based on VMT and DEIR

Woodstoves - No wood fireplaces

Energy Use -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	550.00	1,935.00
tblConstructionPhase	NumDays	7,750.00	1,565.00
tblConstructionPhase	NumDays	7,750.00	781.00
tblConstructionPhase	NumDays	775.00	652.00
tblConstructionPhase	NumDays	775.00	1,304.00

tblConstructionPhase	NumDays	775.00	521.00
tblConstructionPhase	NumDays	300.00	261.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	1,542.75	455.00
tblFireplaces	NumberNoFireplace	181.50	1,360.00
tblFireplaces	NumberWood	90.75	0.00
tblGrading	AcresOfGrading	18,256.00	1,937.50
tblGrading	AcresOfGrading	652.00	3,260.00
tblGrading	AcresOfGrading	260.50	1,302.50
tblGrading	MaterialExported	0.00	8,279,040.00
tblLandUse	LotAcreage	1.21	23.00
tblLandUse	LotAcreage	53.57	26.40
tblLandUse	LotAcreage	535.71	264.00
tblOffRoadEquipment	HorsePower	212.00	600.00
tblOffRoadEquipment	HorsePower	212.00	436.00
tblOffRoadEquipment	HorsePower	212.00	100.00
tblOffRoadEquipment	HorsePower	212.00	290.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	25.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	392.72
tblTripsAndVMT	VendorTripNumber	917.00	47.00
tblTripsAndVMT	VendorTripNumber	917.00	19.00
tblTripsAndVMT	WorkerTripNumber	95.00	20.00

tblTripsAndVMT	WorkerTripNumber	15.00	8.00
tblTripsAndVMT	WorkerTripNumber	8.00	11.00
tblTripsAndVMT	WorkerTripNumber	2,501.00	262.00
tblTripsAndVMT	WorkerTripNumber	500.00	52.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	2,501.00	131.00
tblVehicleTrips	CC_TL	8.40	1.07
tblVehicleTrips	CNW_TL	6.90	1.07
tblVehicleTrips	CW_TL	16.60	1.07
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	8.70	13.24
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	13.24
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	13.24
tblVehicleTrips	HW_TTP	40.20	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	22.75	53.80
tblVehicleTrips	ST_TR	0.00	0.91
tblVehicleTrips	ST_TR	9.91	9.30
tblVehicleTrips	SU_TR	16.74	53.80
tblVehicleTrips	SU_TR	0.00	0.91
tblVehicleTrips	SU_TR	8.62	8.10
tblVehicleTrips	WD_TR	1.89	53.80
tblVehicleTrips	WD_TR	1.29	1.62
tblVehicleTrips	WD_TR	27.92	0.91

tblVehicleTrips	WD_TR	9.52	8.96
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	4.4855	75.4811	29.6661	0.1255	14.1364	1.8714	16.0078	4.2376	1.7264	5.9640	0.0000	12,016.5417	12,016.5417	1.7547	0.0000	12,060.4084
2019	7.4628	130.5681	51.7351	0.2404	13.9915	2.9069	16.8984	4.0726	2.6829	6.7555	0.0000	22,963.6909	22,963.6909	3.2851	0.0000	23,045.8175
2020	8.0797	124.2246	52.9296	0.2472	14.4295	2.7892	17.2187	4.1878	2.5767	6.7644	0.0000	23,427.1361	23,427.1361	3.3476	0.0000	23,510.8248
2021	2.2795	6.4820	6.3548	0.0142	3.0136	0.2928	3.3064	0.7521	0.2730	1.0250	0.0000	1,265.9426	1,265.9426	0.2143	0.0000	1,271.3003
2022	2.1862	5.6370	6.0939	0.0140	3.0087	0.2423	3.2510	0.7499	0.2260	0.9759	0.0000	1,245.2853	1,245.2853	0.2114	0.0000	1,250.5697
2023	2.0629	4.3271	5.3491	0.0127	2.8071	0.1794	2.9864	0.6399	0.1677	0.8076	0.0000	1,131.7762	1,131.7762	0.1788	0.0000	1,136.2463
2024	1.8817	2.4580	3.7179	9.4600e-003	0.4895	0.0923	0.5818	0.1309	0.0872	0.2181	0.0000	848.7108	848.7108	0.0905	0.0000	850.9720
2025	1.9277	2.9883	4.5180	0.0110	1.3885	0.1083	1.4968	0.3173	0.1016	0.4189	0.0000	979.5446	979.5446	0.1344	0.0000	982.9055
2026	2.0013	4.0483	5.2275	0.0113	1.7842	0.1626	1.9468	0.5887	0.1516	0.7402	0.0000	993.2018	993.2018	0.2035	0.0000	998.2882
2027	1.9358	3.4717	4.5228	9.8600e-003	1.5734	0.1387	1.7121	0.4753	0.1296	0.6049	0.0000	870.4676	870.4676	0.1677	0.0000	874.6601
2028	0.2321	1.8129	2.5204	5.5300e-003	0.2014	0.0697	0.2711	0.0539	0.0655	0.1194	0.0000	488.9999	488.9999	0.0762	0.0000	490.9037
Maximum	**8.0797**	**130.5681**	**52.9296**	**0.2472**	**14.4295**	**2.9069**	**17.2187**	**4.2376**	**2.6829**	**6.7644**	**0.0000**	**23,427.1361**	**23,427.1361**	**3.3476**	**0.0000**	**23,510.8248**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	4.4855	75.4810	29.6661	0.1255	9.8885	1.8714	11.7599	2.7589	1.7264	4.4853	0.0000	12,016.5372	12,016.5372	1.7547	0.0000	12,060.4039
2019	7.4628	130.5680	51.7350	0.2404	10.1072	2.9069	13.0141	2.7938	2.6829	5.4767	0.0000	22,963.6828	22,963.6828	3.2851	0.0000	23,045.8093
2020	8.0796	124.2245	52.9295	0.2472	10.5489	2.7892	13.3381	2.9110	2.5766	5.4876	0.0000	23,427.1279	23,427.1279	3.3476	0.0000	23,510.8165
2021	2.2795	6.4820	6.3548	0.0142	1.4798	0.2928	1.7726	0.3747	0.2730	0.6477	0.0000	1,265.9417	1,265.9417	0.2143	0.0000	1,271.2995
2022	2.1862	5.6370	6.0939	0.0140	1.4767	0.2423	1.7190	0.3736	0.2260	0.5996	0.0000	1,245.2845	1,245.2845	0.2114	0.0000	1,250.5689
2023	2.0629	4.3271	5.3491	0.0127	1.3963	0.1794	1.5757	0.3302	0.1677	0.4979	0.0000	1,131.7755	1,131.7755	0.1788	0.0000	1,136.2455
2024	1.8817	2.4580	3.7179	9.4600e-003	0.4895	0.0923	0.5818	0.1309	0.0872	0.2181	0.0000	848.7104	848.7104	0.0905	0.0000	850.9716
2025	1.9277	2.9883	4.5180	0.0110	0.8460	0.1083	0.9543	0.2051	0.1016	0.3068	0.0000	979.5441	979.5441	0.1344	0.0000	982.9049
2026	2.0013	4.0483	5.2275	0.0113	0.8836	0.1626	1.0462	0.2797	0.1516	0.4312	0.0000	993.2009	993.2009	0.2035	0.0000	998.2874
2027	1.9358	3.4717	4.5228	9.8600e-003	0.7957	0.1387	0.9345	0.2340	0.1296	0.3636	0.0000	870.4669	870.4669	0.1677	0.0000	874.6593
2028	0.2321	1.8129	2.5203	5.5300e-003	0.2014	0.0697	0.2711	0.0539	0.0655	0.1194	0.0000	488.9995	488.9995	0.0762	0.0000	490.9033
Maximum	**8.0796**	**130.5680**	**52.9295**	**0.2472**	**10.5489**	**2.9069**	**13.3381**	**2.9110**	**2.6829**	**5.4876**	**0.0000**	**23,427.1279**	**23,427.1279**	**3.3476**	**0.0000**	**23,510.8165**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**32.93**	**0.00**	**28.49**	**35.54**	**0.00**	**23.61**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	2.1593	2.1593
2	4-1-2021	6-30-2021	2.1750	2.1750
3	7-1-2021	9-30-2021	2.1989	2.1989
4	10-1-2021	12-31-2021	2.2073	2.2073
5	1-1-2022	3-31-2022	1.9357	1.9357
6	4-1-2022	6-30-2022	1.9495	1.9495
7	7-1-2022	9-30-2022	1.9709	1.9709
8	10-1-2022	12-31-2022	1.9787	1.9787
9	1-1-2023	3-31-2023	1.7432	1.7432
10	4-1-2023	6-30-2023	1.7555	1.7555
11	7-1-2023	9-30-2023	1.7607	1.7607
12	10-1-2023	12-31-2023	1.1329	1.1329
13	1-1-2024	3-31-2024	1.0786	1.0786
14	4-1-2024	6-30-2024	1.0720	1.0720
15	7-1-2024	9-30-2024	1.0838	1.0838
16	10-1-2024	12-31-2024	1.0904	1.0904
17	1-1-2025	3-31-2025	1.0244	1.0244
18	4-1-2025	6-30-2025	1.0296	1.0296
19	7-1-2025	9-30-2025	1.1488	1.1488
20	10-1-2025	12-31-2025	1.7032	1.7032
21	1-1-2026	3-31-2026	1.5419	1.5419
22	4-1-2026	6-30-2026	1.4875	1.4875
23	7-1-2026	9-30-2026	1.5038	1.5038
24	10-1-2026	12-31-2026	1.5078	1.5078
25	1-1-2027	3-31-2027	1.4725	1.4725
26	4-1-2027	6-30-2027	1.4851	1.4851

27	**7-1-2027**	**9-30-2027**	1.4954	1.4954
28	**10-1-2027**	**12-31-2027**	0.9511	0.9511
29	**1-1-2028**	**3-31-2028**	0.5140	0.5140
30	**4-1-2028**	**6-30-2028**	0.5117	0.5117
31	**7-1-2028**	**9-30-2028**	0.5173	0.5173
		Highest	2.2073	2.2073

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	14.0657	0.4042	18.7899	2.1900e-003		0.1191	0.1191		0.1191	0.1191	0.0000	249.1186	249.1186	0.0335	4.0100e-003	251.1504
Energy	0.2743	2.3470	1.0191	0.0150		0.1895	0.1895		0.1895	0.1895	0.0000	5,525.6835	5,525.6835	0.2596	0.0927	5,559.8031
Mobile	4.6896	23.7864	69.0499	0.3123	30.6391	0.2162	30.8553	8.2099	0.2008	8.4107	0.0000	28,968.6222	28,968.6222	1.2328	0.0000	28,999.4428
Waste						0.0000	0.0000		0.0000	0.0000	506.6573	0.0000	506.6573	29.9426	0.0000	1,255.2221
Water						0.0000	0.0000		0.0000	0.0000	40.7728	525.2997	566.0725	4.2266	0.1069	703.5948
Total	**19.0297**	**26.5375**	**88.8588**	**0.3294**	**30.6391**	**0.5247**	**31.1638**	**8.2099**	**0.5093**	**8.7193**	**547.4302**	**35,268.7240**	**35,816.1542**	**35.6951**	**0.2036**	**36,769.2132**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	14.0657	0.4042	18.7899	2.1900e-003		0.1191	0.1191		0.1191	0.1191	0.0000	249.1186	249.1186	0.0335	4.0100e-003	251.1504
Energy	0.2743	2.3470	1.0191	0.0150		0.1895	0.1895		0.1895	0.1895	0.0000	5,525.6835	5,525.6835	0.2596	0.0927	5,559.8031
Mobile	4.6896	23.7864	69.0499	0.3123	30.6391	0.2162	30.8553	8.2099	0.2008	8.4107	0.0000	28,968.6222	28,968.6222	1.2328	0.0000	28,999.4428
Waste						0.0000	0.0000		0.0000	0.0000	506.6573	0.0000	506.6573	29.9426	0.0000	1,255.2221
Water						0.0000	0.0000		0.0000	0.0000	40.7728	525.2997	566.0725	4.2266	0.1069	703.5948
Total	**19.0297**	**26.5375**	**88.8588**	**0.3294**	**30.6391**	**0.5247**	**31.1638**	**8.2099**	**0.5093**	**8.7193**	**547.4302**	**35,268.7240**	**35,816.1542**	**35.6951**	**0.2036**	**36,769.2132**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2018	12/31/2018	5	261	
2	Grading	Grading	7/1/2018	12/29/2020	5	652	
3	Fine Grading 1	Grading	10/1/2018	9/28/2023	5	1304	
4	Utilities 1	Trenching	2/1/2019	12/30/2020	5	499	
5	Building Construction	Building Construction	1/1/2020	12/30/2025	5	1565	
6	Architectural Coating	Architectural Coating	8/1/2020	12/31/2027	5	1935	
7	Utilities 2	Trenching	7/1/2025	2/26/2026	5	173	
8	Fine Grading 2	Grading	10/1/2025	9/29/2027	5	521	
9	Building Construction 2	Building Construction	1/1/2026	12/28/2028	5	781	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1937.5

Acres of Paving: 73

Residential Indoor: 6,615,675; Residential Outdoor: 2,205,225; Non-Residential Indoor: 144,754; Non-Residential Outdoor: 48,251; Striped Parking Area: 190,793 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Crawler Tractors	3	8.00	600	0.43
Grading	Crawler Tractors	2	8.00	436	0.43
Grading	Crawler Tractors	2	8.00	100	0.43
Grading	Crawler Tractors	2	8.00	290	0.43
Grading	Excavators	0	8.00	158	0.38

Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	25	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Fine Grading 1	Excavators	2	8.00	158	0.38
Fine Grading 1	Graders	1	8.00	187	0.41
Fine Grading 1	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading 1	Scrapers	0	8.00	367	0.48
Fine Grading 1	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Utilities 1	Excavators	1	6.00	158	0.38
Utilities 1	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Utilities 2	Excavators	1	6.00	158	0.38
Utilities 2	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Fine Grading 2	Excavators	2	8.00	158	0.38
Fine Grading 2	Graders	1	8.00	187	0.41
Fine Grading 2	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading 2	Scrapers	0	8.00	367	0.48
Fine Grading 2	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 2	Cranes	1	7.00	231	0.29
Building Construction 2	Forklifts	3	8.00	89	0.20
Building Construction 2	Generator Sets	1	8.00	84	0.74

Building Construction 2	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 2	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	38	20.00	0.00	1,034,880.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading 1	6	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utilities 1	3	11.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	262.00	47.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	52.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utilities 2	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading 2	6	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	9	131.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3577	0.0000	2.3577	1.2960	0.0000	1.2960	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5954	6.2899	2.9332	4.9600e-003		0.3363	0.3363		0.3094	0.3094	0.0000	453.6168	453.6168	0.1412	0.0000	457.1472
Total	**0.5954**	**6.2899**	**2.9332**	**4.9600e-003**	**2.3577**	**0.3363**	**2.6939**	**1.2960**	**0.3094**	**1.6053**	**0.0000**	**453.6168**	**453.6168**	**0.1412**	**0.0000**	**457.1472**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0130	0.0111	0.1198	2.8000e-004	0.0257	2.3000e-004	0.0260	6.8400e-003	2.2000e-004	7.0500e-003	0.0000	25.5758	25.5758	9.6000e-004	0.0000	25.5998
Total	**0.0130**	**0.0111**	**0.1198**	**2.8000e-004**	**0.0257**	**2.3000e-004**	**0.0260**	**6.8400e-003**	**2.2000e-004**	**7.0500e-003**	**0.0000**	**25.5758**	**25.5758**	**9.6000e-004**	**0.0000**	**25.5998**

3.2 Site Preparation - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9195	0.0000	0.9195	0.5054	0.0000	0.5054	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5954	6.2899	2.9332	4.9600e-003		0.3363	0.3363		0.3094	0.3094	0.0000	453.6163	453.6163	0.1412	0.0000	457.1467
Total	**0.5954**	**6.2899**	**2.9332**	**4.9600e-003**	**0.9195**	**0.3363**	**1.2558**	**0.5054**	**0.3094**	**0.8148**	**0.0000**	**453.6163**	**453.6163**	**0.1412**	**0.0000**	**457.1467**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0130	0.0111	0.1198	2.8000e-004	0.0257	2.3000e-004	0.0260	6.8400e-003	2.2000e-004	7.0500e-003	0.0000	25.5758	25.5758	9.6000e-004	0.0000	25.5998
Total	**0.0130**	**0.0111**	**0.1198**	**2.8000e-004**	**0.0257**	**2.3000e-004**	**0.0260**	**6.8400e-003**	**2.2000e-004**	**7.0500e-003**	**0.0000**	**25.5758**	**25.5758**	**9.6000e-004**	**0.0000**	**25.5998**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6788	0.0000	2.6788	0.8323	0.0000	0.8323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7330	33.4235	18.7933	0.0353		1.3559	1.3559		1.2474	1.2474	0.0000	3,224.2715	3,224.2715	1.0038	0.0000	3,249.3655
Total	**2.7330**	**33.4235**	**18.7933**	**0.0353**	**2.6788**	**1.3559**	**4.0347**	**0.8323**	**1.2474**	**2.0797**	**0.0000**	**3,224.2715**	**3,224.2715**	**1.0038**	**0.0000**	**3,249.3655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0431	34.7215	7.1616	0.0837	7.1296	0.1288	7.2584	1.8021	0.1232	1.9253	0.0000	8,200.2960	8,200.2960	0.5783	0.0000	8,214.7538
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2600e-003	6.2100e-003	0.0668	1.6000e-004	0.0144	1.3000e-004	0.0145	3.8100e-003	1.2000e-004	3.9300e-003	0.0000	14.2632	14.2632	5.4000e-004	0.0000	14.2766
Total	**1.0503**	**34.7277**	**7.2284**	**0.0838**	**7.1440**	**0.1289**	**7.2729**	**1.8059**	**0.1234**	**1.9292**	**0.0000**	**8,214.5592**	**8,214.5592**	**0.5789**	**0.0000**	**8,229.0304**

3.3 Grading - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0448	0.0000	1.0448	0.3246	0.0000	0.3246	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7330	33.4235	18.7932	0.0353		1.3559	1.3559		1.2474	1.2474	0.0000	3,224.2677	3,224.2677	1.0038	0.0000	3,249.3617
Total	**2.7330**	**33.4235**	**18.7932**	**0.0353**	**1.0448**	**1.3559**	**2.4006**	**0.3246**	**1.2474**	**1.5720**	**0.0000**	**3,224.2677**	**3,224.2677**	**1.0038**	**0.0000**	**3,249.3617**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0431	34.7215	7.1616	0.0837	7.1296	0.1288	7.2584	1.8021	0.1232	1.9253	0.0000	8,200.2960	8,200.2960	0.5783	0.0000	8,214.7538
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2600e-003	6.2100e-003	0.0668	1.6000e-004	0.0144	1.3000e-004	0.0145	3.8100e-003	1.2000e-004	3.9300e-003	0.0000	14.2632	14.2632	5.4000e-004	0.0000	14.2766
Total	**1.0503**	**34.7277**	**7.2284**	**0.0838**	**7.1440**	**0.1289**	**7.2729**	**1.8059**	**0.1234**	**1.9292**	**0.0000**	**8,214.5592**	**8,214.5592**	**0.5789**	**0.0000**	**8,229.0304**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.8531	0.0000	3.8531	1.4778	0.0000	1.4778	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.0655	60.5908	34.6315	0.0704		2.4535	2.4535		2.2572	2.2572	0.0000	6,319.1667	6,319.1667	1.9993	0.0000	6,369.1497
Total	**5.0655**	**60.5908**	**34.6315**	**0.0704**	**3.8531**	**2.4535**	**6.3066**	**1.4778**	**2.2572**	**3.7350**	**0.0000**	**6,319.1667**	**6,319.1667**	**1.9993**	**0.0000**	**6,369.1497**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9672	65.5557	13.9244	0.1643	7.5695	0.2346	7.8041	1.9617	0.2245	2.1862	0.0000	16,129.2778	16,129.2778	1.1375	0.0000	16,157.7145
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0131	0.0109	0.1185	3.0000e-004	0.0286	2.5000e-004	0.0289	7.6000e-003	2.3000e-004	7.8300e-003	0.0000	27.4926	27.4926	9.5000e-004	0.0000	27.5163
Total	**1.9803**	**65.5666**	**14.0429**	**0.1646**	**7.5981**	**0.2349**	**7.8329**	**1.9693**	**0.2247**	**2.1940**	**0.0000**	**16,156.7704**	**16,156.7704**	**1.1384**	**0.0000**	**16,185.2308**

3.3 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5027	0.0000	1.5027	0.5763	0.0000	0.5763	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.0655	60.5907	34.6315	0.0704		2.4535	2.4535		2.2572	2.2572	0.0000	6,319.1592	6,319.1592	1.9993	0.0000	6,369.1421
Total	**5.0655**	**60.5907**	**34.6315**	**0.0704**	**1.5027**	**2.4535**	**3.9562**	**0.5763**	**2.2572**	**2.8335**	**0.0000**	**6,319.1592**	**6,319.1592**	**1.9993**	**0.0000**	**6,369.1421**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9672	65.5557	13.9244	0.1643	7.5695	0.2346	7.8041	1.9617	0.2245	2.1862	0.0000	16,129.2778	16,129.2778	1.1375	0.0000	16,157.7145
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0131	0.0109	0.1185	3.0000e-004	0.0286	2.5000e-004	0.0289	7.6000e-003	2.3000e-004	7.8300e-003	0.0000	27.4926	27.4926	9.5000e-004	0.0000	27.5163
Total	**1.9803**	**65.5666**	**14.0429**	**0.1646**	**7.5981**	**0.2349**	**7.8329**	**1.9693**	**0.2247**	**2.1940**	**0.0000**	**16,156.7704**	**16,156.7704**	**1.1384**	**0.0000**	**16,185.2308**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.8441	0.0000	3.8441	1.4728	0.0000	1.4728	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7367	55.3731	32.1985	0.0701		2.2370	2.2370		2.0581	2.0581	0.0000	6,158.1596	6,158.1596	1.9917	0.0000	6,207.9515
Total	**4.7367**	**55.3731**	**32.1985**	**0.0701**	**3.8441**	**2.2370**	**6.0811**	**1.4728**	**2.0581**	**3.5309**	**0.0000**	**6,158.1596**	**6,158.1596**	**1.9917**	**0.0000**	**6,207.9515**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.8210	61.2769	13.5063	0.1618	7.5662	0.1906	7.7568	1.9606	0.1823	2.1429	0.0000	15,904.4055	15,904.4055	1.1078	0.0000	15,932.0994
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0120	9.6800e-003	0.1070	2.9000e-004	0.0285	2.4000e-004	0.0287	7.5700e-003	2.2000e-004	7.7900e-003	0.0000	26.5551	26.5551	8.4000e-004	0.0000	26.5760
Total	**1.8330**	**61.2866**	**13.6133**	**0.1621**	**7.5947**	**0.1908**	**7.7855**	**1.9681**	**0.1826**	**2.1507**	**0.0000**	**15,930.9606**	**15,930.9606**	**1.1086**	**0.0000**	**15,958.6755**

3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4992	0.0000	1.4992	0.5744	0.0000	0.5744	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7367	55.3730	32.1985	0.0701		2.2370	2.2370		2.0581	2.0581	0.0000	6,158.1523	6,158.1523	1.9917	0.0000	6,207.9441
Total	**4.7367**	**55.3730**	**32.1985**	**0.0701**	**1.4992**	**2.2370**	**3.7362**	**0.5744**	**2.0581**	**2.6325**	**0.0000**	**6,158.1523**	**6,158.1523**	**1.9917**	**0.0000**	**6,207.9441**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.8210	61.2769	13.5063	0.1618	7.5662	0.1906	7.7568	1.9606	0.1823	2.1429	0.0000	15,904.4055	15,904.4055	1.1078	0.0000	15,932.0994
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0120	9.6800e-003	0.1070	2.9000e-004	0.0285	2.4000e-004	0.0287	7.5700e-003	2.2000e-004	7.7900e-003	0.0000	26.5551	26.5551	8.4000e-004	0.0000	26.5760
Total	**1.8330**	**61.2866**	**13.6133**	**0.1621**	**7.5947**	**0.1908**	**7.7855**	**1.9681**	**0.1826**	**2.1507**	**0.0000**	**15,930.9606**	**15,930.9606**	**1.1086**	**0.0000**	**15,958.6755**

3.4 Fine Grading 1 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9273	0.0000	1.9273	0.2959	0.0000	0.2959	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0923	1.0276	0.5780	1.0500e-003		0.0500	0.0500		0.0460	0.0460	0.0000	95.6440	95.6440	0.0298	0.0000	96.3883
Total	**0.0923**	**1.0276**	**0.5780**	**1.0500e-003**	**1.9273**	**0.0500**	**1.9773**	**0.2959**	**0.0460**	**0.3419**	**0.0000**	**95.6440**	**95.6440**	**0.0298**	**0.0000**	**96.3883**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4600e-003	1.2500e-003	0.0135	3.0000e-005	2.8900e-003	3.0000e-005	2.9200e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.8744	2.8744	1.1000e-004	0.0000	2.8771
Total	**1.4600e-003**	**1.2500e-003**	**0.0135**	**3.0000e-005**	**2.8900e-003**	**3.0000e-005**	**2.9200e-003**	**7.7000e-004**	**2.0000e-005**	**7.9000e-004**	**0.0000**	**2.8744**	**2.8744**	**1.1000e-004**	**0.0000**	**2.8771**

3.4 Fine Grading 1 - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7517	0.0000	0.7517	0.1154	0.0000	0.1154	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0923	1.0276	0.5780	1.0500e-003		0.0500	0.0500		0.0460	0.0460	0.0000	95.6438	95.6438	0.0298	0.0000	96.3882
Total	**0.0923**	**1.0276**	**0.5780**	**1.0500e-003**	**0.7517**	**0.0500**	**0.8017**	**0.1154**	**0.0460**	**0.1614**	**0.0000**	**95.6438**	**95.6438**	**0.0298**	**0.0000**	**96.3882**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4600e-003	1.2500e-003	0.0135	3.0000e-005	2.8900e-003	3.0000e-005	2.9200e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.8744	2.8744	1.1000e-004	0.0000	2.8771
Total	**1.4600e-003**	**1.2500e-003**	**0.0135**	**3.0000e-005**	**2.8900e-003**	**3.0000e-005**	**2.9200e-003**	**7.7000e-004**	**2.0000e-005**	**7.9000e-004**	**0.0000**	**2.8744**	**2.8744**	**1.1000e-004**	**0.0000**	**2.8771**

3.4 Fine Grading 1 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.5145	0.0000	2.5145	0.6186	0.0000	0.6186	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3404	3.7444	2.2516	4.1400e-003		0.1789	0.1789		0.1646	0.1646	0.0000	371.7833	371.7833	0.1176	0.0000	374.7240
Total	**0.3404**	**3.7444**	**2.2516**	**4.1400e-003**	**2.5145**	**0.1789**	**2.6934**	**0.6186**	**0.1646**	**0.7832**	**0.0000**	**371.7833**	**371.7833**	**0.1176**	**0.0000**	**374.7240**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2300e-003	4.3600e-003	0.0474	1.2000e-004	0.0114	1.0000e-004	0.0115	3.0400e-003	9.0000e-005	3.1300e-003	0.0000	10.9971	10.9971	3.8000e-004	0.0000	11.0065
Total	**5.2300e-003**	**4.3600e-003**	**0.0474**	**1.2000e-004**	**0.0114**	**1.0000e-004**	**0.0115**	**3.0400e-003**	**9.0000e-005**	**3.1300e-003**	**0.0000**	**10.9971**	**10.9971**	**3.8000e-004**	**0.0000**	**11.0065**

3.4 Fine Grading 1 - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9807	0.0000	0.9807	0.2413	0.0000	0.2413	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3404	3.7444	2.2516	4.1400e-003		0.1789	0.1789		0.1646	0.1646	0.0000	371.7829	371.7829	0.1176	0.0000	374.7236
Total	**0.3404**	**3.7444**	**2.2516**	**4.1400e-003**	**0.9807**	**0.1789**	**1.1595**	**0.2413**	**0.1646**	**0.4058**	**0.0000**	**371.7829**	**371.7829**	**0.1176**	**0.0000**	**374.7236**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2300e-003	4.3600e-003	0.0474	1.2000e-004	0.0114	1.0000e-004	0.0115	3.0400e-003	9.0000e-005	3.1300e-003	0.0000	10.9971	10.9971	3.8000e-004	0.0000	11.0065
Total	**5.2300e-003**	**4.3600e-003**	**0.0474**	**1.2000e-004**	**0.0114**	**1.0000e-004**	**0.0115**	**3.0400e-003**	**9.0000e-005**	**3.1300e-003**	**0.0000**	**10.9971**	**10.9971**	**3.8000e-004**	**0.0000**	**11.0065**

3.4 Fine Grading 1 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.5175	0.0000	2.5175	0.6203	0.0000	0.6203	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3228	3.4968	2.2324	4.1500e-003		0.1647	0.1647		0.1515	0.1515	0.0000	365.0606	365.0606	0.1181	0.0000	368.0123
Total	**0.3228**	**3.4968**	**2.2324**	**4.1500e-003**	**2.5175**	**0.1647**	**2.6822**	**0.6203**	**0.1515**	**0.7718**	**0.0000**	**365.0606**	**365.0606**	**0.1181**	**0.0000**	**368.0123**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8400e-003	3.9000e-003	0.0431	1.2000e-004	0.0115	1.0000e-004	0.0116	3.0500e-003	9.0000e-005	3.1400e-003	0.0000	10.7038	10.7038	3.4000e-004	0.0000	10.7122
Total	**4.8400e-003**	**3.9000e-003**	**0.0431**	**1.2000e-004**	**0.0115**	**1.0000e-004**	**0.0116**	**3.0500e-003**	**9.0000e-005**	**3.1400e-003**	**0.0000**	**10.7038**	**10.7038**	**3.4000e-004**	**0.0000**	**10.7122**

3.4 Fine Grading 1 - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9818	0.0000	0.9818	0.2419	0.0000	0.2419	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3228	3.4968	2.2324	4.1500e-003		0.1647	0.1647		0.1515	0.1515	0.0000	365.0601	365.0601	0.1181	0.0000	368.0118
Total	**0.3228**	**3.4968**	**2.2324**	**4.1500e-003**	**0.9818**	**0.1647**	**1.1465**	**0.2419**	**0.1515**	**0.3934**	**0.0000**	**365.0601**	**365.0601**	**0.1181**	**0.0000**	**368.0118**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8400e-003	3.9000e-003	0.0431	1.2000e-004	0.0115	1.0000e-004	0.0116	3.0500e-003	9.0000e-005	3.1400e-003	0.0000	10.7038	10.7038	3.4000e-004	0.0000	10.7122
Total	**4.8400e-003**	**3.9000e-003**	**0.0431**	**1.2000e-004**	**0.0115**	**1.0000e-004**	**0.0116**	**3.0500e-003**	**9.0000e-005**	**3.1400e-003**	**0.0000**	**10.7038**	**10.7038**	**3.4000e-004**	**0.0000**	**10.7122**

3.4 Fine Grading 1 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.5145	0.0000	2.5145	0.6186	0.0000	0.6186	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3044	3.2618	2.2014	4.1400e-003		0.1504	0.1504		0.1384	0.1384	0.0000	363.5944	363.5944	0.1176	0.0000	366.5343
Total	**0.3044**	**3.2618**	**2.2014**	**4.1400e-003**	**2.5145**	**0.1504**	**2.6649**	**0.6186**	**0.1384**	**0.7570**	**0.0000**	**363.5944**	**363.5944**	**0.1176**	**0.0000**	**366.5343**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4900e-003	3.5000e-003	0.0395	1.1000e-004	0.0114	9.0000e-005	0.0115	3.0400e-003	9.0000e-005	3.1300e-003	0.0000	10.3243	10.3243	3.0000e-004	0.0000	10.3319
Total	**4.4900e-003**	**3.5000e-003**	**0.0395**	**1.1000e-004**	**0.0114**	**9.0000e-005**	**0.0115**	**3.0400e-003**	**9.0000e-005**	**3.1300e-003**	**0.0000**	**10.3243**	**10.3243**	**3.0000e-004**	**0.0000**	**10.3319**

3.4 Fine Grading 1 - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9807	0.0000	0.9807	0.2413	0.0000	0.2413	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3044	3.2618	2.2014	4.1400e-003		0.1504	0.1504		0.1384	0.1384	0.0000	363.5940	363.5940	0.1176	0.0000	366.5339
Total	**0.3044**	**3.2618**	**2.2014**	**4.1400e-003**	**0.9807**	**0.1504**	**1.1311**	**0.2413**	**0.1384**	**0.3797**	**0.0000**	**363.5940**	**363.5940**	**0.1176**	**0.0000**	**366.5339**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4900e-003	3.5000e-003	0.0395	1.1000e-004	0.0114	9.0000e-005	0.0115	3.0400e-003	9.0000e-005	3.1300e-003	0.0000	10.3243	10.3243	3.0000e-004	0.0000	10.3319
Total	**4.4900e-003**	**3.5000e-003**	**0.0395**	**1.1000e-004**	**0.0114**	**9.0000e-005**	**0.0115**	**3.0400e-003**	**9.0000e-005**	**3.1300e-003**	**0.0000**	**10.3243**	**10.3243**	**3.0000e-004**	**0.0000**	**10.3319**

3.4 Fine Grading 1 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.5115	0.0000	2.5115	0.6170	0.0000	0.6170	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2582	2.7243	2.1177	4.1200e-003		0.1218	0.1218		0.1120	0.1120	0.0000	362.1545	362.1545	0.1171	0.0000	365.0827
Total	**0.2582**	**2.7243**	**2.1177**	**4.1200e-003**	**2.5115**	**0.1218**	**2.6333**	**0.6170**	**0.1120**	**0.7290**	**0.0000**	**362.1545**	**362.1545**	**0.1171**	**0.0000**	**365.0827**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-003	3.1500e-003	0.0362	1.1000e-004	0.0114	9.0000e-005	0.0115	3.0300e-003	8.0000e-005	3.1100e-003	0.0000	9.9232	9.9232	2.7000e-004	0.0000	9.9300
Total	**4.2000e-003**	**3.1500e-003**	**0.0362**	**1.1000e-004**	**0.0114**	**9.0000e-005**	**0.0115**	**3.0300e-003**	**8.0000e-005**	**3.1100e-003**	**0.0000**	**9.9232**	**9.9232**	**2.7000e-004**	**0.0000**	**9.9300**

3.4 Fine Grading 1 - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9795	0.0000	0.9795	0.2406	0.0000	0.2406	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2582	2.7243	2.1177	4.1200e-003		0.1218	0.1218		0.1120	0.1120	0.0000	362.1540	362.1540	0.1171	0.0000	365.0822
Total	**0.2582**	**2.7243**	**2.1177**	**4.1200e-003**	**0.9795**	**0.1218**	**1.1012**	**0.2406**	**0.1120**	**0.3526**	**0.0000**	**362.1540**	**362.1540**	**0.1171**	**0.0000**	**365.0822**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-003	3.1500e-003	0.0362	1.1000e-004	0.0114	9.0000e-005	0.0115	3.0300e-003	8.0000e-005	3.1100e-003	0.0000	9.9232	9.9232	2.7000e-004	0.0000	9.9300
Total	**4.2000e-003**	**3.1500e-003**	**0.0362**	**1.1000e-004**	**0.0114**	**9.0000e-005**	**0.0115**	**3.0300e-003**	**8.0000e-005**	**3.1100e-003**	**0.0000**	**9.9232**	**9.9232**	**2.7000e-004**	**0.0000**	**9.9300**

3.4 Fine Grading 1 - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3128	0.0000	2.3128	0.5077	0.0000	0.5077	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1696	1.7410	1.5304	3.0800e-003		0.0752	0.0752		0.0692	0.0692	0.0000	270.2579	270.2579	0.0874	0.0000	272.4431
Total	**0.1696**	**1.7410**	**1.5304**	**3.0800e-003**	**2.3128**	**0.0752**	**2.3879**	**0.5077**	**0.0692**	**0.5769**	**0.0000**	**270.2579**	**270.2579**	**0.0874**	**0.0000**	**272.4431**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9400e-003	2.1200e-003	0.0249	8.0000e-005	8.5000e-003	7.0000e-005	8.5700e-003	2.2600e-003	6.0000e-005	2.3200e-003	0.0000	7.1333	7.1333	1.8000e-004	0.0000	7.1379
Total	**2.9400e-003**	**2.1200e-003**	**0.0249**	**8.0000e-005**	**8.5000e-003**	**7.0000e-005**	**8.5700e-003**	**2.2600e-003**	**6.0000e-005**	**2.3200e-003**	**0.0000**	**7.1333**	**7.1333**	**1.8000e-004**	**0.0000**	**7.1379**

3.4 Fine Grading 1 - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9020	0.0000	0.9020	0.1980	0.0000	0.1980	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1696	1.7410	1.5304	3.0800e-003		0.0752	0.0752		0.0692	0.0692	0.0000	270.2576	270.2576	0.0874	0.0000	272.4428
Total	**0.1696**	**1.7410**	**1.5304**	**3.0800e-003**	**0.9020**	**0.0752**	**0.9772**	**0.1980**	**0.0692**	**0.2672**	**0.0000**	**270.2576**	**270.2576**	**0.0874**	**0.0000**	**272.4428**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9400e-003	2.1200e-003	0.0249	8.0000e-005	8.5000e-003	7.0000e-005	8.5700e-003	2.2600e-003	6.0000e-005	2.3200e-003	0.0000	7.1333	7.1333	1.8000e-004	0.0000	7.1379
Total	**2.9400e-003**	**2.1200e-003**	**0.0249**	**8.0000e-005**	**8.5000e-003**	**7.0000e-005**	**8.5700e-003**	**2.2600e-003**	**6.0000e-005**	**2.3200e-003**	**0.0000**	**7.1333**	**7.1333**	**1.8000e-004**	**0.0000**	**7.1379**

3.5 Utilities 1 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0648	0.6566	0.7023	1.0200e-003		0.0394	0.0394		0.0362	0.0362	0.0000	91.1849	91.1849	0.0289	0.0000	91.9062
Total	**0.0648**	**0.6566**	**0.7023**	**1.0200e-003**		**0.0394**	**0.0394**		**0.0362**	**0.0362**	**0.0000**	**91.1849**	**91.1849**	**0.0289**	**0.0000**	**91.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5600e-003	5.4600e-003	0.0594	1.5000e-004	0.0143	1.3000e-004	0.0145	3.8100e-003	1.2000e-004	3.9300e-003	0.0000	13.7885	13.7885	4.7000e-004	0.0000	13.8003
Total	**6.5600e-003**	**5.4600e-003**	**0.0594**	**1.5000e-004**	**0.0143**	**1.3000e-004**	**0.0145**	**3.8100e-003**	**1.2000e-004**	**3.9300e-003**	**0.0000**	**13.7885**	**13.7885**	**4.7000e-004**	**0.0000**	**13.8003**

3.5 Utilities 1 - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0648	0.6566	0.7023	1.0200e-003		0.0394	0.0394		0.0362	0.0362	0.0000	91.1848	91.1848	0.0289	0.0000	91.9061
Total	**0.0648**	**0.6566**	**0.7023**	**1.0200e-003**		**0.0394**	**0.0394**		**0.0362**	**0.0362**	**0.0000**	**91.1848**	**91.1848**	**0.0289**	**0.0000**	**91.9061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5600e-003	5.4600e-003	0.0594	1.5000e-004	0.0143	1.3000e-004	0.0145	3.8100e-003	1.2000e-004	3.9300e-003	0.0000	13.7885	13.7885	4.7000e-004	0.0000	13.8003
Total	**6.5600e-003**	**5.4600e-003**	**0.0594**	**1.5000e-004**	**0.0143**	**1.3000e-004**	**0.0145**	**3.8100e-003**	**1.2000e-004**	**3.9300e-003**	**0.0000**	**13.7885**	**13.7885**	**4.7000e-004**	**0.0000**	**13.8003**

3.5 Utilities 1 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0650	0.6482	0.7661	1.1100e-003		0.0375	0.0375		0.0345	0.0345	0.0000	97.8168	97.8168	0.0316	0.0000	98.6077
Total	**0.0650**	**0.6482**	**0.7661**	**1.1100e-003**		**0.0375**	**0.0375**		**0.0345**	**0.0345**	**0.0000**	**97.8168**	**97.8168**	**0.0316**	**0.0000**	**98.6077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6300e-003	5.3400e-003	0.0591	1.6000e-004	0.0157	1.3000e-004	0.0159	4.1800e-003	1.2000e-004	4.3000e-003	0.0000	14.6615	14.6615	4.6000e-004	0.0000	14.6730
Total	**6.6300e-003**	**5.3400e-003**	**0.0591**	**1.6000e-004**	**0.0157**	**1.3000e-004**	**0.0159**	**4.1800e-003**	**1.2000e-004**	**4.3000e-003**	**0.0000**	**14.6615**	**14.6615**	**4.6000e-004**	**0.0000**	**14.6730**

3.5 Utilities 1 - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0650	0.6482	0.7661	1.1100e-003		0.0375	0.0375		0.0345	0.0345	0.0000	97.8167	97.8167	0.0316	0.0000	98.6076
Total	**0.0650**	**0.6482**	**0.7661**	**1.1100e-003**		**0.0375**	**0.0375**		**0.0345**	**0.0345**	**0.0000**	**97.8167**	**97.8167**	**0.0316**	**0.0000**	**98.6076**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6300e-003	5.3400e-003	0.0591	1.6000e-004	0.0157	1.3000e-004	0.0159	4.1800e-003	1.2000e-004	4.3000e-003	0.0000	14.6615	14.6615	4.6000e-004	0.0000	14.6730
Total	**6.6300e-003**	**5.3400e-003**	**0.0591**	**1.6000e-004**	**0.0157**	**1.3000e-004**	**0.0159**	**4.1800e-003**	**1.2000e-004**	**4.3000e-003**	**0.0000**	**14.6615**	**14.6615**	**4.6000e-004**	**0.0000**	**14.6730**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
Total	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**		**0.1463**	**0.1463**		**0.1376**	**0.1376**	**0.0000**	**303.4091**	**303.4091**	**0.0740**	**0.0000**	**305.2596**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0223	0.6672	0.1806	1.5800e-003	0.0388	3.1000e-003	0.0419	0.0112	2.9700e-003	0.0142	0.0000	152.9560	152.9560	9.7200e-003	0.0000	153.1990
Worker	0.1584	0.1278	1.4128	3.8800e-003	0.3761	3.2100e-003	0.3793	0.0999	2.9500e-003	0.1029	0.0000	350.5479	350.5479	0.0111	0.0000	350.8241
Total	**0.1808**	**0.7950**	**1.5934**	**5.4600e-003**	**0.4149**	**6.3100e-003**	**0.4212**	**0.1111**	**5.9200e-003**	**0.1170**	**0.0000**	**503.5039**	**503.5039**	**0.0208**	**0.0000**	**504.0231**

3.6 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592
Total	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**		**0.1463**	**0.1463**		**0.1376**	**0.1376**	**0.0000**	**303.4087**	**303.4087**	**0.0740**	**0.0000**	**305.2592**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0223	0.6672	0.1806	1.5800e-003	0.0388	3.1000e-003	0.0419	0.0112	2.9700e-003	0.0142	0.0000	152.9560	152.9560	9.7200e-003	0.0000	153.1990
Worker	0.1584	0.1278	1.4128	3.8800e-003	0.3761	3.2100e-003	0.3793	0.0999	2.9500e-003	0.1029	0.0000	350.5479	350.5479	0.0111	0.0000	350.8241
Total	**0.1808**	**0.7950**	**1.5934**	**5.4600e-003**	**0.4149**	**6.3100e-003**	**0.4212**	**0.1111**	**5.9200e-003**	**0.1170**	**0.0000**	**503.5039**	**503.5039**	**0.0208**	**0.0000**	**504.0231**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2867**	**302.2867**	**0.0729**	**0.0000**	**304.1099**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0191	0.6053	0.1641	1.5600e-003	0.0386	1.2300e-003	0.0399	0.0112	1.1800e-003	0.0123	0.0000	151.1887	151.1887	9.2700e-003	0.0000	151.4205
Worker	0.1471	0.1145	1.2930	3.7400e-003	0.3747	3.0900e-003	0.3778	0.0995	2.8400e-003	0.1024	0.0000	338.1206	338.1206	9.9500e-003	0.0000	338.3694
Total	**0.1662**	**0.7198**	**1.4571**	**5.3000e-003**	**0.4133**	**4.3200e-003**	**0.4176**	**0.1107**	**4.0200e-003**	**0.1147**	**0.0000**	**489.3093**	**489.3093**	**0.0192**	**0.0000**	**489.7899**

3.6 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2863**	**302.2863**	**0.0729**	**0.0000**	**304.1095**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0191	0.6053	0.1641	1.5600e-003	0.0386	1.2300e-003	0.0399	0.0112	1.1800e-003	0.0123	0.0000	151.1887	151.1887	9.2700e-003	0.0000	151.4205
Worker	0.1471	0.1145	1.2930	3.7400e-003	0.3747	3.0900e-003	0.3778	0.0995	2.8400e-003	0.1024	0.0000	338.1206	338.1206	9.9500e-003	0.0000	338.3694
Total	**0.1662**	**0.7198**	**1.4571**	**5.3000e-003**	**0.4133**	**4.3200e-003**	**0.4176**	**0.1107**	**4.0200e-003**	**0.1147**	**0.0000**	**489.3093**	**489.3093**	**0.0192**	**0.0000**	**489.7899**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2428	301.2428	0.0722	0.0000	303.0471
Total	**0.2218**	**2.0300**	**2.1272**	**3.5000e-003**		**0.1052**	**0.1052**		**0.0990**	**0.0990**	**0.0000**	**301.2428**	**301.2428**	**0.0722**	**0.0000**	**303.0471**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0178	0.5729	0.1547	1.5400e-003	0.0385	1.0800e-003	0.0396	0.0111	1.0300e-003	0.0121	0.0000	149.2866	149.2866	8.9200e-003	0.0000	149.5095
Worker	0.1374	0.1031	1.1868	3.5900e-003	0.3732	2.9800e-003	0.3762	0.0991	2.7400e-003	0.1019	0.0000	324.9851	324.9851	8.9500e-003	0.0000	325.2089
Total	**0.1552**	**0.6759**	**1.3414**	**5.1300e-003**	**0.4117**	**4.0600e-003**	**0.4158**	**0.1102**	**3.7700e-003**	**0.1140**	**0.0000**	**474.2717**	**474.2717**	**0.0179**	**0.0000**	**474.7184**

3.6 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2425	301.2425	0.0722	0.0000	303.0467
Total	**0.2218**	**2.0300**	**2.1272**	**3.5000e-003**		**0.1052**	**0.1052**		**0.0990**	**0.0990**	**0.0000**	**301.2425**	**301.2425**	**0.0722**	**0.0000**	**303.0467**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0178	0.5729	0.1547	1.5400e-003	0.0385	1.0800e-003	0.0396	0.0111	1.0300e-003	0.0121	0.0000	149.2866	149.2866	8.9200e-003	0.0000	149.5095
Worker	0.1374	0.1031	1.1868	3.5900e-003	0.3732	2.9800e-003	0.3762	0.0991	2.7400e-003	0.1019	0.0000	324.9851	324.9851	8.9500e-003	0.0000	325.2089
Total	**0.1552**	**0.6759**	**1.3414**	**5.1300e-003**	**0.4117**	**4.0600e-003**	**0.4158**	**0.1102**	**3.7700e-003**	**0.1140**	**0.0000**	**474.2717**	**474.2717**	**0.0179**	**0.0000**	**474.7184**

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0132	0.4328	0.1388	1.4900e-003	0.0385	5.1000e-004	0.0390	0.0111	4.8000e-004	0.0116	0.0000	144.6130	144.6130	7.8800e-003	0.0000	144.8100
Worker	0.1292	0.0932	1.0913	3.4600e-003	0.3732	2.9000e-003	0.3761	0.0991	2.6700e-003	0.1018	0.0000	313.0930	313.0930	8.0600e-003	0.0000	313.2945
Total	**0.1424**	**0.5261**	**1.2301**	**4.9500e-003**	**0.4117**	**3.4100e-003**	**0.4151**	**0.1102**	**3.1500e-003**	**0.1134**	**0.0000**	**457.7059**	**457.7059**	**0.0159**	**0.0000**	**458.1044**

3.6 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0132	0.4328	0.1388	1.4900e-003	0.0385	5.1000e-004	0.0390	0.0111	4.8000e-004	0.0116	0.0000	144.6130	144.6130	7.8800e-003	0.0000	144.8100
Worker	0.1292	0.0932	1.0913	3.4600e-003	0.3732	2.9000e-003	0.3761	0.0991	2.6700e-003	0.1018	0.0000	313.0930	313.0930	8.0600e-003	0.0000	313.2945
Total	**0.1424**	**0.5261**	**1.2301**	**4.9500e-003**	**0.4117**	**3.4100e-003**	**0.4151**	**0.1102**	**3.1500e-003**	**0.1134**	**0.0000**	**457.7059**	**457.7059**	**0.0159**	**0.0000**	**458.1044**

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0130	0.4345	0.1356	1.4900e-003	0.0388	5.0000e-004	0.0393	0.0112	4.8000e-004	0.0117	0.0000	145.1448	145.1448	7.8200e-003	0.0000	145.3404
Worker	0.1233	0.0857	1.0241	3.3800e-003	0.3761	2.8800e-003	0.3790	0.0999	2.6500e-003	0.1025	0.0000	305.7189	305.7189	7.4400e-003	0.0000	305.9050
Total	**0.1363**	**0.5202**	**1.1596**	**4.8700e-003**	**0.4149**	**3.3800e-003**	**0.4183**	**0.1111**	**3.1300e-003**	**0.1142**	**0.0000**	**450.8638**	**450.8638**	**0.0153**	**0.0000**	**451.2455**

3.6 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0130	0.4345	0.1356	1.4900e-003	0.0388	5.0000e-004	0.0393	0.0112	4.8000e-004	0.0117	0.0000	145.1448	145.1448	7.8200e-003	0.0000	145.3404
Worker	0.1233	0.0857	1.0241	3.3800e-003	0.3761	2.8800e-003	0.3790	0.0999	2.6500e-003	0.1025	0.0000	305.7189	305.7189	7.4400e-003	0.0000	305.9050
Total	**0.1363**	**0.5202**	**1.1596**	**4.8700e-003**	**0.4149**	**3.3800e-003**	**0.4183**	**0.1111**	**3.1300e-003**	**0.1142**	**0.0000**	**450.8638**	**450.8638**	**0.0153**	**0.0000**	**451.2455**

3.6 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4953	301.4953	0.0709	0.0000	303.2671
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4953**	**301.4953**	**0.0709**	**0.0000**	**303.2671**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0126	0.4275	0.1311	1.4700e-003	0.0385	4.9000e-004	0.0390	0.0111	4.7000e-004	0.0116	0.0000	143.2520	143.2520	7.6500e-003	0.0000	143.4433
Worker	0.1164	0.0778	0.9432	3.2200e-003	0.3732	2.7900e-003	0.3760	0.0991	2.5700e-003	0.1017	0.0000	291.6378	291.6378	6.7300e-003	0.0000	291.8062
Total	**0.1289**	**0.5053**	**1.0742**	**4.6900e-003**	**0.4117**	**3.2800e-003**	**0.4150**	**0.1102**	**3.0400e-003**	**0.1133**	**0.0000**	**434.8898**	**434.8898**	**0.0144**	**0.0000**	**435.2494**

3.6 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4949	301.4949	0.0709	0.0000	303.2667
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4949**	**301.4949**	**0.0709**	**0.0000**	**303.2667**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0126	0.4275	0.1311	1.4700e-003	0.0385	4.9000e-004	0.0390	0.0111	4.7000e-004	0.0116	0.0000	143.2520	143.2520	7.6500e-003	0.0000	143.4433
Worker	0.1164	0.0778	0.9432	3.2200e-003	0.3732	2.7900e-003	0.3760	0.0991	2.5700e-003	0.1017	0.0000	291.6378	291.6378	6.7300e-003	0.0000	291.8062
Total	**0.1289**	**0.5053**	**1.0742**	**4.6900e-003**	**0.4117**	**3.2800e-003**	**0.4150**	**0.1102**	**3.0400e-003**	**0.1133**	**0.0000**	**434.8898**	**434.8898**	**0.0144**	**0.0000**	**435.2494**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6259					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.0918	0.0998	1.6000e-004		6.0500e-003	6.0500e-003		6.0500e-003	6.0500e-003	0.0000	13.9152	13.9152	1.0800e-003	0.0000	13.9422
Total	**0.6391**	**0.0918**	**0.0998**	**1.6000e-004**		**6.0500e-003**	**6.0500e-003**		**6.0500e-003**	**6.0500e-003**	**0.0000**	**13.9152**	**13.9152**	**1.0800e-003**	**0.0000**	**13.9422**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0131	0.0106	0.1167	3.2000e-004	0.0311	2.6000e-004	0.0313	8.2500e-003	2.4000e-004	8.4900e-003	0.0000	28.9451	28.9451	9.1000e-004	0.0000	28.9679
Total	**0.0131**	**0.0106**	**0.1167**	**3.2000e-004**	**0.0311**	**2.6000e-004**	**0.0313**	**8.2500e-003**	**2.4000e-004**	**8.4900e-003**	**0.0000**	**28.9451**	**28.9451**	**9.1000e-004**	**0.0000**	**28.9679**

3.7 Architectural Coating - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6259					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.0918	0.0998	1.6000e-004		6.0500e-003	6.0500e-003		6.0500e-003	6.0500e-003	0.0000	13.9152	13.9152	1.0800e-003	0.0000	13.9422
Total	**0.6391**	**0.0918**	**0.0998**	**1.6000e-004**		**6.0500e-003**	**6.0500e-003**		**6.0500e-003**	**6.0500e-003**	**0.0000**	**13.9152**	**13.9152**	**1.0800e-003**	**0.0000**	**13.9422**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0131	0.0106	0.1167	3.2000e-004	0.0311	2.6000e-004	0.0313	8.2500e-003	2.4000e-004	8.4900e-003	0.0000	28.9451	28.9451	9.1000e-004	0.0000	28.9679
Total	**0.0131**	**0.0106**	**0.1167**	**3.2000e-004**	**0.0311**	**2.6000e-004**	**0.0313**	**8.2500e-003**	**2.4000e-004**	**8.4900e-003**	**0.0000**	**28.9451**	**28.9451**	**9.1000e-004**	**0.0000**	**28.9679**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4987					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0286	0.1993	0.2372	3.9000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	33.3200	33.3200	2.2900e-003	0.0000	33.3771
Total	**1.5272**	**0.1993**	**0.2372**	**3.9000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**33.3200**	**33.3200**	**2.2900e-003**	**0.0000**	**33.3771**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0292	0.0227	0.2566	7.4000e-004	0.0744	6.1000e-004	0.0750	0.0198	5.6000e-004	0.0203	0.0000	67.1079	67.1079	1.9700e-003	0.0000	67.1573
Total	**0.0292**	**0.0227**	**0.2566**	**7.4000e-004**	**0.0744**	**6.1000e-004**	**0.0750**	**0.0198**	**5.6000e-004**	**0.0203**	**0.0000**	**67.1079**	**67.1079**	**1.9700e-003**	**0.0000**	**67.1573**

3.7 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4987					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0286	0.1993	0.2372	3.9000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	33.3199	33.3199	2.2900e-003	0.0000	33.3771
Total	**1.5272**	**0.1993**	**0.2372**	**3.9000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**33.3199**	**33.3199**	**2.2900e-003**	**0.0000**	**33.3771**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0292	0.0227	0.2566	7.4000e-004	0.0744	6.1000e-004	0.0750	0.0198	5.6000e-004	0.0203	0.0000	67.1079	67.1079	1.9700e-003	0.0000	67.1573
Total	**0.0292**	**0.0227**	**0.2566**	**7.4000e-004**	**0.0744**	**6.1000e-004**	**0.0750**	**0.0198**	**5.6000e-004**	**0.0203**	**0.0000**	**67.1079**	**67.1079**	**1.9700e-003**	**0.0000**	**67.1573**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4929					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0266	0.1831	0.2358	3.9000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	33.1923	33.1923	2.1600e-003	0.0000	33.2463
Total	**1.5195**	**0.1831**	**0.2358**	**3.9000e-004**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**33.1923**	**33.1923**	**2.1600e-003**	**0.0000**	**33.2463**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0273	0.0205	0.2355	7.1000e-004	0.0741	5.9000e-004	0.0747	0.0197	5.4000e-004	0.0202	0.0000	64.5009	64.5009	1.7800e-003	0.0000	64.5453
Total	**0.0273**	**0.0205**	**0.2355**	**7.1000e-004**	**0.0741**	**5.9000e-004**	**0.0747**	**0.0197**	**5.4000e-004**	**0.0202**	**0.0000**	**64.5009**	**64.5009**	**1.7800e-003**	**0.0000**	**64.5453**

3.7 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4929					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0266	0.1831	0.2358	3.9000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	33.1923	33.1923	2.1600e-003	0.0000	33.2463
Total	**1.5195**	**0.1831**	**0.2358**	**3.9000e-004**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**33.1923**	**33.1923**	**2.1600e-003**	**0.0000**	**33.2463**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0273	0.0205	0.2355	7.1000e-004	0.0741	5.9000e-004	0.0747	0.0197	5.4000e-004	0.0202	0.0000	64.5009	64.5009	1.7800e-003	0.0000	64.5453
Total	**0.0273**	**0.0205**	**0.2355**	**7.1000e-004**	**0.0741**	**5.9000e-004**	**0.0747**	**0.0197**	**5.4000e-004**	**0.0202**	**0.0000**	**64.5009**	**64.5009**	**1.7800e-003**	**0.0000**	**64.5453**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4929					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0249	0.1694	0.2355	3.9000e-004		9.2100e-003	9.2100e-003		9.2100e-003	9.2100e-003	0.0000	33.1923	33.1923	1.9900e-003	0.0000	33.2419
Total	**1.5178**	**0.1694**	**0.2355**	**3.9000e-004**		**9.2100e-003**	**9.2100e-003**		**9.2100e-003**	**9.2100e-003**	**0.0000**	**33.1923**	**33.1923**	**1.9900e-003**	**0.0000**	**33.2419**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0257	0.0185	0.2166	6.9000e-004	0.0741	5.7000e-004	0.0747	0.0197	5.3000e-004	0.0202	0.0000	62.1406	62.1406	1.6000e-003	0.0000	62.1806
Total	**0.0257**	**0.0185**	**0.2166**	**6.9000e-004**	**0.0741**	**5.7000e-004**	**0.0747**	**0.0197**	**5.3000e-004**	**0.0202**	**0.0000**	**62.1406**	**62.1406**	**1.6000e-003**	**0.0000**	**62.1806**

3.7 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4929					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0249	0.1694	0.2354	3.9000e-004		9.2100e-003	9.2100e-003		9.2100e-003	9.2100e-003	0.0000	33.1923	33.1923	1.9900e-003	0.0000	33.2419
Total	**1.5178**	**0.1694**	**0.2354**	**3.9000e-004**		**9.2100e-003**	**9.2100e-003**		**9.2100e-003**	**9.2100e-003**	**0.0000**	**33.1923**	**33.1923**	**1.9900e-003**	**0.0000**	**33.2419**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0257	0.0185	0.2166	6.9000e-004	0.0741	5.7000e-004	0.0747	0.0197	5.3000e-004	0.0202	0.0000	62.1406	62.1406	1.6000e-003	0.0000	62.1806
Total	**0.0257**	**0.0185**	**0.2166**	**6.9000e-004**	**0.0741**	**5.7000e-004**	**0.0747**	**0.0197**	**5.3000e-004**	**0.0202**	**0.0000**	**62.1406**	**62.1406**	**1.6000e-003**	**0.0000**	**62.1806**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5044					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0237	0.1597	0.2371	3.9000e-004		7.9800e-003	7.9800e-003		7.9800e-003	7.9800e-003	0.0000	33.4476	33.4476	1.8800e-003	0.0000	33.4947
Total	**1.5281**	**0.1597**	**0.2371**	**3.9000e-004**		**7.9800e-003**	**7.9800e-003**		**7.9800e-003**	**7.9800e-003**	**0.0000**	**33.4476**	**33.4476**	**1.8800e-003**	**0.0000**	**33.4947**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0245	0.0170	0.2033	6.7000e-004	0.0747	5.7000e-004	0.0752	0.0198	5.3000e-004	0.0204	0.0000	60.6770	60.6770	1.4800e-003	0.0000	60.7140
Total	**0.0245**	**0.0170**	**0.2033**	**6.7000e-004**	**0.0747**	**5.7000e-004**	**0.0752**	**0.0198**	**5.3000e-004**	**0.0204**	**0.0000**	**60.6770**	**60.6770**	**1.4800e-003**	**0.0000**	**60.7140**

3.7 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5044					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0237	0.1597	0.2371	3.9000e-004		7.9800e-003	7.9800e-003		7.9800e-003	7.9800e-003	0.0000	33.4476	33.4476	1.8800e-003	0.0000	33.4947
Total	**1.5281**	**0.1597**	**0.2371**	**3.9000e-004**		**7.9800e-003**	**7.9800e-003**		**7.9800e-003**	**7.9800e-003**	**0.0000**	**33.4476**	**33.4476**	**1.8800e-003**	**0.0000**	**33.4947**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0245	0.0170	0.2033	6.7000e-004	0.0747	5.7000e-004	0.0752	0.0198	5.3000e-004	0.0204	0.0000	60.6770	60.6770	1.4800e-003	0.0000	60.7140
Total	**0.0245**	**0.0170**	**0.2033**	**6.7000e-004**	**0.0747**	**5.7000e-004**	**0.0752**	**0.0198**	**5.3000e-004**	**0.0204**	**0.0000**	**60.6770**	**60.6770**	**1.4800e-003**	**0.0000**	**60.7140**

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4987					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3200	33.3200	1.8200e-003	0.0000	33.3654
Total	**1.5210**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3200**	**33.3200**	**1.8200e-003**	**0.0000**	**33.3654**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0232	0.0155	0.1879	6.4000e-004	0.0744	5.6000e-004	0.0749	0.0198	5.1000e-004	0.0203	0.0000	58.1049	58.1049	1.3400e-003	0.0000	58.1385
Total	**0.0232**	**0.0155**	**0.1879**	**6.4000e-004**	**0.0744**	**5.6000e-004**	**0.0749**	**0.0198**	**5.1000e-004**	**0.0203**	**0.0000**	**58.1049**	**58.1049**	**1.3400e-003**	**0.0000**	**58.1385**

3.7 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4987					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3199	33.3199	1.8200e-003	0.0000	33.3654
Total	**1.5210**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3199**	**33.3199**	**1.8200e-003**	**0.0000**	**33.3654**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0232	0.0155	0.1879	6.4000e-004	0.0744	5.6000e-004	0.0749	0.0198	5.1000e-004	0.0203	0.0000	58.1049	58.1049	1.3400e-003	0.0000	58.1385
Total	**0.0232**	**0.0155**	**0.1879**	**6.4000e-004**	**0.0744**	**5.6000e-004**	**0.0749**	**0.0198**	**5.1000e-004**	**0.0203**	**0.0000**	**58.1049**	**58.1049**	**1.3400e-003**	**0.0000**	**58.1385**

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4987					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3200	33.3200	1.8200e-003	0.0000	33.3654
Total	**1.5210**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3200**	**33.3200**	**1.8200e-003**	**0.0000**	**33.3654**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0222	0.0143	0.1756	6.2000e-004	0.0744	5.4000e-004	0.0749	0.0198	5.0000e-004	0.0203	0.0000	56.0867	56.0867	1.2300e-003	0.0000	56.1175
Total	**0.0222**	**0.0143**	**0.1756**	**6.2000e-004**	**0.0744**	**5.4000e-004**	**0.0749**	**0.0198**	**5.0000e-004**	**0.0203**	**0.0000**	**56.0867**	**56.0867**	**1.2300e-003**	**0.0000**	**56.1175**

3.7 Architectural Coating - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4987					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3199	33.3199	1.8200e-003	0.0000	33.3654
Total	**1.5210**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3199**	**33.3199**	**1.8200e-003**	**0.0000**	**33.3654**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0222	0.0143	0.1756	6.2000e-004	0.0744	5.4000e-004	0.0749	0.0198	5.0000e-004	0.0203	0.0000	56.0867	56.0867	1.2300e-003	0.0000	56.1175
Total	**0.0222**	**0.0143**	**0.1756**	**6.2000e-004**	**0.0744**	**5.4000e-004**	**0.0749**	**0.0198**	**5.0000e-004**	**0.0203**	**0.0000**	**56.0867**	**56.0867**	**1.2300e-003**	**0.0000**	**56.1175**

3.7 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4987					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3200	33.3200	1.8200e-003	0.0000	33.3654
Total	**1.5210**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3200**	**33.3200**	**1.8200e-003**	**0.0000**	**33.3654**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0212	0.0132	0.1646	6.0000e-004	0.0744	5.1000e-004	0.0749	0.0198	4.7000e-004	0.0202	0.0000	54.2991	54.2991	1.1300e-003	0.0000	54.3273
Total	**0.0212**	**0.0132**	**0.1646**	**6.0000e-004**	**0.0744**	**5.1000e-004**	**0.0749**	**0.0198**	**4.7000e-004**	**0.0202**	**0.0000**	**54.2991**	**54.2991**	**1.1300e-003**	**0.0000**	**54.3273**

3.7 Architectural Coating - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4987					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3199	33.3199	1.8200e-003	0.0000	33.3654
Total	**1.5210**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3199**	**33.3199**	**1.8200e-003**	**0.0000**	**33.3654**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0212	0.0132	0.1646	6.0000e-004	0.0744	5.1000e-004	0.0749	0.0198	4.7000e-004	0.0202	0.0000	54.2991	54.2991	1.1300e-003	0.0000	54.3273
Total	**0.0212**	**0.0132**	**0.1646**	**6.0000e-004**	**0.0744**	**5.1000e-004**	**0.0749**	**0.0198**	**4.7000e-004**	**0.0202**	**0.0000**	**54.2991**	**54.2991**	**1.1300e-003**	**0.0000**	**54.3273**

3.8 Utilities 2 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0214	0.1927	0.3821	5.6000e-004		8.3200e-003	8.3200e-003		7.6500e-003	7.6500e-003	0.0000	49.5960	49.5960	0.0160	0.0000	49.9970
Total	**0.0214**	**0.1927**	**0.3821**	**5.6000e-004**		**8.3200e-003**	**8.3200e-003**		**7.6500e-003**	**7.6500e-003**	**0.0000**	**49.5960**	**49.5960**	**0.0160**	**0.0000**	**49.9970**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-003	1.2100e-003	0.0146	5.0000e-005	5.7900e-003	4.0000e-005	5.8300e-003	1.5400e-003	4.0000e-005	1.5800e-003	0.0000	4.5210	4.5210	1.0000e-004	0.0000	4.5236
Total	**1.8000e-003**	**1.2100e-003**	**0.0146**	**5.0000e-005**	**5.7900e-003**	**4.0000e-005**	**5.8300e-003**	**1.5400e-003**	**4.0000e-005**	**1.5800e-003**	**0.0000**	**4.5210**	**4.5210**	**1.0000e-004**	**0.0000**	**4.5236**

3.8 Utilities 2 - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0214	0.1927	0.3821	5.6000e-004		8.3200e-003	8.3200e-003		7.6500e-003	7.6500e-003	0.0000	49.5960	49.5960	0.0160	0.0000	49.9970
Total	**0.0214**	**0.1927**	**0.3821**	**5.6000e-004**		**8.3200e-003**	**8.3200e-003**		**7.6500e-003**	**7.6500e-003**	**0.0000**	**49.5960**	**49.5960**	**0.0160**	**0.0000**	**49.9970**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-003	1.2100e-003	0.0146	5.0000e-005	5.7900e-003	4.0000e-005	5.8300e-003	1.5400e-003	4.0000e-005	1.5800e-003	0.0000	4.5210	4.5210	1.0000e-004	0.0000	4.5236
Total	**1.8000e-003**	**1.2100e-003**	**0.0146**	**5.0000e-005**	**5.7900e-003**	**4.0000e-005**	**5.8300e-003**	**1.5400e-003**	**4.0000e-005**	**1.5800e-003**	**0.0000**	**4.5210**	**4.5210**	**1.0000e-004**	**0.0000**	**4.5236**

3.8 Utilities 2 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.6300e-003	0.0598	0.1187	1.8000e-004		2.5800e-003	2.5800e-003		2.3800e-003	2.3800e-003	0.0000	15.4048	15.4048	4.9800e-003	0.0000	15.5294
Total	**6.6300e-003**	**0.0598**	**0.1187**	**1.8000e-004**		**2.5800e-003**	**2.5800e-003**		**2.3800e-003**	**2.3800e-003**	**0.0000**	**15.4048**	**15.4048**	**4.9800e-003**	**0.0000**	**15.5294**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	3.4000e-004	4.2400e-003	1.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.3555	1.3555	3.0000e-005	0.0000	1.3562
Total	**5.4000e-004**	**3.4000e-004**	**4.2400e-003**	**1.0000e-005**	**1.8000e-003**	**1.0000e-005**	**1.8100e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.3555**	**1.3555**	**3.0000e-005**	**0.0000**	**1.3562**

3.8 Utilities 2 - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.6300e-003	0.0598	0.1187	1.8000e-004		2.5800e-003	2.5800e-003		2.3800e-003	2.3800e-003	0.0000	15.4048	15.4048	4.9800e-003	0.0000	15.5294
Total	**6.6300e-003**	**0.0598**	**0.1187**	**1.8000e-004**		**2.5800e-003**	**2.5800e-003**		**2.3800e-003**	**2.3800e-003**	**0.0000**	**15.4048**	**15.4048**	**4.9800e-003**	**0.0000**	**15.5294**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	3.4000e-004	4.2400e-003	1.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.3555	1.3555	3.0000e-005	0.0000	1.3562
Total	**5.4000e-004**	**3.4000e-004**	**4.2400e-003**	**1.0000e-005**	**1.8000e-003**	**1.0000e-005**	**1.8100e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.3555**	**1.3555**	**3.0000e-005**	**0.0000**	**1.3562**

3.9 Fine Grading 2 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.8894	0.0000	0.8894	0.1838	0.0000	0.1838	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0514	0.5016	0.5138	1.0500e-003		0.0208	0.0208		0.0191	0.0191	0.0000	91.9664	91.9664	0.0297	0.0000	92.7100
Total	**0.0514**	**0.5016**	**0.5138**	**1.0500e-003**	**0.8894**	**0.0208**	**0.9102**	**0.1838**	**0.0191**	**0.2029**	**0.0000**	**91.9664**	**91.9664**	**0.0297**	**0.0000**	**92.7100**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2600e-003	1.5100e-003	0.0183	6.0000e-005	7.2300e-003	5.0000e-005	7.2900e-003	1.9200e-003	5.0000e-005	1.9700e-003	0.0000	5.6512	5.6512	1.3000e-004	0.0000	5.6545
Total	**2.2600e-003**	**1.5100e-003**	**0.0183**	**6.0000e-005**	**7.2300e-003**	**5.0000e-005**	**7.2900e-003**	**1.9200e-003**	**5.0000e-005**	**1.9700e-003**	**0.0000**	**5.6512**	**5.6512**	**1.3000e-004**	**0.0000**	**5.6545**

3.9 Fine Grading 2 - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3469	0.0000	0.3469	0.0717	0.0000	0.0717	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0514	0.5016	0.5138	1.0500e-003		0.0208	0.0208		0.0191	0.0191	0.0000	91.9663	91.9663	0.0297	0.0000	92.7099
Total	**0.0514**	**0.5016**	**0.5138**	**1.0500e-003**	**0.3469**	**0.0208**	**0.3676**	**0.0717**	**0.0191**	**0.0908**	**0.0000**	**91.9663**	**91.9663**	**0.0297**	**0.0000**	**92.7099**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2600e-003	1.5100e-003	0.0183	6.0000e-005	7.2300e-003	5.0000e-005	7.2900e-003	1.9200e-003	5.0000e-005	1.9700e-003	0.0000	5.6512	5.6512	1.3000e-004	0.0000	5.6545
Total	**2.2600e-003**	**1.5100e-003**	**0.0183**	**6.0000e-005**	**7.2300e-003**	**5.0000e-005**	**7.2900e-003**	**1.9200e-003**	**5.0000e-005**	**1.9700e-003**	**0.0000**	**5.6512**	**5.6512**	**1.3000e-004**	**0.0000**	**5.6545**

3.9 Fine Grading 2 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4765	0.0000	1.4765	0.5066	0.0000	0.5066	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2033	1.9838	2.0319	4.1400e-003		0.0821	0.0821		0.0756	0.0756	0.0000	363.6852	363.6852	0.1176	0.0000	366.6258
Total	**0.2033**	**1.9838**	**2.0319**	**4.1400e-003**	**1.4765**	**0.0821**	**1.5587**	**0.5066**	**0.0756**	**0.5821**	**0.0000**	**363.6852**	**363.6852**	**0.1176**	**0.0000**	**366.6258**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.5200e-003	5.4900e-003	0.0675	2.4000e-004	0.0286	2.1000e-004	0.0288	7.6000e-003	1.9000e-004	7.7900e-003	0.0000	21.5718	21.5718	4.7000e-004	0.0000	21.5837
Total	**8.5200e-003**	**5.4900e-003**	**0.0675**	**2.4000e-004**	**0.0286**	**2.1000e-004**	**0.0288**	**7.6000e-003**	**1.9000e-004**	**7.7900e-003**	**0.0000**	**21.5718**	**21.5718**	**4.7000e-004**	**0.0000**	**21.5837**

3.9 Fine Grading 2 - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5759	0.0000	0.5759	0.1976	0.0000	0.1976	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2033	1.9838	2.0319	4.1400e-003		0.0821	0.0821		0.0756	0.0756	0.0000	363.6848	363.6848	0.1176	0.0000	366.6254
Total	**0.2033**	**1.9838**	**2.0319**	**4.1400e-003**	**0.5759**	**0.0821**	**0.6580**	**0.1976**	**0.0756**	**0.2731**	**0.0000**	**363.6848**	**363.6848**	**0.1176**	**0.0000**	**366.6254**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.5200e-003	5.4900e-003	0.0675	2.4000e-004	0.0286	2.1000e-004	0.0288	7.6000e-003	1.9000e-004	7.7900e-003	0.0000	21.5718	21.5718	4.7000e-004	0.0000	21.5837
Total	**8.5200e-003**	**5.4900e-003**	**0.0675**	**2.4000e-004**	**0.0286**	**2.1000e-004**	**0.0288**	**7.6000e-003**	**1.9000e-004**	**7.7900e-003**	**0.0000**	**21.5718**	**21.5718**	**4.7000e-004**	**0.0000**	**21.5837**

3.9 Fine Grading 2 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2748	0.0000	1.2748	0.3957	0.0000	0.3957	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1511	1.4745	1.5103	3.0800e-003		0.0611	0.0611		0.0562	0.0562	0.0000	270.3254	270.3254	0.0874	0.0000	272.5111
Total	**0.1511**	**1.4745**	**1.5103**	**3.0800e-003**	**1.2748**	**0.0611**	**1.3358**	**0.3957**	**0.0562**	**0.4518**	**0.0000**	**270.3254**	**270.3254**	**0.0874**	**0.0000**	**272.5111**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0500e-003	3.7600e-003	0.0470	1.7000e-004	0.0213	1.5000e-004	0.0214	5.6500e-003	1.3000e-004	5.7800e-003	0.0000	15.5232	15.5232	3.2000e-004	0.0000	15.5312
Total	**6.0500e-003**	**3.7600e-003**	**0.0470**	**1.7000e-004**	**0.0213**	**1.5000e-004**	**0.0214**	**5.6500e-003**	**1.3000e-004**	**5.7800e-003**	**0.0000**	**15.5232**	**15.5232**	**3.2000e-004**	**0.0000**	**15.5312**

3.9 Fine Grading 2 - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4972	0.0000	0.4972	0.1543	0.0000	0.1543	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1511	1.4745	1.5103	3.0800e-003		0.0611	0.0611		0.0562	0.0562	0.0000	270.3251	270.3251	0.0874	0.0000	272.5108
Total	**0.1511**	**1.4745**	**1.5103**	**3.0800e-003**	**0.4972**	**0.0611**	**0.5582**	**0.1543**	**0.0562**	**0.2105**	**0.0000**	**270.3251**	**270.3251**	**0.0874**	**0.0000**	**272.5108**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0500e-003	3.7600e-003	0.0470	1.7000e-004	0.0213	1.5000e-004	0.0214	5.6500e-003	1.3000e-004	5.7800e-003	0.0000	15.5232	15.5232	3.2000e-004	0.0000	15.5312
Total	**6.0500e-003**	**3.7600e-003**	**0.0470**	**1.7000e-004**	**0.0213**	**1.5000e-004**	**0.0214**	**5.6500e-003**	**1.3000e-004**	**5.7800e-003**	**0.0000**	**15.5232**	**15.5232**	**3.2000e-004**	**0.0000**	**15.5312**

3.10 Building Construction 2 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9900e-003	0.1718	0.0521	5.9000e-004	0.0156	1.9000e-004	0.0158	4.5100e-003	1.9000e-004	4.6900e-003	0.0000	57.8274	57.8274	3.0600e-003	0.0000	57.9039
Worker	0.0558	0.0360	0.4424	1.5600e-003	0.1873	1.3600e-003	0.1887	0.0498	1.2500e-003	0.0510	0.0000	141.2955	141.2955	3.1000e-003	0.0000	141.3729
Total	**0.0608**	**0.2078**	**0.4945**	**2.1500e-003**	**0.2030**	**1.5500e-003**	**0.2045**	**0.0543**	**1.4400e-003**	**0.0557**	**0.0000**	**199.1228**	**199.1228**	**6.1600e-003**	**0.0000**	**199.2768**

3.10 Building Construction 2 - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9900e-003	0.1718	0.0521	5.9000e-004	0.0156	1.9000e-004	0.0158	4.5100e-003	1.9000e-004	4.6900e-003	0.0000	57.8274	57.8274	3.0600e-003	0.0000	57.9039
Worker	0.0558	0.0360	0.4424	1.5600e-003	0.1873	1.3600e-003	0.1887	0.0498	1.2500e-003	0.0510	0.0000	141.2955	141.2955	3.1000e-003	0.0000	141.3729
Total	**0.0608**	**0.2078**	**0.4945**	**2.1500e-003**	**0.2030**	**1.5500e-003**	**0.2045**	**0.0543**	**1.4400e-003**	**0.0557**	**0.0000**	**199.1228**	**199.1228**	**6.1600e-003**	**0.0000**	**199.2768**

3.10 Building Construction 2 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.8900e-003	0.1703	0.0512	5.9000e-004	0.0156	1.9000e-004	0.0158	4.5100e-003	1.8000e-004	4.6900e-003	0.0000	57.5533	57.5533	3.0100e-003	0.0000	57.6286
Worker	0.0533	0.0332	0.4146	1.5100e-003	0.1873	1.2800e-003	0.1886	0.0498	1.1800e-003	0.0509	0.0000	136.7919	136.7919	2.8400e-003	0.0000	136.8629
Total	**0.0582**	**0.2034**	**0.4658**	**2.1000e-003**	**0.2030**	**1.4700e-003**	**0.2044**	**0.0543**	**1.3600e-003**	**0.0556**	**0.0000**	**194.3451**	**194.3451**	**5.8500e-003**	**0.0000**	**194.4915**

3.10 Building Construction 2 - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.8900e-003	0.1703	0.0512	5.9000e-004	0.0156	1.9000e-004	0.0158	4.5100e-003	1.8000e-004	4.6900e-003	0.0000	57.5533	57.5533	3.0100e-003	0.0000	57.6286
Worker	0.0533	0.0332	0.4146	1.5100e-003	0.1873	1.2800e-003	0.1886	0.0498	1.1800e-003	0.0509	0.0000	136.7919	136.7919	2.8400e-003	0.0000	136.8629
Total	**0.0582**	**0.2034**	**0.4658**	**2.1000e-003**	**0.2030**	**1.4700e-003**	**0.2044**	**0.0543**	**1.3600e-003**	**0.0556**	**0.0000**	**194.3451**	**194.3451**	**5.8500e-003**	**0.0000**	**194.4915**

3.10 Building Construction 2 - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1771	1.6148	2.0830	3.4900e-003		0.0683	0.0683		0.0643	0.0643	0.0000	300.3357	300.3357	0.0706	0.0000	302.1007
Total	**0.1771**	**1.6148**	**2.0830**	**3.4900e-003**		**0.0683**	**0.0683**		**0.0643**	**0.0643**	**0.0000**	**300.3357**	**300.3357**	**0.0706**	**0.0000**	**302.1007**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.7700e-003	0.1677	0.0501	5.8000e-004	0.0155	1.9000e-004	0.0157	4.4700e-003	1.8000e-004	4.6500e-003	0.0000	56.8793	56.8793	2.9500e-003	0.0000	56.9530
Worker	0.0503	0.0304	0.3872	1.4600e-003	0.1859	1.1800e-003	0.1871	0.0494	1.0800e-003	0.0505	0.0000	131.7849	131.7849	2.6000e-003	0.0000	131.8500
Total	**0.0550**	**0.1981**	**0.4374**	**2.0400e-003**	**0.2014**	**1.3700e-003**	**0.2028**	**0.0538**	**1.2600e-003**	**0.0551**	**0.0000**	**188.6642**	**188.6642**	**5.5500e-003**	**0.0000**	**188.8030**

3.10 Building Construction 2 - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1771	1.6148	2.0830	3.4900e-003		0.0683	0.0683		0.0643	0.0643	0.0000	300.3353	300.3353	0.0706	0.0000	302.1003
Total	**0.1771**	**1.6148**	**2.0830**	**3.4900e-003**		**0.0683**	**0.0683**		**0.0643**	**0.0643**	**0.0000**	**300.3353**	**300.3353**	**0.0706**	**0.0000**	**302.1003**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.7700e-003	0.1677	0.0501	5.8000e-004	0.0155	1.9000e-004	0.0157	4.4700e-003	1.8000e-004	4.6500e-003	0.0000	56.8793	56.8793	2.9500e-003	0.0000	56.9530
Worker	0.0503	0.0304	0.3872	1.4600e-003	0.1859	1.1800e-003	0.1871	0.0494	1.0800e-003	0.0505	0.0000	131.7849	131.7849	2.6000e-003	0.0000	131.8500
Total	**0.0550**	**0.1981**	**0.4374**	**2.0400e-003**	**0.2014**	**1.3700e-003**	**0.2028**	**0.0538**	**1.2600e-003**	**0.0551**	**0.0000**	**188.6642**	**188.6642**	**5.5500e-003**	**0.0000**	**188.8030**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.6896	23.7864	69.0499	0.3123	30.6391	0.2162	30.8553	8.2099	0.2008	8.4107	0.0000	28,968.6222	28,968.6222	1.2328	0.0000	28,999.4428
Unmitigated	4.6896	23.7864	69.0499	0.3123	30.6391	0.2162	30.8553	8.2099	0.2008	8.4107	0.0000	28,968.6222	28,968.6222	1.2328	0.0000	28,999.4428

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1,398.80	1,398.80	1398.80	400,762	400,762
Elementary School	1,017.36	0.00	0.00	2,504,438	2,504,438
Government (Civic Center)	40.04	40.04	40.04	123,649	123,649
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	14,784.00	15,345.00	13365.00	70,658,702	70,658,702
Single Family Housing	1,478.40	1,534.50	1336.50	7,065,870	7,065,870
Total	18,718.60	18,318.34	16,140.34	80,753,422	80,753,422

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	1.07	1.07	1.07	33.00	48.00	19.00	66	28	6
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
Government (Civic Center)	16.60	8.40	6.90	75.00	20.00	5.00	50	34	16
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	13.24	13.24	13.24	100.00	0.00	0.00	100	0	0
Single Family Housing	13.24	13.24	13.24	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Elementary School	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Government (Civic Center)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Other Asphalt Surfaces	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Single Family Housing	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Northlake Creek Avoidance Alternative - Los Angeles-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,811.0425	2,811.0425	0.2076	0.0430	2,829.0303
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,811.0425	2,811.0425	0.2076	0.0430	2,829.0303
NaturalGas Mitigated	0.2743	2.3470	1.0191	0.0150		0.1895	0.1895		0.1895	0.1895	0.0000	2,714.6410	2,714.6410	0.0520	0.0498	2,730.7728
NaturalGas Unmitigated	0.2743	2.3470	1.0191	0.0150		0.1895	0.1895		0.1895	0.1895	0.0000	2,714.6410	2,714.6410	0.0520	0.0498	2,730.7728

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	546030	2.9400e-003	0.0268	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003	0.0000	29.1383	29.1383	5.6000e-004	5.3000e-004	29.3114
Government (Civic Center)	458040	2.4700e-003	0.0225	0.0189	1.3000e-004		1.7100e-003	1.7100e-003		1.7100e-003	1.7100e-003	0.0000	24.4428	24.4428	4.7000e-004	4.5000e-004	24.5880
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	4.53331e+006	0.0244	0.2089	0.0889	1.3300e-003		0.0169	0.0169		0.0169	0.0169	0.0000	241.9145	241.9145	4.6400e-003	4.4400e-003	243.3521
Single Family Housing	4.53331e+007	0.2444	2.0889	0.8889	0.0133		0.1689	0.1689		0.1689	0.1689	0.0000	2,419.1454	2,419.1454	0.0464	0.0444	2,433.5212
Total		**0.2743**	**2.3470**	**1.0191**	**0.0150**		**0.1895**	**0.1895**		**0.1895**	**0.1895**	**0.0000**	**2,714.6410**	**2,714.6410**	**0.0520**	**0.0498**	**2,730.7728**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	546030	2.9400e-003	0.0268	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003	0.0000	29.1383	29.1383	5.6000e-004	5.3000e-004	29.3114
Government (Civic Center)	458040	2.4700e-003	0.0225	0.0189	1.3000e-004		1.7100e-003	1.7100e-003		1.7100e-003	1.7100e-003	0.0000	24.4428	24.4428	4.7000e-004	4.5000e-004	24.5880
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	4.53331e+006	0.0244	0.2089	0.0889	1.3300e-003		0.0169	0.0169		0.0169	0.0169	0.0000	241.9145	241.9145	4.6400e-003	4.4400e-003	243.3521
Single Family Housing	4.53331e+007	0.2444	2.0889	0.8889	0.0133		0.1689	0.1689		0.1689	0.1689	0.0000	2,419.1454	2,419.1454	0.0464	0.0444	2,433.5212
Total		**0.2743**	**2.3470**	**1.0191**	**0.0150**		**0.1895**	**0.1895**		**0.1895**	**0.1895**	**0.0000**	**2,714.6410**	**2,714.6410**	**0.0520**	**0.0498**	**2,730.7728**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	310817	55.3674	4.0900e-003	8.5000e-004	55.7217
Government (Civic Center)	571560	101.8147	7.5200e-003	1.5600e-003	102.4662
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.35437e+006	241.2600	0.0178	3.6900e-003	242.8039
Single Family Housing	1.35437e+007	2,412.6004	0.1782	0.0369	2,428.0385
Total		**2,811.0425**	**0.2076**	**0.0430**	**2,829.0303**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	310817	55.3674	4.0900e-003	8.5000e-004	55.7217
Government (Civic Center)	571560	101.8147	7.5200e-003	1.5600e-003	102.4662
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.35437e+006	241.2600	0.0178	3.6900e-003	242.8039
Single Family Housing	1.35437e+007	2,412.6004	0.1782	0.0369	2,428.0385
Total		**2,811.0425**	**0.2076**	**0.0430**	**2,829.0303**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	14.0657	0.4042	18.7899	2.1900e-003		0.1191	0.1191		0.1191	0.1191	0.0000	249.1186	249.1186	0.0335	4.0100e-003	251.1504
Unmitigated	14.0657	0.4042	18.7899	2.1900e-003		0.1191	0.1191		0.1191	0.1191	0.0000	249.1186	249.1186	0.0335	4.0100e-003	251.1504

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1111					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	12.3702					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0221	0.1887	0.0803	1.2000e-003		0.0153	0.0153		0.0153	0.0153	0.0000	218.5248	218.5248	4.1900e-003	4.0100e-003	219.8234
Landscaping	0.5624	0.2155	18.7096	9.9000e-004		0.1038	0.1038		0.1038	0.1038	0.0000	30.5938	30.5938	0.0293	0.0000	31.3270
Total	**14.0657**	**0.4042**	**18.7898**	**2.1900e-003**		**0.1191**	**0.1191**		**0.1191**	**0.1191**	**0.0000**	**249.1186**	**249.1186**	**0.0335**	**4.0100e-003**	**251.1504**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1111					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	12.3702					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0221	0.1887	0.0803	1.2000e-003		0.0153	0.0153		0.0153	0.0153	0.0000	218.5248	218.5248	4.1900e-003	4.0100e-003	219.8234
Landscaping	0.5624	0.2155	18.7096	9.9000e-004		0.1038	0.1038		0.1038	0.1038	0.0000	30.5938	30.5938	0.0293	0.0000	31.3270
Total	**14.0657**	**0.4042**	**18.7898**	**2.1900e-003**		**0.1191**	**0.1191**		**0.1191**	**0.1191**	**0.0000**	**249.1186**	**249.1186**	**0.0335**	**4.0100e-003**	**251.1504**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	566.0725	4.2266	0.1069	703.5948
Unmitigated	566.0725	4.2266	0.1069	703.5948

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 30.9785	61.3089	4.5300e-003	9.4000e-004	61.7012
Elementary School	1.52242 / 3.9148	11.7619	0.0504	1.3400e-003	13.4234
Government (Civic Center)	8.74103 / 5.3574	33.6506	0.2871	7.2000e-003	42.9730
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	118.255 / 74.5518	459.3511	3.8845	0.0974	585.4972
Total		**566.0725**	**4.2266**	**0.1069**	**703.5948**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 30.9785	61.3089	4.5300e-003	9.4000e-004	61.7012
Elementary School	1.52242 / 3.9148	11.7619	0.0504	1.3400e-003	13.4234
Government (Civic Center)	8.74103 / 5.3574	33.6506	0.2871	7.2000e-003	42.9730
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	118.255 / 74.5518	459.3511	3.8845	0.0974	585.4972
Total		**566.0725**	**4.2266**	**0.1069**	**703.5948**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	506.6573	29.9426	0.0000	1,255.2221
Unmitigated	506.6573	29.9426	0.0000	1,255.2221

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	2.24	0.4547	0.0269	0.0000	1.1265
Elementary School	114.61	23.2648	1.3749	0.0000	57.6375
Government (Civic Center)	250.8	50.9101	3.0087	0.0000	126.1277
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2128.31	432.0277	25.5321	0.0000	1,070.3303
Total		**506.6573**	**29.9426**	**0.0000**	**1,255.2221**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	2.24	0.4547	0.0269	0.0000	1.1265
Elementary School	114.61	23.2648	1.3749	0.0000	57.6375
Government (Civic Center)	250.8	50.9101	3.0087	0.0000	126.1277
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2128.31	432.0277	25.5321	0.0000	1,070.3303
Total		**506.6573**	**29.9426**	**0.0000**	**1,255.2221**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX F-1

CREEK AVOIDANCE ALTERNATIVE ASSESSMENT

NORTHLAKE
CASTAIC, LOS ANGELES COUNTY, CALIFORNIA

CREEK AVOIDANCE ALTERNATIVE

ASSESSMENT

July 2021
Revised: June 2022

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EXHIBITS

1. Creek Avoidance Alternative Exhibit “A”

I. INTRODUCTION/BACKGROUND

The project involves the phased development of up to 3,150 residential units, 9.2 acres of commercial uses, 13.9 acres of industrial uses, 799.5 acres of parks and open space, a 22.9-acre school site and a 1.4-acre pad for a future fire station (Project) within the area of the previously approved Northlake Specific Plan (Project Site). Subsequent to the publication of the Final SEIR, the Regional Planning Commission requested that the Applicant include an affordable housing component in the Project. The Applicant made minor revisions to the Project to include an affordable component. Specifically, the Applicant eliminated 108,283 square feet (SF) of industrial use (all of the industrial uses) and 13,197 SF of commercial uses (leaving 38,700 SF of commercial uses) and reallocated 323 units from the Phase 2 area of the Project to the Phase 1 area. The County of Los Angeles Regional Planning Commission approved the Northlake Project on April 18, 2018 and the Los Angeles County Board of Supervisors approved the Project on April 2, 2019 (previously Approved Project).

On January 11, 2021 the Los Angeles Superior Court ruled (Court Ruling) on the Center For Biological Diversity and Endangered Habitats League v. County Of Los Angeles, et al, and Real Parties in Interest, Northlake Associates, et al, Case No. 19STCPO1610, finding that the analysis of project alternatives in the Supplemental Environmental Impact Report (SEIR) was deficient in failing to adequately study a creek avoidance alternative and explain the reasons for rejection at a screening level. The ruling on the creek avoidance alternative is as follows.

ISSUE TWO: THE REASONABLE RANGE OF ALTERNATIVES PRESENTED IN THE SEIR IS DEFICIENT FOR FAILING TO CONSIDER AN ALTERNATIVE THAT WOULD PRESERVE THE GRASSHOPPER CREEK HABITAT:

CEQA requires the lead agency to consider a reasonable range of alternatives to evaluate whether an alternative to the Project exists that will reduce or better mitigate the significant environmental impacts of a project. PRC 21002; Guidelines section l 5126.6. An EIR is to "ensure that all reasonable alternatives to proposed projects are thoroughly assessed" by the decision- makers. Laurel Heights Improvement Association v. Regents of the University of California (1988) 47 Cal.3d 376, 400.

The SEIR's alternate analysis for the Project does not include an alternative that would protect Grasshopper Creek (AR 2403-2426), and for that reason is fatally flawed.

Without necessarily finding a violation of section 1 51 51, the Court finds that the County's exclusion of the "creek avoidance" alternative from the range of alternatives is not supported by substantial evidence. That failure is a violation of Guidelines section 1 5126.6 and, therefore, of PRC 21002. The failure invalidates the approvals given for the Project and requires the submittal of an amended EIR that includes an appropriate analysis section for consideration by the County's decisionmakers.

The planning and design effort of this Creek Avoidance Alternative Assessment is to address the Court Ruling that includes an updated alternative study and a comprehensive analysis of the impacts and feasibility off a Creek Avoidance Alternative.

II. CREEK AVOIDANCE ALTERNATIVE DESCRIPTION

This Creek Avoidance Alternative assumes the same design basis as the previously assessed screening alternative in the SEIR: avoid disturbing the creek bottom that runs through the Project Site while developing a viable land plan effectuating the approved Northlake Specific Plan. The existing landform is created by landslides that traverse the Project Site from the westerly side of Grasshopper Creek to the easterly side of the Project boundary. Typically, per standard engineering and design practices and Los Angeles County requirements, all underlying landslides would be required to be removed and recompacted in order to provide a suitable soil condition for project development. Grasshopper Creek has several existing landslides directly underneath the creek bottom that extend from approximately 10-feet to 200-feet easterly and westerly of the creek bottom. A 300-foot setback was determined to be an appropriate buffer from the creek bottom for the Creek Avoidance Alternative. This setback was based on three considerations: 1) Topography ascending to the east from the creek can be rather steep (locally 1.5:1 to 1:1 +/-). The 300-foot setback generally removes the toe of development into areas with 3:1 to 4:1 slope gradients. 2) The irregular / meandering path of the creek bed required a suitable setback to accommodate a design that would allow a toe for a fill slope configuration, as development is proposed for the easterly slopes and developable pads will need to be graded. 3) The 300-foot setback allowed the proposed fill slope to begin further east / upslope of the upper portions of most of the small to moderate size landslides which are located along the east side of the creek bed. This design and the suitability of the landslide stability mid slope would still need to be fully analyzed by G3SoilsWorks (the Project Site geotechnical engineer for the Project). Thus, the developable area for the Creek Avoidance Alternative will commence at the creek setback line and ascend easterly to the easterly boundary of the Creek Avoidance Alternative. The Creek Avoidance Alternative requires the realignment and new construction of Ridge Route Road. The planning areas around the realigned Ridge Route Road will be developed to provide affordable housing and commercial uses. The Creek Avoidance Alternative is shown on the Creek Avoidance Study Exhibit "A" (attached hereto).

III. ALTERNATIVE ANALYSIS

A. Limits of Grading & Earthwork

Under this alternative, from the easterly creek setback a 2:1 ascending slope would create tiers of developable pad areas across the Project Site to the easterly Project boundary. The total residential developable area will be limited to 264 acres when various factors discussed below are taken into account (the total Project Site acreage is 1330 acres). The elevation for the developable pads for this alternative is based on the approved Northlake Specific Plan elevations. The Creek Avoidance Alternative site grading will require cut in order to develop the site as indicated, however, due to the lack of fill placement area this new design will produce a net export of dirt, which will need to be exported offsite from the Project Site: Phase 1 will produce an estimated 5.4 million cubic yards of export, and Phase 2 will produce an estimated 2.8 million

cubic yards of export, totaling approximately 8.2 million cubic yards of export from the Project Site. The exported yardage would need to be taken offsite to a landfill or other designated area by haul trucks. In comparison, the Approved Project resulted in a balanced site; no export was required.

B. **Project Access - Bridges**

As part of the design for the Creek Avoidance Alternative, two clear span bridges to access the project from Ridge Route Road are required in Phase 1, and an additional third bridge is required in Phase 2. The bridges will be approximately 600-feet long to span across Grasshopper Creek, west to east, and will be approximately 90- to 120-feet above the creek bottom. Columns and piles will be required to be imbedded into underlying, intact bedrock at either end of the bridge. The utilities (i.e., sewer, water, gas, electric, telephone and cable) serving the easterly portion of the project will be supported and span under these bridges all crossing the creek from above similar to access, utilities run west to east given existing conditions.

Hydrology & LID

Los Angeles County Public Works approved the hydrology study for Tentative Tract 73336 based on the previously Approved Project configuration. The previously Approved Project was designed assuming existing Grasshopper Creek would be graded and filled with the tributary drainage areas being captured and routed through the Project Site in a covered storm drain system. At the downstream end of the Project was a series of regional basins (retention and detention) that were designed to mitigate increases to storm drain runoff volume due to site development and to satisfy hydromodification requirements (Projects must fully mitigate off-site drainage impacts caused by hydromodification and changes in water quality, flow velocity, flow volume, and depth/width of flow. Hydromodification control criteria must be implemented by project applicants to control potential adverse impacts of changes in hydrology that may result from projects located within natural drainage systems; County of Los Angeles Department of Public Works, Low Impact Development, Standard Manual, February 2014). Since these basins are located within the footprint of the existing creek, they would not be able to be utilized for the Creek Avoidance Alternative. Per the geotechnical consultant, G3SoilsWorks, the only place where infiltration would be feasible on the Project Site was within the creek bottom area. Therefore, for hydromodification and Low Impact Development (LID) purposes, the use of infiltration for the Creek Avoidance Alternative would be considered infeasible. Similarly, there would not be enough irrigation demand to implement a harvest and re-use program. Biofiltration would therefore be required to meet the LID volume criteria.

The Creek Avoidance Alternative would reduce the hydromodification impacts as compared to the previously Approved Project. This is due to the fact that there would be debris in the creek which would reduce the effects of "hungry water" as the Creek Avoidance Alternative outlets the developed "Q" into the existing drainage course. However, there would still be some degree of impact and in order to mitigate for this hydromodification concern, the Creek Avoidance Alternative would require that drainage acceptance letters for any hydraulic impacts be obtained from all downstream owners.

The previously Approved Project had a 1,001 acre disturbed area project footprint with a requirement of 41.3 acre-ft of retention storage for LID and 113.6 acre-ft of detention storage for hydromodification. The Creek Avoidance Alternative has a 647 acre disturbed area project footprint. For the Creek Avoidance Alternative, we have prorated these volumes based on the project footprint (647 acre for Creek Avoidance/1,001 acre for the previously Approved Project = 0.646). Therefore, the required storage for the Creek Avoidance Alternative is 43.1 x 0.646 = 27.9 acre-ft of retention and 113.6 x 0.646 = 73.4 acre-ft for detention storage. The 27.9 acre-ft could no longer be retained and infiltrated and would therefore need to be accepted by the downstream owner. Since the site drains to the Castaic Lagoon an increase in volume may be considered by the owner (State and County) to be beneficial.

C. **Unit Count**

With a significantly reduced project footprint, revised street design to accommodate traffic circulation, LID requirements, and relocated basins/best management practices (BMPs), the developable acreage for the Creek Avoidance Alternative decreases the total developable area from 364 acres to 286 acres, thereby reducing the amount of area available for development. After incorporating other conditioned site elements such as a 23 acres school site and 1 acre fire station (as per the Specific Plan) along with 167 acres of recreation and park areas, under the Creek Avoidance Alternative design the residential unit count will be reduced to 1,815 units (of which 165 units are affordable). As compared to the 3,150 dwelling units (of which 315 units were affordable with an additional 6 live/work units) under the previously Approved Project, the Creek Avoidance Alternative would result in a reduction of 1,335 dwelling units. The Creek Avoidance Alternative will have similar commercial acreages as the previously Approved Project. Proportionately, the affordable unit count would be reduced from 315 to 165 units.

IV. CONCLUSION

The previously Approved Project was a balanced site as it relates to grading and earthwork. The Creek Avoidance Alternative requires extensive cut in order to create the developable pad areas. Due to the lack of onsite fill areas to accept this cut the Creek Avoidance Alternative is an unbalanced site which produces 8.2 million cubic yards of export, which will need to be hauled offsite.

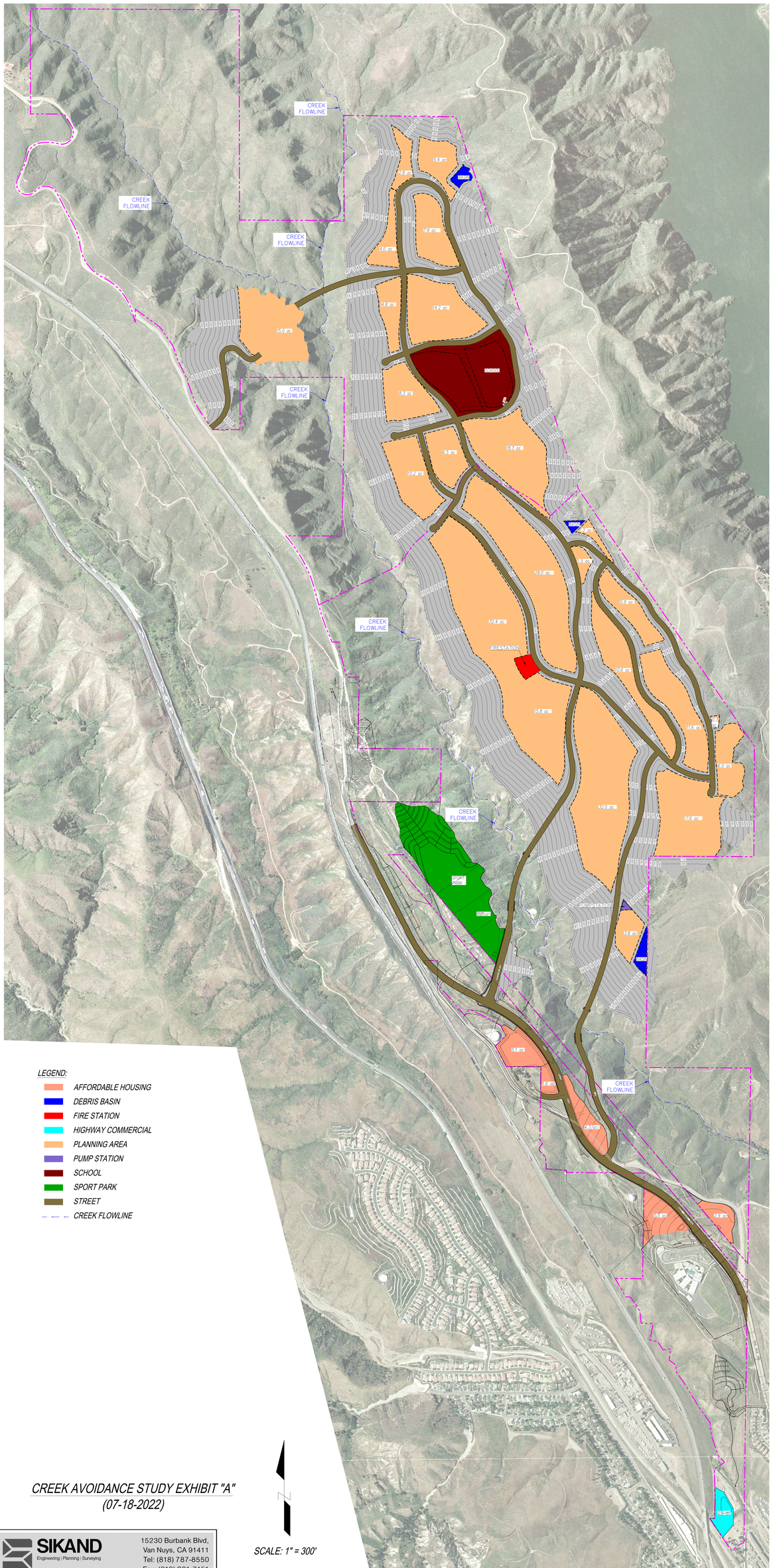
The required infrastructure improvements, remediation of potential geotechnical and flood hazards and project grading that requires relocations of some existing on-site easements, pipelines, and utilities to accommodate site development are similar to the original design, and in some cases more (due to the crossing and support within or below the three proposed bridges crossings) than were in the previously Approved Project.

The previously Approved Project took advantage of the permeable areas in the creek at the downstream end of the project to meet LID and hydromodification requirements for development

of retention and detention basins. For the Creek Avoidance Alternative these requirements will need to be addressed by implementing bio-filtration and obtaining downstream acceptance letters.

Compared to the previously Approved Project, a Creek Avoidance Alternative reduces the project's developable area by 30%. This reduced developable area results in a project wide unit count reduction of 42%, or loss of 1,335 units.

This assessment assumes that from civil engineering standpoint what development could be designed to avoid Grasshopper Creek with reasonable engineering assumptions. Geotechnical and Biological evaluations are beyond the scope of this analysis and will be separately contained in the project's soils engineer, G3SoilsWorks, technical report and Glenn Lukos Associates, technical memorandum.



LEGEND:

- *AFFORDABLE HOUSING*
- *DEBRIS BASIN*
- *FIRE STATION*
- *HIGHWAY COMMERCIAL*
- *PLANNING AREA*
- *PUMP STATION*
- *SCHOOL*
- *SPORT PARK*
- *STREET*
- *CREEK FLOWLINE*

CREEK AVOIDANCE STUDY EXHIBIT "A"
(07-18-2022)

SCALE: 1" = 300'

SIKAND
Engineering | Planning | Surveying

15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

APPENDIX F-2

GEOTECHNICAL/HYDROGEOLOGIC REVIEW OF CREEK AVOIDANCE ALTERNATIVE

G3SoilWorks

GEOLOGY · GEOTECH · GROUNDWATER

BONTERRA PSOMAS
225 South Lake Avenue, Suite 1000
Pasadena, CA, 91101

July 14, 2021
Project No. 1-1048-C

Attention: Joan P. Kelly, AICP, Principal-in-Charge
Jennifer Marks, Senior Project Manager

CC: Mr. Thomas DiPrima
Northlake Associates, LLC

Subject: Geotechnical / Hydrogeologic Review of
Creek Avoidance Alternative Design
Northlake, Vesting Tentative Tract Map No. 73336
Castaic, Los Angeles County, California

Dear Mr. DiPrima,

Pursuant to your request and authorization, G3SoilWorks, Inc. (G3) has reviewed the referenced project alternative to the Approved Northlake Specific Plan which would avoid Grasshopper Canyon (a.k.a. “Grasshopper Creek”) – herein termed the Creek Avoidance Alternative (CAA). The original approved plan designated Grasshopper Creek – an ephemeral drainage / canyon bottom that runs southeasterly through the site – as a fill zone and a structurally important component that both controlled the ultimate elevations of the original project and provided key support / buttressing to mitigate existing slope instability. Sikand Engineering Associates (Sikand) has designed the CAA (Reference 1, Exhibit A) to avoid grading impacts to Grasshopper Creek. G3 has prepared this review of Sikand’s CAA design report and has presented opinion of project feasibility herein based on that review from a geotechnical / hydrogeologic perspective. Other available information for this geotechnical / hydrogeologic review and evaluation included the referenced geotechnical studies, aerial photo review, ongoing desktop research of published and proprietary information, and substantial knowledge of this project site and underlying geologic conditions. Our review found that the CAA configuration results in significant increased geotechnical, engineering hydrogeologic, and safety / critical access risks to the development. The CAA was also found to seriously impact Grasshopper Creek as well. It is our opinion that the CAA approach, in an attempt to “save” the creek, would likely result in the ultimate degradation and destruction of the creek and canyon habitat. We also conclude that the engineering geologic / geotechnical adversities that would develop as a result of implementing the CAA approach would result in unacceptable increases in risk and, as a result, would not be feasible.

CREEK AVOIDANCE ALTERNATIVE PROJECT DESCRIPTION

The proposed Northlake project is a large-scale residential development in the Castaic area of unincorporated Los Angeles County, California, located easterly of Interstate 5 (Golden State Freeway) and westerly of the Castaic Lake State Recreation Area. Implementation of the original Approved Project is separated into two phases, with the first phase incorporating the southern 720± acres and the second phase incorporating the northern 610± acres. The extent of the original project layout encompassed the lower portion of Grasshopper Creek and the adjoining ridges to the east and west. In order to avoid grading impacts to Grasshopper Creek, the layout of the subject CAA moves the development easterly of Grasshopper Creek with a setback of approximately 300 feet, reduces the development acreage to 368 acres, and leaves in place basal landslides at the creek bottom (see Exhibit B). To accommodate travel into and out of this development, at least two bridges on the order of 90 to 120 feet high will need to be installed in Phase 1 with an additional bridge installed in Phase 2 for a total of three bridges (see Exhibit A).

SETTING

The project site is in a westerly facing flank complex that trends from Castaic Lake to the Golden State Freeway. In ancestral time, when rainfall was more plentiful, associated undercutting / downcutting caused the formation of Grasshopper Canyon. This erosional activity also undermined / exposed the underlying geologic structure and resulted in numerous landslide complexes (see Glossary, Figure 1). The current canyon is generally steep-sided on the west and gentler on the east - a geometry that is reflective of the existing geologic conditions. In the present day, the climate has become much drier, and the creek has only developed limited alluvial structure within its bottom (See Glossary, Figure 2). Surface flows have become ephemeral with extended dry periods and only occasional flows ranging from a trickle following typical rain events to a torrent following extreme rain events. Sources of water to the creek include surface water directed by tributaries and transient groundwater / moisture stored largely within landslide debris and, to a lesser extent, along bedding planes and other structure that is hydraulically favorable (see Glossary). Groundwater storage as free water within the alluvial structure of the canyon is very limited due to the limited alluvial development, and is, rather, present in the form of near-surface moisture. Surface water is generally only present during and immediately following rainfall of sufficient intensity / duration to create flow, which occurs infrequently. The majority of water comes from the easterly tributaries and northerly headwaters, as illustrated in Exhibit C. The only semi-permanent surface water is limited to the man-made pond which is located on a terrace above the creek on the easterly flank tributary system (see Exhibit C). This pond is understood to have been created in the early- to mid-20th century for support of livestock activities. Based on our review, this pond is to be removed under both the CAA and the original Approved Project.

Habitat quality along Grasshopper Creek from a hydrogeologic / geomorphic perspective is predominantly poor to mediocre, as described in Table 1 below, Glossary Figure 2, the project environmental studies (Reference 7), and from aerial photo studies. In “better alluviated” portions of the creek that can store water / moisture, the flow corridor has scrubby semi-riparian vegetation development as exemplified in Glossary Figure 2b. These “better alluviated” portions of the creek

are not considered to be sufficiently developed / contiguous to be considered "good" or "well-developed" habitat, as exemplified in Glossary Figure 2a. In other areas, alluvial development is marginal to absent, with some areas exposing relatively barren bedrock. The areas of limited to absent alluvial development generally have only poorly developed vegetation and are considered mediocre to poor quality habitat as exemplified in Glossary Figure 2c-2d. Locations of poor, mediocre, and fair habitat along Grasshopper Creek from a geomorphic perspective are shown in Exhibit C. For habitat conditions from a biologic perspective, refer to Glenn Lukos Associates technical memorandum dated June 25, 2021.

Table 1: Description of habitat quality based on hydrogeologic / geomorphic conditions present.

Habitat Quality	Alluviation	Vegetation
Poor	Marginal to absent	Sparse to absent phreatophyte development / low and scrubby growth
Mediocre	Limited	Low density of low growing vegetation
Fair	Moderate	Medium dense cover with moderately defined corridor

CONSIDERATIONS

Hydrogeologic Considerations

The new CAA configuration sets the development back approximately 300 feet from Grasshopper Creek and removes / replaces the upper landslides with engineered compacted fills and associated underground back drains while leaving the lower landslides in place within the 300± feet set back zone. As Exhibit C shows, a majority of the tributaries to the east which contribute both water and sediment to Grasshopper Creek will be eliminated and/or redirected toward storm drain systems where the earthwork assemblies are constructed. Even though development, grading, and placement of fill within Grasshopper Creek proper has been eliminated under the CAA, Grasshopper Creek's habitat will still be significantly impacted by the neighboring development. The modification of the easterly tributaries with geotechnically-required buttressing systems required to stabilize the slopes will result in the loss of up to 2/3 of Grasshopper Creek's current tributary water. Not only will the surface flows be affected, but any subsurface water (a major contributor during drought conditions) that once fed the creek through landslide deposits and, to a lesser extent, through bedding planes on the easterly flank will be reduced or cutoff entirely. As the bedding planes dip away from the creek on the westerly flank, subsurface water from the westerly flank is not expected to contribute nearly to the same degree as from the easterly flank, which dips toward the creek. This significant reduction in subsurface and surface water will negatively impact / reduce habitat productivity. Even with Grasshopper Creek preserved in place, the surface and subsurface water / moisture sources that once fed it will no longer be available to sustain it under the proposed CAA development plan.

When considering the influence of the altered hydrology on the canyon system – with most of the alluvial and habitat-sustaining, low-flow water and moisture crimped or eliminated under the proposed plan – the canyon would still be exposed to high-flow water rain events (10- to 50-year storms) in wet years. As ordinary transport mechanisms that move eroded soils downstream continue to occur, the lost sediments would not be replaced from the sediment-loading easterly tributaries (which will be lost as a result of development) as they once were, and the creek will begin to suffer from sediment starvation and deflation. This change in flow regime will reduce the vegetation density which act as an erosion control, making the canyon more susceptible to greater erosion. Continued downcutting of the canyon will eventually lead to exposure of the underlying bedrock and unfavorable bedding planes (Glossary Figure 1). This downcut condition presents several negative consequences as they pertain to both the creek habitat and to the proposed development alternative which include: 1) degradation of habitat / loss of phreatophytes due to removal of alluvial sediment platform, nutrients, and moisture / groundwater storage carried with it; 2) increased risk for uncontrolled deflation / downcutting during periods of heavy rain; 3) scour of sediments and bedrock compromising the integrity of the proposed bridge additions (as in Glossary Figure 3); and 4) daylighting and undermining of bedding planes and related geologic structure leading to slope instabilities and endangerment to the development above (as in Glossary Figure 1).

Geotechnical / Engineering Geologic Considerations

From a structural geology perspective, the geologic formations underlying the project area which includes Grasshopper Creek generally dip to the west, as in Glossary Figure 1. These rocks are relatively low strength materials that became highly unstable due to the downcutting action of the ancestral Grasshopper Canyon during high-flow climate conditions, which daylighted out-of-slope bedding and resulted in the original failures (i.e., landslides, see Exhibit B).

The success and safety of any project design at this location is predicated on the stabilization of these slopes to protect the development above. In order to preserve Grasshopper Creek in place, the CAA shifts development to the east of Grasshopper Creek and leaves lower portions of landslides in place within the setback area. This leaves no option but to place earthen keys and retaining wall systems upslope of these landslides (see Exhibit D). However, along some portions of the lower canyon, complete landslide removal will very likely still be required within the setback zone to even achieve an acceptable factor of safety for the proposed development. With the creek now being starved of sediment load, the creek bottom will begin to erode and deflate further, and the canyon will start scouring its banks and bottom (see Glossary). This will result in a reoccurrence of the conditions which produced the original landslides – the escalation of downcutting and mass wasting – likely developing new instabilities that can / will undermine the proposed buttress and/or retaining wall systems.

An option to increase the setback distance from the Grasshopper Creek flow line may possibly be considered. However, potential drawbacks must be considered, including: 1) a larger setback increases the amount of landslide material immediately below the proposed fill – this will greatly increase existing slope instability and will require even wider and deeper remedial keyways; 2)

the larger setback will considerably reduce the developable area and further decreases the lot count; and 3) remedial grading associated with the larger keyway excavation will likely require back cut slopes to approach or go beyond the current eastern ridgeline. The development of undercutting / erosion / deflation will still be expected to occur and cause problems unacceptably increasing risk of instability.

In addition, the integrity of the proposed bridges is expressly dependent upon the strength of the soil / rock into which its foundations are embedded. Foundation elements will likely need to bear into the canyon sidewalls and creek bottom to support the bridges. However, the canyon sidewalls – particularly the easterly side – have unfavorable geology, including landslide debris and shallow / unsupported bedding structure. If foundation elements are founded in the creek, they will become increasingly exposed to extreme scour (Glossary, Figure 3) because of the unbalanced sediment-starvation condition, resulting in deflation and undermining of the supports. The unfavorable geologic conditions will be at significantly increased risk of becoming unstable and damaged, undermining the foundation elements. Neither the sidewalls nor the creek bottom present suitable conditions for bridge foundation embedment and expose the bridges to high risks of instability. Moreover, since most of the utilities required to support the development will need to be suspended under these bridges, instability to the bridge abutments from scour would introduce risk of both utility separation and/or spillage into the creek, as well as the loss of functionality of the utilities. Not only is the bridge itself exposed to significant increased risk of instability, but the introduced undermining / mass wasting condition further destabilizes the banks and side slopes, presenting great risk to the development above.

CONCLUSIONS

Our review considered the detailed studies and information database developed by the Northlake design team for the subject area from engineering geologic, geotechnical, and hydrogeologic perspectives. Based on our technical and expert opinion, feasibility of the CAA is heavily influenced by the following key considerations:

1. The site area is underlain by bedrock that dips westerly over the majority of the area to be developed. In ancestral time when climate was wetter, the downcutting action of Grasshopper Canyon daylighted bedding in the canyon by action of erosion. These unsupported / daylighted beds became unstable and formed the complexes of landslides present on the site, as shown on Exhibit B.
2. Hydrogeologically, the predominant tributaries for Grasshopper Creek are located to the east of the creek, and to a lesser extent, the headwater areas to the north. Note that the easterly tributaries will be eliminated and filled in under both the CAA and the Approved Project. The new storm drain controls and mandated BMPs will introduce a new hydrologic regime, re-directing water away from the creek and removing not only surface flows provided by the tributaries, but their sediment loads as well. This new regime increases susceptibility to creek deflation, accelerated erosion of the canyon, and associated slope destabilization.

3. Although low-flow, low-threshold contributions to the Grasshopper Creek drainage will likely be strongly reduced by removal of the easterly tributaries, high-flow events will still occur in response to upper bound storms, creating susceptibility to an increased rate of erosion and resulting in derogatory effects on embankment and foundational stability.

4. The keyway / buttress assemblies along the western revised earthwork limits will be less effective than the original plan that used essentially the entire canyon as a buttress fill and removed all landslide remnants, replacing them with engineered, compacted fill. Since the keyway / buttress assemblies for the CAA have been moved up-dip / upslope to the east to accommodate preservation of the creek, their effective depth relative to the rock exposed along the canyon bottom is reduced, providing a lesser degree of protection against future instabilities when compared to the original plan remedial concepts.

5. The existing habitat quality along the creek is predominantly poor to mediocre from a geomorphic perspective, and generally has only limited alluvial development that may be locally absent. Surface water flows are highly ephemeral (uncommon / infrequent), and storage of water / moisture in the alluvial materials is limited, even within the better-developed portions. This alluvium has been shown in site specific studies to be sensitive to erosion and mobilization (References 6-7).

6. Site specific studies and our expert experience with similar canyon and creek bottom terrain indicate that during the majority of time, when surface water contributions are lacking to absent, an important contributor of essential moisture is local groundwater. The landslide bodies, unlike the surrounding bedrock, are failed masses of rock that are broken up and disarticulated. These landslide complexes have the ability to store considerable groundwater / moisture (relative to intact bedrock) that is proximal to the drainage and can contribute water through seepage mechanisms into the creek – particularly its alluvial complexes – to be available to habitat during recurring dry and drought periods. With remedial grading of the vast majority of landslides on the east slope, this potential subsurface water for the creek will be removed, eliminating a significant portion of – if not all – groundwater sources for Grasshopper Creek.

7. The subject CAA plan will result in the need to install multiple high bridges to cross the canyon to provide access to the east side development from the west side. These bridges and their supports will likely include foundation elements that will bear into either the canyon sidewall or creek bottom. The canyon sidewall areas, particularly the easterly side, have been identified as being comprised of materials that are poor stability candidates – namely landslide debris and geologically unfavorable bedding structure. The canyon bottom is subject to erosion and scour. These geologic / hydrogeologic conditions present risks of instability to the proposed bridges and risk of spillage / interruption to associated utilities.

Integrating the above, we conclude the following:

A. The Creek Avoidance Alternative still significantly impacts the hydrogeology of Grasshopper Creek, namely by elimination of 1) surface water / sediment load recharge from the easterly tributaries; and 2) elimination of subsurface water from remedial removal of landslide debris that are both considered primary. This loss will starve the creek of a large proportion of low-flow water along with sediment that are critical components to habitat productivity. Habitat of the canyon bottom will be strongly degraded as the alluvial materials deflate and erode away, ultimately leaving an actively downcutting rock-bottomed gully.

B. The loss of the easterly tributary will produce a substantial reduction in sediment recharge, which will have profound engineering repercussions. When the creek is starved of sediment recharge, it will begin to scour its bottom and banks to make up for the lost sediment recharge loads. This will result in deflation of the already scant alluvial materials present. As already described, detailed project studies have shown the alluvial materials to be easily mobilized and eroded. With a strongly reduced sediment recharge, this deflation will likely continue such that the canyon resumes downcutting. This will have a destabilizing effect to the development by 1) undermining the keyways / buttresses by exposing / removing support from underlying adverse bedding planes and/or introducing new failures; and 2) accelerated ongoing scour and downcutting of bridge supports.

C. To provide suitable slope stability for the development, complete remedial removal of landslides, significantly enhanced and deepened cut-off keyway / buttress systems, and/or other heavy engineering mitigation within the setback and creek flow line area will likely be required. Even still, the creek-ward portions will be subject to undercutting and mass wasting failures that can damage / destroy creek habitat and create dangerous undermining / destabilizations.

We have found, based on our direct study and experience, that any attempt at saving Grasshopper Creek and isolating it from the development results in either a degradation of the habitat character of the creek and/or presents an increased risk of instability to the Project elements. Climate change studies we have reviewed show that current climate trends of drought interrupted by heavy atmospheric river type events are likely to remain in place for the foreseeable future. The influence of these climate effects on the subject canyon and creek is important to consider from both engineering and habitat perspectives. Storms that produce periodic heavy flows in times of drought interruption will tend to be favored as has been in recent past events – favoring alluvial deflation and canyon downcutting. Stress to the habitat from prolonged drought will increase and available water sources and quantities will be reduced strongly, effectively destroying the creek.

We conclude from our review that the subject CAA approach would likely result in the ultimate degradation and destruction of the creek and canyon habitat. We also conclude that the engineering geologic / geotechnical adversities that would develop as a result of implementing the CAA approach would result in unacceptable increases in risk. As such, it is our expert opinion that the CAA proposed development is infeasible from engineering geologic, geotechnical, and hydrogeologic perspectives.

This memorandum is subject to the review and approval by the controlling jurisdiction. If you have any questions, or require additional information, please contact the undersigned.

Respectfully submitted,
G3SoilWorks, Inc.

By: _____
Richard H. Spindler, P.G., C.E.G.
Senior Engineering Geologist

By: _____
Larry E. Fanning, P.G., C.E.G., R.E.P.A., Q.S.D.
President

By: _____
Dana L. Mariscal
Staff Engineer

Attachments: List of Selected References
Glossary
Exhibit A – Developmental Study
Exhibit B – Landslide and Inferred Landslide Map
Exhibit C – Tributary and Habitat Map
Exhibit D – Cross-Section A-A'

Distribution: Addressee

LIST OF SELECTED REFERENCES

1. Sikand Engineering Associates, Creek Avoidance Alternative Assessment, Northlake, Castaic, Los Angeles County, California, dated April 2021.
2. LACDPW, Geotechnical and Materials Engineering Review sheet, Tentative Tract 73336, Castaic, Tentative Map Feasibility Approval, dated May 25, 2016, PCA: GMPH / A867.
3. G3SoilWorks, Inc., Response to Geologic and Soils Engineering Review Sheet, Tentative Tract 73336, Northlake, Castaic, Los Angeles County, California, dated May 19, 2016, Project No. 1-1048.
4. G3SoilWorks, Inc., Response to Geologic and Soils Engineering Review Sheet, Tentative Tract 73336, Northlake, Castaic, Los Angeles County, California, dated April 18, 2016, Project No. 1-1048.
5. G3SoilWorks, Inc., Updated Geologic / Geotechnical Report and Response to County Review Comments, Northlake Vesting Tentative Tract Map No. 73336, Los Angeles County, California, dated February 10, 2016, Project No. 1-1048.
6. Geosyntec Consultants, Low Impact Development Plan, Vesting TTM No. 073336, Northlake Phase 1, dated April 2017, Project Number: WW1993.
7. BonTerra Psomas, Biological Resources Downstream Impacts Assessment, NorthLake Specific Plan Project, Revision dated March 2017.

Glossary

1. Ephemeral creek – A dry creek bed with flowing water only during / after precipitation for a short period.
2. Key – Excavation of predetermined depth and width starting at the toe of a proposed slope. When compacted engineered fill is placed at designed grade, the created fill prism counters the downslope driving force of uphill daylighted bedding. (also, Buttress).
3. Keyways – An excavated trench into competent earth material beneath the toe of a proposed fill slope for increased slope stability (see Key).
4. Undercutting – erosion of materials at base of slope (in this case, by action of stream flow)
5. Downcutting – downward erosion that cuts, erodes, and deepens the channel by removing material.
6. Alluviation – Deposition / accumulation of sediment created by running water (also, Alluvial; Alluvium).
7. Bedding Planes – The surface that separates each successive layer of a stratified rock from its preceding layer. Depending on its engineering geologic character, bedding planes represent a discontinuity / plane of weakness.
8. Tributaries – A smaller body of water that feeds into a larger body of water.
9. Headwaters – The upstream source / where a stream begins.
10. Sediment Starvation – When sediment export exceeds sediment import of an alluvial / fluvial system.
11. Deflation – Geomorphic process of removal of soil resulting in bedrock exposure.
12. Mass Wasting – Downward slope movement, failure, and ground loss triggered by a variety of derogatory processes often acting in combination to create an unzippering / run-away instability that may occur rapidly over a large area.
13. Daylighted bedding – when rock layers dip at angles less than the angle of the slope.
14. Scour – removal of sediment by fast flowing water causing scour holes around objects in the path of flowing water, particularly bridge abutments (see Figure 3 below).

Glossary Figures

Figure 1: Illustration of interaction mechanism between stream flow and weak zones in a rock mass with resulting slope instability and slope deformation. The slope can be stressed by downcutting and weak zones / daylighted bedding planes.

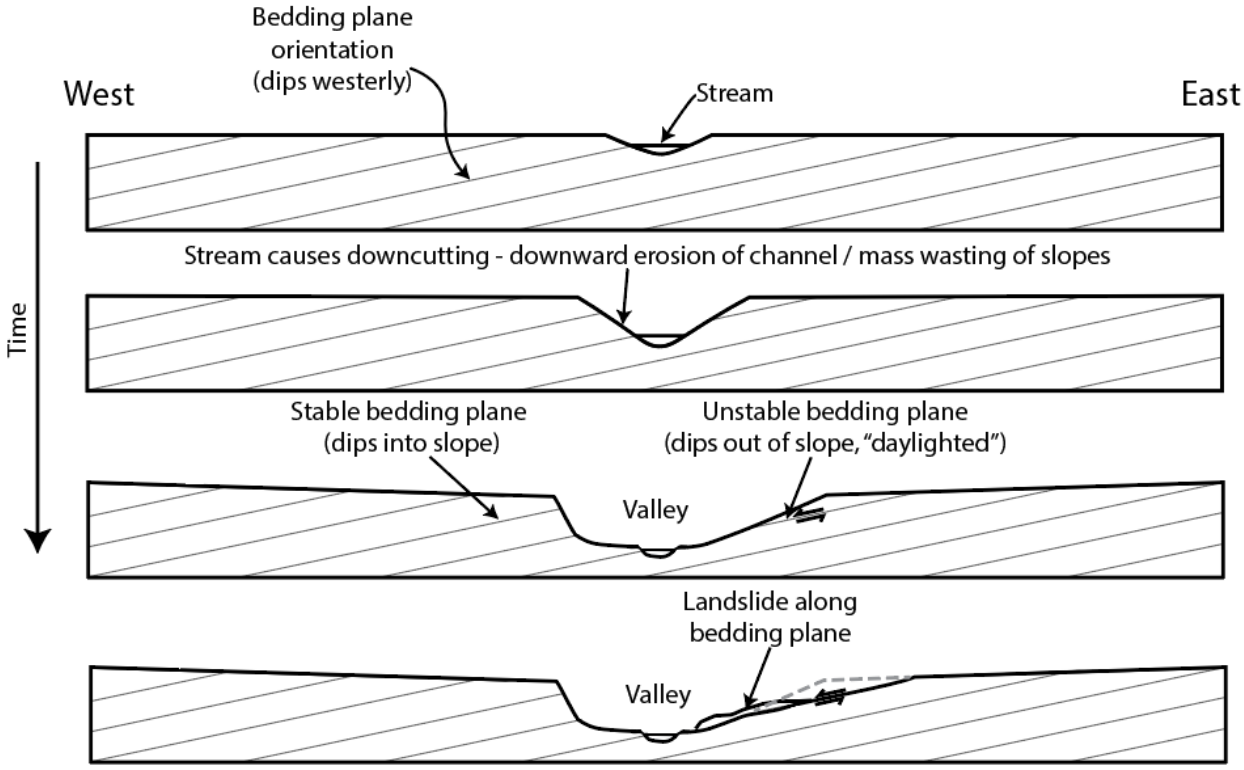
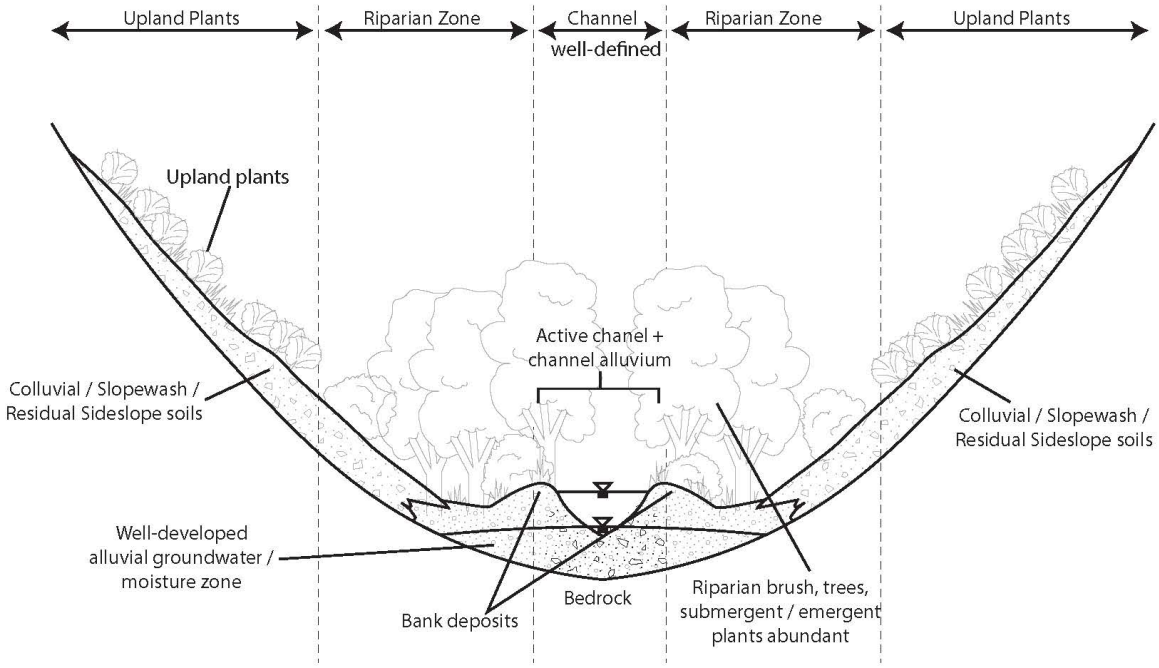


Figure 2a-d: Examples of habitat quality from a geomorphic perspective.

2a) Well-Developed Habitat



2b) Fair Habitat

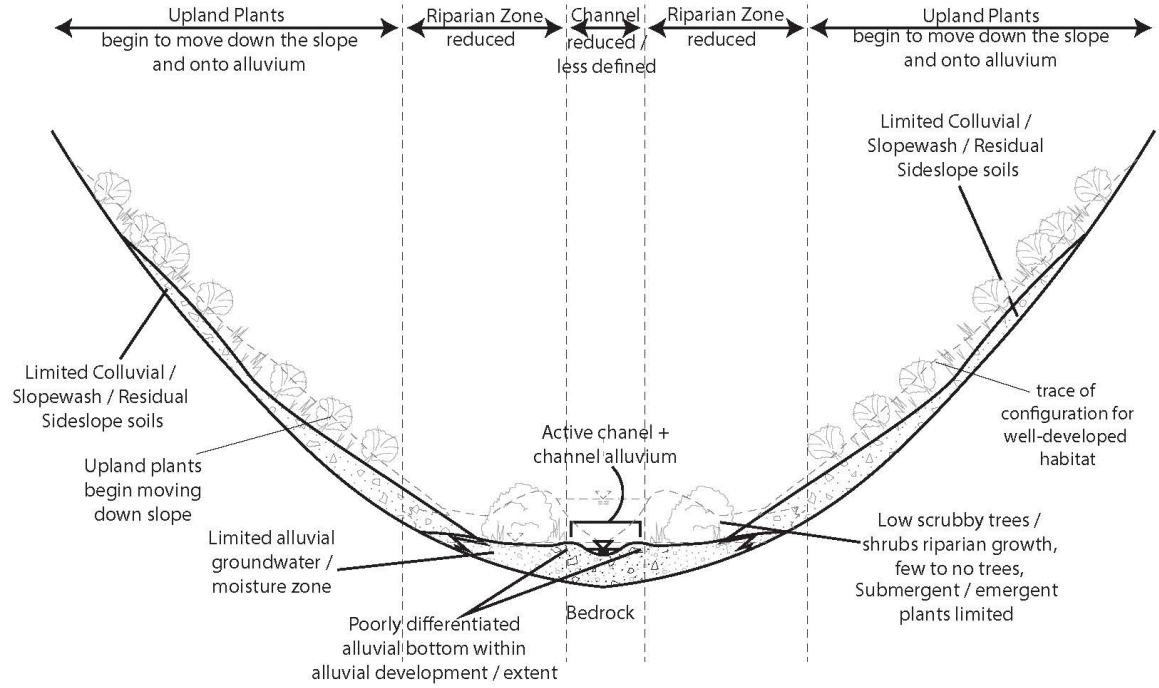


Figure 2a-d: Examples of habitat quality from a geomorphic perspective.

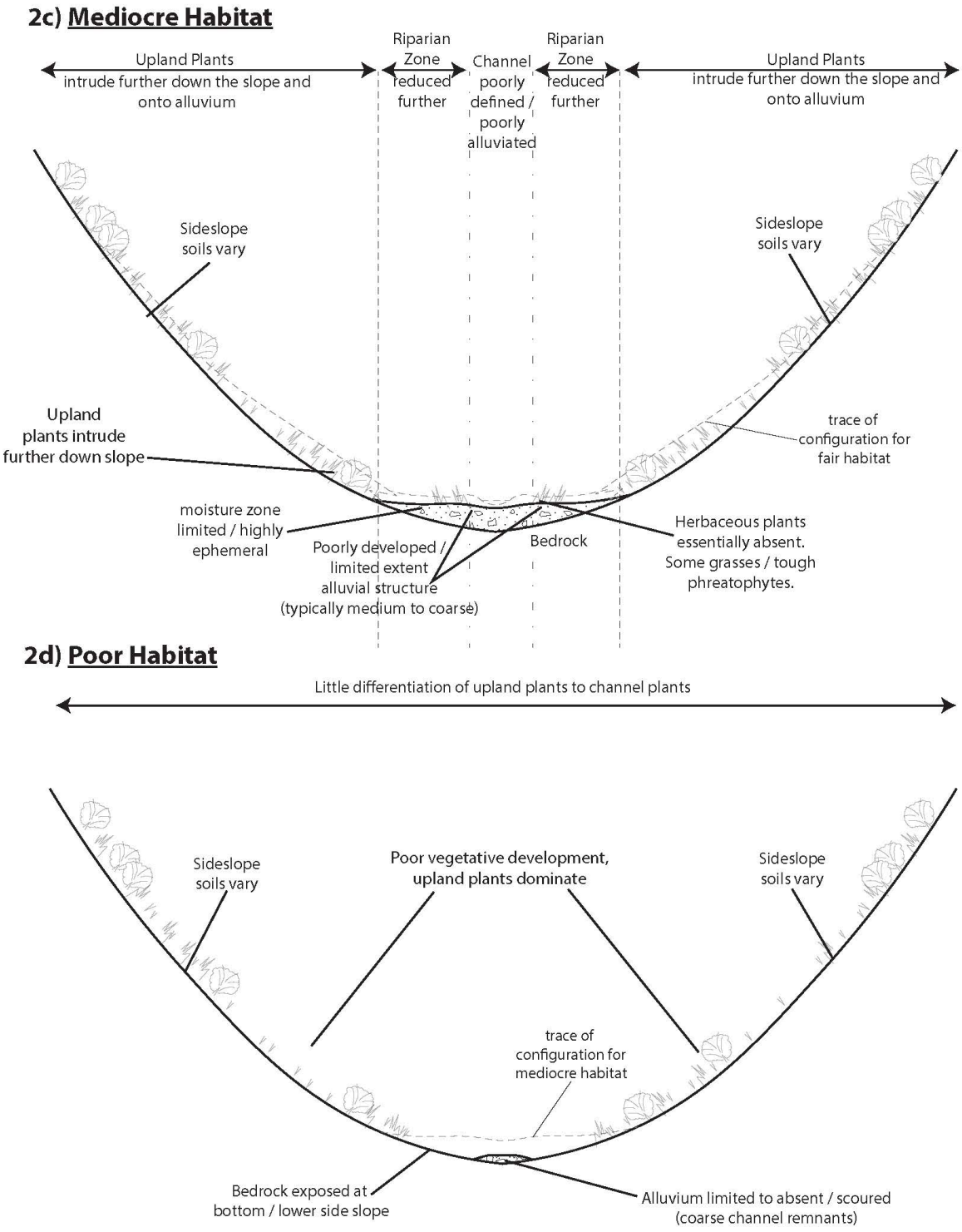
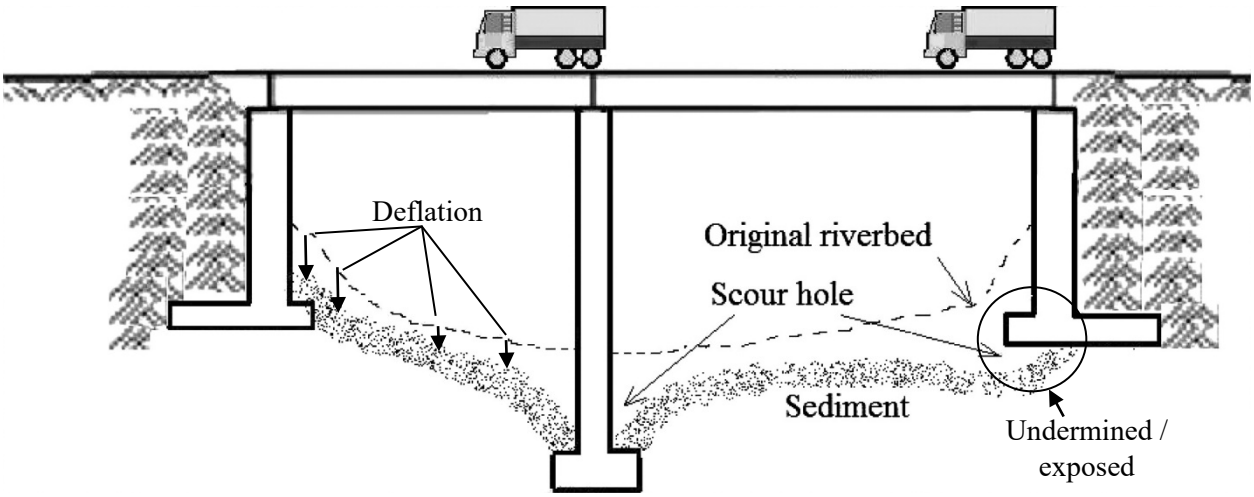
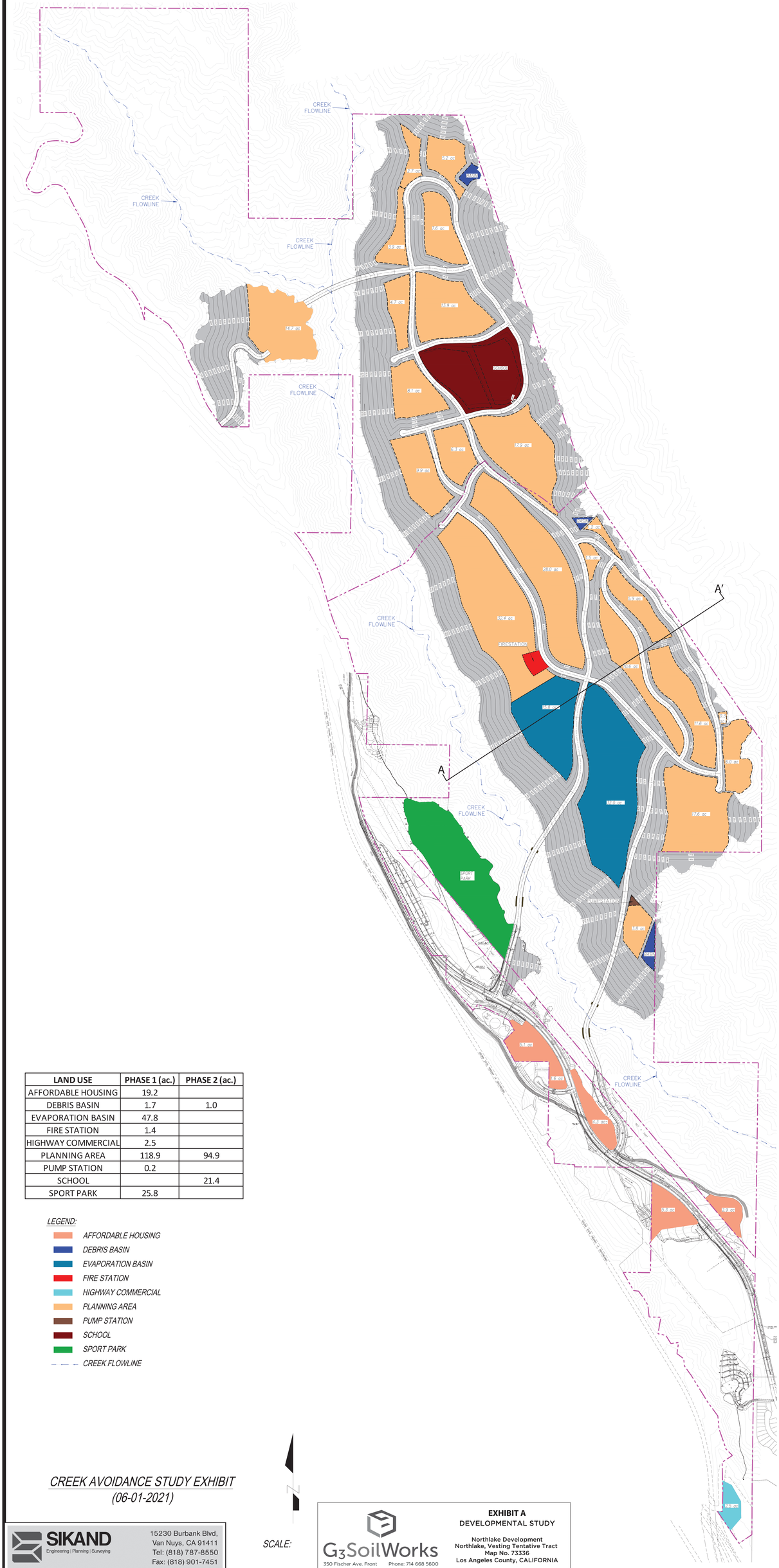


Figure 3: Example depiction of bridge scour





LAND USE	PHASE 1 (ac.)	PHASE 2 (ac.)
AFFORDABLE HOUSING	19.2	
DEBRIS BASIN	1.7	1.0
EVAPORATION BASIN	47.8	
FIRE STATION	1.4	
HIGHWAY COMMERCIAL	2.5	
PLANNING AREA	118.9	94.9
PUMP STATION	0.2	
SCHOOL		21.4
SPORT PARK	25.8	

LEGEND:

- *AFFORDABLE HOUSING*
- *DEBRIS BASIN*
- *EVAPORATION BASIN*
- *FIRE STATION*
- *HIGHWAY COMMERCIAL*
- *PLANNING AREA*
- *PUMP STATION*
- *SCHOOL*
- *SPORT PARK*
- *CREEK FLOWLINE*

CREEK AVOIDANCE STUDY EXHIBIT
(06-01-2021)

SCALE:

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EXHIBIT A
DEVELOPMENTAL STUDY

Northlake Development
Northlake, Vesting Tentative Tract
Map No. 73336
Los Angeles County, CALIFORNIA

JULY 2021 PN 1-1048-C

G3SoilWorks
350 Fischer Ave. Front
Costa Mesa, CA 92626
Phone: 714 668 5600
G3SoilWorks.com

Exhibit B
Landslide and Inferred Landslide Map

NORTHLAKE, VESTING TENTATIVE TRACT MAP NO. 73336
LOS ANGELES COUNTY, CALIFORNIA

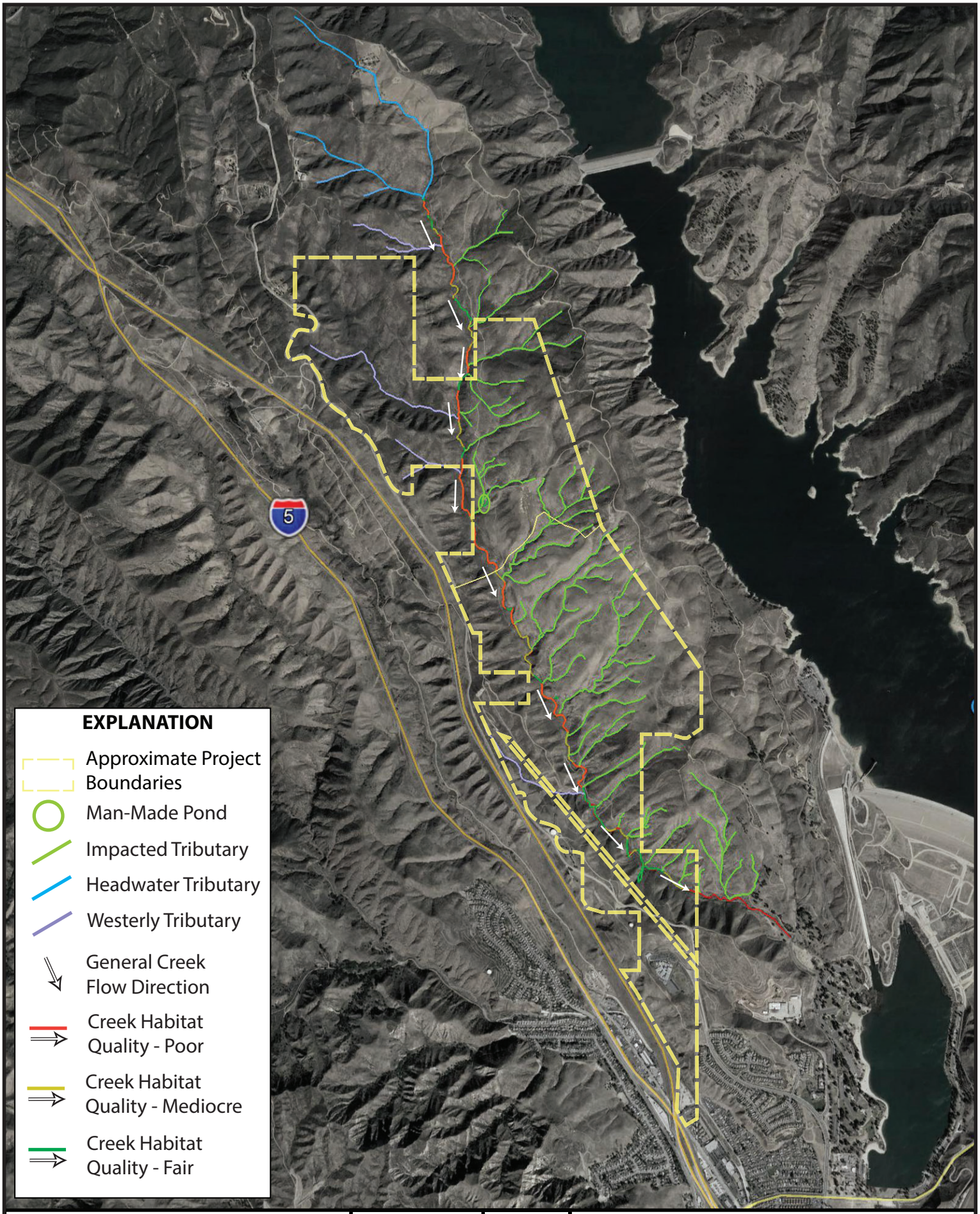
July 2021

PN: 1-1048-C

EXPLANATION

	Approximate Geologic Contact
caf	Compacted Artificial Fill
af	Artificial Fill
Qal	Alluvium
Qoal	Older Alluvium
Qcol	Colluvium
	Rock Creep
Qls (Ph 1)	Landslide (Phase 1)
Qls	Inferred Landslide (Phase 2)
Tc	Castaic Formation





Tributary and Habitat Map	Proj. No. 1-1048-C	July 2021	G3SoilWorks
Northlake Development	Los Angeles County, CA	Exhibit C	

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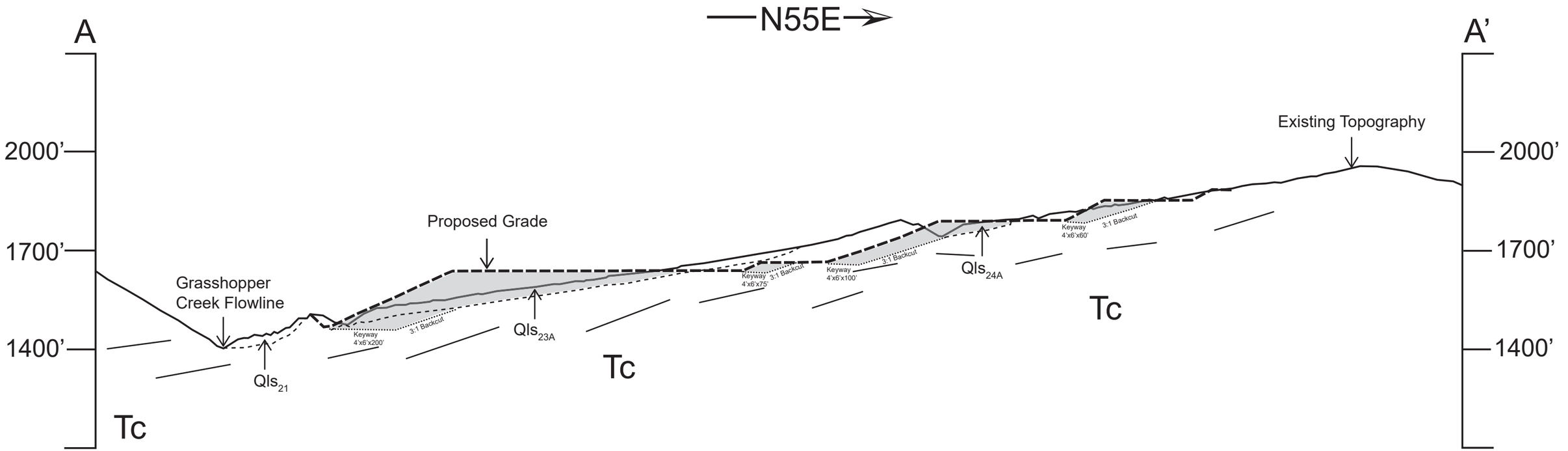

EXPLANATION

Tc	Castaic Formatation
Qls	Landslide with Number Designation
/	Schematic Bedding

Schematic Geologic Cross-Section A-A’
Based on Creek Avoidance Study Exhibit (Exhibit A)
Dated 06-01-2021

Scale: 1” = 300’ H&V

Geotechnical Cross-Section A-A’		Project No. 1-1048-C	July 2021
Northlake Development	Los Angeles County, CA		Exhibit D

G3SoilWorks
350 Fischer Ave. Front
Costa Mesa, CA 92626
Phone: (714) 668 5600
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APPENDIX F-3

CREEK AVOIDANCE ALTERNATIVE BIOLOGICAL CONDITIONS

TECHNICAL MEMORANDUM

GLENN LUKOS ASSOCIATES
Regulatory Services

PROJECT NUMBER: 11150006WOOD

TO: Joan P. Kelly, AICP, Principal-in-Charge
Jennifer Marks, Senior Project Manager
BONTERRA PSOMAS
225 South Lake Avenue, Suite 1000
Pasadena, California 91101

FROM: Tony Bomkamp

DATE: July 01, 2021

SUBJECT: Biological Conditions Associated with Grasshopper Creek Avoidance Alternative, NorthLake Project, Castaic, Los Angeles County

---

I have reviewed various documents[1] that address the Grasshopper Creek Avoidance Alternative for the NorthLake Project, comparing existing conditions and the expected hydrological conditions within Grasshopper Creek in the post-project condition. The Grasshopper Creek Avoidance Alternative includes establishment of a development on the east side setback approximately 300 feet from Grasshopper Creek and requires remediation of the upper landslides with engineered compacted fills and associated underground back drains while leaving the lower landslides in place within the 300± feet set back zone. Most of the tributaries to the east which contribute both water and sediment to Grasshopper Creek will be eliminated and/or redirected toward storm drain systems where the earthwork assemblies are constructed. Even though development, grading, and placement of fill within Grasshopper Creek has been eliminated under this Alternative, the hydrologic and associated biological conditions associated with Grasshopper Creek habitat will be substantially modified by the proposed development. The modification of the easterly tributaries with geotechnically-required buttressing systems required to stabilize the slopes will result in the loss of up to two-thirds of Grasshopper Creek's current tributary water. Not only will the surface flows be affected, but subsurface water (a major contributor during normal and drought conditions) that contributes to the creek through landslide deposits and, to a lesser extent, through bedding planes on the easterly flank will be reduced and likely eliminated. This significant reduction in subsurface and surface water will negatively impact / reduce habitat productivity. Even with Grasshopper Creek preserved in place, the surface and subsurface water sources that contribute to it will no longer be available to maintain the existing conditions.

[1] Those documents include the Sikland Memo *Creek Avoidance Alternative Assessment* dated June __, 2021 and the G3Soils Geotechnical / Hydrogeologic Review of Creek Avoidance Alternative Design, dated June__, 2021(G3Soils Memo), as well as the Trial Court's January 11, 2021 Ruling in the matter *Center for Biological Diversity v. County of Los Angeles, et al.,* Case No. 19STCPO1610 and the 2019 NorthLake Supplemental Environmental Impact Report.

EXISTING CONDITIONS

Grasshopper Creek flows from north to south and is an ephemeral drainage, with localized areas of seasonal groundwater discharge due to the water-holding capacity of landslides and bedding planes that provide for the discharge of subsurface water. In other areas, which do not exhibit discharge of subsurface water, shallow groundwater lenses support phreatophytes (plants with roots that are capable of reaching shallow groundwater typically at depths between three to 20 feet).[2] Where subsurface water occurs, Grasshopper Creek supports a mix of phreatophytes such as willows (*Salix* spp.), mulefat (*Baccharis salicifolia*), saltgrass (*Distichlis spicata*), and spiny rush (*Juncus acutus leopoldii*), a California Native Plant Society List 4 species[3]. Thus, while Grasshopper Creek appears dry for most of the year and surface water is not usually present except during storm events, portions of the creek support phreatophytic vegetation, due to shallow groundwater, including areas densely vegetated with species such as spiny rush, which are supported by the subsurface water that is directly dependent on the geological conditions.

AVOIDANCE ALTERNATIVE POST-PROJECT CONDITIONS

Under the post project conditions for the Grasshopper Creek Avoidance Alternative in addition to elimination of a significant portion of the surface tributary discharge, subsurface water will also be eliminated. This will occur as a result of the remedial grading needed to remove the landslide areas that will eliminate the landslide debris and bedding planes that store and transmit the groundwater[4], such that the groundwater that currently supports the phreatophytes will be, "by design" eliminated. The stress on "by design" is important because the very conditions that create the potential unstable geotechnical conditions are the very conditions that provide for the presence of the subsurface water. Elimination of this subsurface water will result in the elimination of the phreatophytic vegetation, which contributes to the conditions within Grasshopper Creek that are associated with the biological values. In short, the very conditions that contribute to the important biological functions in Grasshopper Creek will be eliminated and the creek would fail to function as it currently does.

CONCLUSIONS

The Grasshopper Creek Avoidance Alternative, while avoiding direct grading impacts to the drainage would, nevertheless, result in elimination of the hydrological conditions (*i.e.*, near surface or shallow ground water) that supports a special-status plant (spiny rush) and the suite of other riparian phreatophytes. Even with establishment of a 300-foot setback, it would not be possible to construct a geotechnically sound development and maintain Grasshopper Creek in its current biological condition.

---

[2] T.W. Robinson. *Phreatophytes: Geological Survey Water-Supply Paper 1423*. Washington D.C. 1958.
[3] See GLA Rare Plant Memo dated July 2021.
[4] See G3Soils Memo.

APPENDIX F-4

PARTIAL CREEK AVOIDANCE ALTERNATIVE ASSESSMENT

SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd., #100 Van Nuys, CA 91411
Phone 818.787.8550 Fax 818.901.7451
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MEMORANDUM

TO: Northlake Associates, LLC

CC:

FROM: Raman Gaur

Vice President/ Project Director

DATE: July 12, 2022 – Revised: October 14, 2024

RE: Partial Creek Avoidance Alternative (PCAA)

PARTIAL CREEK AVOIDANCE ALTERNATIVE

Background: The Applicant originally proposed the phased development of up to 3,150 residential units, 9.2 acres of commercial uses, 13.9 acres of industrial uses, 799.5 acres of parks and open space, a 22.9-acre school site and a 1.4-acre pad for a future fire station (Project) within the area of the previously approved Northlake Specific Plan (Project Site). Subsequent to the publication of the Final Supplemental Environmental Impact Report (SEIR), the County of Los Angeles Regional Planning Commission requested that the Applicant include an affordable housing component in the Project. The Applicant made minor revisions to the Project to include an affordable component. Specifically, the Applicant eliminated 108,283 square feet (SF) of industrial use (all of the industrial uses) and 13,197 SF of commercial uses (leaving 38,700 SF of commercial uses) and reallocated 315 units from the Phase 2 area of the Project to the Phase 1 area. All 315 reallocated units are affordable units. The Regional Planning Commission approved the Northlake Project on April 18, 2018, and the Los Angeles County Board of Supervisors approved the Project on April 2, 2019 (the Project).

On January 11, 2021, the Los Angeles Superior Court ruled (Court Ruling) on the Center for Biological Diversity and Endangered Habitats League v. County of Los Angeles, et al, and Real Parties in Interest, Northlake Associates, et al, Case No.

19STCPO1610, finding that the analysis of project alternatives in the SEIR was deficient in failing to adequately study a creek avoidance alternative.

Creek Avoidance Alternative: A Creek Avoidance Alternative (CAA) Assessment was prepared and presented by the Applicant and technical consultants for the Northlake project to the Regional Planning Director, Amy Bodek, and her staff on July 29, 2021. The assessment concluded that due primarily to geotechnical reasonings, completely avoiding the creek was not a feasible alternative. Regional Planning took that conclusion under advisement and stated that the assessment would be forwarded to the Department of Public Works for further review. During this meeting the Planning Director requested that the Applicant team assess an additional alternative that, while not fully avoiding the creek, could reduce the development's impacts to the creek.

Partial Creek Avoidance Alternative: Based on the above request, the Applicant team analyzed and prepared an alternative that reduces some of the impacts to Grasshopper Creek (Creek) – a partial creek avoidance alternative – but still maintains the majority of the Project's design and features. This alternative reflects the fact that the existing landslides within the Project Site, especially the numerous landslides that toe out under the creek within Phase 1 of the Project, will most likely result in the loss of the Creek, once disturbed. As such, due to engineering geologic / geotechnical adversities that would develop as a result of implementing the CAA approach, development of the CAA would result in unacceptable increases in risk of future slope failures/landslides and, as a result, would not be feasible.

This alternative leaves Phase 1 as previously approved but reduces the scope of the Phase 2 development of the Project (see attached Exhibit).

The reduced Phase 2 area design (Partial Creek Avoidance Alternative, PCAA) avoids a cluster of smaller and larger landslides in the northern portion of the Phase 2 area. This is proposed to avoid disturbing the landslides and risk additional loss of Creek area (similar to the issues with the CAA). This alternative design would preserve both the Creek and sensitive habitat within the upper portion of the Phase 2 area of the Project Site.

This alternative provides a balanced site within the proposed Phase 2 grading footprint and does not require any additional import or export of soil, while reducing the total disturbed area in Phase 2 by 60%, thereby creating additional undisturbed open space. It also reduces the impacts to that portion of the Creek on the Project Site by approximately 20%.

Furthermore, this alternative greatly reduces the raw earthwork of Phase 2 by approximately 10 million cubic yards.

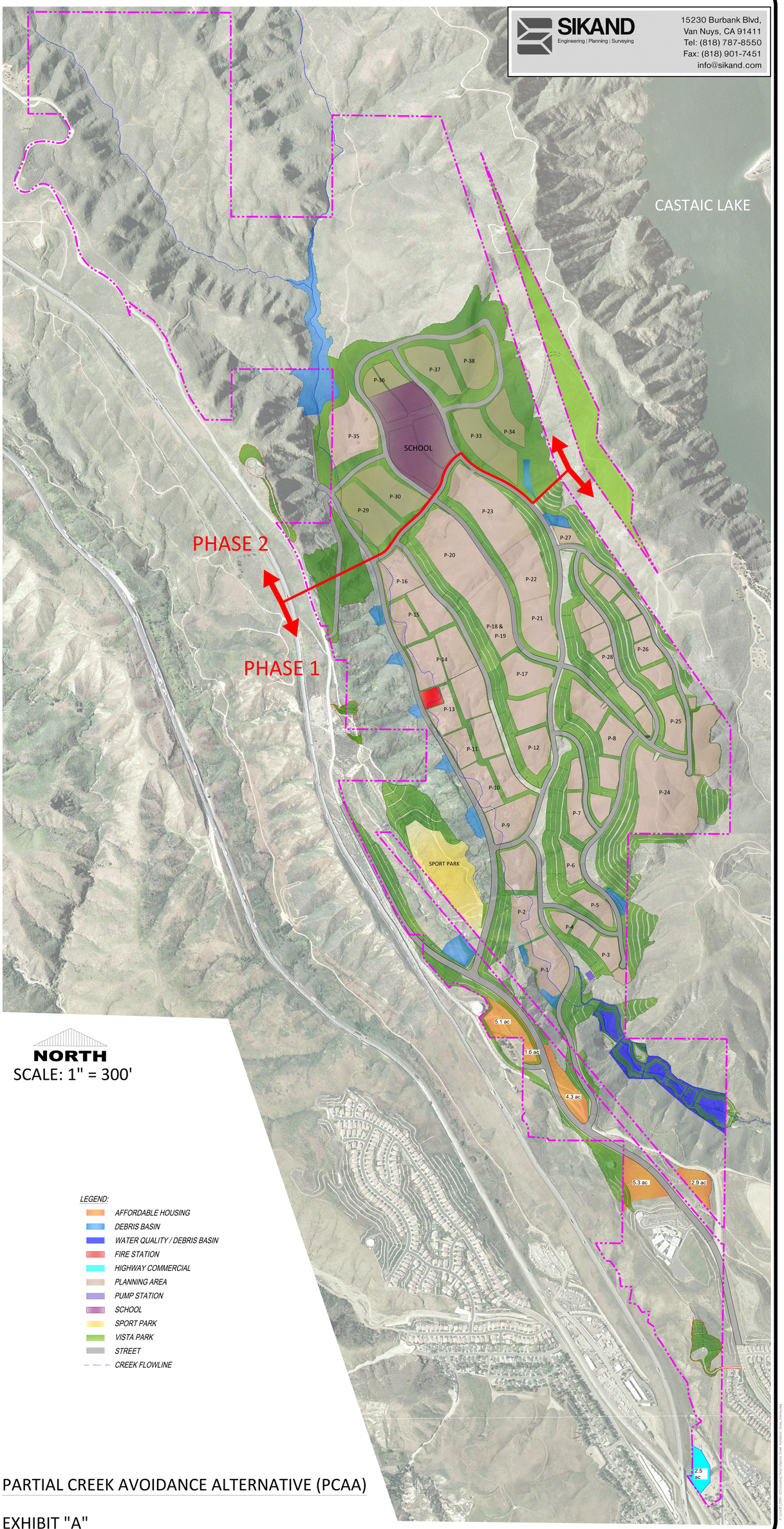
The alternate design maintains the Project unit count of 3,150. The alternative design preserves the agreed affordable component of 315 units, mixed use and live work units, and preserves the school and fire station sites, commercial sites, and the sports park, all of which were provided in the Project and remain unchanged in this alternate design.

Benefits of the Partial Creek Avoidance Alternative

• The portion of the Creek that will be saved in Phase 2 is contiguous of the upstream offsite tributary, and therefore this alternative preserves more undisturbed stream.
• The Project Site can be graded for better balance, since Phase 2 is mostly cut, while Phase 1 is fill.
• Reducing Phase 2 would promote saving of more sensitive habitat in those areas that will be undisturbed where sensitive habitat is present.
• Reducing Phase 2 will better assist wildlife movement with the upper wildlife crossing, and does not affect the secondary access and Project circulation.
• Reducing the scale of Phase 2 would promote a better fire break from the northern denser vegetation.

Rejection of the Partial Creek Avoidance Alternative

• Although the Partial Creek Avoidance Alternative would have similar impacts for each environmental topic when compared to the previously approved Project, it would not provide active recreational area to the same extent as the previously approved Project as the alternative provides 22 percent less active recreation area. (Specific Plan Policy IV. Open Space/Recreation Area, Goal i: To improve opportunities for a variety of outdoor recreational experiences.)



PARTIAL CREEK AVOIDANCE ALTERNATIVE (PCAA)

EXHIBIT "A"

APPENDIX F-5

NORTHLAKE SPECIFIC PLAN ALTERNATIVES VMT ANALYSIS

Stantec

Memo

To:	Damon Mamalakis Armbruster Goldsmith & Delvac LLP	From:	Maria Morris and Daryl Zerfass Stantec
Project/File:	2042648800	Date:	February 27, 2025

Reference: Northlake Specific Plan Alternatives VMT Analysis

This memorandum summarizes a vehicle mile travelled (VMT) analysis prepared for the Northlake Specific Plan (NLSP) Development located east of the Interstate 5 (I-5) Freeway and north of Lake Hughes Road in the unincorporated Los Angeles County. The NLSP was adopted by the Board of Supervisors on June 1, 1992. In 2019, changes to the land use plan were approved by the Los Angeles County Board of Supervisors (referred to herein as the previously approved Project). The Project applicant is currently proposing to recirculate portions of the Northlake Specific Plan Supplemental EIR including the alternatives section. As part of the recirculated alternatives section, two new alternatives, referred to here as the Creek Avoidance Alternative (CAA) and the Partial Creek Avoidance Alternative (PCAA) are proposed. Presented here is a VMT assessment of the CAA and PCAA alternatives with a comparison to the previously approved Project. **Figure 1** shows the previously approved Project site plan.

Methodology

At the time the previously approved Project traffic analysis was prepared, level of service (LOS) was the metric used to evaluate transportation impacts. VMT is now the metric used to evaluate a transportation impact per Senate Bill 743. Los Angeles County has updated their Transportation Impact Analysis Guidelines[1] to utilize the VMT metric. The County has also developed a VMT tool (Version 1.0 available upon request from the County) that is specifically designed to develop project-specific daily residential VMT per capita and daily employment VMT per employee metrics for residential, office, and industrial development projects in the County. The County's VMT tool is used to calculate VMT estimates for the CAA and PCAA alternatives for comparison to the VMT estimates of the previously approved Project[2].

VMT Analysis

The Governor's Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA[3] (OPR's Technical Advisory) defines VMT as "the amount and distance of automobile travel attributable to a project"[4]. Project VMT is calculated by multiplying the Project-generated vehicle trips with the vehicle trip lengths. **Table 1** summarizes the land use for the previously approved Project, the CAA, and the PCAA.

[1] TIA Guidelines Version 1.1, Los Angeles County Department of Public Works, July 2020 updated September 2020.
[2] The previously approved Project would generate less VMT and a lower VMT per service population rate than the NLSP. Due to the VMT reduction, the previously approved Project's impacts would be less, and the previously approved Project would not result in any new or increased significant transportation impacts. (The Northlake Specific Plan Transportation Analysis Memorandum, Stantec, November 19, 2024).
[3] Technical Advisory on Evaluating Transportation Impacts in CEQA, State of California Governor's Office of Planning and Research, December 2018.
[4] Page 4 ibid.

Reference: Northlake Specific Plan Alternatives VMT Analysis

Table 1 Northlake Specific Plan Project Land Use Summary

Category	Previously Approved Project		CAA		PCAA	
	Acres	Units	Acres	Units	Acres	Units
Residential						
Single Family	186	1,143	264	1,650	94	1,143
Multi Family	107	1,341	0	0	107	1,341
Single Family (Age Qualified)	49	345	0	0	49	345
Affordable Housing/Live Work	20	321	20	165	20	321
Total Residential	**362**	**3,150**	**284**	**1,815**	**270**	**3,150**
Difference (Compared to Approved Project)	***n/a***	***n/a***	***-78***	***-1,335***	***-92***	***0***
Non-Residential						
Commercial Highway	2	n/a	2	n/a	2	n/a
School	44		23		44	
Recreation Park	167		26		103	
Public Services (Fire Station)	1		1		1	
Total Non-Residential	**214**		**52**		**150**	
Difference (Compared to Approved Project)	***n/a***		***-162***		***-64***	
Other – Roads and Open Space						
Road	120	n/a	71	n/a	98	n/a
OS - Manufactured Slope	305		284		239	
OS - Undisturbed	328		638		572	
Total Road and Open Space	**753**		**993**		**909**	
Difference (Compared to Approved Project)	**n/a**		**+240**		**+156**	
Total Project	**1,329**	**3,150**	**1,329**	**1,815**	**1,329**	**3,150**

As shown in **Table 1**, the previously approved Project includes 3,150 residential dwelling units on 362 acres. The CAA proposes to construct 1,815 residential units on 284 acres (1,335 fewer residential units on 78 less residential acres). The PCAA proposes to construct 3,150 residential units (the same as the previously approved Project) on 270 acres (92 less residential acres). The CAA would construct fewer residential units than the previously approved Project and would generate fewer vehicle trips when compared to the approved Project. The PCAA would generate the same vehicle trips as the previously approved Project. Average trip lengths are not anticipated to change. Therefore, the residential component of each of the two alternatives would generate less than or the same VMT compared to the previously approved Project.

In regard to the non-residential uses, the previously approved Project includes development of non-residential uses on 214 acres. In comparison, the CAA proposes non-residential development on 52 acres and the PCAA 150 acres. Both alternatives would generate fewer non-residential vehicle trips when compared to the previously approved Project. Average trip lengths are not anticipated to change. Therefore, the non-residential component of each of the two alternatives would generate less VMT compared to the approved Project. Lastly, **Table 1** shows a decrease is road development and increases in open space. These land uses do not generate vehicle trips on their own and would not affect VMT.

Reference: Northlake Specific Plan Alternatives VMT Analysis

Conclusion

The Project was approved in 2019, for which the approval was rescinded May 2021. The Project applicant is currently proposing to recirculate portions of the Northlake Specific Plan Supplemental EIR including the alternatives section. As part of the recirculated alternatives section, the Project applicant is proposing two additional development alternatives referred to here as the CAA and the PCAA.

The land use summary provided in **Table 1** compares the proposed land uses for the two alternatives and shows that residential development for the CAA is reduced compared to the previously approved Project by 1,335 dwelling units (-42%), while the number of residential units for the PCAA is the same as the previously approved Project but on a reduced development area (92 less residential acres). Non-residential development for the CAA and the PCAA is reduced compared to the previously approved Project by 162 acres and 64 acres, respectively.

With the CAA the residential and non-residential development is reduced, therefore this alternative would generate fewer vehicle trips and less VMT compared to the previously approved Project. Residential trips would be reduced by approximately 28% and residential VMT would be reduced by approximately 37% in comparison to the previously approved Project. **Table 2** summarizes the reductions.

With the PCAA, the number of residential units is the same as the previously approved Project and non-residential development is reduced compared to the previously approved Project. As shown in **Table 2**, this alternative would have the same amount of residential vehicle trips and residential VMT as generated by the previously approved Project.

For the non-residential uses, the school acreage decreases with the CAA and remains the same with the PCAA, and school attendance is presumed to reduce proportionally to the reduction in population. The changes to school and park use are not expected to have a significant effect on VMT.

The previously approved Project does not result in any new or increased significant transportation impacts when compared to the NLSP[5]. Therefore, since the CAA would generate less VMT than the previously approved Project, and the PCAA would generate the same amount of VMT as the previously approved Project, the CAA and the PCAA would not result in any new or increased significant transportation impacts.

[5] The Northlake Specific Plan Transportation Analysis Memorandum, Stantec, November 19, 2024.

Reference: Northlake Specific Plan Alternatives VMT Analysis

Table 2 Estimated Residential Trip and VMT Reductions

Description	Previously Approved Project	CAA	PCAA
Residential Units	3,150	1,815	3,150
Estimated Population[1]	10,049	5,790	10,049
Residential VMT per Capita[2]	25.9	28.4	25.9
Total Residential Daily Trips[2]	22,677	16,262	22,677
Total Residential VMT[3]	260,256	164,432	260,256
Change in Total Residential Units (Compared to Approved Project)	--	-42%	0%
Change in Total Residential Daily Trips (Compared to Approved Project)	--	-28%	0%
Change in Total Residential VMT (Compared to Approved Project)	--	-37%	0%

[1] Assumes 3.19 persons per household (source: US Census QuickFacts for Castaic Census Designated Place, California)

[2] Los Angeles County VMT Tool Version 1.0

[3] Total VMT = Population x VMT per capita

Sincerely,

STANTEC CONSULTING SERVICES INC.

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Principal, Transportation Planning & Traffic Engineering
Phone: (949) 923-6058
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Maria Morris AICP, PTP
Senior Transportation Planner
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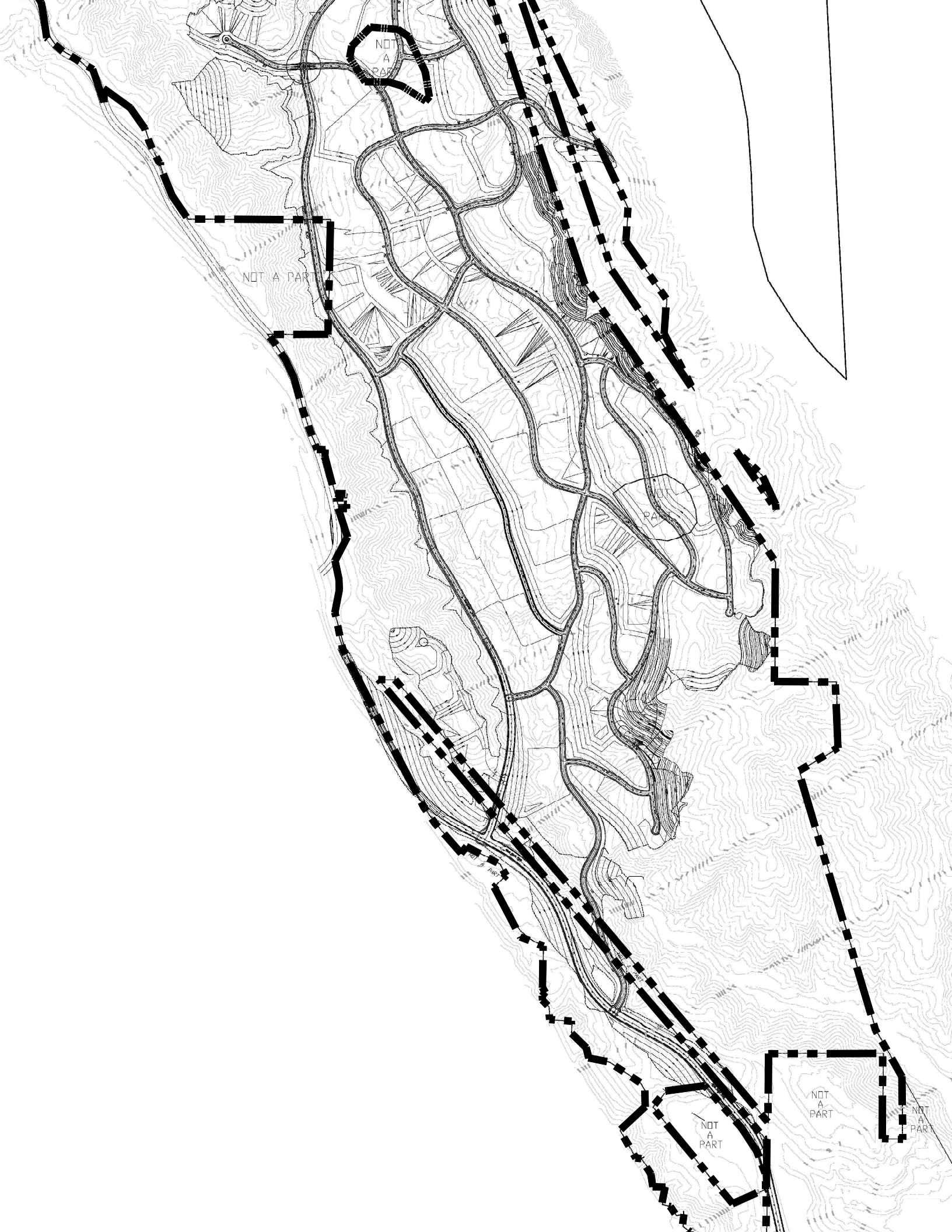
Attachment: Figure 1 Previously Approved Project Site Plan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APPENDIX G

NORTHLAKE PARTIAL CREEK AVOIDANCE ALTERNATIVE AND ASSOCIATED WILDLIFE MOVEMENT ENHANCEMENTS

TECHNICAL MEMORANDUM

GLENN LUKOS ASSOCIATES
Regulatory Services

PROJECT NUMBER: 11150006WOOD

TO: Thomas DiPrima

FROM: Tony Bomkamp

DATE: April 17, 2023

SUBJECT: NorthLake Partial Creek Avoidance Alternative and Associated Wildlife Movement Enhancements

---

Biologists from Glenn Lukos Associates (GLA) conducted an analysis of a Partial Creek Avoidance Alternative ("PCAA") prepared by the NorthLake development team that avoids the northerly segments of Grasshopper Creek on the NorthLake project site. The purpose of the biological analysis was to determine the effects on Wildlife Movement of the PCAA compared with the project as previously approved by the County of Los Angeles ("Previously Approved Project") and in the final decision of the Superior Court in the CENTER FOR BIOLOGICAL DIVERSITY and ENDANGERED HABITATS LEAGUE v. COUNTY OF LOS ANGELES, et al, and Real Parties in Interest, NORTHLAKE ASSOCIATES, et al, Case No. 19STCPO1610. This analysis considers specific factors including the previous approved project design and the proposed PCAA, with a focus on the northern portion of the site. This analysis considers the following issues.

- Expanded potential for wildlife movement due to elimination of development in the northernmost portion of the project site.
- Reduced encroachment by the development into the identified wildlife corridor to the north of the project site, and
- Enhanced movement opportunities associated with the freeway culverts that allow limited east-to-west and west-to-east movement.

Expanded Potential for Wildlife Movement due to Elimination of Development in the Northernmost Portion of the Project Site

It was determined that the Previously Approved Project would not have impacts to wildlife movement under the California Environmental Quality Act ("CEQA"), a determination that the Superior Court upheld. Even though it was determined that impacts to wildlife movement were determined to be less than significant, the project Applicant voluntarily accepted a condition of approval (Condition of Approval No. 51) to provide for wildlife movement post project development. Exhibit 1 depicts the preliminary Wildlife Connectivity Plan adopted as a condition of approval for the Previously Approved Project. It is anticipated that if the Previously Approved Project were reapproved, the same or a functionally equivalent Wildlife Connectivity Plan would be adopted as depicted on Exhibit 2. In addition, it is anticipated that the Wildlife Connectivity Plan would also apply to each of the alternatives

considered in the Recirculated Draft Supplemental Environmental Impact Report. Of the three alternatives considered, only the PCAA's reduced northerly footprint would have implications regarding the Wildlife Connectivity Plan as the two other alternatives propose similar northerly development.

Under the Previously Approved Project, wildlife would have an unobstructed path from the nearby culvert under Interstate 5 to the Castaic Lake environs. Exhibit 2 depicts the PCAA wherein the northernmost approximately 2,200 feet of development has been eliminated leaving a broad corridor across the northern end of the site, including a variety of pathways along drainages and other suitable topographic features.

Reduction of Encroachment by the Approved Development into the Identified Wildlife Corridor to the North of the Project Site

Exhibit 3 depicts the project site in the context of Figure 8 prepared by South Coast Wildlands that shows "permeability" for a suite of wildlife species described in the *South Coast Missing Linkages Project: A Linkage Design for the Sierra Madre-Castaic Connection*[1] ("Linkages Project"). Figure 8 consolidates the permeability for all the species considered in the Linkages Project. The Previously Approved Project fully avoided areas of permeability for the Mountain Lion; however, the project encroached into the Least Cost Corridor areas of mule deer permeability. When areas of highest permeability (i.e., most ideal for animal passage) are considered, those areas are to the north of the project development areas, and thus not impacted by the project. As such, the Previously Approved Project would have a less than significant impact on mule deer movement. Exhibit 4 shows that with the PCAA, the encroachment into the area of Least Cost Corridor areas for mule deer permeability is reduced substantially and outside the areas of highest permeability. Like the Previously Approved Project, the PCAA would have less than significant impacts on mule deer movement in the identified wildlife corridor.

Enhanced Movement Opportunities Associated with the Freeway Culverts that Allow Limited East-to-West and West-to-East Movement Under Interstate 5

Exhibit 2 depicts the location of the two northerly under-crossings beneath Interstate 5 in relation to the PCAA that eliminates the above-mentioned approximately 2,200 feet of development leaving multiple paths for wildlife movement between the northern Interstate 5 under-crossing and Castaic Lake. Exhibit 2 also shows the relationship between the southerly of these two crossings which now can more easily connect wildlife to Castaic Lake by the northerly route as well as to the south and west. In addition, Exhibit 2 shows pathways through the southerly part of the develop consistent with the preliminary Wildlife Connectivity Plan adopted as a condition of approval for the Previously Approved Project.

[1] Penrod, K., C. Cabanero, P. Beier, C. Luke, W. Spencer, and E. Rubin. 2005. *South Coast Missing Linkages Project: A Linkage Design for the Sierra Madre-Castaic Connection*. South Coast Wildlands, Idyllwild, CA. www.scwildlands.org

Conclusions

By eliminating development at the northern end of the project site, the PCAA provides for enhanced wildlife movement when compared with the Previously Approved Project, which was determined through project approval and review by the court to have less than significant impacts to wildlife movement.

North Valley Paseo

North Valley Park

School

Vista Park

CASTAIC LAKE

Enhanced Parkway

Grasshopper Creek Park

Fire Station

5

Community Sports Park

Commercial

Castaic Lagoon Park

Lower Ridge Route

Industrial

Northlake Hills Elementary School

LEGEND

PROPOSED WILDLIFE CONNECTIVITY

EXISTING FREEWAY CROSSING

1″=600′

0′ 600′ 1200′

Exhibit 1

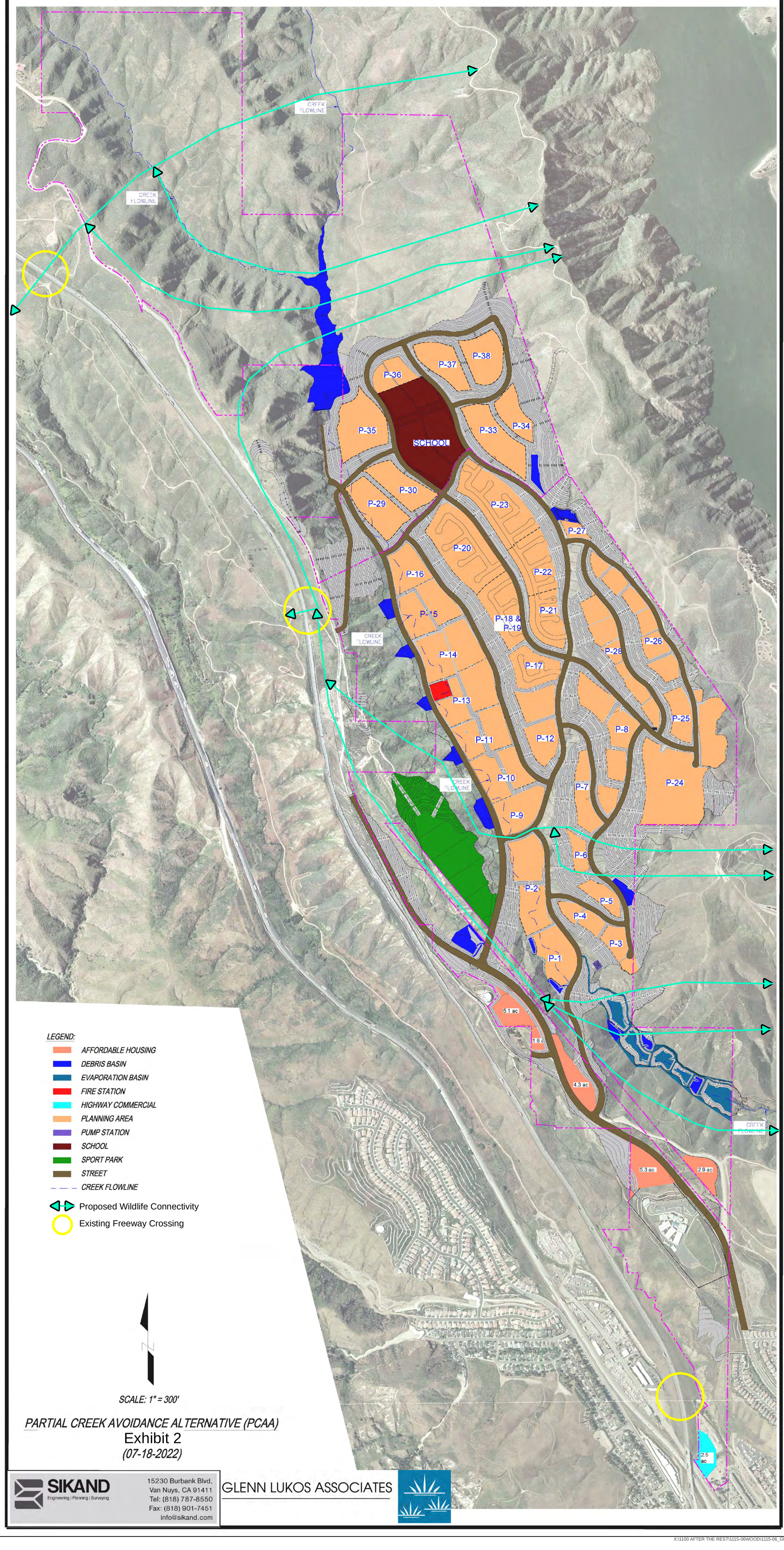
Previously Approved Project

NORTHLAKE WILDLIFE CONNECTIVITY PLAN PRELIMINARY

NORTHLAKE

DATE: 03.19.2018

PLACEWORKS



PARTIAL CREEK AVOIDANCE ALTERNATIVE (PCAA)

Exhibit 2

(07-18-2022)

SIKAND
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15230 Burbank Blvd,
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

GLENN LUKOS ASSOCIATES

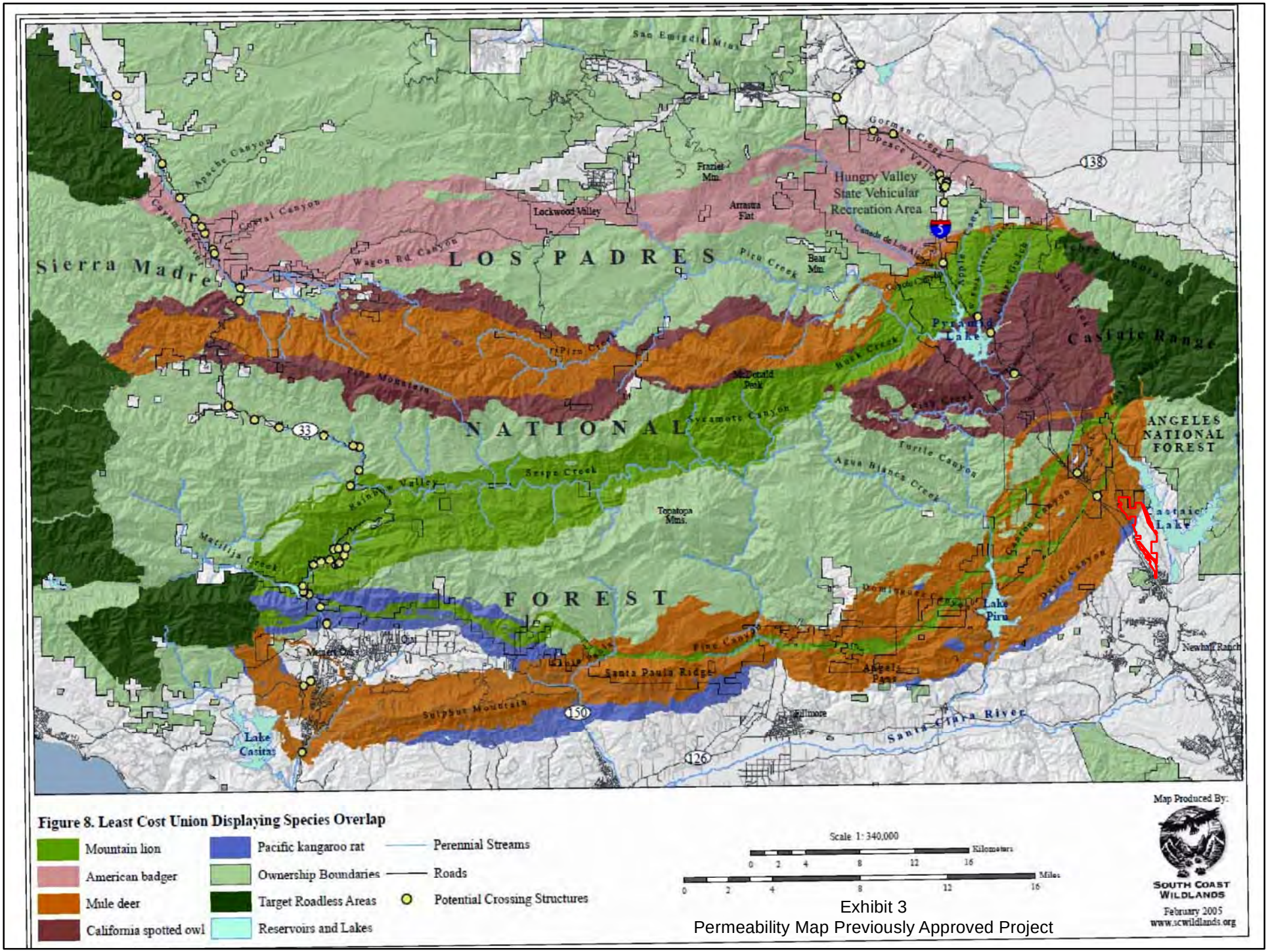

Figure 8. Least Cost Union Displaying Species Overlap

- Mountain lion
- American badger
- Mule deer
- California spotted owl
- Pacific kangaroo rat
- Ownership Boundaries
- Target Roadless Areas
- Reservoirs and Lakes
- Perennial Streams
- Roads
- Potential Crossing Structures

Scale 1: 340,000

Kilometers: 0 2 4 8 12 16

Miles: 0 2 4 8 12 16

Map Produced By:

SOUTH COAST WILDLANDS

February 2005

www.scwildlands.org

Exhibit 3

Permeability Map Previously Approved Project

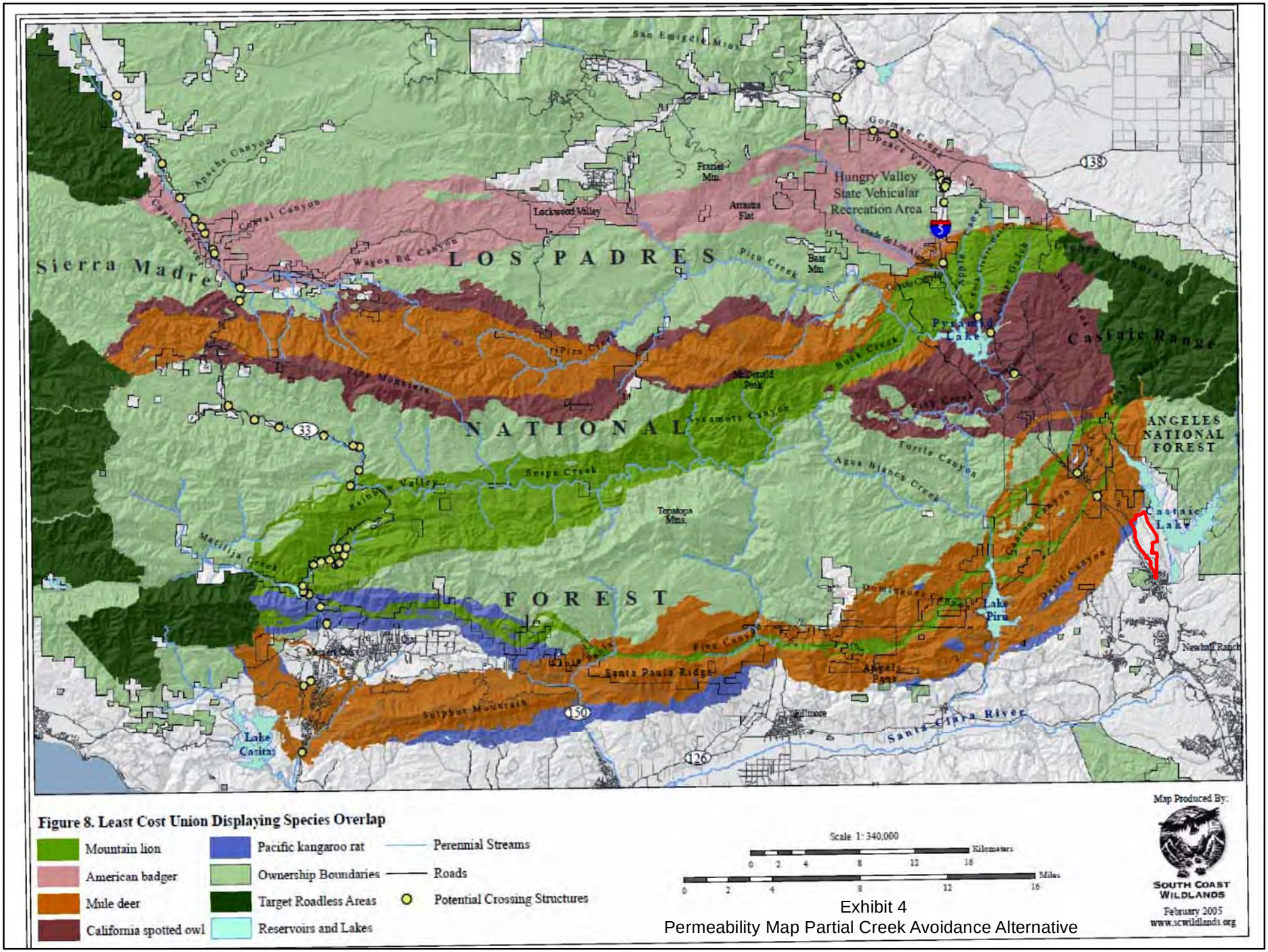

Figure 8. Least Cost Union Displaying Species Overlap

- Mountain lion
- American badger
- Mule deer
- California spotted owl
- Pacific kangaroo rat
- Ownership Boundaries
- Target Roadless Areas
- Reservoirs and Lakes
- Perennial Streams
- Roads
- Potential Crossing Structures

Scale 1: 340,000

Kilometers: 0 2 4 8 12 16

Miles: 0 2 4 8 12 16

Map Produced By:

SOUTH COAST WILDLANDS

February 2005

www.scwildlands.org

Exhibit 4

Permeability Map Partial Creek Avoidance Alternative

APPENDIX H

EFFECTS OF POTENTIAL LISTING OF WESTERN SPADEFOOT TOAD ON NORTHLAKE PROJECT IN CASTAIC, LOS ANGELES COUNTY, CALIFORNIA

TECHNICAL MEMORANDUM

GLENN LUKOS ASSOCIATES
Regulatory Services

PROJECT NUMBER: 1115-6WOOD

TO: Damon Mamalakis

FROM: Tony Bomkamp

DATE: November 12, 2023

SUBJECT: Effects of Potential Listing of Western Spadefoot Toad on NorthLake Project in Castaic, Los Angeles County, California

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On December 5, 2023, U.S. Fish and Wildlife Service (USFWS) issued a "Proposed Rule" to List the Western Spadefoot Toad (WST). Specifically, to list the WST which was summarized follows:

> *We, the U.S. Fish and Wildlife Service (Service), propose to list the northern distinct population segment (DPS) of the western spadefoot (Spea hammondii), an amphibian occurring in central and northern California, and the southern DPS of the western spadefoot, occurring in southern California and northwestern Mexico, as threatened DPSs under the Endangered Species Act of 1973 (Act), as amended. This determination serves as our 12-month finding on a petition to list the western spadefoot range-wide. After a review of the best scientific and commercial information available, we find that listing the northern and southern DPSs of the western spadefoot as threatened is warranted. Accordingly, we propose to list the northern and southern DPSs of the western spadefoot as threatened DPSs with a rule issued under section 4(d) of the Act (''4(d) rule''). If we finalize this rule as proposed, it would add the northern DPS and southern DPS of the western spadefoot to the List of Endangered and Threatened Wildlife and extend the Act's protections to the two DPSs. Due to the current lack of data sufficient to perform required analyses, we conclude that the designation of critical habitat for the northern DPS and southern DPS of the western spadefoot is not determinable at this time.*[1]

The WST was evaluated as part of the NorthLake Supplemental Draft Environmental Impact Report (SDEIR) to determine whether removal of occupied habitat would result in significant impacts in accordance with Appendix G of the CEQA Guidelines. At the time the SDEIR was prepared, the WST was designated as a Species of Concern by California Department of Fish and Wildlife (CDFW). Based on this status as a Species of Concern,

[1] **Federal Register** / Vol. 88, No. 232 / Tuesday, December 5, 2023 / Proposed Rules, p.82452.

the SDEIR found that the proposed impacts were significant and with mitigation, the proposed impacts would be reduced to less-than-significant. Subsequent to these determinations, the Los Angeles Superior Court ruled (Court Ruling) on the Center For Biological Diversity and Endangered Habitats League v. County Of Los Angeles, et al, and Real Parties in Interest, NorthLake Associates, et al, Case No. 19STCPO1610, finding that relative to the WST that the SEIR was deficient in failing to adequately delineate the WST baseline and failing to provide adequate mitigation measures for the relocation of the WST.

To address the Court's decision, the applicant prepared a detailed Western Spadefoot Toad (*Spea hammondii*) Impact Assessment and Habitat Mitigation and Monitoring Plan (HMMP) dated June 2023 that updated the impact analysis and provided for onsite mitigation that addresses the proposed impacts and reduces the impacts to less-than-significant, again based on the WST status as a California Species of Concern. The HMMP was reviewed by the County of Los Angeles and by the California Department of Fish and Wildlife (CDFW) and approved by each agency prior to the proposed listing by USFWS which would result in the listing of the WST as "Threatened" pursuant to the Federal Endangered Species Act (FESA).

Thus, currently, the WST remains a California Species of Concern and the finding of significance would not change. The new federal status of "Proposed Threatened" would not change the finding that the impacts on the WST from the proposed Project would be significant. Under the CEQA Appendix G Guidelines, the proposed mitigation would remain adequate, and no additional mitigation would be necessary due to the new federal Proposed Rule.

Should the Proposed Rule to list the WST as "Threatened" pursuant to the FESA, be finalized and the WST listed as Threatened, it would be necessary to obtain a "Take" permit pursuant to Section 7 or Section 10 of the FESA to permit relocation of the WST as called for in the HMMP. During processing of the Take permit from USFWS, additional mitigation could be required by USFWS; nevertheless, this would not change the mitigation requirements under CEQA.

APPENDIX I

SUMMARY OF WESTERN SPADEFOOT TOAD SURVEYS IN 2023 AND 2024 AT NORTHLAKE PROJECT SITE, LOS ANGELES COUNTY, CALIFORNIA

TECHNICAL MEMORANDUM

GLENN LUKOS ASSOCIATES
Regulatory Services

PROJECT NUMBER: 11150006WOOD

TO: Thomas DiPrima

FROM: Tony Bomkamp and Stephanie Cashin

DATE: August 6, 2024

SUBJECT: Summary of Western Spadefoot Toad Surveys in 2023 and 2024 at NorthLake Project Site, Los Angeles County, California

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Biologists from Glenn Lukos Associates (GLA) conducted surveys for the western spadefoot toad (*Spea hammondii*) (WST) during the 2022/2023 and 2023/2024 rainfall seasons to document status within areas of potential habitat at the NorthLake Project Site (Project Site). As described below, for each of the survey seasons, WST was detected in three existing features within the Project Site where WST had been detected previously. The occupied features are depicted on Exhibit 1 [Pond Map]. The three features are designated as Cattle Pond, Pond 1, and Pond 2. Exhibit 2 [Site Photographs] depicts representative photographs from both the 2023 and 2024 surveys. Table 1 below summarizes the survey dates, weather, and presence/absence of WST for each of the survey seasons.

Table 1. Summary of Western Spadefoot Surveys

Survey Date	Biologist[1]	Start/End Time	Start/End Temperature (degree F)	Start/End Wind Speed (mph)	Cloud Cover (%)	Western Spadefoot Detected
04/27/2023	JA, SC, JF	0700-1500	65-83	3-5/0-1	Clear	Yes
04/03/2024	SC, CW	0930-1230	64-75	1-2/2-5	Clear	Yes
05/15/2024	SC, CW	1300-1400	70-70	0-5/0-5	Clear	Yes

[1] Jeff Ahrens (JA), Stephanie Cashin (SC), Jason Fitzgibbon (JF), Chris Waterston (CW).

2023 Western Spadefoot Survey Results

On April 27, 2023, GLA biologists, Jeff Ahrens, Stephanie Cashin, and Jason Fitzgibbon, conducted a focused survey for the WST at three previously documented ponded features known to support WST. GLA biologists also inspected potentially suitable habitat for WST when encountered. The 2022-2023 rainfall year was above average measuring 24.06 inches[1]. Above average rainfall damaged access roads within the Project Site and delayed earlier survey efforts to the previously documented

[1] https://dpw.lacounty.gov/wrd/rainfall/

ponded features. However, WST were detected at all three ponded features on April 27, 2023. Details regarding the WST the previously documented ponded features are below.

Cattle Pond

The Cattle Pond is a large shallow basin, which inundates during the rainy season. During the survey, the feature contained mostly open water with bare soil edges and sporadic mulefat (*Baccharis salicifolia*) along the edges [Exhibit 2, Photograph 1 and 2]. On April 27, 2023, the Cattle Pond had dried significantly with remaining surface water measuring 20 meters by 13 meters, eight centimeters deep, on average, and 15 centimeters at the deepest point. Clay was saturated below the surface and measured at least 30 cm in depth. The water was turbid, which made the estimation of WST individuals difficult. WST tadpoles were observed coming up for air at surface and diving into deeper water.

Biologists Stephanie Cashin and Jason Fitzgibbon walked the pond edge to search for WST. While walking the pond edge, WST metamorphs were observed hopping from the edge into vegetation and additional metamorphs were observed emerging from deep soil cracks along the edges [Exhibit 2, Photograph 4]. Gosner stage (Gosner, 1960)[2] was visually estimated and recorded as a range for each cohort. The metamorphs retained a small tail that wrapped close to the body (Gosner stage 44-45). Biologist Jeff Ahrens conducted dip netting near the center to confirm WST presence. Dip netting was conducted for 15 minutes with 25 WST tadpoles (Gosner stage 26-35) observed that appeared to be from the same cohort with all individuals with an estimated length of nine cm. No other amphibian species was detected.

Pond 1

Pond 1 is a shallow round depression measuring approximately ten meters by eight meters with transparent open water, an average of ten centimeters deep with portions up to 30 centimeters. The edges of the pond were vegetated predominately with common spike rush (*Eleocharis marchrostachya*) [Exhibit 2, Photograph 5]. The pond is surrounded primarily by grassland habitat, including annual bromes (*Bromus* spp.) and slender wild oat (*Avena barbata*). The WST population was estimated visually using an average of three counts which were then rounded to the nearest one hundred. An estimated 1,000 WST tadpoles, appearing to be from three cohorts, were detected in Pond 1. Approximately half of this total appeared to be from the oldest and largest cohort measuring approximately 9 cm with some having well developed hind legs (Gosner 31-41). The tadpoles were observed in several dense congregations and others were evenly distributed throughout the pool. Some WST tadpoles were also observed surfacing for air from deeper areas [Exhibit 2, Photograph

[2] Gosner, K. L. (1960) A Simplified Table for Staging Anuarn Embryos and Larvae with Notes on Identification. Herpetologica, 16, 183-190.

6]. Additionally, an estimated 400 non-aquatic metamorphs were detected roaming within the vegetation and emerging from soil cracks of the previously wetted pond edge.

Pond 2

Pond 2 was dry on April 27, 2023. Pond 2 is also a shallow round depression surrounded by grassland and supports patches of common spike rush [Exhibit 2, Photograph 7]. Near the center and presumably the deepest location of the pond, an estimated 400 desiccated WST tadpoles were observed [Exhibit 2, Photograph 8]. Additionally, an estimated 100 WST toadlets, less than 2.5 cm, were observed within and emerging from soil cracks within the depression.

2024 Western Spadefoot Survey Results

On April 3 and May 15, 2024, GLA biologists, Stephanie Cashin and Chris Waterston, conducted a focused survey for the WST at three previously documented ponded features known to support WST (the same features as 2023). The 2023-2024 rainfall year was above average measuring 19.24 inches (*Castaic Fire Station, Los Angeles Public Works*). For a second consecutive year, above average rainfall damaged access roads to the ponded features and delayed earlier survey efforts. As with the 2023 surveys, WST were detected at all three ponded features. No additional features with WST were detected in 2024. Details regarding each of the previously documented occupied features are below.

Cattle Pond

On May 15, 2024, the Cattle Pond was dry, but evidence of ponding during the 2024 rain season was observed with mud visible in the deep soil cracks and cow hoofprints. The pond was walked in meandering transects to detect presence of WST, hydrology, and vegetation cover. No surface water was observed. Approximately 40 WST metamorphs were detected roaming in vegetation and emerging from soil cracks in the depression, suggesting there were likely 100s [Exhibit 2, Photograph 9].

Pond 1

On April 3, 2024, Pond 1 was observed to be inundated to approximately half of the maximum ponding observed in 2023. An approximate six- by five-meter area of shallow, clear, open water that supported patches of common spike rush was observed [Exhibit 2, Photograph 10]. An estimated 600 WST tadpoles from three cohorts were detected in Pond 1 [Exhibit 2, Photograph 11]. The smallest WST tadpoles were similar in size to the co-occurring Baja California treefrog (*Pseudacris hypochondriaca*) tadpoles.

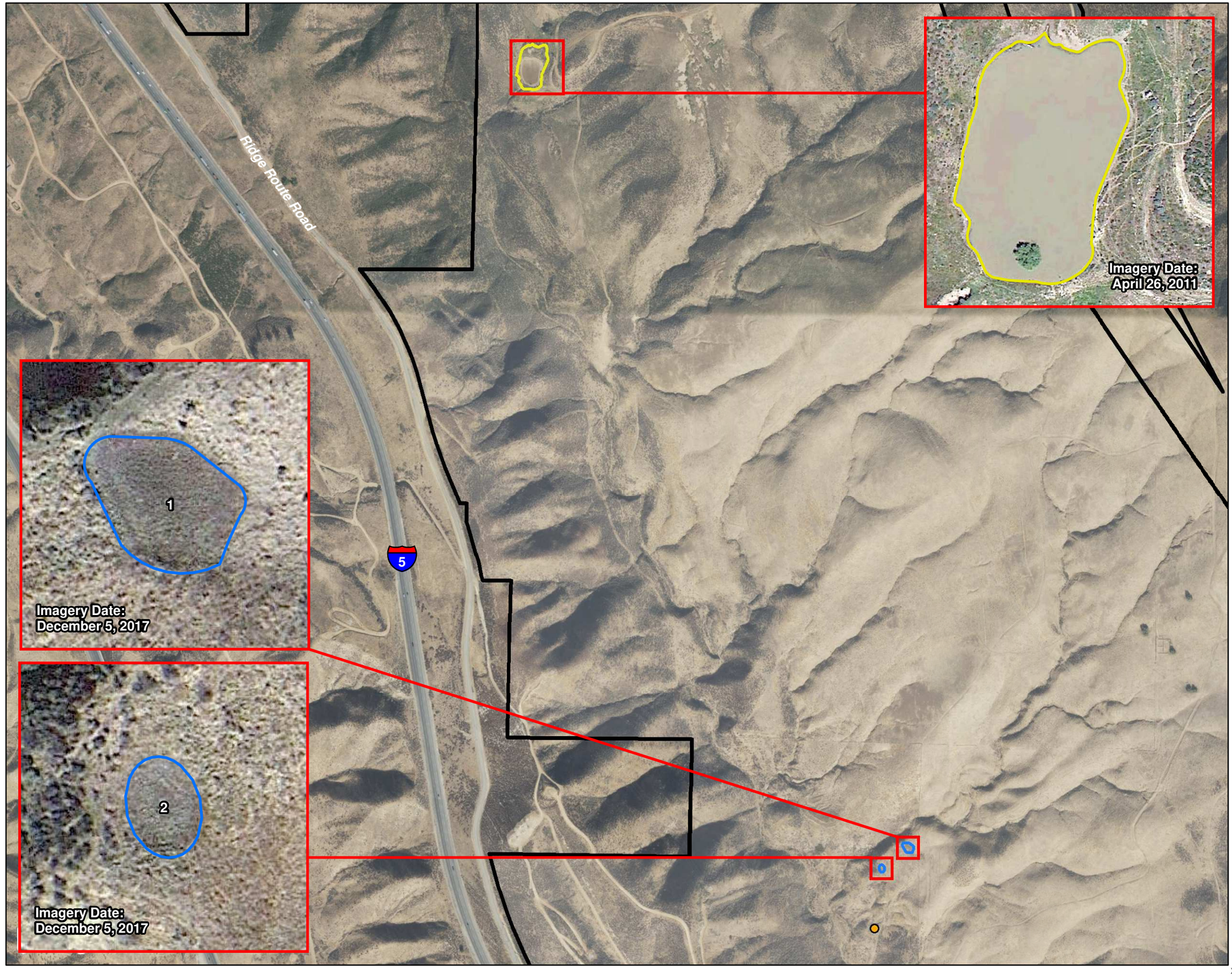
Pond 2

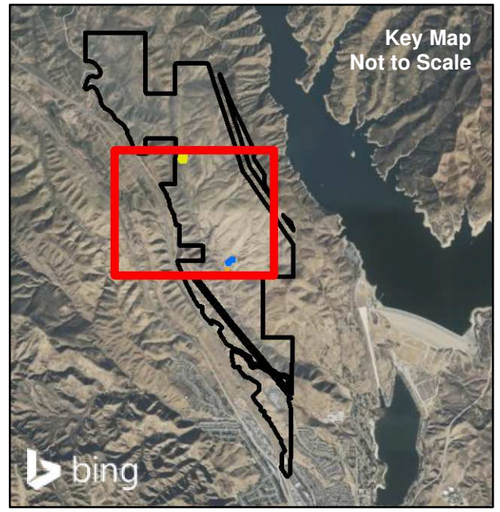
On April 3, 2024, inundation was observed within Pond 2. An approximate six- by five-meter shallow, turbid pond was observed, which supported patches of common spike rush [Exhibit 2, Photograph 12]. An estimated 350 WST tadpoles appearing to be from two cohorts were detected in Pond 2 [Exhibit 2, Photographs 13 and 14]. Approximately 300 of the individuals appeared to be from the oldest and largest cohort, which measured approximately 9 cm. A few individuals were observed to have well developed hind legs (Gosner 31-41). The second, smaller cohort was approximately half the size of the larger cohort at five cm. No other amphibian species were detected in Pond 2.

Discussion and Conclusion

GLA biologists detected WST at three locations during two above average rainfall seasons (2022-2023, 2023-2024). Surveys were delayed due to access issues both years; however, WST were detected at all known locations as documented in *Western Spadefoot Toad (Spea hammondii) Impact Assessment and Habitat Mitigation and Monitoring Plan (GLA April 2024)* during both years. Given the survey delays within the earlier portion of the survey season, population estimates varied between each ponded feature, but consistent detection suggests the populations appear stable at each feature.

The WST population estimates for the Cattle Pond were difficult to quantify as this pond dried faster and earlier in the year than the two smaller ponds and the water was turbid. The detection of WST at the Cattle Pond was low; however, metamorphs were quickly detected during both years. Given the Cattle Pond dries faster than Ponds 1 and 2, WST development may be accelerated in the Cattle Pond. The Cattle Pond is larger than the other two ponds with more soil cracks available for WST refuge; therefore, the number of metamorphs hiding in the cracks is likely much higher than were detected. The detection of WST at Pond 1 yielded the highest consistent detection from 500s to low 1,000s and multiple cohorts were observed co-occurring. Pond 1 appears to remain inundated longer than Pond 2; therefore, it may support a larger population of WST larvae, allowing multiple cohorts to metamorphose. Pond 1 was observed to support multiple cohorts and Baja California treefrog during both years. During the 2024 Pond 2 survey, the WST tadpoles were primarily from one cohort and of similar size to Pond 1's oldest cohort. As mentioned above, Pond 2 appears to dry faster than Pond 1, as it exhibited half the surface area compared to Pond 1 in 2024 and completely dry during the 2023 visit. However, Pond 2 remained inundated long enough, in both years, to produce at least one cohort, given the numerous metamorphs detected in 2023 and the late-stage tadpoles observed in 2024. Although Pond 1 appears to have the ability to support more WST larvae, both ponds are sufficiently proximate to each other to function as a single population that is likely supporting hundreds to low 1,000s of WST metamorphs during above average rainfall years.





Project Location

Cattle Pond: 0.80 acre

Pond

#1: 0.06 acre
#2: 0.02 acre

N

0 275 550 1,100
Feet

1 inch = 550 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: May 10, 2022

NORTHLAKE SPECIFIC PLAN

Pond Map

GLENN LUKOS ASSOCIATES

Exhibit 1

X:\1100 AFTER THE REST\1115-06WOOD\1115-06_GIS\PondsGIS\1115-6_Ponds.mxd



Photograph 1: Depicts the Cattle Pond, facing approximately west, on April 27, 2023.



Photograph 2: Depicts a closer view of wet potion of Cattle Pond, facing approximately north, on April 27, 2023.



Photograph 3: Depicts western spadefoot (*Spea hammondii*) metamorph with tail (Gosner 44), approximately 2.5 cm long, detected in Cattle Pond and placed temporarily into white basin for photograph then released on April 27, 2023.



Photograph 4: Depicts western spadefoot metamorphs emerging from soil crack of Cattle Pond on April 27, 2023.



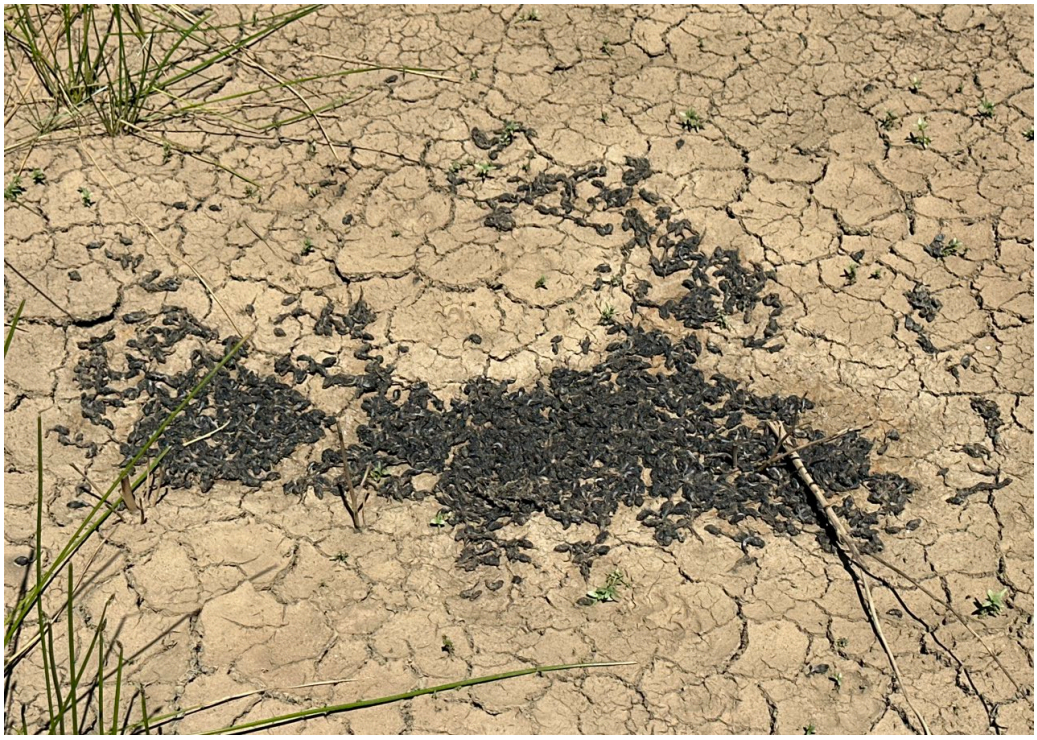
Photograph 5: Depicts Pond 1 with transparent open water and emergent common spike rush (*Eleocharis machrostachya*) on April 27, 2023.



Photograph 6: Depicts western spadefoot in Pond 1 with an estimated 100, 9 cm long tadepoles (Gosner 36-39) and 12 metamorph (Gosner 42-44). Additionally, 300-500 non-aquatic metamorphs (Gosner 44-46) were free moving in vegetation or emerging from soil cracks around pond on April 27, 2023.



Photograph 7: Depicts Pond 2 dry on April 27, 2023.



Photograph 8: Depicts dead western spadefoot tadpoles near center of Pond 2 on April 27, 2023. Additionally, approximately 100 non-aquatic metamorphs (Gosner 44-46) were free moving in vegetation or emerging from soil cracks around pond.



Photograph 9: Depicts Western spadefoot metamorph hiding in a soil crack within the Cattle Pond on May 25, 2024



Photograph 10: Depicts Pond 1 on April 3, 2024.



Photograph 11: Depicts dozens of western spadefoot tadpoles (Gosnar 31-41) in Pool 1 on April 3, 2024. Three cohorts of spadefoot tadpoles were observed and Baja California treefrog (*Pseudacris hypochondriaca*) tadpoles were observed.



Photograph 12: Depicts dozens of western spadefoot tadpoles in Pond 2 on April 3, 2024.



Photograph 13: Depicts western spadefoot tadpoles congregating at pond edge in warn shallow water on April 3, 2024



Photograph 14: Depicts an additional view of western spadefoot tadpoles in Pond 1 on April 3, 2024

APPENDIX J

CROTCH'S BUMBLEBEE SURVEY RESULTS, IMPACTS AND MITIGATION FOR NORTHLAKE PROJECT, LOS ANGELES COUNTY BY GLENN LUKOS ASSOCIATES, INC, DATED JULY 2024

TECHNICAL MEMORANDUM

GLENN LUKOS ASSOCIATES
Regulatory Services

PROJECT NUMBER: 1115-6WOOD

TO: Tom DiPrima

FROM: Tony Bomkamp

DATE: July 26, 2024

SUBJECT: Crotch's Bumblebee Survey Results, Impacts and Mitigation for NorthLake Project, Los Angeles County

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Biologists from Glenn Lukos Associates (GLA) conducted focused surveys for the Crotch's Bumblebee (*Bombus crotchii*) (CBB) on the NorthLake project site [Project site; Exhibits 1 and 2], including areas proposed for development and areas within the NorthLake open space that also included adjacent parcels owned by NorthLake that have been identified for mitigation through establishment of a long-term conservation mechanism. Exhibit 3 depicts the proposed development area and areas of onsite and offsite open space, wherein the offsite open space is under the ownership of NorthLake.

Background

The CBB was petitioned to the State of California in 2018 for listing of the CBB as endangered under the California Endangered Species Act (CESA). The Fish and Game Commission advanced the species to "Candidate" status (for listing as endangered) under the CESA in June 2019. The CBB has a historic range that covers the portions of southern and central California including the NorthLake project site. Subsequently, the candidacy of the CBB was challenged in court, and in November 2020 the Sacramento County Superior Court ruled that insects are not eligible for listing under CESA. The Superior Court's ruling was subject to a subsequent legal challenge regarding CESA's definition of a fish as "a wild fish, mollusk, crustacean, invertebrate, amphibian, or part, spawn, or ovum of any of those animals" and was eventually overruled by the California Court of Appeal on May 31, 2022, making the CBB subject to protection under CESA.[1]

[1] *Almond Alliance of California v. Fish and Game Commission* (2022) 79 Cal.App.5th 337.

Invertebrates

The CBB is a State Candidate Endangered species[2] that inhabits open grassland and scrub habitats. This species occurs primarily in California, including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of southwestern California. This species was historically common in the Central Valley of California, but according to the listing package now appears to be absent from most of it, especially in the center of its historic range.

Bumblebees, including CBB, are generalist foragers and have been reported visiting a wide variety of flowering plants. CBB has a very short tongue, and thus is best suited to forage at open flowers with short corollas. The plant families commonly associated with CBB observations or collections from California include Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae. Plants in the genera *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia,* and *Salvia* are common food plants. These floral associations do not necessarily represent CBB's only preferred plants over other flowering plants, but rather may represent the prevalence of these flowers in the landscape where this species occurs.

Bumblebees are social insects that live in colonies composed of a queen, workers, and reproductive individuals (males and new queens). Colonies are annual and only the new, mated queens overwinter. These queens emerge from hibernation in the early spring and immediately start foraging for pollen and nectar and begin to search for a nest site. Nests are often located underground in abandoned rodent nests, or above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees. Initially, the queen does the foraging and care for the colony until the first workers emerge and assist with these duties. Bumblebees collect both nectar and pollen of the plants that they pollinate. In general, bumblebees forage from a diversity of plants, although individual species can vary greatly in their plant preferences, largely due to differences in tongue length. Bumblebees are well-known to engage in "buzz pollination," a very effective foraging technique in which they sonicate the flowers to vibrate the pollen loose from the anthers.

As addressed in more detail below, GLA biologists conducted surveys for CBB within areas of suitable habitat within the NorthLake Project site. The CBB was detected during the surveys at a variety of locations across the site, including within areas proposed for development and within areas proposed for avoidance that will be maintained as open space subject to permanent preservation. Exhibit 1 shows the Project site boundaries, Project development area and areas where CBB were detected.

[2] The California Fish and Game Commission voted to designate CBB as Candidate Endangered species on June 12, 2019. That designation was placed on hold during the litigation. Following the Court of Appeal ruling, the candidacy was reinstated on September 30, 2022. The final determination is pending.

Methodology

Surveys were conducted by GLA biologists experienced in conducting focused surveys for the CBB in areas of suitable habitat within the proposed development area as well as areas of onsite and offsite open space as depicted on Exhibit 1.

GLA biologists performed focused surveys for the CBB within suitable habitat areas within the NorthLake Project site. Surveys followed a protocol developed by GLA which largely encompasses the CBB flight season (March to September) when the queen, daughters, males and new queens are generally active. Surveys are preferably spaced out throughout the flight season to take advantage of different blooming periods and floral resources. The survey protocol recommends that individual biologists conduct three focused surveys during the flight season, beginning within the three acres of that contain the highest quality floral resources per every 50 acres of potential suitable habitat. Based on previous mapping by BonTerra[3], the Project site supports up to 1001.8 acres of potential suitable habitat, and due to the overall size of the Project site and distance between suitable habitat areas, four different biologists conducted three focused surveys each, with two or three biologists during each survey visit. In addition to the focused surveys listed in Table 1 below, CBB were observed on April 3, 2024 during other biological surveys conducted by GLA.

During each focused survey, two sampling approaches were implemented. During the first phase, the surveyor conducted one hour of visual survey effort within the three-acre flowering area identified as supporting the highest quality habitat as determined by the surveyor. If CBB were not detected during the first hour of searching, a second hour of survey effort was conducted. During the second hour, the surveyor could either choose to resurvey the same flowering area (if any *Bombus* species were detected prior) or the surveyor could choose to conduct a second hour of searching within another high quality three-acre flowering area on site. If CBB were not detected during the second hour of the survey effort, the second survey phase was be implemented, in which the surveyor surveyed the best additional flowering areas throughout the site, as deemed appropriate. The surveyor scanned suitable flowering areas for bumblebee activity and focused on those areas. Minimal time was spent in lesser quality habitat. Depending on the size of the habitat area, the opportunistic survey effort generally did not exceed one hour. In addition, GLA biologists documented bumblebee activity incidentally during all other biological surveys.

Focused surveys were conducted by GLA biologists Jason Fitzgibbon, Chris Waterston, Stephanie Cashin, and Ian Rhodes on May 15, May 16, May 23 and June 27, 2024. Pursuant to the survey guidelines, the surveys were conducted during daytime hours when floral resources

[3] BonTerra. December 2015. Biological Technical Assessment Report, NorthLake Specific Plan Development Project, Prepare for Woodridge Capital Partners, LLC 1999 Avenue of the Stars Suite 2850 Los Angeles, California 90067.

were in bloom and when it was sufficiently warm for bumblebee activity. Weather conditions during the surveys were conducive to a high level of bee activity. Table 1 summarizes the CBB survey visits. The results of the CBB surveys are documented below. Resumes for each of the Biologists are attached as Appendix A with specific qualifications for CBB included with the resumes and a GLA qualifications memo included at the end of Appendix A.

Table 1. Summary of Crotch's Bumblebee Surveys

Survey Date	Biologist[1]	Start/End Time	Start/End Temperature (degree F)	Start/End Wind Speed (mph)	Cloud Cover (%)
05/15/24	SC/CW	1400/1700	64/68	2-5/5-10	Clear
05/16/24	SC/CW	0900/1200	65/70	2-4/2-5	Clear
05/23/24	SC/IR	1050/1415	64/73	1-2/2-12	Cloudy
06/27/24	JF/IR	0620/0915	69/84	0-2/2-5	Clear
[1] Jason Fitzgibbon (JF), Chris Waterston (CW), Stephanie Cashin (SC), Ian Rhodes (IR).					

Results

Crotch bumblebees were detected within the proposed development areas and within proposed open space areas as depicted on Exhibit 1. Based on previous vegetation mapping for the NorthLake Project site conducted for the Biological Technical Assessment Report (BTAR) prepared by BonTerra (2015), the site contains areas of sage scrub communities, native grassland communities and wildflower fields that provide suitable nectar sources and therefore considered suitable habitat for the CBB. As recorded in the BTAR and depicted on Exhibit 2 the following vegetation associations were confirmed by GLA to exhibit suitable conditions based on a combination of Crotch bumblebee survey observations and the presence of suitable nectar plants.

Impacts

Project grading will impact the following vegetation alliances that support or could potentially support CBB based on the presence of suitable floral resources.

Sage Scrub Communities

A total of 634.70 acres of sage scrub would be impacted by Project implementation, which includes Purple sage scrub, California sagebrush–California buckwheat scrub, Black sage scrub, California sagebrush–California buckwheat scrub/Foothill needlegrass grassland, California sagebrush–California buckwheat scrub/California annual grassland, and the burned sage scrub areas: burned Purple sage scrub, burned California sagebrush–California buckwheat scrub, burned Black sage scrub, and burned California sagebrush–California buckwheat scrub/California annual grassland. Impacts on these vegetation types

would be considered significant due to the loss of this vegetation type in southern California and the potential for this habitat to support special status species.

Native Grassland Communities
A total of 24.23 acres of Foothill needlegrass grassland and burned Foothill needle grass grassland would be impacted by Project implementation. Impacts on this vegetation type would be considered significant due to the limited distribution of this vegetation type in California.

California Annual Grassland/Wildflower Fields
A total of 342.85 acres of California annual grassland/Wildflower fields would be impacted by Project implementation. Impacts on California annual grassland/Wildflower fields would be considered adverse and potentially significant because of the density and diversity of native plants found in this vegetation type and because of the general lack of similar areas in the Project vicinity.

Mitigation

Based on the detection of CBB within the NorthLake development area, it is expected that an Incidental Take Permit will be needed to authorize incidental take of CBB during grading. Mitigation for direct impacts to CBB and associated habitat will be fulfilled through compensatory mitigation at a minimum 2:1 suitable habitat that provides replacement of equal functions and values to those impacted by the NorthLake project, or as otherwise determined through the Incidental Take Permit process. Mitigation will be accomplished either through a combination of onsite conservation, offsite conservation on adjacent NorthLake owned lands, and/or through a CDFW-approved mitigation bank. If mitigation is not purchased through a mitigation bank, and lands are conserved separately, a cost estimate will be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity. The funding source will be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount will be established following the completion of a project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The Property Analysis Record will consider all management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development.

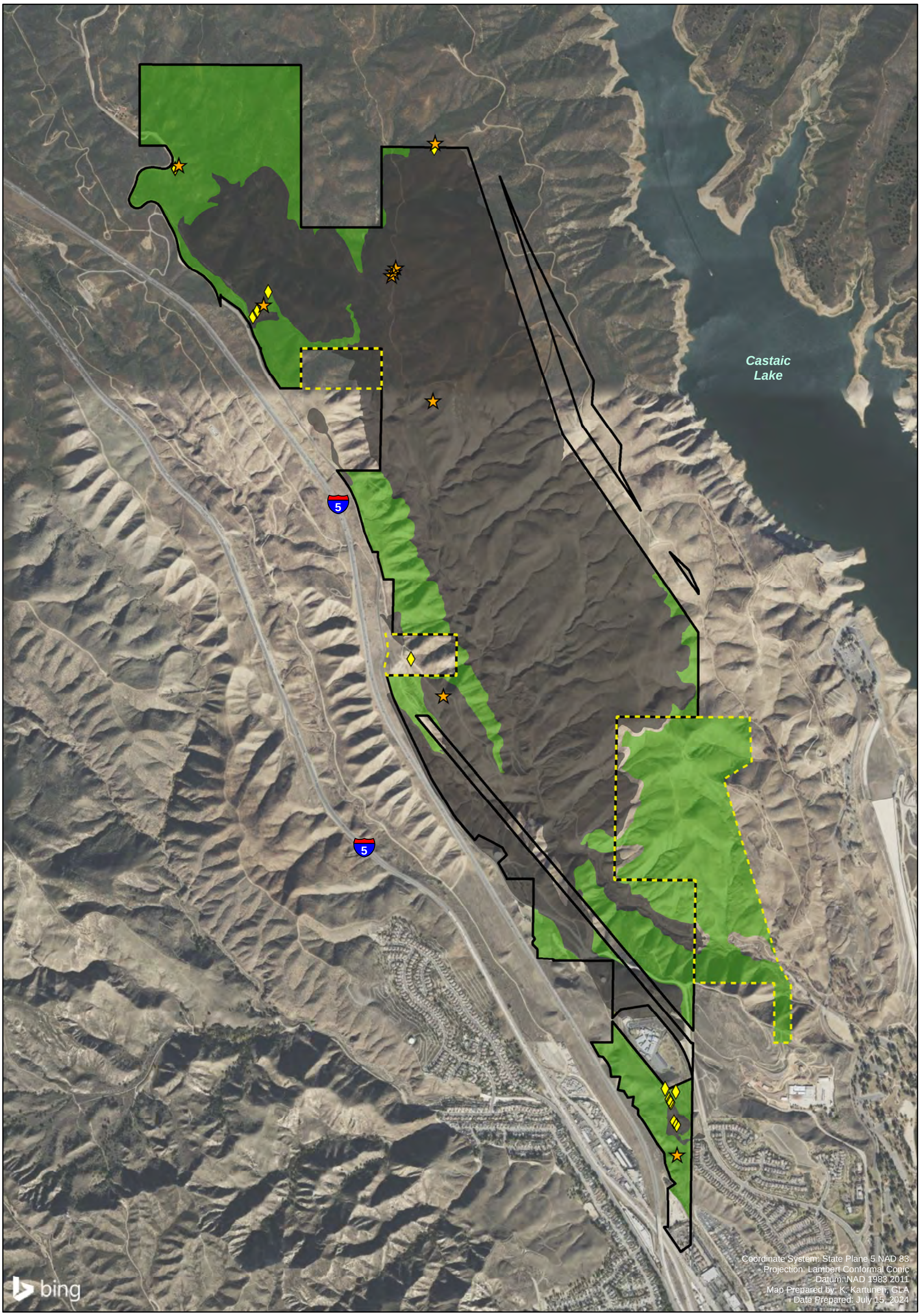
Based on areas of suitable habitat, the project would provide 337.55 acres of mitigation within the onsite conservation areas and 156.66 acres of conservation on adjacent NorthLake ownership for a total of 492.2 acres of preservation as depicted on Exhibit 3. Thus, based on impacts to up to 1,001.8 acres of suitable habitat which supports or potentially supports CBB, the mitigation ratio of 2:1 would be 2,003.6 acres. To achieve 2:1 mitigation, NorthLake will provide approximately 337.5 acres onsite, 156.7 acres on

NorthLake-owned offsite property, and obtain 1,509.4 acres from a CDFW-approved mitigation bank for the CBB or through purchase and long-term conservation of suitable habitat, or a combination of the two options to account for the remainder. Appendix B is a Mitigation Feasibility Assessment that includes candidate properties with suitable habitat such as coastal sage scrub, chaparral, and native grasslands that contain suitable habitat for CBB.

As noted, the proposed mitigation will correspond to the requirements of the NorthLake Specific Plan Final Supplemental EIR (FSEIR) that were set forth in the previous approvals. With the implementation of the previously approved proposed mitigation, significant impacts on Crotch's bumblebee would be reduced to less-than-significant consistent with the FSEIR measures excerpted below.

> **Coastal Sage Scrub**
> The loss of sage scrub habitat within the impact area is considered a significant impact. Sage scrub habitat shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP). The ratio shall be no less than 2:1 for habitat restoration or preservation. Habitat enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. The mitigation ratio for habitat enhancement shall depend on the initial quality of the habitat area to be enhanced and would be determined by the Project Applicant and the LACDRP. Sage scrub habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type.
>
> **Needlegrass Grassland**
> The loss of foothill needle grass grassland within the impact area is considered to be a significant impact. Foothill needle grass grassland shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP). Habitat enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. The ratio shall be no less than 2:1 for habitat restoration or preservation. The mitigation ratio for habitat enhancement shall depend on the initial quality of the habitat area to be enhanced, and would be determined by the project applicant and the LACDRP.
>
> **Wildflower Fields**
> The loss of California annual grassland/wildflower fields within the impact area is considered to be a significant impact. California annual grassland/wildflower fields shall be preserved, restored, or enhanced on site and/or off site at a

ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP). Habitat enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures.



Project - Onsite

Project - Offsite

Development Footprint

Proposed CBB Conservation Area

Crotch's Bumblebee (9)

Other Bee Species (13)

N

0 750 1,500 3,000

Feet

1 inch = 1,500 feet

NORTHLAKE SPECIFIC PLAN

Crotch's Bumblebee Map

GLENN LUKOS ASSOCIATES

Exhibit 1

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See Inset

CASTAIC LAKE

5

5

Project Boundary

Burned Area

Vegetation Types and Other Areas

- Purple sage scrub
- Black sage scrub
- California annual grassland
- California annual grassland/Wildflower fields
- California sagebrush - California buckwheat scrub
- California sagebrush - California buckwheat scrub/California annual grassland
- California sagebrush - California buckwheat scrub/Foothill needlegrass grassland
- Foothill needlegrass grassland
- Fremont cottonwood riparian forest
- Mulefat thickets
- Willow thickets
- Willow thicktes/Mulefat thickets
- Baltic and Mexican rush marsh
- Open water
- Ornamental
- Ornamental/Disturbed
- Disturbed

Inset

0 300 600 Feet

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Vegetation Types and Other Areas

Exhibit 2

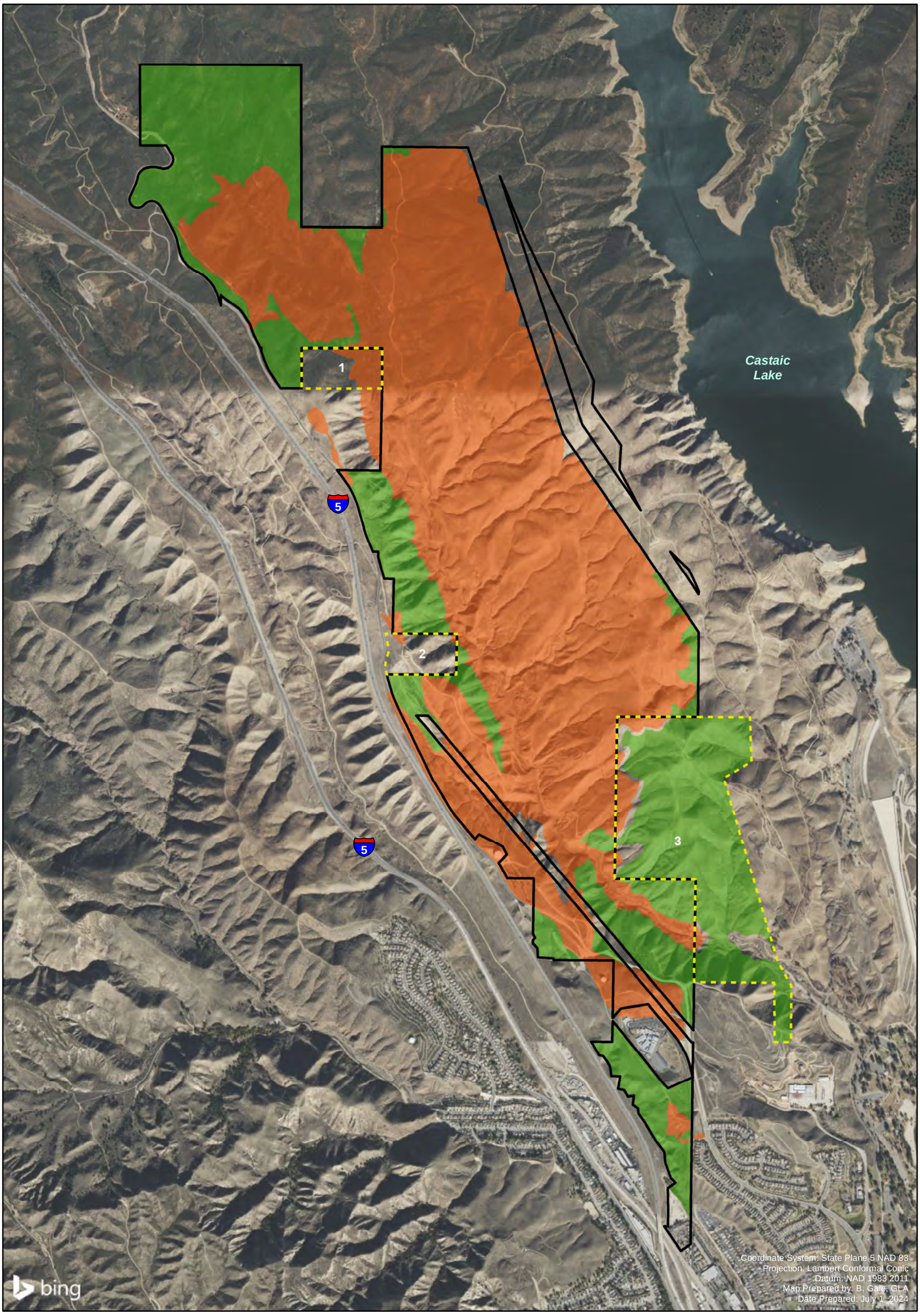
NorthLake Specific Plan

N W E S

1,500 750 0 1,500 Feet

BonTerra PSOMAS

(Rev: 11-02-2015 CJS) R:\Projects\Woodri (WCP)\J001\Graphics\BioTech\ex4_Veg_20151102.pdf



Project - Onsite

Project - Offsite

Development Footprint

Proposed CBB
Conservation Area (492.21 ac.)

N

0 750 1,500 3,000

Feet

1 inch = 1,500 feet

NORTHLAKE SPECIFIC PLAN

CBB Conservation Area

GLENN LUKOS ASSOCIATES

Exhibit 3

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APPENDIX A
BIOLOGIST QUALIFICATIONS

STEPHANIE CASHIN

Associate Biologist

YEARS OF EXPERIENCE

Professional start date: 2000

Years at GLA: 10

EDUCATION

MS, Environmental Studies, California State University, Fullerton, 2012

BS, Biology with Minor in Zoology, California Polytechnic State University, Pomona, 1999

PERMITS AND CERTIFICATIONS

USFWS 10(a)(1)(A) Recovery Permit #TE20280D-0 for vernal pool branchiopods (including Conservancy fairy shrimp, longhorn fairy shrimp, Riverside fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp)

TRAININGS ATTENDED

California Rare Bumblebee
The Wildlife Society-Western Section
Via Zoom, 2021

Advanced Bat Acoustics Workshop
The Wildlife Society-Western Section
Via Zoom, 2021

Intro Desert Tortoise Field Techniques
The Desert Tortoise Council
Via Zoom, 2020

Bat Acoustics Workshop
The Wildlife Society-Western Section
James Reserve, Idyllwild, 2018

CONTINUED (PAGE 4)

PROFESSIONAL SUMMARY

Stephanie Cashin is an Associate Biologist with expertise in field biology, herpetology, biological monitoring, and habitat restoration. Stephanie has served as a Project Biologist throughout Southern California and specializes in conducting focused wildlife surveys, including conducting habitat assessments and focused bat surveys, focused protocol surveys for arroyo toad, western spadefoot toad, southern western pond turtle, desert tortoise, legless lizard, least Bell's vireo, burrowing owl, and general biological surveys for California amphibian and reptile species of special concern in Orange, Los Angeles, San Bernardino, Ventura, and Riverside Counties. She has assisted in several vernal pool inventory surveys for species including listed fairy shrimp and western spadefoot toad. She has led and assisted in numerous focused rare plant surveys including many-stemmed dudleya, Blochman's dudleya, Verity's dudleya, intermediate mariposa lily, Catalina mariposa lily, slender mariposa lily, southern tarplant, Palmer's grapplinghook, and short-joint beavertail cactus. She has performed construction monitoring with a competent understanding of ensuring compliance with resource agency permit conditions while maintaining the benefit of natural resources within or adjacent to existing development areas.

Stephanie's strengths in working with complex projects include her extensive scientific background and analytical capacity. She is extremely skilled in collecting and organizing data and finding resolution to issues requiring direct action. Stephanie's biological experience spans 16 years.

SELECTED PROJECT EXPERIENCE

DEVELOPMENT

THE SAN JACINTO RIVER MASTER DRAINAGE PLAN, STAGE 3 — RIVERSIDE COUNTY, CALIFORNIA

Assisting Project Biologist to conduct focused wet season fairy shrimp surveys in support of project permitting.

MEAD VALLEY MINE PROJECT — RIVERSIDE COUNTY, CALIFORNIA

Assisting Project Biologist to conduct dry season fairy shrimp soil sample collection; conduct focused burrowing owl, rare plant, and acoustic bat surveys in support of project permitting.

ADOBE SPRINGS PROJECT — MURRIETA, CALIFORNIA

Assisting Project Biologist. Conduct focused visual presence/absence survey for southern western pond turtle (Emys marmorata pallida) for two seasons in support of project permitting. Assist with implementation of pond turtle avoidance minimization plan including installation of turtle protection fencing, turtle exclusion, preconstruction surveys and monitoring.

LOS VALLES PROJECT — LOS ANAGELES COUNTY, CALIFORNIA

Serving as Project Biologist. Prepare and implement the western spadefoot habitat mitigation creation plan including pool creation monitoring, project site surveys, western spadefoot translocation. Coordinate with CDFW in support of plan approval.

OCTA PRESERVES — ORANGE COUNTY TRANSPOTATION AUTHORITY PROPERTIES, CALIFORNIA

Assisting Project Biologist with stewardship monitoring, California gnatcatcher and cactus wren surveys, focused reptile surveys, southern cactus scrub mapping, invasive species mapping and habitat restoration monitoring.

MONTEBELLO HILLS DEVELOPMENT PROJECT — MONTEBELLO, CALIFORNIA

Assisting Project Biologist. Provide biological support and conducting focused acoustic bat surveys, construction monitoring, and preconstruction surveys for California legless lizard, Crotch bumblebee, and cactus wren.

SPECIAL AREA MANAGEMENT PLAN, VARIOUS PLANNING AREAS, AND INFRASTRUCTURE — RANCHO MISSION VIEJO; SAN JUAN CAPISTRANO, CALIFORNIA

Serving as Project Biologist. Provide biological support relevant to California Environmental Quality Act (CEQA) and National Environmental Policy Act in addition to regulatory and mitigation support. Conduct pre-construction and biological monitoring. Assist in designing and implementing protocols for a rare plant translocation program including for many-stemmed dudleya, intermediate mariposa lily, thread-leaved brodiaea, and southern tarplant. Implement management action plan rare plant monitoring for southern tarplant, thread-leaved brodiaea, Coulter's saltbush, and many-stemmed dudleya. Implement mitigation monitoring plan, identify new site receptor locations and manage translocation for many-stemmed dudleya. Collect rare plant seed and harvest rare plants for use in restoration. Coordinate with the landscape contractor. Conduct qualitative and quantitative monitoring surveys, prepare annual monitoring reports, and photo exhibits documenting findings.

TAPIA CANYON DEVELOPMENT PROJECT — SANTA CLARITA, CALIFORNIA

Serving as Project Biologist. Provide biological and regulatory support specifically for preparation of biological technical and a jurisdictional delineation reports to satisfy CEQA requirements. Conduct general biological surveys, vegetation mapping, focused plant surveys including for slender mariposa lily and Pierson's morning glory, focused surveys for western spadefoot toad, least Bell's vireo, and burrowing owl, and jurisdictional delineation. Prepare a biological technical report and jurisdictional delineation report.

SKYLINE RANCH DEVELOPMENT PROJECT — PARDEE HOMES; UNINCORPORATED LOS ANGELES COUNTY, CALIFORNIA

Serving as Project Biologist. Conduct focused burrowing owl surveys and coordinate with the project team regarding preparation of burrowing owl relocation and protection plans. Conduct coastal sage scrub vegetation mapping; overseeing coastal sage scrub maintenance activities; and conducting nesting bird surveys, coordinate, conduct annual monitoring and reporting for Plum Canyon Habitat Mitigation Plan.

SPRING CANYON DEVELOPMENT PROJECT — RAINTREE INVESTMENT CORPORATION; SANTA CLARITA, CALIFORNIA

Serving as Project Biologist and Assistant Habitat Restoration Specialist. Support preparation the HMMP and conduct mariposa lily surveys to document population locations, assess phenology, and flag populations for translocation and harvest. Conduct mitigation monitoring and preparation of annual reports for slender mariposa lily. Conduct holly leaf cherry woodland habitat assessment mapping. Conduct focused arroyo toad surveys in support of project permitting. Conduct burrowing owl and reptile preconstruction surveys.

NBC UNIVERSAL PROJECTS — NBC UNIVERSAL; UNIVERSAL CITY, CALIFORNIA

Serving as Project Biologist. Provide biological support services for multiple NBC Universal projects. Attend pre-construction meetings and perform pre-construction surveys. Conduct nesting bird and bat surveys and nest monitoring. Prepare reports documenting findings. Perform habitat assessments for nesting birds, reptiles, and various special-status plant and wildlife species. Prepare biological assessments and various mitigation compliance letters. Coordinate with various project teams.

LAX/EL SEGUNDO DUNES SENSITIVE HABITAT SUPPORT PROJECTS FOR LOS ANGELES WORLD AIRPORTS — CDM SMITH; LOS ANGELES, CALIFORNIA

Serving as Project Biologist. Provide support services for multiple projects. Conduct sensitive habitat pre-construction meeting, biological construction monitoring, conduct pre-construction nesting bird surveys, rare plant mitigation monitoring and reporting. Review construction permits and perform construction monitoring. Prepare compliance and completion memoranda, photo exhibits, and a Regional Water Quality Control Board annual monitoring report. Outside of the abovementioned scope, GLA additionally provided task management, initial technical support, and regulatory support; conducted burrowing owl, south cost branching phacelia, and Lewis' evening primrose surveys; and developed and implemented contractor training, oversee south coast branching phacelia restoration monitoring, conduct contractor training and biological monitoring within the El Segundo Dunes Blue Butterfly Reserve.

NEWPORT BANNING RANCH PROJECT — NEWPORT BANNING RANCH, LLC; NEWPORT BEACH, CALIFORNIA

Serving as Project Biologist and Assistant Habitat Restoration Specialist. Conduct biological work required for CEQA authorization including vegetation mapping; general biological surveys; rare plant surveys; and focused least Bell's vireo, cactus wren, raptor, burrowing owl surveys. Conduct qualitative and quantitative monitoring to assess germination of hand-seeded species, establishment of native container plantings, natural recruitment, and presence of non-native species. Prepare memoranda, reports, and exhibits. Conduct data analyses and report documented findings to the client and regulatory agencies including the CCC. The mitigation areas are exceeding 5-year success criteria.

THE CANYON AT PEACE PARK PROJECT — THE CANYON AT PEACE PARK; MALIBU, CALIFORNIA

Serving as Project Biologist. Monitor demolition of on-site structures in preparation for native habitat restoration. Conduct biological monitoring including for nesting birds and biological surveys pertaining to potential environmentally sensitive habitat areas. Perform focused raptor surveys. Prepare a vegetation map, biological technical report, biological memoranda, and photo exhibits for review by project attorney and California Coastal Commission (CCC). Conduct qualitative and quantitative monitoring surveys of restoration areas.

JOHN WAYNE GULCH AND SUNSET RIDGE PARK PROJECTS — CITY OF NEWPORT BEACH; NEWPORT BEACH, CALIFORNIA

Serving as Assistant Habitat Restoration Specialist. Provide habitat restoration support for the 0.48-acre John Wayne Gulch and 1.5-acre Sunset Ridge Park mitigation sites. Conduct qualitative and quantitative monitoring to assess establishment of native plantings, natural recruitment, and presence of non-natives. Prepare memoranda, reports, and exhibits. Conduct data analyses and report documented findings to the client and regulatory agencies including the CCC. Both mitigation sites are exceeding 5-year success criteria.

GOLDEN VALLEY RANCH PROJECT — TRIPOINTE GROUP; SANTA CLARITA, CALIFORNIA

Serving as Project Biologist and Assistant Habitat Restoration Specialist. Provide regulatory, biological, and habitat restoration support. Attend site meeting to review riparian mitigation site progress as well as a worker education meeting. Coordinate with the landscape contractor regarding weed abatement progress. Prepare a riparian mitigation plant palette, seed mix for riparian and alluvial mitigation areas, and mitigation area exhibit. Maintain a record of site photos.

TRANSPORTATION

PARKS, TRAILS, AND OPEN SPACE

ENERGY

WATER

EMPLOYMENT HISTORY

Glenn Lukos Associates. Associate Biologist. Lake Forest, California. 2013 – Present.

Fullerton College. Laboratory Manager-Biological Sciences. Fullerton, California. 2000 – 2013.

San Bernardino County Museum, Countywide Biodiversity Census, Herpetology Team Wildlife Biologist, San Bernardino County, California. March to August-2000.

VOLUNTEERING

Assist USGS biologists over many years and at multiple locations with western pond turtle trapping and seining, arroyo toad and western spadefoot surveys.

ADDITONAL WORKSHOPS

California Fairy and Tadpole Shrimp Identification Class and Test, Mary Schug Belk, San Diego, 2017

Flat-tailed horned lizard, Biological Monitor Training, BLM El Centro Field Office, 2017

Rare Pond Species Workshop, Laguna de Santa Rosa Foundation, 2016

As part of her Master's project, Ms. Cashin studied wildlife movement in an urban environment using camera trapping and track stations. Prior to working at GLA, Ms. Cashin managed a community college biological laboratory and teaching museum. Additionally, Ms. Cashin was a staff herpetology field biologist for the San Bernardino County Museum.

ADDITIONAL TRAININGS ATTENED (NOT ON PAGE 1)

Vernal Pool Branchiopods: Field Workshop, The Wildlife Society-Western Section, Sacramento, 2018

Wetland Delineation Course, Wetland Training Institute, 2022

CBB Qualifications

Stephanie Cashin is a Glenn Lukos Associates (GLA) Senior Wildlife Biologist with 11 years of experience conducting biological surveys for special-status floral and faunal species and habitat resources. Stephanie Cashin has a broad zoological and ecological background and continued to expand bumble bee experience through independent study and formal technical workshops. Stephanie Cashin has conducted visual focused surveys for Crotch's bumble bee (CBB), including the identification of other Bombus.species, beginning 2020 to present. GLA developed and conducts a visual methodology approved by the California Department of Fish and Wildlife in 2020, which was derived from the USFWS rusty-patched bumble bee protocol (USFWS, 2019) and the Xerces Society Bumble Bee method. Beginning in 2024, the CDFW Survey Considerations for CESA Candidate Bumble Bee Species (CDFW, 2023) guidelines are incorporated into the GLA visual survey protocol. Stephanie Cashin has detected CBB in a variety of habitats throughout southern California, including coast dune, coastal sage scrub, chaparral, grassland, meadow, and oak woodland. A summary of focused survey and incidental detection locations are listed below:

Focused Survey Locations:
Tujunga, Los Angeles County, 2024 - Crotch's bumble bee detected
Jurupa Valley, Riverside County, 2024 - Crotch's bumble bee detected
Lake Elsinore, Riverside County, 2024 - Crotch's bumble bee detected
Brea, Orange County, 2024 - Crotch's bumble bee detected
Castaic, Los Angeles County, 2024 - Crotch's bumble bee detected
La Habra, Orange County, 2023
Corona, Riverside County, June 2020 - Crotch's bumble bee detected
Calimesa, Riverside County, May 2020 and May 2021 - Crotch's bumble bee detected
Lake Hughes, Los Angeles County, July 2020 – Crotch's bumble bee detected
Carbon Canyon, Orange County, July 2020 – Crotch's bumble bee detected
Camarillo, Ventura County, 2020
Montebello, Los Angeles County, 2020 and 2021

Incidental Crotch's Bumble Bee Detection Locations:
Carbon Canyon, Orange County, June 2023
San Juan Capistrano, Orange County, May 2023.
Castaic, Los Angeles County, May 2023
Newhall, Los Angeles, April 2022
Trabuco Canyon, Orange County 2021
Castaic, Los Angeles County, June 2020
El Segundo, Los Angeles County, May 2020
Irvine, Orange County, April 2020

Technical Training:
California Bumble Bee Atlas 2024, Completed Volunteer Quiz and Named on Atlas SCP for Volunteer Field Surveys
California Bumble Bee Atlas Training 2024, Virtual Attendance, Xerces Society, March 18, 2024
Identifying Male Bumble Bees in Western North America, Virtual Attendance, Xerces Society, December 6, 2023
Field Training Workshop for California Bumble Bee Atlas Volunteers– Los Angeles Arboretum, Xerces Society, May 20, 2023
Bumble Bee Identification (Females) for Bumble Bee Atlas Volunteers, Virtual Attendance, Xerces Society, Fall 2021
California Rare Bumblebee Workshop, The Wildlife Society-Western Section, Virtual Attendance, May 2021
Los Angeles Natural History Museum, Bumble Bee Collection-Independent Study, February 2020
Entomology (CalPolyPomona, 1998)

Invertebrate Zoology (CalPolyPomona, 1998)
General Zoology (FullertonCollege, 1996)

CBB_quals_scashin2024

JASON FITZGIBBON

Associate Biologist

YEARS OF EXPERIENCE

Professional start date: 2011

Years at GLA: 7

EDUCATION

MS, Environmental Studies,
California State University, Fullerton, 2013

BS, Biology,
California State University, Long Beach, 2008

TRAININGS ATTENDED

Wetland Delineation Course,
Wetland Training Institute, 2022

California Rare Bumblebee
The Wildlife Society-Western Section, 2021

Rare Pond Species Workshop,
Laguna de Santa Rosa Foundation, 2016

Wetland Delineation Course,
Wetland Training Institute, 2013

GIS Analysis and Map Design,
California State University, Fullerton, 2013

Desert Tortoise Handling, Monitoring, and Surveying Training,
Desert Tortoise Council, 2012

Yellow-billed Cuckoo Workshop,
Kern County Preserve, 2012

PROFESSIONAL SUMMARY

Jason Fitzgibbon is a Biologist and Environmental Scientist with experience in field biology, biological monitoring, and regulatory permitting. He has participated in numerous biological studies throughout Southern California including projects requiring preparation of California Environmental Quality Act (CEQA) documents and occurring under the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), San Diego County Multiple Species Conservation Program (MSCP), and Orange County Natural Community Conservation Plan (NCCP). Jason holds a Bachelor's of Science degree in Biology and a Master of Science degree in Environmental Science with an emphasis in conservation biology. Jason's Master's thesis involved the study of the effects of adjacent construction-related disturbance on the spatial arrangement and demographic distribution of least Bell's vireo within San Diego Creek in Orange County, California.

SELECTED PROJECT EXPERIENCE

DEVELOPMENT

ALISO CREEK RESTORATION PROJECT —
LAGUNA CANYON FOUNDATION; ALISO VIEJO, CALIFORNIA

Served as Project Biologist. Conducted sensitive species surveys for least Bell's vireo, yellow-breasted chat, and rare/sensitive plants to establish a baseline measure for comparison of future monitoring results to pre-restoration condition of the 55-acre Aliso Creek restoration site. A component of restoration included sensitive species monitoring throughout implementation of the restoration program to document any increases in occurrences and/or nesting as a means of tracking restoration success.

CROWN VALLEY COMMUNITY PARK IMPROVEMENT PROJECT —HUNSAKER & ASSOCIATES IRVINE, INC.; LAGUNA NIGUEL, CALIFORNIA

Served as Project Biologist. Performed vegetation mapping, general wildlife and botanical surveys, and a jurisdictional delineation of the 16-acre study area. Conducted habitat assessments to determine presence/absence of sensitive species and communities. Prepared a biological technical report addressing potential impacts to biological resources and permitting requirements in accordance with CEQA. GLA processed Section 401, 404, and 1602 authorizations. The project involved preparation of a redesign concept for the community park including a new park entry-bridge over a soft-bottom flood channel to replace an existing Arizona crossing, two new parking lots, and connecting roadways. The redesign integrated opportunities for use of impervious pavements, managing flood debris and trash, providing water quality benefits, and minimizing impacts to native vegetation and the stream channel.

PICERNE PROPRETY PROJECT — THE PICERNE GROUP; LAGUNA NIGUEL, CALIFORNIA

Served as Project Biologist. Performed vegetation mapping, general wildlife and botanical surveys, and a jurisdictional determination of the 7-acre study area. Conducted habitat assessments to determine presence/absence of sensitive species and communities. Assisted in preparing the biological technical report addressing potential impacts to biological resources and permitting requirements in accordance with CEQA. The project is a new residential development consisting of 426 multi-family residential units, resident and guest parking, residential common use amenities and an approximately 0.66-acre open space park.

SAN JUAN MEADOWS AND DISTRITO DE LA NOVIA PROJECT —
ADVANCED REAL ESTATE SERVICES; SAN JUAN CAPISTRANO, CALIFORNIA

Served as Project Biologist. Delineated Corps and CDFW jurisdiction within the 160-acre property study area and prepared a report of findings. GLA prepared a letter of permission request for the Corps and notifications for the Regional Board and CDFW as well as coordinated processing of Section 404, 401, and 1602 authorizations. The project additionally involved preparation of a conceptual habitat mitigation and monitoring plan to address habitat restoration.

RANCH AT LAGUNA BEACH PROJECT — LAGUNA BEACH GOLF & BUNGALOW VILLAGE; LAGUNA BEACH, CALIFORNIA

Serving as Project Biologist. The project has involved coordination with the U.S. Fish and Wildlife Service and California Coastal Commission to resolve an appeal regarding property renovations. Conduct vegetation mapping, delineate coastal wetland boundaries and tree trimming/clearing locations, and survey turf removal areas for native vegetation. Conduct nesting bird surveys and prepare a nesting bird memorandum. Prepare a biological technical report addressing baseline conditions and impact analyses associated with the project and study area. Perform noise monitoring and prepare an analysis of sound monitoring data. Support review of archeological records and preparation of an archaeological and paleontological resources memorandum, habitat restoration plan, and noise/lighting management plan.

LAGUNA BEACH FUEL MODIFICATION ZONE PROJECTS — CITY OF LAGUNA BEACH; LAGUNA BEACH, CALIFORNIA

Serving as Project Manager/Biologist. Jason has served as Project Biologist for City of Laguna Beach Fire Department since 2011, providing coastal expertise for numerous fuel modification projects. The span of work has ranged from conducting general and focused surveys for sensitive wildlife and plant species including coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), Pacific pocket mouse, tidewater goby, Laguna Beach dudleya, and big-leaved crownbeard to performing habitat assessments and vegetation mapping. Additionally, Jason has prepared numerous biological technical reports for the City's ongoing fuel modification zone projects, addressing wildlife movement corridors, impacts to biological resources including special-status species, and mitigation measures. Tasks include rare plant surveys within all fuel modification zones throughout City, providing Biological Support in accordance with the California Environmental Quality Act (CEQA) for new fuel modification zones, and preparing/processing Coastal Development Permits for areas subject to Chapter 3 Policies of the Coastal Act.

LAKE FOREST DRIVE/BAKE PARKWAY EXTENSION PROJECT — THE IRVINE COMPANY; IRVINE, CALIFORNIA

Served as Project Biologist. GLA provided biological, regulatory, and mitigation support for Lake Forest Drive/Bake Parkway bridges, infrastructure, and undergrounding improvements. Reviewed rope alignment prior to construction. Performed focused surveys for least Bell's vireo. Conducted site monitoring and biological/botanical resource monitoring during construction in accordance with CEQA approvals; resource agency permits; and approved/permitted plans, reports, and technical specifications. Provided fieldwork memoranda and compliance reports. Additionally, GLA prepared a contractor education manual, processed a Section 404 permit for maintenance of undercrossings, obtained a permit amendment for noise barrier installation and buffer distance from least Bell's vireo nests, and conducted mitigation implementation and monitoring.

NEWPORT BANNING RANCH — NEWPORT BANNING RANCH, LLC; NEWPORT BEACH, CALIFORNIA

Serving as Project Biologist. Conduct biological work required for CEQA authorization including vegetation mapping; general biological surveys; rare plant surveys; and focused least Bell's vireo, cactus wren, raptor, and burrowing owl surveys. The project additionally has involved performing focused fairy shrimp, coastal California gnatcatcher, and southwestern willow flycatcher surveys; preparing a biological technical report for use in preparation of draft and final EIRs pursuant to CEQA as well as responses to comments on the final EIR; preparing a jurisdictional delineation report; and directing and participating in public outreach at public workshops. The City of Newport Beach has approved the project and certified the EIR.

RANCHO SUMMIT ESTATES PROJECT — SHEA HOMES; ENCINITAS, CALIFORNIA

Serving as Lead Biological Construction Monitor. Conduct coastal California gnatcatcher surveys in compliance with issued habitat loss permits. Monitor stream crossing work and conduct jurisdictional delineation fieldwork.

QUALITATIVE BIOLOGICAL MONITORING — SAN JUAN BASIN AUTHORITY, SAN JUAN CAPISTRANO, CALIFORNIA

Served as Project Biologist. Conducted qualitative biological monitoring of San Juan Creek for the San Juan Basin Authority's (SJBA) Phase I San Juan Basin Groundwater Management and Facility Plan. Tasks included performance of qualitative and quantitative monitoring; preparation of memoranda, reports, and exhibits; analysis of data; and submission of findings to the client and regulatory agencies.

CORONA 720 PROJECT — GREEN RIVER CANYONS, LLC; CORONA, CALIFORNIA Serving as Project Biologist. The project includes vegetation mapping within the 720-acre property as well as presence/absence surveys for coastal California gnatcatcher and focused plant surveys for various species including intermediate mariposa lily and many-stemmed dudleya.

JURISDICTIONAL DELINEATION OF THE FIRE STATION LOCATED AT THE INTERSECTION OF STATE COLLEGE AND YORBA LINDA BOULEVARDS — CITY OF FULLERTON, ORANGE COUNTY, CALIFORNIA

Served as Project Manager. Oversaw preparation of a jurisdictional delineation report and provided senior review/quality control.

LOW WATER CROSSING AT ADIT ROAD PROJECT — LOS ANGELES DEPARTMENT OF WATER AND POWER (LADWP), CALIFORNIA

Serving as Delineator/Regulatory Specialist. The Project consists of installing a low water crossing using Articulate Concrete Blocks (ACB) on Adit Road where it crosses San Francisquito Creek. The dimensions will be approximately the width of the road (12') and 200' long. GLA is conducting a jurisdictional delineation and preparing a jurisdictional delineation report.

VICTORVILLE TRANSMISSION LINE EROSION CONTROL PROJECT — LOS ANGELES DEPARTMENT OF WATER AND POWER (LADWP), SAN BERNARDINO COUNTY, CALIFORNIA

Serving as Delineator/Regulatory Specialist. The Project consists of a delineation around three transmission towers for the purpose of installing erosion control. GLA is conducting a jurisdictional delineation and preparing a jurisdictional delineation report.

OCTA M2 PRESERVES INTERIM BIOLOGICAL MONITORING SUPPORT SERVICES PROJECT—ORANGE COUNTY TRANSPORTATION AUTHORITY; ORANGE COUNTY, CALIFORNIA

Serving as Biologist. Work includes biological resources monitoring for seven Preserves totaling over 1,300 acres to determine threats and stressors that may impact Covered Species and natural communities, conducting overall assessments (e.g., invasive species, erosion, unauthorized trail cutting, and trail condition) to help determine areas of highest management priority, conducting focused species surveys, updating vegetation mapping, and documenting unauthorized activities and related effects to biological resources. GLA conducts ongoing site visits, photo monitoring, and reporting to address results of research and monitoring activities, recommend appropriate adaptive management actions, and discuss anticipated activities for the upcoming year. Specific to Laguna Beach, GLA provides biological monitoring at the Pacific Horizon Preserve, including monitoring the burn area associated with the May 2022 Coastal Fire and leading public hikes. Mr. Fitzgibbon has supported the project by conducting general biological monitoring, conducting focused surveys for special-status plants, and leading public hikes.

TRANSPORTATION

PARKS, TRAILS, AND OPEN SPACE

ENERGY

WATER

EMPLOYMENT HISTORY

Glenn Lukos Associates. Associate Biologist. Lake Forest, California. 2011 – Present.

QuantumSphere, Inc. Biologist/Chemist. Santa Ana, California. 2008 – 2011.

CBB Qualifications

Jason Fitzgibbon is a Glenn Lukos Associates (GLA) Senior Wildlife Biologist with 11 years of experience conducting biological surveys for special-status floral and faunal species and habitat resources throughout California and the southwest. In addition to the completion of Xerces Society Crotch's bumble bee (CBB) technical training workshops and associated independent study, Jason Fitzgibbon has over four years of experience conducting visual focused surveys for CBB, including the identification of other Bombus.species. Jason Fitzgibbon has detected CBB in a variety of habitats throughout southern California, including desert scrub, alkali playa, coastal sage scrub, chaparral, grassland, meadow, oak woodland and coniferous forest. A summary of focused survey and incidental detection locations are listed below:

Focused Survey Locations:
Tujunga, Los Angeles County, 2024 - Crotch's bumble bee detected
Lake Elsinore, Riverside County, 2024 - Crotch's bumble bee detected
Brea, Orange County, 2024 - Crotch's bumble bee detected
Castaic, Los Angeles County, 2024 - Crotch's bumble bee detected
La Habra, Los Angeles County, 2024 – Crotch's bumble bee detected
Riverside, Riverside County, 2023 – Crotch's bumble bee detected
Banning, San Bernadino County, 2023
Jurupa, Riverside County, 2023
Santa Clarita, Los Angeles County, 2021- Crotch's bumble bee detected
Corona, Riverside County, June 2020 - Crotch's bumble bee detected
Camarillo, Ventura County, 2020
Laguna Beach, Orange County, 2020

Incidental Crotch's Bumble Bee Detection Locations:
San Juan Capistrano, Orange County, April 2024
Pasadena, Los Angeles County, April 2024
Santa Rosa Mountains, Imperial County, March 2024
Laguna Beach, Orange County, March 2024
Carrizo Plain, San Luis Obispo County, June 2023
Castaic, Los Angeles County, May 2023
Kennedy Meadows, Kern County, May 2023
Crystal Cove State Park, Orange County, April 2023
San Mateo Wilderness, San Diego County, June 2022
Aliso Viejo, Orange County, June 2022
Nest observation - Laguna Beach, Orange County, July 2021
Lake Isabella, Kern County, April 2021
Adelanto, San Bernardino County, April 2020
Corona, Riverside County, April 2020

Technical Training:
California Bumble Bee Atlas Training 2024, Virtual Attendance, Xerces Society, April 22, 2024
Identifying Male Bumble Bees in Western North America, Virtual Attendance, Xerces Society, March 21, 2024
California Rare Bumblebee Workshop, The Wildlife Society-Western Section, Virtual Attendance, May 2021
Entomology (California State University Long Beach, 2007)
Invertebrate Zoology (California State University Long Beach, 2006)

Christopher Waterston

Regulatory Project Manager/Biologist

YEARS OF EXPERIENCE

Professional start date: 2012

Years at GLA: 3

EDUCATION

BS, Biological Science,
California State University, Fullerton, 2011

PERMITS AND CERTIFICATIONS

California Rapid Assessment Methodology (CRAM) Practitioner – Riverine and Depressional Wetlands Modules, 2015

American Academy of Underwater Sciences (AAUS) Diver Certification, 2012

TRAININGS ATTENDED

Wetland Delineation Course,
Wetland Training Institute, 2022

Introduction to
Wildlife Crossings Caltrans, 2017

Bats and Transportation, Caltrans, 2017

ESA Section 7,
Federal Highway Administration, 2016

Ordinary High-Water Mark (OHWM),
U.S. Army Corps of Engineers, 2016

CONTINUED (PAGE 4)

PROFESSIONAL SUMMARY

Christopher Waterston has eleven years of extensive environmental planning, biological and regulatory experience in both the public and private sectors. He has played a key role in coordinating and performing biological surveys, preparing technical documents, and obtaining permits for projects requiring federal Endangered Species Act (FESA), California Endangered Species Act (CESA), and federal Clean Water Act (CWA) compliance. Christopher additionally has broad experience with regulatory agency coordination ranging from conducting Section 7 consultations to acquiring aquatic permits.

Christopher has performed the role of Lead Biologist on numerous California Department of Transportation (Caltrans) projects throughout Orange County, involving biological and regulatory aspects from initial project scoping through construction, and post-construction mitigation. He has extensive experience in preparing biological technical documents, including Natural Environment Study (NES) reports, Biological Assessments (BA), CEQA and NEPA Environmental Documents, California Rapid Assessment Method (CRAM) reports, Senate Bill (SB) 857 Fish Passage Legislative Reports, and Habitat Mitigation Monitoring Plan (HMMP) reports. He has extensive experience in writing avoidance, minimization, and mitigation measures, general and focused survey reports. He routinely coordinates and conducts general biological and aquatic resource constraints surveys and focused protocol surveys for special-status species such as arroyo toad, arroyo chub, various bat species, burrowing owl, least Bell's vireo, coastal California gnatcatcher, Essential Fish Habitat (EFH), and rare endemic plants. Christopher regularly coordinates with state, federal, and local agencies, including the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (Corps), California Department of Fish and Wildlife (CDFW), SB-857 coordination with state, federal, and local agencies, various Regional Water Quality Control Boards (RWQCBs)/State Water Resources Control Board (SWRCB), U.S. Forest Service (USFS), National Marine Fisheries Service (NMFS), and the Orange County Transportation Authority (OCTA) to obtain CWA permits, 401 water quality certifications, streambed alteration agreements, FESA and CESA incidental take permits, authorizations, approvals, and coordination. He is knowledgeable in the Orange County Central/Coastal Natural Community Conservation Plan (NCCP)/Habitat Conservation Plan (HCP) and Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). He served as the Caltrans District liaison for quarterly meetings with CDFW, USFWS, and was the District Fish Passage Biologist. His eight years of professional experience has given him familiarity in a diverse array of biological elements throughout southern California.

SELECTED PROJECT EXPERIENCE

DEVELOPMENT

RANCHO MISSION VIEJO — SAN JUAN CAPISTRANO, CALIFORNIA

Serving as Project Manager. Managing multiple large residential development, infrastructure, and mitigation compliance projects throughout the Rancho Mission Viejo (RMV) property. Regularly coordinates with RMV environmental and construction managers, contractors, and field staff. Oversees a team of biologists and regulatory specialists performing various special-status flora and fauna surveys, construction monitoring, vegetation mapping, jurisdictional delineations, and mitigation monitoring. Prepares monthly memos and annual reports to various resource agencies. Manages various contracts, project task orders, permits, and certifications.

SUMMERWIND RANCH RESIDENTIAL DEVELOPMENT — CALIMESA, CALIFORNIA

Serving as Project Manager. The project consists of a residential development. Managed a team of biologists and regulatory specialists. Conducted special-status flora and fauna surveys required by the Western Riverside MSHCP, federal, and state regulations. Conducted a jurisdictional delineation and California Rapid Assessment Method (CRAM) on the 280-acre site. Prepared and processed a jurisdictional delineation and CRAM report. Processed a Waste Discharge Requirement (WDR) with the Regional Water Quality Control Board, a preliminary jurisdictional determination with the U.S. Army Corps, and a Streambed Alteration Agreement (1600 permit) with the CA Department of Fish and Wildlife. Conducted oak tree surveys and prepared an oak tree mitigation plan to comply with city tree protection ordinances. Coordinated with project proponents, resource agencies, city staff, and various consultants to facilitate the receival of permits, approvals, and certifications for the project.

TRANSPORTATION

INTERSTATE 5 WIDENING PROJECT — CALTRANS/OCTA MEASURE 2, ORANGE COUNTY, CALIFORNIA

Served as Lead Biologist. The project involved widening the I-5 in both directions to increase capacity for the highly traveled I-5 corridor in Orange County. Facilitated in approving the biological technical document (NES), Biological Assessment, Environmental Impact Report and Environmental Impact Statement (EIR/EIS) and performed Section 7 Consultation with USFWS. Developed project standard-special specifications (SSPs), avoidance, minimization, and mitigation measures. Reviewed consultant prepared permit applications (401, 404, 1602), and coordinated with regulatory managers at CDFW and USFWS to incorporate the approved OCTA M2 NCCP/HCP measures. Performed biological surveys within the project area for nesting birds and roosting bats, fish passage analysis, and arroyo chub protocol surveys with CDFW fisheries biologists. As the project's lead biologist, coordinated meetings with the Project Development Team, contractors, consultants, and resource agency personnel. Coordinated directly with Caltrans and OCTA project managers to convey biological and permitted resource requirements. Wrote monthly monitoring reports to the SWRCB and CDFW for project compliance/noncompliance issues.

STATE ROUTE-73/MACARTHUR BOULEVARD OFF-RAMP WIDENING PROJECT — CALTRANS, ORANGE COUNTY, CALIFORNIA

Served as Lead Biologist. The safety project involved widening the SR-73 southbound MacArthur Blvd. off-ramp over Bonita Creek in the City of Newport Beach. Facilitated in the approval of the NES, BA, and CEQA/NEPA documents. Performed Section 7 Consultation with the USFWS. Prepared water quality permit applications (401, 404, and 1602). Communicated with CDFW and USFWS regarding project impacts to the Orange County Central/Coastal NCCP/HCP. Developed project contract SSPs, avoidance, minimization, and mitigation measures. Analyzed project impacts and determined ratios of mitigation needed for loss of coastal sage-scrub, wetland waters of the U.S., CDFW riparian, and NCCP/HCP habitats. Coordinated with Orange County Parks and TCA environmental program managers for mitigation credit releases. Performed protocol-level surveys for coastal California gnatcatcher, bat habitat assessments, visual and acoustic emergence surveys. Coordinated directly with Caltrans project managers and engineers to convey project environmental needs and resource agency requirements.

INTERSTATE 405 WIDEINING PROJECT — CALTRANS/OCTA MEASURE 2, ORANGE COUNTY, CALIFORNIA

As the District Biologist, served an oversight role in the Environmental Planning processes. The "design-build" project involved the addition of one high-occupancy vehicle (HOV) lane and one general-purpose lane in both directions between I-605 and SR-55. Facilitated the approval of the NES and the project's EIR/EIS. Reviewed consultant prepared permit applications and coordinated with regulatory managers at CDFW, SWRCB, and USACE to incorporate the approved OCTA M2 Program's 404 Letter of Permission

(LOP), 401 Water Quality Certification, and 1602 Streambed Alteration Agreement measures into the project's contract specifications and mitigation measures. Approved monthly biological monitoring reports and coordinated in weekly meetings with the Project's contractors, consultants, and managers for both Caltrans and OCTA.

STATE ROUTE-73 DETENTION BASIN/EROSION CONTROL PROJECT — CALTRANS/TRANSPORTAION CORRIDOR AGENCY (TCA), ORANGE COUNTY, CALIFORNIA

Served as Lead Biologist. The SR-73 was completed in the late 90s. Caltrans and TCA designed multiple detention basins adjacent to the new freeway in order to capture and filter stormwater. Due to some deficiencies, a construction project was implemented in 2014 to address excess erosion, stormwater runoff, and detention basin maintenance. As the lead biologist, conducted nesting bird surveys prior to grading operations and protocol-level coastal California gnatcatcher surveys. Facilitated and approved the landscape and plant pallet plans from district landscape architects. Monitored habitat restoration activities, performed plant transect surveys, coordinated with landscape contractors, and prepared annual Habitat Mitigation Monitoring Plan (HMMP) reports.

STATE ROUTE 74 SAFETY SHOULDER WIDENING PROJECT — CALTRANS, ORANGE COUNTY, CALIFORNIA

Served as Lead Biologist. The project involved widening the existing shoulders associated with SR-74 safety and maintenance improvements. Performed jurisdictional delineations, CRAM analysis, and biological surveys including protocol-level surveys for the federally endangered arroyo toad. Coordinated with USFWS biologists for implementation of Biological Opinion measures during construction and with U.S. Forest Service biologists for aquatic resource mitigation within Cleveland National Forest. Approved annual monitoring reports and reviewed consultant task order budgets and invoices. Coordinated with Casper's Regional Park rangers, landscape architects, and contractors for the off-site arroyo toad habitat restoration. Performed plant transect surveys, organized field procedures under USFWS mitigation measures for impacts to designated critical habitat for the arroyo toad. Performed protocol-level surveys and eradicated invasive predators within San Juan Creek for five years.

STATE ROUTE-91 EASTBOUND WIDENING PROJECT — CALTRANS, ORANGE COUNTY, CALIFORNIA

Served as the District Biologist. The project involved widening the eastbound SR-91 by adding one-general purpose lane from SR-57 to Tustin Avenue. Project impacts to the Santa Ana River required water quality permits, nesting bird surveys, and pre-construction bat roost surveys. Late in the project design phase, a maternity colony of Yuma myotis bats were discovered in the SR-91/Santa Ana River Bridge. As the district biologist, coordinated with CDFW's Caltrans liaison for facilitating project design changes; and to incorporate for the first time in the district, alternative bat habitat (panels) that were installed on the westbound side of the SR-91 Bridge. Monitored construction activities, communicated directly with project managers, engineers, construction personnel, and consultant biologists. Performed multiple day and nighttime bat surveys, collected data for CDFW, and prepared quarterly monitoring reports detailing the success of the bat mitigation.

ENERGY

TRANSMISSION PROJECT — SOUTHERN CALIFORNIA EDISON, SAN BERNARDINO COUNTY, CALIFORNIA

Served as Team Biologist. The transmission project occurred north of I-10 in the City of Cabazon from SR-111 to the Morongo Resort. Performed special-status species surveys for endemic plants, desert tortoise, desert kit fox, burrowing owl, and loggerhead shrike. Prepared daily field reports, coordinated with lead biologists, and adjacent property owners.

TRANSMISSION PROJECT — SOUTHERN CALIFORNIA EDISON, RIVERSIDE COUNTY, CALIFORNIA

Served as Team Biologist. The project occurred along the Santa Ana River Valley in Riverside County. It involved tree trimming and removal activities adjacent to Southern California Edison right-of-way. Performed nesting bird surveys ahead of vegetation maintenance activities. Coordinated with contractors, team biologists, and managers. Prepared daily field reports, collected data using a handled GPS, and submitted monthly monitoring reports to the client.

LOCAL GOVERNMENT

WEST VALLEY DETENTION CENTER — SAN BERNARDINO COUNTY, CALIFORNIA

Served as Lead Biologist. The project occurred within Day Creek, adjacent to the West Valley Detention Center in Fontana, CA. The project replaced a water and sewage line that went through Day Creek. Monitored construction activities, performed nesting bird

surveys, communicated 401, 404, and 1602 permit conditions to project contractors. Prepared daily field reports, collected data using a handled GPS, and submitted monthly monitoring reports to the client.

LOS ANGELES DEPARTMENT OF WATER AND POWER (LADWP) — BEACON PHASE II ENERGY STORAGE PROJECT SITE, KERN COUNTY, CALIFORNIA

Served as Regulatory Specialist. The Project consisted of an energy storage facility owned and operated by the LADWP within the Mojave Desert in unincorporated Kern County, CA. The project included conducting a jurisdictional delineation, preparation of a jurisdictional delineation report, and coordination with project proponents to facilitate the preparation of CEQA documents and regulatory agency permits.

MARINA DEL REY HARBOR PIER INSTALLATION — LOS ANGELES COUNTY, CALIFORNIA

Served as a team Marine Biologist and an American Academy of Underwater Sciences (AAUS) certified diver. The project involved installation and removal of piers for residential docks within Marina del Rey Harbor. Operated under a California Coastal Commission Development permit. Operated small watercraft, surface/diver communication systems, and SCUBA diving equipment. Performed sensitive habitat SCUBA surveys for invasive algae (Caulerpa) and native seagrass (Zostera) habitat surveys. Recorded species of fish, marine invertebrates, and general marine conditions. Provided surface support by recording sensitive areas surveyed with GPS units and entered data into ArcGIS.

NEWPORT BAY EELGRASS RESTORATION — ORANGE COUNTY, CALIFORNIA

Served as a team Marine Biologist and AAUS certifies diver. The City of Newport Beach's mitigation project involved installation of seagrass (Zostera) habitat within Newport Bay. Operated small watercraft, surface/diver communication systems, and SCUBA diving equipment. Gathered and separated eelgrass from "donor" beds and re-planted individual grasses below intertidal areas. Performed underwater transects and monitored the growth, density, and condition of planted seagrasses.

WHITE ABALONE SURVEYS — NATIONAL MARINE FISHERIES SERVICE AND CALIFORNIA COASTKEEPER, POINT LOMA, SAN DIEGO CALIFORNIA

Served as a team Marine Biologist and AAUS certified diver. Supported biological and genetic research dives with NMFS Marine Biologists for the federally listed white abalone (Haliotis sorenseni) off Point Loma, California. Performed underwater transects, surveyed the surrounding benthic environment and noted locations of special-status species. Collected data using diving slates, photography, and facilitated data entry for NMFS' White Abalone Recovery Plan.

PROFESSIONAL AFFILIATIONS

American Academy of Underwater Sciences

Callflora

California Coastkeeper

Divers Alert Network

Society for Conservation Biology

EMPLOYMENT HISTORY

Glenn Lukos Associates. Regulatory Project Manager/Biologist. Santa Ana, California. 2020 – Present.

California Department of Transportation – District 12 Orange County. Associate Environmental Planner (Natural Sciences)/Biologist. Santa Ana, California. 2013 - 2020.

Kidd Biological, Inc. Biologist. Perris, California. 2012.

Coastal Resources Management. Marine Biologist. Corona del Mar, California. 2012.

ADDITIONAL TRAININGS ATTENED (NOT ON PAGE 1)

Plant Identification, California Native Plant Society, 2016

Bat Workshop, Bat Conservation Management, Modoc County, 2015

Advanced Wetland Delineation, Wetland Training Institute, 2014

Construction, Design, and Maintenance, Caltrans, 2014

CEQA/NEPA Basics, Caltrans, 2013

CBB Qualifications

Chris Waterston is a Glenn Lukos Associates (GLA) Senior Biologist and Regulatory Specialist with 12 years of experience conducting biological surveys for special-status floral and faunal species and habitat resources. Chris Waterston is proficient in the visual identification of *Bombus* species within southern California. He has attended multiple *Bombus* identification and survey method trainings including, the Xerces Society's: Western Bumble Bee Identification Webinar, Male Bumble Bee Identification along the Pacific Coast of North America, and the California Bumble Bee Atlas Training Webinar. GLA developed and conducts a visual methodology approved by the California Department of Fish and Wildlife in 2020, which was derived from the USFWS rusty-patched bumble bee protocol (USFWS, 2019) and the Xerces Society Bumble Bee method. Beginning in 2024, the CDFW Survey Considerations for CESA Candidate Bumble Bee Species (CDFW, 2023) guidelines are incorporated into the GLA visual survey protocol. Chris Waterston has detected CBB in a variety of habitats throughout southern California, including coast dune, coastal sage scrub, chaparral, grassland, meadow, and oak woodland. A summary of focused survey and incidental detection locations are listed below:

Survey Location/Number of Detections:

San Juan Capistrano, CA – June 2024 - Crotch's bumble bee detected
Brea, CA – April 2024 - Crotch's bumble bee detected
La Habra, CA – April 2024 - Crotch's bumble bee detected
San Juan Capistrano, CA – March 2024 - Crotch's bumble bee detected
Castaic, CA – May 2023 and May 2024 - Crotch's bumble bee detected
Calimesa, CA – July 2022 - Crotch's bumble bee detected

Ian Rhodes

Wildlife Biologist

YEARS OF EXPERIENCE

Professional start date: 2024

Years at GLA: 0.5

EDUCATION

BA, Environmental Studies and Economics, University of California, Santa Cruz, 2021

PROFESSIONAL SUMMARY

Ian Rhodes is a Wildlife Biologist with extensive technical and field experience working within Central and Southern California plant communities, with particular interest in coastal sage scrub and grassland ecosystems. At University of California, Santa Cruz, he assisted with ecological restoration at the Fort Ord Natural Reserve in Marina, California. Specifically, his work focused on boosting populations of sand gilia (*Gilia tenuiflora* ssp*. arenaria*) and seaside bird's beak (*Cordylanthus rigidus* ssp*. littoralis*). He has also assisted with ecological restoration of native grassland and coastal sage scrub communities at the Palos Verdes Peninsula Land Conservancy as a native plant restoration nursery technician. During his time at GLA, he has assisted with the coordination and execution of a wide array of biological surveys across the Southern California area.

His field experience includes vegetation alliance mapping, California native flora identification, vegetation monitoring, focused rare plant surveys and mapping, wildlife surveys, nesting bird surveys, coastal California gnatcatcher nesting and census surveys, Crotch's bumble bee surveys, burrowing owl surveys, and seed and plant collection. Other specialized work includes public education on Southern California native flora, California native plant propagation, and landscape design.

SELECTED PROJECT EXPERIENCE

DEVELOPMENT

MONTEBELLO HILLS—TOLL BROTHERS, INC.; MONTEBELLO, CALIFORNIA

Served as a biological monitor for the annual coastal California gnatcatcher population census in 484 acres of open space in the city of Montebello, California. Work included assisting with the monitoring of breeding and nesting activities of coastal California gnatcatcher (*Polioptila californica*); planning avoidance measures with construction crews; performing qualitative monitoring of viable habitat; and analyzing and interpreting survey results.

TAPIA RANCH—DACA-CASTAIC LLC; CASTAIC, CALIFORNIA

Served as an assistant wildlife biologist for general biological surveys, vegetation alliance mapping, focused rare plant surveys, and focused Crotch's bumble bee surveys on 1,167 acres in unincorporated Los Angeles County, California. Work included assisting with the pre-survey research of rare and endangered species using data from the California Natural Diversity Database (CNDDB) and the California Native Plant Society (CNPS) Inventory; conducting vegetation alliance mapping; conducting rare plant surveys; conducting Crotch's bumble bee (*Bombus crotchii*) surveys; interpreting survey results; conducting surveys of viable habitat for Crotch's bumble bee; rare flora identification; and assisting in the preparation of a biological technical report.

CHURCH & DWIGHT TRAILER LOT EXPANSION PROJECT—LINK LOGISTICS; VICTORVILLE, CALIFORNIA

Served as project manager and lead biologist for a western Joshua tree survey and nesting bird survey on 10 acres in the city of Victorville, California. Work included preparing survey materials; conducting a western Joshua tree (*Yucca brevifolia*) survey; analyzing and interpreting Joshua tree survey results; conducting a pre-construction nesting bird survey; and analyzing and interpreting nesting bird survey results.

AERA MASTER PLANNED COMMUNITY—AERA ENERGY LLC; BREA, CALIFORNIA

Served as an assistant wildlife biologist for multiple biological surveys on 3,000 acres in the city of Brea, California. Work included researching rare and endangered flora and fauna using data from the CNDDB and the CNPS Inventory; conducting focused rare plant surveys; mapping observations of coastal California gnatcatcher; conducting vegetation alliance mapping in accordance with the Manual of California Vegetation; conducting Crotch's bumble bee (*Bombus crotchii*) surveys; and assisting in the preparation of a biological technical report.

CORONA QUARRY EXPANSION PROJECT—HARRISON TEMBLADOR HUNGERFORD & GUERNSEY; CORONA, CALIFORNIA

Served as an assistant wildlife biologist for multiple biological surveys on 243 acres in the city of Corona, California. Work included researching rare and endangered flora and fauna using data from the CNDDB and the CNPS Inventory; researching survey protocols and target species in accordance with the Western Riverside County Multiple-Species Habitat Conservation Plan (MSHCP); conducting vegetation alliance mapping in accordance with the Manual of California Vegetation; conducting focused rare plant surveys; mapping observations of coastal California gnatcatcher and least Bell's vireo (*Vireo bellii pusillus*); and assisting with the preparation of a biological technical report.

PARKS, TRAILS, AND OPEN SPACE

OCTA PRESERVES INTERIM BIOLOGICAL MONITORING SUPPORT SERVICES CONTRACT—ORANGE COUNTY TRANSPORTATION AUTHORITY, ORANGE COUNTY, CALIFORNIA

Served on a team of biologists conducting preserve-wide vegetation mapping. GLA has provided support to OCTA with biological resources monitoring for all seven preserves, totaling over 1,300 acres, to determine threats and stressors that may impact covered species and natural communities; conducting overall assessments (e.g., invasive species, erosion, unauthorized trail cutting, and trail condition) to help determine areas of highest management priority; and documenting unauthorized activities and related effects to biological resources (e.g., encroachments and unauthorized trail cutting). GLA provides ongoing site visits, photographic monitoring, and reporting, which includes annual reports to address results of research and monitoring activities, recommendations of appropriate adaptive management actions, and discussion of anticipated activities for the upcoming year. Ian assisted with the vegetation mapping efforts being conducted at the preserves.

PETERSEN RANCH/ELIZABETH LAKE MITIGATION BANK—EIP IV CREDIT CO., LLC; LAKE HUGHES, CALIFORNIA

Served as an assistant biologist for focused Crotch's bumble bee surveys on 3,500 acres in the town of Elizabeth Lake, California. Work included pre-survey research and preparation of materials for surveys, conducting surveys of suitable

habitat and nectar sources for Crotch's bumble bee, conducting focused Crotch's bumble bee surveys, and analyzing and interpreting survey results.

PALOS VERDES NATURE PRESERVE HABITAT RESTORATION—PALOS VERDES PENINSULA LAND CONSERVANCY (PVPLC), RANCHO PALOS VERDES, CALIFORNIA

Served as the native plant restoration nursery technician. Work included seed and cutting propagation of native plant species; implementing Best Management Practices (BMP's) within the nursery to minimize the spread of blight (*Phytopthora* sp.) and other waterborne pathogens amongst nursery stock; coordinating wholesale and retail native plant sales; coordinating public native plant sales; attending public outreach events; educating members of the public about California native flora; assisting with minor construction projects at the native plant restoration nursery; and collecting seed and cuttings from PVPLC's 1,400 acres of preserves for propagation and conservation purposes.

WATER

MDP LINE E PROJECT—ALBERT A. WEBB ASSOCIATES; SAN JACINTO, CALIFORNIA

Served as an assistant wildlife biologist for focused rare plant surveys on a 14,000 linear foot drainage in the city of San Jacinto, California. Work included performing pre-survey research of rare and endangered flora using data from the CNDDB and the CNPS Inventory; researching survey protocols and target species in accordance with the Western Riverside County MSHCP; conducting focused rare plant surveys for multiple target species including smooth tarplant (*Centromadia pungens* ssp. *laevis*) and Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*); identifying and mapping observations of least Bell's vireo; interpreting survey results; and assisting in the preparation of a biological technical report.

IVANPAH WATERLINE PROJECT—EQUINOX GOLD CORPORATION; SAN BERNARDINO COUNTY, CALIFORNIA

Served as an assistant wildlife biologist for focused rare plant surveys and burrowing owl surveys on a 30-mile linear study area in San Bernardino County, California and Clark County, Nevada. Work included performing pre-survey research of rare and endangered flora of California and Nevada using data from the CNDDB, the CNPS Inventory, and the state of Nevada's BLM plant species watchlist; assembling rare floral and faunal species tables for use in focused surveys; conducting focused rare plant surveys; interpreting survey results; assisting with burrowing owl (*Athene cunicularia*) surveys; rare flora identification; and assisting in the production of a biological technical report.

PROFESSIONAL AFFILIATIONS

California Native Plant Society, South Coast Chapter

EMPLOYMENT HISTORY

Glenn Lukos Associates. Wildlife Biologist. Santa Ana, California. February 2024 – Present.

Palos Verdes Peninsula Land Conservancy. Native Plant Restoration Nursery Technician. Rancho Palos Verdes, California. 2023.

University of California, Santa Cruz Arboretum and Botanic Garden. Horticulturist. Santa Cruz, California. 2020-2021.

UC Fort Ord Natural Preserve. Restoration Intern. Marina, California. 2019-2020.

MEMORANDUM

GLENN LUKOS ASSOCIATES
Regulatory Services

DATE: June 13, 2024

SUBJECT: Staff Qualifications to Conduct Protocol Surveys for Crotch's Bumble Bee

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Glenn Lukos Associates, Inc. (GLA) currently has four biologists on staff that are qualified to perform protocol surveys for Crotch's bumble bee (*Bombus crotchii*) [CBB].

- Jeff Ahrens
- Stephanie Cashin
- Jason Fitzgibbon
- Chris Waterston

The qualifications are based on the following:

- Ability to identify CBB in the field and distinguish CBB from other *Bombus* species that also occur in similar habitats.
- Familiarity with survey protocols.
- Training specific to CBB and other bumble bee species.
- Surveys and CBB identification in a variety of vegetation communities at multiple sites across the range of the species.

Background of CBB Experience

GLA staff have undergone training and conducted visual focused surveys for Crotch's bumble bee (CBB), beginning in 2020 and continuing to the present. Starting in 2020, GLA developed a visual survey methodology that was approved by the California Department of Fish and Wildlife (CDFW) for use on a specific project where CDFW required CBB surveys. GLA's initial survey protocol was derived from the USFWS rusty-patched bumble bee protocol (USFWS, 2019) and the Xerces Society Bumble Bee method. Beginning in 2024, GLA incorporated the CDFW Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW, 2023). The survey protocol includes photo documentation to support the field identification of CBB. GLA has surveyed and detected CBB in a variety of habitats throughout southern California, including coast dune, coastal sage scrub, chaparral, grassland, meadow, and woodland habitats.

CBB Training

There are multiple training opportunities that a number of GLA's staff have completed, including the four biologists referenced above. All the referenced staff have completed the following:

- California Rare Bumblebee Workshop, 2021, The Wildlife Society-Western Section, Virtual Attendance
- Identifying Male Bumble Bees in Western North America, 2024, Virtual Attendance, Xerces Society
- California Bumble Bee Atlas Training, 2024, Virtual Attendance, Xerces Society

In addition, two of GLA's biologist (Jeff Ahrens and Stephanie Cashin) performed independent study by reviewing the bumble bee collection at the Los Angeles Natural History Museum.

Survey Experience

GLA's staff have completed CBB protocol surveys for a variety of habitats at numerous sites throughout southern California, including in Los Angeles, Orange, Riverside, San Bernardino, Ventura and Kern counties. Collectively, GLA has detected CBB at a minimum of 13 different sites while conducting protocol surveys and has incidentally detected CBB at a minimum of another 25 sites.

p:RESUMES\GLA_CBB Qualifications

APPENDIX B
MITIGATION FEASIBILITY ASSESSMENT

MEMORANDUM

August 28, 2018

To:
John Arvin
NorthLake

From:
Marc Blain

Subject: Feasibility Analysis of NorthLake Biological Mitigation Requirements

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An analysis was conducted to confirm the feasibility of implementing NorthLake biological mitigation measures for the NorthLake Project. Specifically, requirements for preservation of existing vegetation or preservation with restoration of potentially suitable habitat for select wildlife species were reviewed and required amounts of mitigation by habitat type were calculated. Using a two-pronged approach, potential mitigation properties were identified and then evaluated using a GIS tool to rank potential mitigation parcels based on biological values relative to NorthLake mitigation needs. The results of this analysis, as discussed below, indicate that properties with the appropriate biological resources and of sufficient acreage are currently available or are in process towards becoming available within the region. Properties were considered to be "available" if they are currently listed for sale, if there are no recorded development plans for the sites, where information provided by sellers or brokers indicated that offers would be considered or potentially considered, where properties have other constraints to development such as USFWS designated Critical Habitat, and where the properties have not been used as mitigation for prior projects. As such, biological resources mitigation for the NorthLake Project is feasible.

The attached tables and maps include properties identified based on communication with sellers, brokers, mitigation bank managers, and/or other publicly available information, and the results of a preliminary analysis of on-site vegetation and soils. The purpose of the analysis was to identify available properties with native habitat that exhibit sufficient acreage to offset the potential loss of native habitats associated with Project development. Properties were identified by Psomas staff based on (1) staff's previous knowledge of properties; (2) inquiries with approved mitigation banks; (3) inquiries with entities such as the Trust for Public Lands, Mountains Recreation and Conservation Authority, and California Department of Fish and Wildlife; and (4) review of properties listed for sale (and thus assumed to be available). Potential properties were given priority based on size, proximity to the Project site, proximity to other preserved open space areas, and overall level of disturbance and quality of habitat. Aerial photos were reviewed for each site to determine the general type of habitat (e.g. scrub, riparian, grassland, etc.) as were soil maps to determine each site's suitability for establishment/translocation of special status plant species and seasonal pools for western spadefoot toad. In addition, estimated vegetation types and acreage was extracted from Cal Fire Regional Vegetation Maps.

Psomas' Ecologists and GIS Specialists then developed a searchable database, using existing ecological/geographic data (federal/State/local), to assess the suitability of identified properties as well as other potentially suitable parcels of undeveloped land in the Project region. For this purpose, undeveloped land was defined as parcels that were totally or nearly totally undeveloped.

Several parameters were used to create the database (see below) that are representative of the characteristics/resources on the Project site. Each parameter was assigned a score based on (1) its occurrence on, or in proximity to, the Project site; and (2) its relative importance/priority in achieving the goals of the mitigation program. For several of the parameters, a fraction of the maximum points is awarded—for example, a parcel is awarded 10 points if it falls within a Los Angeles County Significant Ecological Area (SEA), but it is awarded a fraction of that amount if it falls *within one mile* of an SEA. Only parcels that are 50 acres or greater in size were included in the database, except for parcels less than 50 acres in size that are contiguous with parcels that form a combined area of 50 acres or greater.

The parameters used in the database development in order of highest priority/score (see Table 3), included:

(1) A record of the federally-map generated listed Threatened coastal California gnatcatcher (*Polioptila californica californica*) (gnatcatcher) (up to 75 points);
(2) The occurrence of designated Critical Habitat (per U.S. Fish and Wildlife Service) for the gnatcatcher (up to 60 points);
(3) the occurrence of coastal scrub vegetation as designated by the California Department of Forestry and Fire Protection (up to 50 points);
(4) The occurrence within Los Angeles County (40 points);
(5) The watershed location (e.g., Santa Clara River watershed – highest score [30 points]);
(6) The occurrence of a Significant Ecological Area as defined by the County of Los Angeles (up to 10 points);
(7) The occurrence of a California Essential Habitat Connectivity Project area, as defined by the California Department of Transportation and the California Department of Fish and Wildlife (up to 8 points); and
(8) The occurrence within one (1) mile of a National Forest, National Park, State Park, or County Park (natural park) (up to 5 points).

The resulting maps generated from this database (see attached Exhibit 1: Regional Suitability for Mitigation; and Exhibit 2.1 through 2.4: Detail Sheet A, B, C, and D – Local Suitability for Mitigation) present a color-coded display with gradations of high suitability (green) to low suitability (red) that represent the combined score for each qualifying parcel. The maps also display the County Assessor parcel numbers, the watershed boundaries, and other parameters set forth above. The database enables the user to evaluate parcels in the Project region for their potential suitability to provide mitigation acreages for losses of biological/habitat resources that are currently present on the Project site. Exhibits 3.1, 3.2, 3.3, and 3.4 provide a sample of soils data reviewed within potential mitigation opportunity properties and other parcels.

Results of the analysis indicate that properties with the appropriate biological resources and of sufficient acreage are currently available or are in process towards becoming available (based on information obtained by Psomas staff) within the region. As summarized in Table 1, Summary of NorthLake Mitigation Requirements and Partial List of Mitigation Opportunities, and detailed in

Table 2, Detail of NorthLake Mitigation Requirements and Partial List of Mitigation Opportunities, available acreage exceeds mitigation requirements for each impact category and additional properties with suitable habitats are expected to occur as well. A portion of the mitigation acreage is expected to occur on-site (see Exhibit 4) with the balance occurring within off-site lands owned by NorthLake (see Exhibit 5) and other off-site lands potentially available (see Table 2). In addition, the identified properties exhibit biological rankings equivalent to that of the affected habitats on the Project site (see Exhibits 1 and 2 and Table 3, Top 20 High Scoring Parcels from Regional Analysis). This equivalence is an indication of appropriate mitigation replacement values and can also be used to assess additional properties which may become available for mitigation. Biological resources mitigation for the NorthLake Project is, therefore, feasible.

In conclusion, this analysis (as well as the supporting tables and maps) shows that the biology mitigation measures for the NorthLake Project impacts identified in the SEIR are feasible and will mitigate the Project's potentially significant biology impacts.

Attachments:

1. Table 1, Summary of NorthLake Mitigation Requirements and Partial List of Mitigation Opportunities
2. Table 2, Detail of NorthLake Mitigation Requirements and Partial List of Mitigation Opportunities
3. Table 3, Top 20 High Scoring Parcels from Regional Analysis
4. Exhibit 1, Regional Suitability for Mitigation
5. Exhibit 2.1, Detail Sheet A - Local Suitability for Mitigation
6. Exhibit 2.2, Detail Sheet B - Local Suitability for Mitigation
7. Exhibit 2.3, Detail Sheet C - Local Suitability for Mitigation
8. Exhibit 2.4, Detail Sheet D - Local Suitability for Mitigation
9. Exhibit 3.1, Detail Sheet A - Soils
10. Exhibit 3.2, Detail Sheet B - Soils
11. Exhibit 3.3, Detail Sheet C - Soils
12. Exhibit 3.4, Detail Sheet D - Soils
13. Exhibit 4, On-site Mitigation Opportunities
14. Exhibit 5, Off-site Mitigation Opportunities Owned by NorthLake

ATTACHMENT 1

TABLE 1, SUMMARY OF NORTHLAKE MITIGATION REQUIREMENTS AND PARTIAL LIST OF MITIGATION OPPORTUNITIES

TABLE 1
SUMMARY OF NORTHLAKE MITIGATION REQUIREMENTS and PARTIAL LIST OF MITIGATION OPPORTUNITIES

BIOLOGICAL RESOURCE	IMPACTS *	REQUIRED MITIGATION @ 2:1	APPROPRIATE HABITAT CURRENTLY OWNED BY NORTHLAKE: ON-SITE (WITHIN NORTHLAKE BOUNDARY) **	APPROPRIATE HABITAT CURRENTLY OWNED BY NORTHLAKE: OFF-SITE (OUTSIDE NORTHLAKE BOUNDARY) **	REQUIRED MITIGATION NOT CURRENTLY OWNED BY NORTHLAKE	PARTIAL LIST OF OFF-SITE MITIGATION PROPERTIES WITH APPROPRIATE HABITAT NOT OWNED BY NORTHLAKE: A	B	C	D	E	F	G	H	I	J	K	L	M	N	TOTAL OFF-SITE OPPORTUNITIES (A-N) (ACRES)	TOTAL OFF-SITE OPPORTUNITIES (A-N) (% of REQ'D)
VEGETATION TYPE (ACRES)																						
Sage Scrub	635	1269	330	189	751		324	1800	65	10	200	120	300	130	20	35				3004	400%
Native Grassland	24	48	1	3	45	250														250	560%
Annual Grassland	399	798	51	18	729	250	72	700		40	400									1462	201%
Riparian/Open Water Communities	13	27	1	1	24			500			10									510	2146%

	IMPACTS	REQUIRED MITIGATION @ 1:1	TOTAL OFF-SITE OPPORTUNITIES (A-N) (INDIVIDUALS)	TOTAL OFF-SITE OPPORTUNITIES (A-N) (% OF REQ'D)
PLANT SPECIES (INDIVIDUALS)				
Round-leaved Filaree	39	39	No offsite property required	
Paniculate Tarplant	300	300	6600	22000%
Southwestern Spine Rush	300	300	6600	22000%
Slender & Club-haired Mariposa Lily	3000	3000	20500	911%

	IMPACTS *	REQUIRED MITIGATION @ 1:1	TOTAL OFF-SITE OPPORTUNITIES (A-N) (ACRES)	TOTAL OFF-SITE OPPORTUNITIES (A-N) (% OF REQ'D)
JURISDICTIONAL WATER (ACRES)				
Waters of the United States	11	11	26	246%

	IMPACTS	REQUIRED MITIGATION	TOTAL OFF-SITE OPPORTUNITIES (A-N) (INDIVIDUALS)	TOTAL OFF-SITE OPPORTUNITIES (A-N) (% OF REQ'D)
WILDLIFE (INDIVIDUALS)				
Burrowing Owl ***	2	13	No offsite property required	
Coastal California Gnatcatcher	2	2	Will be part of Sage Scrub acreage listed above	
Western Spadefoot Toad	0.5	0.5	No offsite property required	

PARTIAL LIST OF OFF-SITE MITIGATION PROPERTIES WITH APPROPRIATE HABITAT NOT OWNED BY NORTHLAKE

A - Peterson Ranch Mitigation Bank
B - Gilmore Ranch Property Val Verde
C - Temescal Ranch Property, Castaic
D - Castaic APN 3247-010-011
E - Val Verde APN 3247-032-031
F - Santa Clarita San Martinez Grande Canyon Road
G - Acton APN 3217-005-018
H - Lannan Ranch Agua Dulce
I - Tract 42537
J - Castaic APN 3247-010-056
K - Castaic APNs 3247-039-007/3247-039-008
L - Templin Highway Undercrossing APN 3247-008-003
M - Templin Highway Undercrossing APN 3247-005-035
N - Templin Highway Undercrossing APN 3247-009-004

Note: The above properties are either: 1) currently part of an established mitigation bank, 2) currently for sale, or 3) have been known to be for sale on the open market.

Footnotes:

* Acreage numbers includes Permanent and Temporary Impact Areas.

** Acreage numbers includes Non-impacted and Temporary Impact Areas.

*** Burrowing Owl mitigation shown hereon is a conservative estimate. As stated in the SEIR, the actual mitigation amount will be determined by field surveys conducted prior to construction.

ATTACHMENT 2

TABLE 2, DETAIL OF NORTHLAKE MITIGATION REQUIREMENTS AND PARTIAL LIST OF MITIGATION OPPORTUNITIES

Biological Resources	Non-Impacted	Habitat Impacts (Acres/Individuals)						Total:	Total:	Mitigation	Required
		On-Site			Off-Site						
		Permanent	Temporary	Subtotal	Permanent	Temporary	Subtotal				
Vegetation Type (acres)											
Sage Scrub Communities											
Sage Scrub Subtotal	**261.48**	**504.77**	**68.09**	**572.86**	**39.82**	**22.02**	**61.84**	**896.18**	**634.7**	**2:1**	**1,269.39**
Native Grassland Communities											
Native Grassland Subtotal	**0.97**	**23.82**	**0.29**	**24.11**	**0.13**	**0**	**0.13**	**25.2**	**24.23**	**2:1**	**48.47**
Annual Grassland Communities											
Annual Grassland Subtotal	**37.45**	**373.02**	**13.11**	**386.14**	**7.03**	**5.71**	**12.75**	**436.33**	**398.88**	**2:1**	**797.77**
Riparian/Open Water Communities[a]											
Riparian/Open Water Subtotal	**1.28**	**12.42**	**0.06**	**12.48**	**0.66**	**0.11**	**0.77**	**14.54**	**13.26**	**2:1**	**26.51**
Plant Species (individuals)											
California macrophylla (round-leaved filaree)	0	39	0	39	0	0	0	N/A	39	**1:1**	**39**
Deinandra paniculata (paniculate tarplant)	0	~300	0	~300	0	0	0	N/A	~300	**1:1**	**~300**
Juncus acutus ssp. *leopoldii* (southwestern spiny rush)	0	~300	0	~300	0	0	0	N/A	~300	**1:1**	**~300**
Calochortus clavatus var. *gracilis* (slender mariposa lily) and *Calochortus clavatus* var. *clavatus* (club-haired mariposa lily)	0	~3,000	0	~3,000	0	0	0	N/A	~3,000	**1:1**	**~3,000**
Wildlife (acres)											
Athene cunicularia (burrowing owl)	0	2*	0	2*	0	0	0	N/A	**2***	**6.5:1**	**13**
Polioptila californica californica (coastal California gnatcatcher)	0	2*	0	2*	0	0	0	N/A	**2***		
Spea hammondii (western spadefoot toad)	0	0.52	0	0.52	0	0	0	N/A	**0.52**	**1:1**	**0.52**
Jurisdictional Waters (acres)											
Waters of the United States									**10.59**	**1:1**	**10.59**

Biological Resources	Opportunity Properties with Existing Veg for Preservation and Potentially Suitable Habitat for Restoration											
	On-site (Undisturbed)		Off-site Northlake				Peterson Ranch Mitigation Bank[b]	Gilmore Ranch Property (2,193 acres) Val Verde	Temescal Ranch Property Castaic, west of I-5 (approx 4,800 acres)	Unnamed off-site, 70 acres (Castaic, north of Northlake; APN 3247-010-011)	Unnamed off-site Val Verde (52 acres; APN 3247-032-031)	Santa Clarita 28190 San Martinez Grande Canyon Road (616 acres)
	All Areas	TOTAL	Area 1	Area 2	Area 3	TOTAL						
Vegetation Type (acres)												
Sage Scrub Communities												
Sage Scrub Subtotal	261.48	261.48	19.23	1.98	145.69	166.90		324.05	1800	65	10	200
Native Grassland Communities												
Native Grassland Subtotal	0.97	0.97	0.57		2.00	2.57	250					
Annual Grassland Communities												
Annual Grassland Subtotal	37.45	37.45	0.23		12.48	12.71	250	71.74	700		40	400
Riparian/Open Water Communities[a]												
Riparian/Open Water Subtotal	1.28	1.28			1.31	1.31			500			10
Plant Species (individuals)												
California macrophylla (round-leaved filaree)	100	100	50	20	100	170.00	0	1000	2000	300	200	1000
Deinandra paniculata (paniculate tarplant)	100	100	50	20	100	170.00	0	1000	2000	300	200	1000
Juncus acutus ssp. *leopoldii* (southwestern spiny rush)	100	100	50	20	100	170.00	0	1000	2000	300	200	1000
Calochortus clavatus var. *gracilis* (slender mariposa lily) and *Calochortus clavatus* var. *clavatus* (club-haired mariposa lily)	300	300	100	50	300	450.00	0	3000	6000	1000	1000	3000
Wildlife (acres)												
Athene cunicularia (burrowing owl)	25	25	15	15	25	55.00	0	250	1000	25	25	100
Polioptila californica californica (coastal California gnatcatcher)		0				0.00	0					
Spea hammondii (western spadefoot toad)	2	2	1	1	2	4.00	0	2	4	1	1	2
Jurisdictional Waters (acres)												
Waters of the United States		0					26					

Biological Resources	Opportunity Properties with Existing Veg for Preservation and Potentially Suitable Habitat for Restoration (cont.)									On & Off-site Opportunities Combined TOTAL
	Unnamed off-site Acton (155 acres; APN 3217-005-018)	Lannan Ranch Agua Dulce (1,586 acres)	Tract 42537 (320 acres)	Unnamed off-site, 20 acres (Castaic, north of Northlake; APN 3247-010-056)	Unnamed off-site, 40 acres (Castaic, north of Northlake; APNs 3247-039-007, 3247-039-008)	Parcel SW of Templin Hwy Undercrossing (APN 3247-008-003)[c]	Parcel N of Templin Hwy Undercrossing (APN 324-7005-035)[c]	Parcel NE of Templin Hwy Undercrossing (APN 324-7009-004)[c]	TOTAL	
Vegetation Type (acres)										
Sage Scrub Communities										
Sage Scrub Subtotal	120	300	130	20	35				3004.05	3432.43
Native Grassland Communities										0.00
Native Grassland Subtotal									250	253.54
Annual Grassland Communities										0.00
Annual Grassland Subtotal									1461.74	1511.90
Riparian/Open Water Communities[a]										0.00
Riparian/Open Water Subtotal									510	512.59
Plant Species (individuals)										
California macrophylla (round-leaved filaree)	300	1000	300	100	100	100	100	100	6600	6870.00
Deinandra paniculata (paniculate tarplant)	300	1000	300	100	100	100	100	100	6600	6870.00
Juncus acutus ssp. *leopoldii* (southwestern spiny rush)	300	1000	300	100	100	100	100	100	6600	6870.00
Calochortus clavatus var. *gracilis* (slender mariposa lily) and *Calochortus clavatus* var. *clavatus* (club-haired mariposa lily)	1000	3000	1000	300	300	300	300	300	20500	21250.00
Wildlife (acres)										
Athene cunicularia (burrowing owl)	50	300	100	5	10	10	10	10	1895	1975.00
Polioptila californica californica (coastal California gnatcatcher)									0	*
Spea hammondii (western spadefoot toad)	1	2	1	0.05	0.05	0.05	0.05	0.05	14.25	20.25
Jurisdictional Waters (acres)										
Waters of the United States									26	26.00

Note: Columns may not add up to the total shown due to complications regarding rounding. Plant and wildlife individuals and areas listed for potential mitigation is an estimate of potentially suitable habitat based on vegetation types and desk-top aerial review.

* Assumes a less than likely scenario in which not more than 2 acres of wintering habitat is impacted for burrowing owl and 2 gnatcatcher (1 pair) are impacted. These are conservative estimates and true impacts will be determined during person surveys conducted prior to construction. Although the table above describes the mitigation required for impacted CSS habitat, the USFS may require some CAGN occupied CSS habitat within the total. Mitigation will require preservation of CSS habitat.

[a] Vegetation mapping is conducted using general field surveys, supplemented with aerial photographs when necessary, while very detailed measurements are taken for jurisdictional delineations. Therefore, permitting for projects is always based on the results of the jurisdictional delineation. It is anticipated that the actual riparian mitigation requirement (proceeding from relevant Project permits) will be based on the total jurisdictional impacts of 15.04 acres.

[b] Acreage represents mixed vegetation communities of 1000 acres of chaparral/grasslands. It is unknown what portion is native and/or annual grassland communities. It assumed 25% native, 25% non-native and 50% chaparral.

[c] These three parcels are included due high biological value and are considered potentially available properties although current status is unknown.

ATTACHMENT 3

TABLE 3, TOP 20 HIGH SCORING PARCELS FROM REGIONAL ANALYSIS

TABLE 3
TOP 20 SCORING PARCELS

Parcel Number	County	Percent Natural	Percent CSS	Size (Minimum 100 Acres)	Parameters/Scores (See Descriptions Below)								
					CNDDB	Critical Habitat	County	Watershed	SEA	CEHCP	CSS	Nat'l Forest/ Park	Total
3210014026	Los Angeles	99	80	105	75	0	40	30	10	8	40	4	**207**
6150210100	Ventura	100	80	327	75	60	0	16	0	1	40	0	**192**
5000370285	Ventura	94	67	138	75	60	0	16	0	8	33	0	**192**
5800010125	Ventura	99	65	123	75	60	0	16	0	8	32	0	**191**
2848009020	Los Angeles	100	67	303	11	60	40	30	10	4	33	2	**190**
6150210045	Ventura	99	88	908	60	60	0	16	0	0	44	0	**180**
6150160455	Ventura	100	53	160	75	60	0	16	0	0	26	0	**177**
2826018066	Los Angeles	100	56	160	0	60	40	30	10	8	28	0	**176**
2826003026	Los Angeles	100	68	152	60	0	40	30	6	0	34	0	**170**
6190020035	Ventura	97	91	134	43	60	0	16	0	0	45	0	**164**
2827029271	Los Angeles	100	23	142	0	60	40	30	10	8	11	4	**163**
2826019036	Los Angeles	100	54	161	0	43	40	30	10	8	27	3	**161**
2826018034	Los Angeles	100	22	162	0	60	40	30	10	8	11	0	**159**
2827013015	Los Angeles	99	25	106	0	60	40	30	6	8	12	2	**158**
3244014053	Los Angeles	99	82	175	46	0	40	30	0	0	41	1	**158**
6200060155	Ventura	100	79	202	32	60	0	16	0	6	39	0	**153**
2601007800	Los Angeles	100	30	234	0	60	40	22	5	8	15	2	**152**
2821011016	Los Angeles	100	22	185	0	60	40	22	10	6	11	2	**151**
2826018053	Los Angeles	100	27	156	0	48	40	30	10	8	13	2	**151**
5000370575	Ventura	96	24	101	54	60	0	16	0	8	12	0	**150**

Parameter Scoring Summary

CNDDB (California Natural Diversity Data Base): A parcel is awarded 75 points if its geographic center falls within a CNDDB record (1980 or newer), or U.S. Fish and Wildlife Service (USFWS) record, for the coastal California gnatcatcher (*Polioptila californica californica*)(gnatcatcher). A parcel is awarded a fraction of 75 points if it occurs within one (1) mile of a gnatcatcher record location.

Critical Habitat: A parcel is awarded 60 points if its geographic center falls within critical habitat (per USFWS) for the coastal California gnatcatcher. A parcel is awarded a fraction of 60 points if it falls within one (1) mile of gnatcatcher critical habitat.

County: A parcel is awarded 40 points if it occurs within the County of Los Angeles.

Watershed: A parcel is awarded the following points based on the watershed in which it occurs – Santa Clara River (30 points); Los Angeles River (22 points); Calleguas Creek (16 points); Santa Monica Bay (8 points).

SEA (Significant Ecological Area): A parcel is awarded 10 points if it falls within a Significant Ecological Area as defined by the County of Los Angeles. A parcel is awarded a fraction of 10 points if it falls within one (1) mile of an SEA.

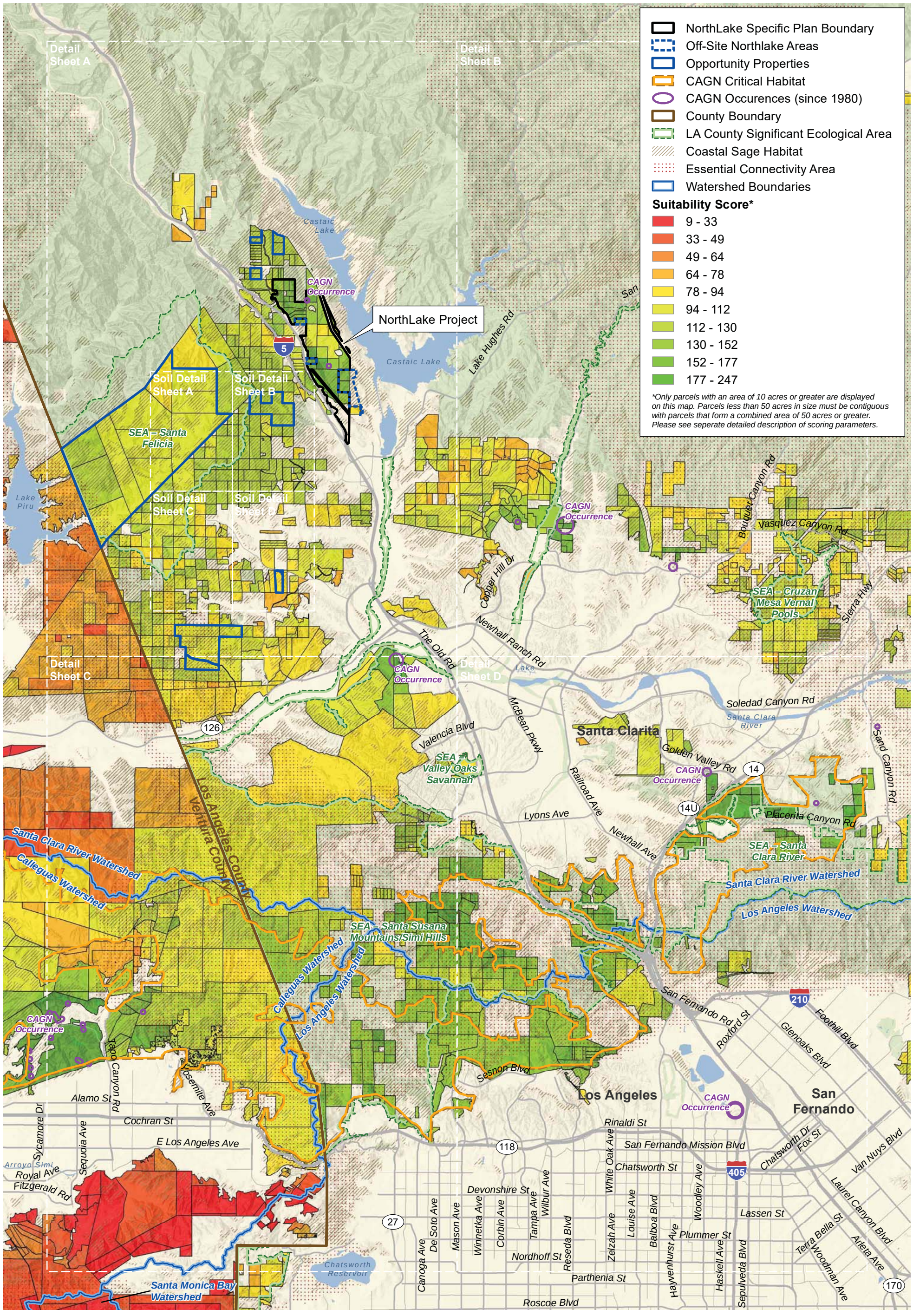
CEHCP (California Essential Habitat Connectivity Project): A parcel is awarded 8 points if it falls within a CEHCP area. as defined by the California Department of Transportation and the California Department of Fish and Wildlife. A parcel is awarded a fraction of 8 points if it falls within one (1) mile of an area designated by the CEHCP.

CSS (Coastal Scrub): A parcel is awarded a fraction of 50 points, equal to the percent of the land area that is covered by the coastal scrub vegetation type, as designated by the California Department of Forestry and Fire Protection (CAL FIRE).

Nat'l Forest/Park: A parcel is awarded a fraction of 5 points if it falls within one (1) mile of a National Forest, National Park, State Park, or County Park (natural park).

ATTACHMENT 4

EXHIBIT 1, REGIONAL SUITABILITY FOR MITIGATION



Regional Suitability for Mitigation

Exhibit 1

NorthLake Specific Plan

N W E S

2 1 0 2 Miles

PSOMAS

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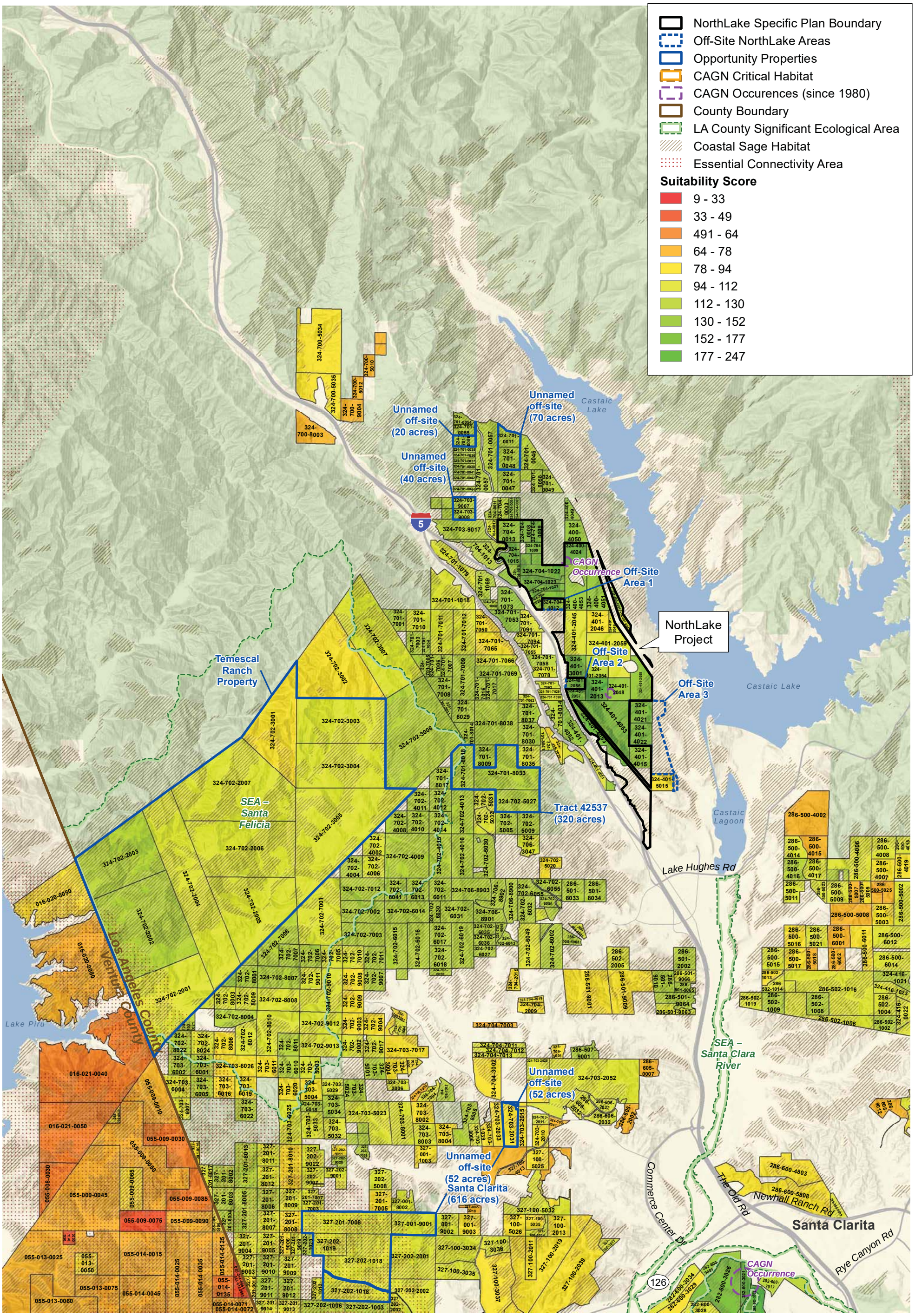
ATTACHMENT 5

EXHIBIT 2.1, DETAIL SHEET A - LOCAL SUITABILITY FOR MITIGATION



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Detail Sheet A – Local Suitability for Mitigation

Exhibit 2.1

NorthLake Specific Plan

N W E S

1 0.5 0 1 Miles

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ATTACHMENT 6

EXHIBIT 2.2, DETAIL SHEET B - LOCAL SUITABILITY FOR MITIGATION

NorthLake Specific Plan Boundary
Off-Site NorthLake Areas
Opportunity Properties
CAGN Critical Habitat
CAGN Occurences (since 1980)
County Boundary
LA County Significant Ecological Area
Coastal Sage Habitat
Essential Connectivity Area

Suitability Score

9 - 33
33 - 49
491 - 64
64 - 78
78 - 94
94 - 112
112 - 130
130 - 152
152 - 177
177 - 247

San Francisquito Canyon Rd
Castaic Lake
SEA – Santa Clara River
CAGN Occurrence
CAGN Occurrence
CAGN Occurrence
Copper Hill Dr
Santa Clarita
Bouquet Canyon Rd
McBean Pkwy
Newhall Ranch Rd
Rye Canyon Rd
Avenue Scott
Lake Lake
Santa Clara River
SEA – Cruzan Mesa Vernal Pools
Vasquez Canyon Rd
Sand Canyon Rd
Sierra Hwy
5

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14

Detail Sheet B – Local Suitability for Mitigation

Exhibit 2.2

NorthLake Specific Plan

N W E S

1 0.5 0 1 Miles

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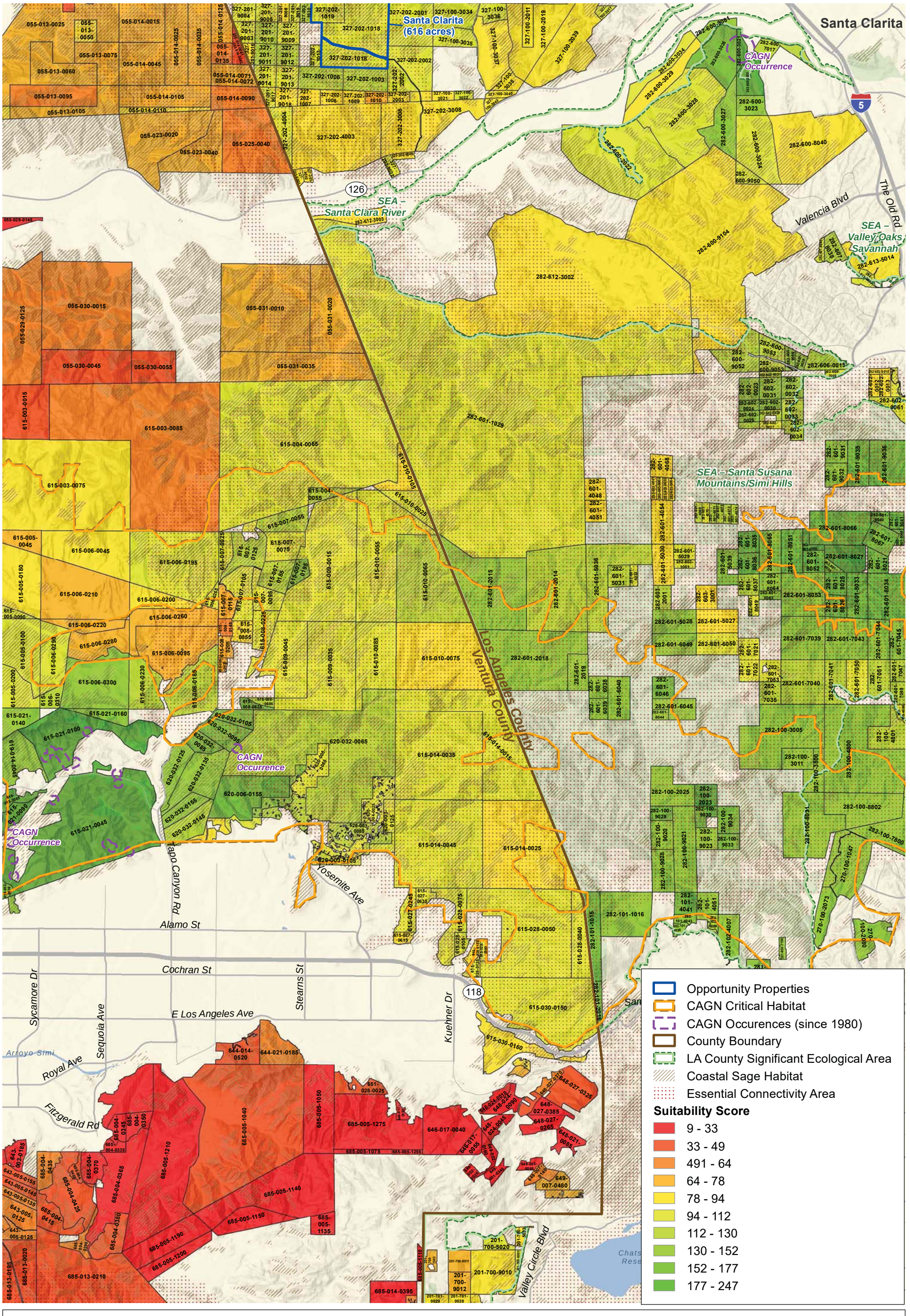
ATTACHMENT 7

EXHIBIT 2.3, DETAIL SHEET C - LOCAL SUITABILITY FOR MITIGATION



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Detail Sheet C – Local Suitability for Mitigation

Exhibit 2.3

NorthLake Specific Plan

PSOMAS

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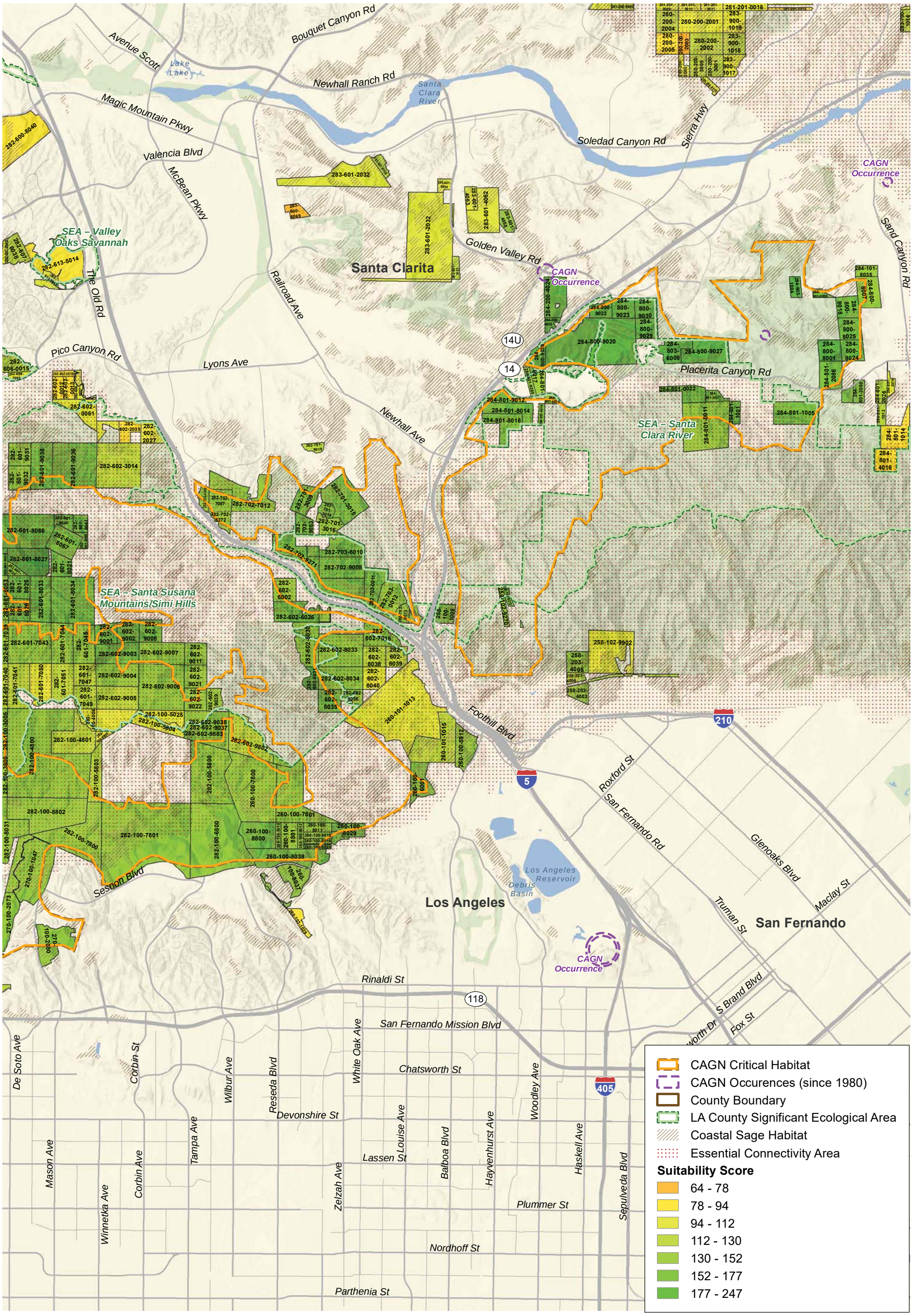
ATTACHMENT 8

EXHIBIT 2.4, DETAIL SHEET D - LOCAL SUITABILITY FOR MITIGATION



Detail Sheet D – Local Suitability for Mitigation

Exhibit 2.4

NorthLake Specific Plan

N W E S

1 0.5 0 1 Miles

PSOMAS

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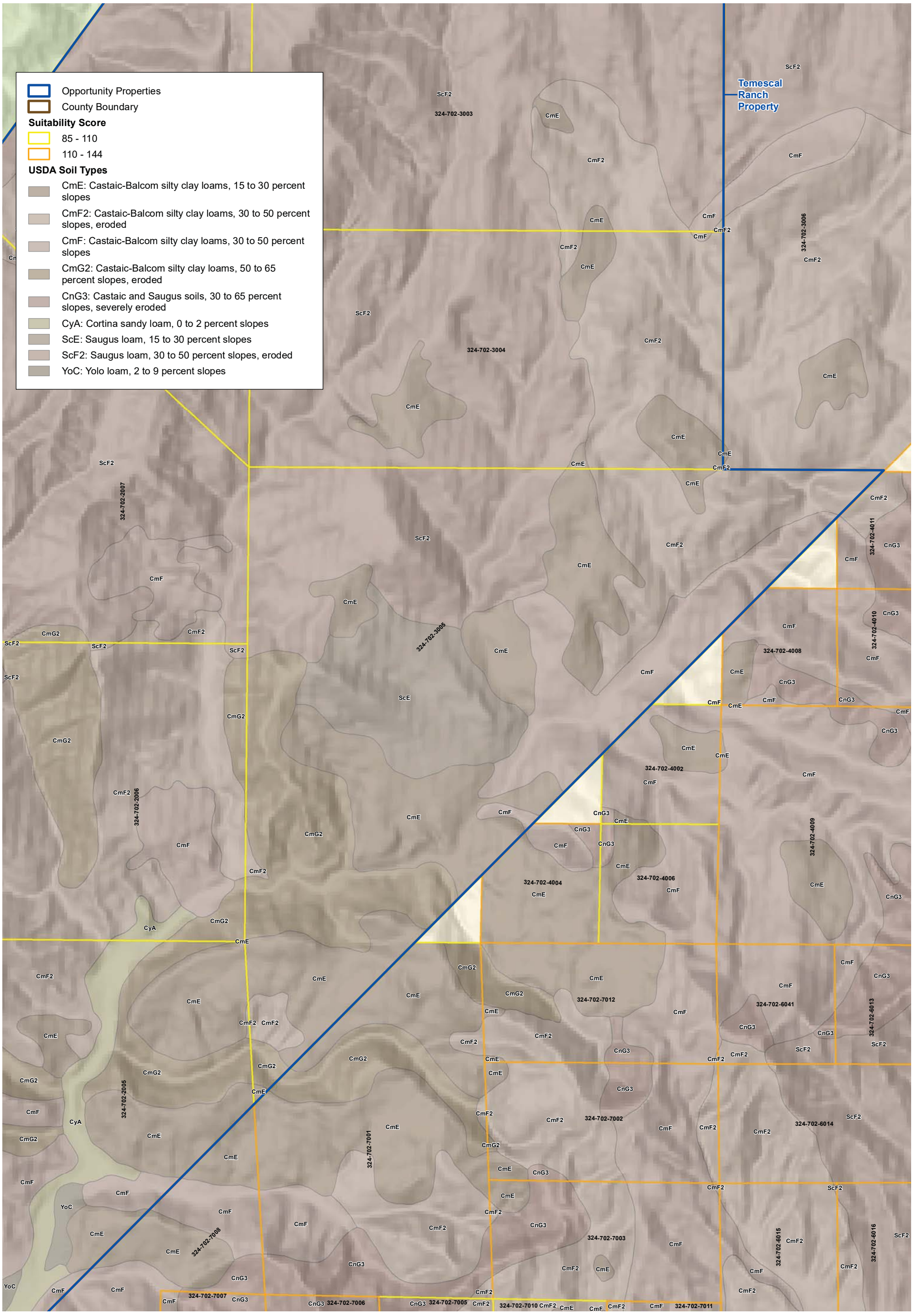
ATTACHMENT 9

EXHIBIT 3.1, DETAIL SHEET A - SOILS



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Detail Sheet A – Soils

Exhibit 3.1

NorthLake Specific Plan

N W E S

1,000 500 0 1,000 Feet

PSOMAS

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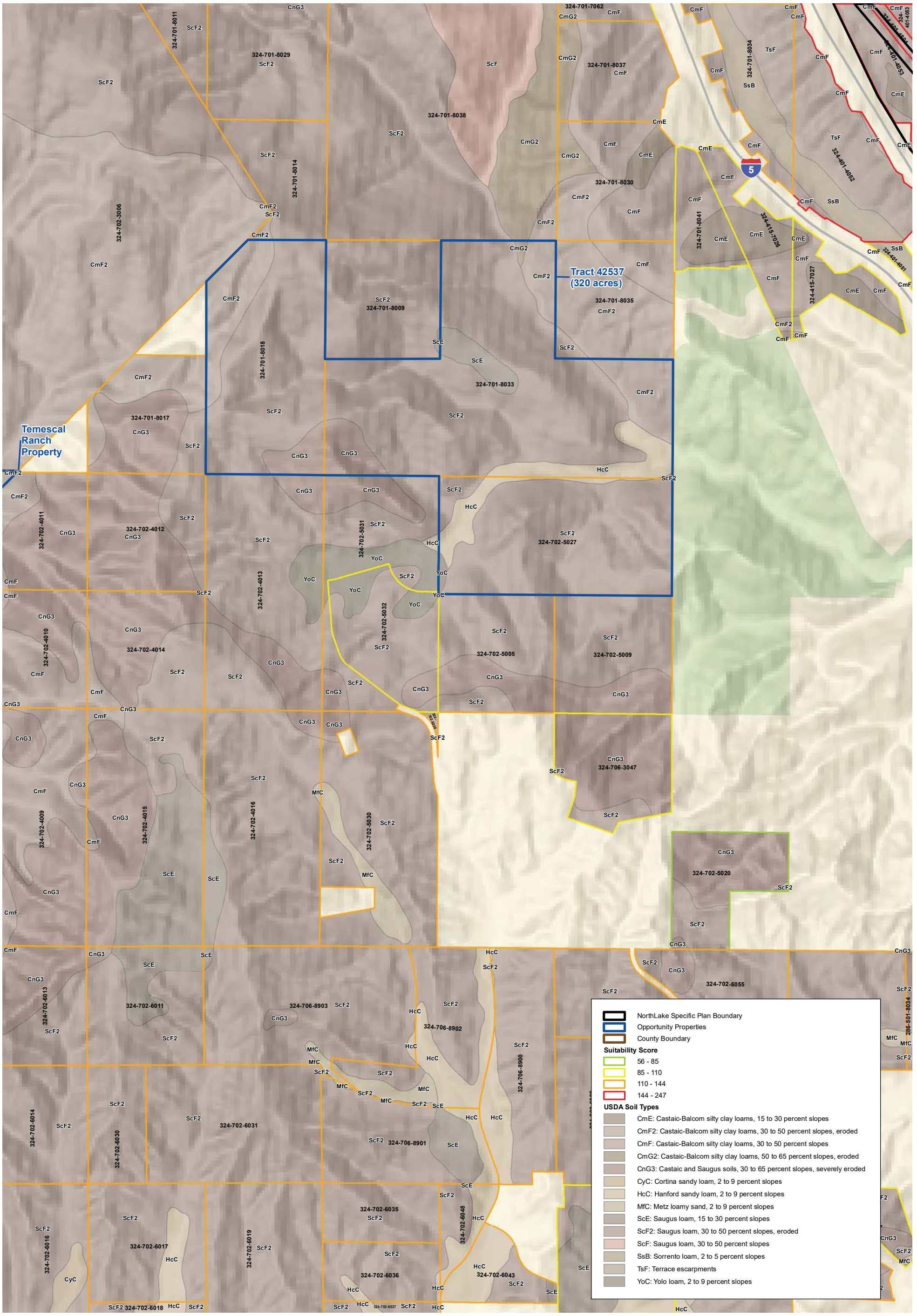
ATTACHMENT 10

EXHIBIT 3.2, DETAIL SHEET B - SOILS



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Detail Sheet B – Soils

Exhibit 3.2

NorthLake Specific Plan

N W E S

1,000 500 0 1,000 Feet

PSOMAS

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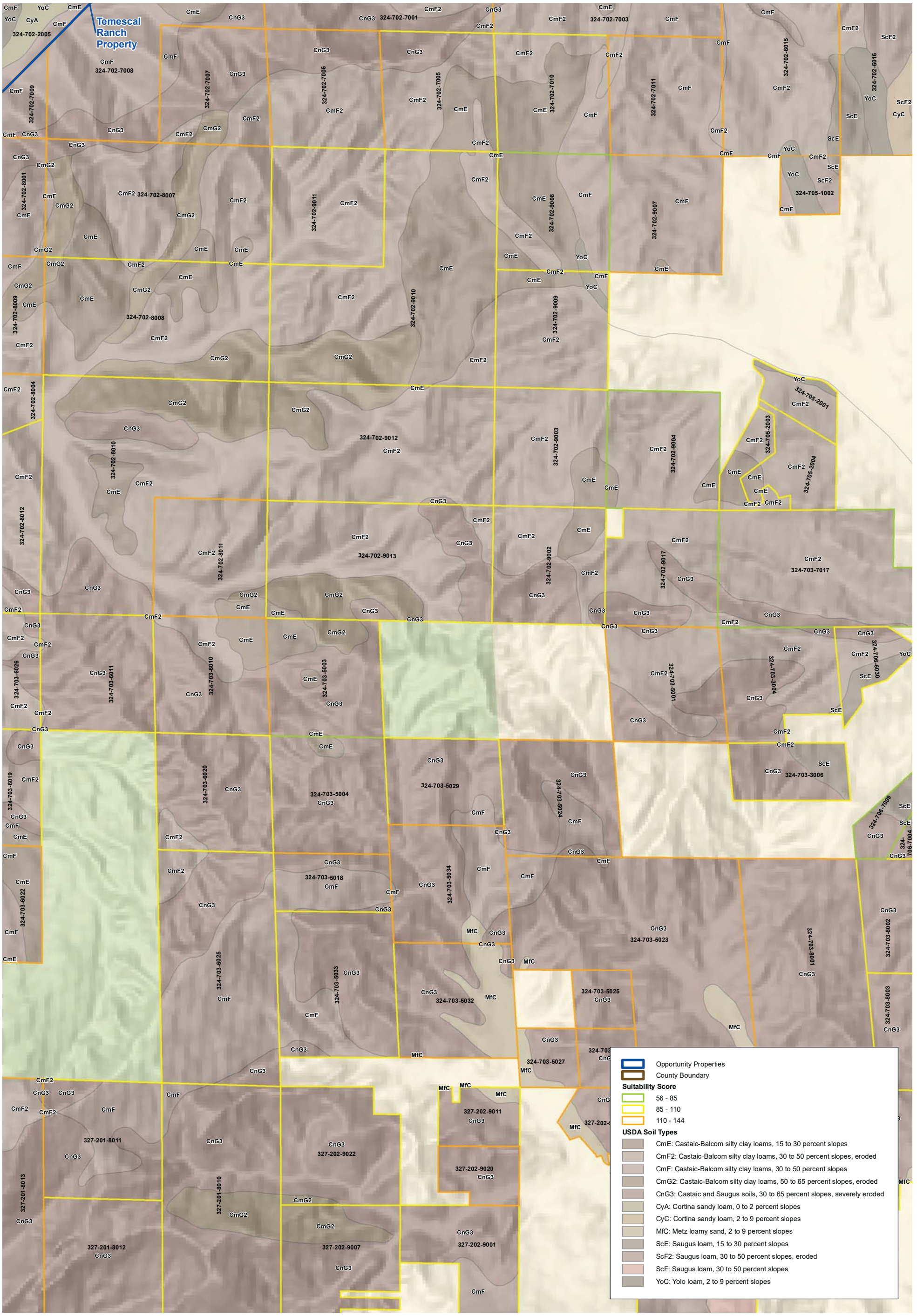
ATTACHMENT 11

EXHIBIT 3.3, DETAIL SHEET C - SOILS



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Detail Sheet C - Soils

Exhibit 3.3

NorthLake Specific Plan

N W E S

1,000 500 0 1,000 Feet

PSOMAS

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ATTACHMENT 12

EXHIBIT 3.4, DETAIL SHEET D - SOILS

Opportunity Properties
County Boundary

Suitability Score

56 - 85
85 - 110
110 - 144

USDA Soil Types

CmE: Castaic-Balcom silty clay loams, 15 to 30 percent slopes
CmF2: Castaic-Balcom silty clay loams, 30 to 50 percent slopes, eroded
CnG3: Castaic and Saugus soils, 30 to 65 percent slopes, severely eroded
CyA: Cortina sandy loam, 0 to 2 percent slopes
CyC: Cortina sandy loam, 2 to 9 percent slopes
HcC: Hanford sandy loam, 2 to 9 percent slopes
MfC: Metz loamy sand, 2 to 9 percent slopes
ScE: Saugus loam, 15 to 30 percent slopes
ScF2: Saugus loam, 30 to 50 percent slopes, eroded
ScF: Saugus loam, 30 to 50 percent slopes
SsB: Sorrento loam, 2 to 5 percent slopes
YoC: Yolo loam, 2 to 9 percent slopes
ZaC: Zamora loam, 2 to 9 percent slopes

Unnamed off-site (52 acres)

Unnamed off-site (52 acres)

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Detail Sheet D – Soils

Exhibit 3.4

NorthLake Specific Plan

N W E S

1,000 500 0 1,000 Feet

PSOMAS

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ATTACHMENT 13

EXHIBIT 4, ON-SITE MITIGATION OPPORTUNITIES

CASTAIC LAKE

NorthLake
Specific Plan

5

5

Project Boundary

Project Area

Vegetation Types and Other Areas

- Purple sage scrub
- Black sage scrub
- California annual grassland
- California annual grassland/Wildflower fields
- California sagebrush - California buckwheat scrub
- California sagebrush - California buckwheat scrub/California annual grassland
- California sagebrush - California buckwheat scrub/Foothill needlegrass grassland
- Foothill needlegrass grassland
- Mulefat thickets
- Disturbed

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On-site Mitigation Opportunities

Exhibit 4

NorthLake Specific Plan

N W E S

1,500 750 0 1,500 Feet

PSOMAS

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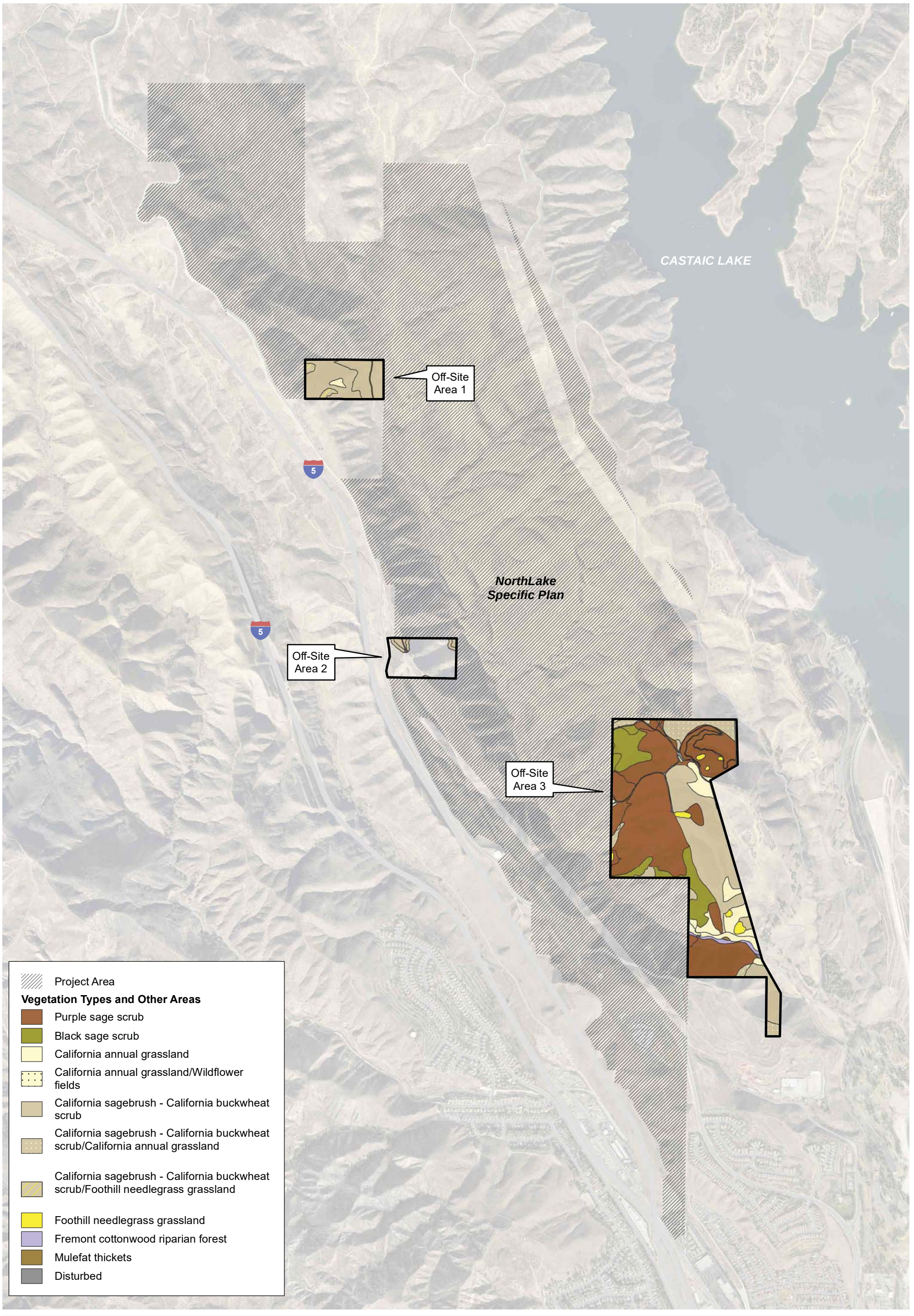
ATTACHMENT 14

EXHIBIT 5, OFF-SITE MITIGATION OPPORTUNITIES OWNED BY NORTHLAKE



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Off-site Mitigation Opportunities - Owned by NorthLake

Exhibit 5

NorthLake Specific Plan

N W E S

1,500 750 0 1,500 Feet

PSOMAS

(Rev: 08-27-2018 CJS) R:\Projects\WCP_Woodrid\J0001\Graphics\Mitigation_Plan\Suitability_Modeling\

ATTACHMENT C

RESUMES OF SENIOR BIOLOGICAL RESOURCES CONTRIBUTORS

Resumes of Senior Biological Resources Contributors

Ann Johnston

Resource Management Team Leader/Principal

EDUCATION

1989/BA/Biology/California State University, Long Beach

PROFESSIONAL AFFILIATIONS

Women's Transportation Seminar, Orange County Chapter

IRWA Chapter 67

EXPERIENCE

With Psomas: 22 years/With Other Firms for: 7 years

Ann Johnston is the Team Leader of Resource Management projects and a Principal of Psomas. She has 29 years of experience in biological resources inventories/evaluations; sensitive species surveys; mitigation monitoring; resource agency permitting and processing; conservation and strategic planning; and technical peer reviews. Ann's professional experience has focused on finding solutions to development challenges where potential impacts to biological resources may occur, and on the assessment and integration of biological data (particularly on sensitive species) into environmental documentation that complies with the requirements of CEQA, NEPA, FESA, and CESA. Over the past 28 years, she has managed and/or authored the biological resources sections of numerous EIRs; EISs; Biological Technical Reports; Biological Assessments (pursuant to Section 7 consultations with the USFWS); Natural Environment Studies (NESs) (pursuant to Caltrans guidelines); focused surveys for sensitive species; tree reports; resource management plans; mitigation monitoring reports; and general biological assessments and constraints analyses.

Experience

Madrona Project, Biological Technical Report, Brea, CA: Principal-in-Charge/Project Manager for this development project (previously known as Canyon Crest) on 367.5 acres. Ann provided peer reviews of Biological Technical Reports prepared for the proposed project by the Project Applicant; served as an extension of City staff; and provided guidance in regards to the adequacy of the information to be summarized into the Biological Resource Section of the EIR. As part of the project, Ann developed the City's Findings of Significance for project impacts to biological resources based on the CEQA Guidelines and City standards/precedents. With changes to the project, including a new property owner, the City continued to rely on Ann to prepare a revised Biological Technical Report, Biological Resource Section of the revised EIR, a California Rapid Assessment Method (CRAM) analysis and an updated Jurisdictional Delineation Report.

Section 7 Consultation for the Operation and Maintenance of Big Tujunga Dam, Angeles National Forest, Los Angeles County, CA: Principal-in-Charge for the Section 7 Consultation for the Operation and Maintenance of Big Tujunga Dam. The study area includes 13 stream miles between Big Tujunga Dam and Hansen Dam. Focused surveys were conducted for listed plant species, least Bell's vireo, southwestern willow flycatcher, arroyo toad, and Sierra Madre yellow-legged frog. Special status species present in the study area include Santa Ana sucker, arroyo chub, Santa Ana speckled dace, western pond turtle, and two-striped garter snake; the arroyo toad occurs upstream of Big Tujunga Reservoir. Ann provided strategic guidance during the preparation of the BA to assess the effect of the operation and maintenance of Big Tujunga Dam on listed species and/or their critical habitat and is assisting LACDPW in their consultation with the resource agencies.

State Route 241 Extension Project Biological Documentation and Permitting, Orange County, CA: Principal-in-Charge/Project Manager for the proposed extension of State Route 241. This extension is a portion of the project that has also been referred to as the South Orange County Transportation Infrastructure Improvement Project or the Foothill Transportation Corridor-South project. Ann currently serves as an extension of the Transportation Corridor Agencies' (TCA) staff on the proposed extension of State Route 241. Ann has provided the TCA with technical and strategic assistance regarding the biological documentation and permitting processes with the following agencies: the Federal Highway Administration (FHWA), Caltrans, the USACE, the USFWS, the California Coastal Commission (CCC), the CDFW, the RWQCB, and the Marine Corps Base Camp Pendleton. Ann has worked on this project in varying capacities since 1990. She has served as the Lead Biologist on the project, conducting many plant and special status wildlife surveys; overseeing daily scientific activities of other biologists; ensuring approved methodologies are followed and results are accurately documented; and preparing/reviewing multiple versions of the project's Natural Environment Study (NES) in accordance with Caltrans guidelines. She was also responsible for preparing multiple Biological Assessments pursuant to consultation with the USFWS required for various alternatives of the project. Ann has also provided strategic planning for the TCA on biological resources issues related to design alternatives; the entitlement process; consensus building with government agencies; mitigation strategies; and negotiations with resource agencies.

Devers-Colorado Corridor Road Repair Project Biological Clearance Survey, Palm Springs to Blythe, CA: Principal-in-Charge/Project Manager for this Southern California Edison (SCE) project, which consists of re-grading approximately 110 miles of an existing access road along an existing transmission line that stretches between the Cities of Desert Hot Springs and Blythe. Psomas completed surveys that were focused on determining the presence of sensitive plant or wildlife species in the study area to aid in implementing biological resource avoidance measures. Ann managed the staff who conducted pre-construction surveys.

Southern California Edison Substation Projects Biological Services, Southern California, CA: Principal-in-Charge for numerous Southern California Edison (SCE) substation projects. Some of the projects include the Circle City Substation Project in Riverside and San Bernardino Counties; the Falcon Ridge Substation Project in San Bernardino County; the Lakeview Substation Project in Riverside County; the Triton Substation Project in Riverside County; the Mascot Substation Project in Kings County; and the Presidential Substation Project in Ventura County. Ann oversaw jurisdictional delineations; vegetation mapping; general plant and wildlife surveys; focused surveys for numerous special status plant and wildlife species; and biological documentation of the survey results.

Sunset Ridge Park Project Biological Resources Services, Newport Beach, CA: Principal-in-Charge for this project, which proposed to develop the approximate 18.9-acre site with active and passive

recreational uses. In support of the project's EIR, Psomas completed a general biological survey, including vegetation mapping; focused surveys for special status plants, coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, and burrowing owl; a jurisdictional delineation and report; and a biological technical report. Biologists also prepared the biological resources portions of the IS and EIR, which included preparing mitigation measures to mitigate for impacts as a result of the park. Psomas also assisted the City in obtaining regulatory permits, including Section 7 permitting, a Section 404 permit, a Section 1602 permit, a Section 401 certification, a CDFW consistency determination, and a Coastal Development Permit. Once the Project was approved and construction began, Psomas reviewed the Lighting Plan and provided biological monitoring services. Ann oversaw all surveys on site and prepared the Biological Technical Report and Biological Resources Section for the project EIR. She also provided strategic planning for the City on biological resources issues related to project design, the entitlement process, mitigation strategies, and negotiations with resources agencies and the California Coastal Commission.

Southern California Gas Company North-South Pipeline Project, Riverside and San Bernardino Counties, CA: Principal-in-Charge/Project Manager for this project, which proposes to construct a new pipeline from Adelanto to Moreno Valley to ensure a reliable supply of gas to Southern California. The project includes the construction and installation of an approximate 65-mile-long, 36-inch-diameter natural gas transmission pipeline, including compressor and pressure limiting stations. Psomas conducted focused surveys and prepared reports for many special status plant and wildlife species, including bat species, burrowing owl, coastal California gnatcatcher, desert tortoise, fairy shrimp, Mohave ground squirrel, raptors, and riparian birds. Psomas also performed small mammal trapping, weed surveys, tree surveys, and a jurisdictional delineation. In addition, Psomas prepared a Biological Technical Report, a Jurisdictional Water Resources Existing Conditions Report, a Biological Assessment/Biological Evaluation (pursuant to U.S. Forest Service Standards), a Hydrology and Water Quality Assessment, and a Land Use Assessment. Psomas also prepared the Application for Federal Clean Water Act Section 401 Water Quality Certification, Pre-Construction Notification under the Federal Clean Water Act Section 404 Nationwide Permit, and Notification of Lake or Streambed Alteration Agreement in accordance with Section 1602 of the California Fish and Game Code. Ann provided technical and project management support in the areas of biology, regulatory, GIS, hydrology, and land-use.

Ortega Highway Safety Improvements Arroyo Toad Surveys/Studies and Invasive Species Control, Cleveland National Forest, CA: Principal-in-Charge for the Ortega Highway Improvements project. The project involved the widening of the existing two-lane State Route (SR) 74 and improvements to San Juan Creek tributary drainage culverts on the Orange County side of the Cleveland National Forest. The project involved a three-year program to evaluate populations of the Endangered arroyo toad in adjacent San Juan Creek. The project required coordination with Caltrans, the U.S. Forest Service (USFS), the USFWS, the County of Orange, and the construction contractor to ensure that monitors were present during construction activities and that mitigation

measures were enforced. As part of the mitigation program required by the USFWS Biological Opinion, annual focused surveys and population studies for the arroyo toad were conducted. An invasive aquatic species control program to remove exotic wildlife species posing an immediate threat to the continued existence of the arroyo toad in San Juan Creek was also instituted. Target species included the red-swamp crayfish, American bullfrog, and African clawed frog. The invasive species control program utilized an adaptive methodology that experimented with several different equipment types and techniques to determine the most efficient means of removal, as well as data collection and analysis of the predatory behavior of the bullfrog in San Juan Creek. Aerials were examined to identify perennial water sources that could facilitate exotic species recruitment within a three-mile radius of the project site. Surveys were conducted at suitable sites to determine target species' presence or absence, and the control program was implemented at occupied sites. Given the success of the program, the USFWS requested continued funding as mitigation for other Caltrans 2010 emergency projects on SR-74. Accordingly, focused surveys and invasive species control in San Juan Creek were funded through 2011.

Falcon Ridge Substation Project Biological Resources Support, San Bernardino County, CA: Biologist for this Southern California Edison (SCE) project, which involved a biological assessment of multiple potential sites for construction of an energy substation and several potential sites for transmission lines to and from the sites in the Cities of Rialto, Rancho Cucamonga, and Fontana and unincorporated San Bernardino County. Ann conducted a special status plant species survey for this project.

Tehachapi Renewable Transmission Project Biological Resources Support, Southern California, CA: Principal-in-Charge for this Southern California Edison project. The Tehachapi Renewable Transmission Project (TRTP) consists of the construction of several substations and a total of 175 miles of transmission lines running from the Antelope Valley through the Angeles National Forest (ANF) and into the City of Ontario. The project's objective is to bring wind and solar sourced energy from the Tehachapi Mountains and western Antelope Valley to the Los Angeles basin. As part of a large, multi-company team, Psomas has provided a full range of biological services including vegetation mapping; focused surveys for plants, trees, birds, herpetofauna, and bats; nesting bird surveys; raptor surveys; pre-construction surveys and construction monitoring; and seed collection. Ann is providing project management and senior support for the portion of the alignment that traverses the ANF. Her responsibilities include technical staff management for focused surveys and construction monitoring; reviews of avoidance and mitigation plans; and guidance on a multitude of other tasks.

Three Oaks (Walnut Hills) Development Mitigation Project, Walnut, CA: Senior Project Manager for this project, which included biological resources and restoration ecology components. Biological surveys were completed to support the Biological Technical Report and EIR for the City of Walnut. The purpose of the surveys and documentation was to identify potential impacts to biological resources and to provide mitigation measures for the project site. Issues analyzed include potential

impacts to several special status resources including walnut trees, oak trees, and the coastal California gnatcatcher. A Biological Assessment was also prepared, and vegetation was cleared from the site in accordance with resource agency permits. Finally, the Walnut Hills Habitat Mitigation Monitoring Plan (HMMP) was created for approximately 120 acres of coast live oak woodland, walnut woodland, coastal sage scrub, and riparian scrub habitat. In accordance with USFWS and USACE consultation processes, Psomas oversaw the development of the mitigation program in project open space areas and on the manufactured slopes within the site. Monitoring activities associated with the HMMP consist of regular evaluations of site conditions and performance; ongoing coordination with the Landscape Contractor regarding site status and performance of remedial measures; and client and resource agency coordination regarding site progress. Ann managed the biological surveys for and the preparation of the Biological Technical Report, which supported an EIR. She also prepared a Biological Assessment for the formal consultation between the USFWS and the USACE. Additionally, Ann coordinated the vegetation clearing on site to avoid direct take of gnatcatchers in accordance with resource agency permits and consulted on site with resource agency personnel.

Newport Banning Ranch Biological Resources Services, Newport Beach, CA: Biological Resources Manager for this development project. In support of the project's EIR, Psomas completed a general biological survey, including vegetation mapping; focused surveys for special status plants, fairy shrimp, coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, and burrowing owl; a jurisdictional delineation and report; a biological technical report. Biologists also prepared the biological resources portions of the IS and EIR, which included preparing mitigation measures to mitigate for impacts as a result of the development. Ann conducted peer reviews of technical studies prepared by the Project Applicant; prepared the Biological Technical Report; served as an extension of City staff; and prepared the Biological Resources Section of the EIR. She also provided strategic planning for the City on biological resources issues related to project design, the entitlement process, and mitigation strategies.

Orange County Transportation Authority Baseline Biological Surveys for Acquired Properties, Orange County, CA. Ms. Johnston serves as the Principal-in-Charge for this project, which provides biological support services for the Orange County Transportation Authority (OCTA), including biological surveys and associated documentation. This work effort has allowed OCTA to establish a biological baseline of five acquired properties, with special attention on species covered under the draft OCTA National Community Conservation Plan (NCCP)/Habitat Conservation Plan (HCP). Surveys were conducted in a manner that allowed the greatest opportunity to also document non-Covered Species and habitats that add value to a potential conservation area. The specific survey and documentation tasks undertaken to establish the biological baseline include literature review; general biological surveys and vegetation mapping; acquisition, restoration, and management criteria evaluation; special status plant surveys; special status wildlife surveys for coastal California gnatcatcher, coastal cactus wren, least Bell's vireo, southern willow flycatcher, and special status bat species; a jurisdictional delineation and California

Rapid Assessment Method (CRAM) evaluation; and Biological Technical Reports documenting the findings of all these surveys.

Tehachapi Renewable Transmission Project Biological Resources Support, Southern California. From 2009 through 2016, Ms. Johnston provided strategic technical support for Southern California Edison's (SCE's) Tehachapi Renewable Transmission Project, which aims to bring wind and solar-sourced energy from the Tehachapi Mountains and western Antelope Valley to the Los Angeles basin. The project consists of the construction of several substations and a total of 175 miles of transmission lines spanning the Cities of Lancaster and Palmdale; the Antelope Valley in the western Mojave Desert; the Sierra Pelona and San Gabriel Mountains in the Angeles National Forest (ANF); and extending through the San Gabriel Valley to the City of Ontario. Over the course of this project, Ms. Johnston has provided project management and technical staff with senior support for the portion of the alignment that traverses the San Gabriel Mountains and the ANF. Her responsibilities included technical staff management for focused surveys and construction monitoring; reviews of avoidance and mitigation plans; and provision of guidance on a multitude of other tasks.

Santiago Creek Bike Trail North Capital Improvement Project No. 6103, City of Orange, CA. Ms. Johnston was the Project Manager for the biological support services for the Santiago Creek Bicycle Trail North project located in the City of Orange. This project would improve roadway and bicycle safety by constructing a Class 1 off-road bike trail consistent with the alignment adopted by the Bikeways Master Plan for the City of Orange. The bikeway would be constructed from Collins Avenue at Santiago Creek to the Cannon Street Bridge within a three-year time frame established by the County Proposition 1B Agreement. Her team conducted a literature review, general plant and wildlife surveys, vegetation mapping, and a jurisdictional delineation of the project site. A Biological Technical Report and Jurisdictional Delineation Report were prepared to evaluate project impacts on biological resources and resources under the jurisdiction of USACE, CDFW, and RWQCB. Focused surveys were conducted for special status plant species and the coastal California gnatcatcher.

Talega Development Project Environmental Impact Report and Biological Technical Report, San Clemente, CA. Ms. Johnston was the Senior Project Manager for the 3,510-acre Talega Development project in San Clemente. She managed the preparation of the Biological Technical Report and the biological resources section of the Talega Development Project EIR. She also prepared five separate Interim Habitat Loss Permit documents pursuant to Section 4(d) of the Federal Endangered Species Act (FESA). Ms. Johnston documented the development of direct, indirect, and cumulative project impacts and corresponding mitigation measures, which includes the restoration of over 133 acres of coastal sage scrub vegetation. Sensitive resources issues included coastal sage scrub, coastal California gnatcatcher, and thread-leaved brodiaea.

Fagan Canyon Project Biological Surveys and Biological Technical Report, Santa Paula, CA. Ms. Johnston was the Senior Project Manager for this project. The project site is approximately 1,400 acres and is located north and westerly of the City of Santa Paula in the foothills that

border the Santa Clara River Valley. The Fagan Canyon project involved the development of six new neighborhoods, including two schools, limited commercial spaces, six community parks, and other associated infrastructure. Ms. Johnston managed the biological surveys and the preparation of the Biological Technical Report, which supported an EIR for the project. The purpose of the surveys and documentation was to identify potential impacts to biological resources and to provide mitigation measures for the project site. Issues analyzed include potential impacts to several special status wildlife species including the southwestern pond turtle, two-striped garter snake, southwestern willow flycatcher, and least Bell's vireo.

North Yorba Linda Estates Biological Resources Documentation, Yorba Linda, CA. Ms. Johnston was the Project Manager on the Shapell Industries North Yorba Linda Estates project sites (Tentative Tracts 16208, 16209, and 16264) in Yorba Linda. She prepared the biological resources documentation and coordinated focused survey efforts for the 3 project sites, which total approximately 1,600 acres. Issues analyzed include potential impacts to coastal California gnatcatcher and special status habitats such as coastal sage scrub and riparian vegetation types. Ms. Johnston also prepared the Biological Assessment and mitigation programs for the project sites to prepare them for regulatory processing in coordination with the USFWS and USACE.

Northeast Bakersfield Open Space Area Vegetation Mapping, Wildlife Surveys, and Habitat Quality Ranking, Bakersfield, CA. Ms. Johnston was the Project Manager for the Northeast Bakersfield Open Space Area project. Ms. Johnston oversaw vegetation mapping, wildlife surveys, and habitat quality ranking of the approximate 4,700-acre project site. The purpose of the surveys was to characterize the habitat on the project site and identify high-priority areas for acquisition to become a preserve under the Metropolitan Bakersfield Habitat Conservation Plan. Geographic Information System (GIS) technology was used as a tool in order to analyze data collected on vegetation quality; historical and current observations of special status species; wildlife diversity; potential for restoration; and proximity to regional open space. Issues analyzed include potential impacts on special status plant species such as the Bakersfield cactus and special status wildlife such as the San Joaquin kit fox and blunt-nosed leopard lizard.

City of Ontario General Plan Update Biological Resources Component, Ontario, CA. Ms. Johnston served as Senior Project Manager for the development of the biological resources component of the General Plan update for the 8,900-acre sphere of influence area in Ontario. Working closely with planners, Ms. Johnston inventoried and evaluated the potential preservation/enhancement opportunities of the biological resources present in the sphere of influence for (1) incorporation into the Parks and Open Space elements or (2) development as contemplated in the Land Use element of the General Plan. Additionally, Ms. Johnston prepared habitat maps; identified presence or potential presence of Threatened or Endangered biological species; and provided recommendations to ensure that quality biological resources are protected for present and future residents.

Brian Daniels

Senior Biologist/Ornithologist

EDUCATION

1980/BS/Zoology/California State University, Long Beach

CERTIFICATIONS

10(a)(1)(A) Permit for yellow-billed cuckoo, California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher/No. TE821401-5/U.S. Fish and Wildlife Service

Principal Investigator for Psomas' CDFW Entity Scientific Collecting Permit/SC-004535/California Department of Fish and Wildlife

PROFESSIONAL AFFILIATIONS

Western Field Ornithologists

EXPERIENCE

With Psomas: 21 years/With Other Firms for: 18 years

Brian Daniels has been an active Biologist and Field Ornithologist in California for 39 years, with experience throughout the southwestern United States. He has conducted a variety of bird surveys for federal and State agencies, including the U.S. Fish and Wildlife Service (USFWS), the Bureau of Land Management (BLM), and the California Department of Transportation (Caltrans). He is permitted to conduct surveys for the federally listed Threatened coastal California gnatcatcher and federally listed Endangered southwestern willow flycatcher, and least Bell's vireo, and to monitor the nests of the coastal California gnatcatcher and the federally listed Endangered least Bell's vireo. Brian specializes in directed surveys for special status bird species, including the species listed above.

Experience

Centennial Project Biological Resources Services, Los Angeles County, CA: Ornithologist for the development of a planned new community located at the northwestern tip of Los Angeles County along the Kern County border. In support of the project's Environmental Impact Report (EIR)., Psomas mapped vegetation; completed focused surveys for plants, fairy shrimp, special status herpetological species, least Bell's vireo, southwestern willow flycatcher, mountain plover, Swainson's hawk, and spotted owl; managed Tehachapi pocket mouse trapping and grassland studies; completed a jurisdictional delineation and report and an oak tree survey; and completed tricolored blackbird and condor studies. Psomas also prepared a biological constraints analysis and Biota Report and managed the Significant Ecological Area Technical Advisory Committee review process of these documents. Psomas organized and managed the project's Mitigation Preserve Review and created a Conceptual Oak Woodland Mitigation Plan. Finally, the Biological Resources Team prepared the documents Biological Resources EIR Section, which summarized the complete work effort. Brian has conducted bird surveys including focused surveys for the for the Swainson's hawk, southwestern willow flycatcher, least Bell's vireo, and tricolored blackbird. These surveys included the identification and determination of breeding status for five Swainson's hawks that summered on the project site. He assisted in the preparation of a Biological Resources Assessment Technical Report for the Los Angeles County Significant Ecological Area Technical Advisory Committee and the Biological Resources Section of the EIR.

NorthLake Specific Plan Environmental Impact Report, Los Angeles County, CA: Senior Biologist for the development of an approximate 1,330-acre project site near Castaic Lake in unincorporated Los Angeles County. This project involves the development of a mix of single-family units; multi-family units; commercial, industrial, and recreational uses; open space; and school and park facilities. Brian served as Senior Ornithologist for focused surveys for the burrowing owl, southwestern willow flycatcher, coastal California gnatcatcher, and least Bell's vireo.

Additionally, Brian has assisted in other surveys on the project site including focused surveys for the arroyo toad.

Soft-Bottom Flood-Control Channels Feasibility Studies, Los Angeles County, CA: Senior Biologist for Biological Technical Assessment Reports and Recommendations in support of five feasibility studies conducted to satisfy RWQCB Waste Discharge Requirements (WDRs), which mandate that a feasibility study be conducted of all watersheds where the Los Angeles County Flood Control District (LACFCD) maintains soft-bottom flood control channels. The purpose of the feasibility studies is to provide a hydraulic analysis of each soft-bottom channel reach to determine whether or not the reach has the capacity for additional vegetation. Based on the results of the hydraulic analysis and biological studies, appropriate recommendations are developed for channel reaches with capacity for and with insufficient capacity for additional vegetation.

San Gabriel River Master Plan and Program Environmental Impact Report, Los Angeles County, CA: Senior Biologist for this LACFCD project that studied over 30 miles of the San Gabriel River from Cogswell Reservoir in the Angeles National Forest to the River's end in the Pacific Ocean near Seal Beach. Brian provided the biological resources existing conditions, impact analyses, and mitigation components of the San Gabriel River Master Plan and Program EIR. He also participated in the master planning team workshops that compiled biological resource opportunities in the study area.

Arroyo Seco Canyon Project Initial Study/Mitigated Negative Declaration, Pasadena, CA: Senior Biologist for the IS/MND for this project, which proposes improvements in three areas along the Upper Arroyo Seco in the City of Pasadena, north of Devil's Gate Dam. Improvements proposed in Area 1 include habitat restoration along the stream channel, a new nature trail, and a rest area/picnic area, along with demolition of the existing Headworks structure. New diversion and weir structures, a control equipment enclosure, and improvements to the damaged portion of the Gabrielino Trail/access road are proposed in Area 2. A small parking lot, additional and expanded spreading basins, a restroom, and a guard station are proposed in Area 3, which is located within the Hahamongna Watershed Park Master Plan boundaries. The purpose of the project is to increase the water infiltration into the Raymond Basin to supplement Pasadena Water and Power's drinking water supplies. Brian served as Senior Biologist for preparation of a Biological Technical Report. He also served as Senior Ornithologist along the Arroyo Seco for focused surveys for the southwestern willow flycatcher and least Bell's vireo.

Former Whittaker-Bermite Facility Project Focused Plant Surveys and Biological Monitoring, Santa Clarita, CA: Biologist for the approximate 996-acre former Whittaker-Bermite Facility project located in the City of Santa Clarita in Los Angeles County. The project site is a former munitions and explosives manufacturing facility under the jurisdiction of the California Department of Toxic Substances Control, which oversees contamination remediation efforts. Manufacturing activities resulted in perchlorate soil contamination (a Chemical of

Potential Concern) in portions of the site; the proposed project consisted of the excavation of contaminated soils, soil transportation off site for disposal, or on-site soil treatment within the 230 Operable Unit 1 (OU1) remedial site. Brian monitored native and non-native vegetation removal prior to the nesting bird season on the project site.

Mullally Debris Basin Enlargement Project, La Canada Flintridge, CA: Senior Biologist for the Los Angeles County Flood Control Division's Mullally Debris Basin Enlargement Project in the City of La Canada Flintridge. Brian prepared a Biological Assessment/Biological Evaluation for the project since part of the debris basin property was on ANF lands. Additionally, Brian conducted an analysis of the project's impacts on 12 Management Indicator Species identified by the USFS in the ANF Land Management Plan.

Long Point Resort Environmental Impact Report Biological Technical Support, Rancho Palos Verdes, CA: Senior Biologist for preparation of a Biological Technical Report for the Long Point Resort project site on the Rancho Palos Verdes Peninsula. Brain provided baseline biological surveys including focused surveys for the coastal California gnatcatcher.

Santa Clara River South Fork Drop Structure and Rock Groins Project, Los Angeles County, CA: Biologist for this project for the Los Angeles County Department of Public Works (LACDPW). Brain conducted baseline surveys (including habitat assessments to determine the potential for special status species to occur at the project site) used for the preparation of a Biological Technical Report. He also served as an Ornithologist and conducted focused surveys for the southwestern willow flycatcher and least Bell's vireo.

North Park Specific Plan Environmental Impact Report, Moorpark, CA: Senior Biologist for the preparation of an EIR for the North Park Specific Plan. This proposed Specific Plan project would allow for the development of 1,650 residential dwelling units on 769.7 acres of the 3,586.3-acre site. Other proposed related and supporting uses would include a 5-acre neighborhood commercial center; a 12-acre school site; a 29.1-acre public youth sports park; 2 additional public parks; 10 private parks; a publicly accessible 52-acre lake; a fire station site; and a day care/church site. Ancillary land uses would include, but are not limited to, water reservoirs, detention basins, and a fire service helispot. Brian conducted baseline surveys and studies for the preparation of a Biological Technical Report for the project. He managed a wildlife movement study and also served as an Ornithologist for focused surveys for the coastal California gnatcatcher.

Zone 1 Ditch Project, Los Angeles County, CA: Senior Biologist for the Zone 1 Ditch Project Baseline and Focused Surveys. Brian conducted baseline surveys and studies (including habitat assessments to determine potential biological constraints) for the preparation of a Biological Technical Report. He also served as an Ornithologist for focused surveys for the southwestern willow flycatcher and least Bell's vireo.

Brian Daniels (Continued)

Dayton Canyon Project, Los Angeles County, CA: Biologist for the Dayton Canyon project in western Los Angeles County. Brian provided baseline documentation of the biological resources associated with the project and provided text and analysis for the preparation of a Biological Technical Report.

Los Angeles Mission College Golf Course Project, Sylmar, CA: Biologist for the proposed Mission College Golf Course located in the Pacoima Wash. Brain conducted focused surveys for the coastal California gnatcatcher, southwestern willow flycatcher, and least Bell's vireo.

Santa Anita Reservoir Middle Sediment Placement Site Project, Arcadia, CA: Biologist for this project to remove sediment from the reservoir, which filled nearly to capacity following the large fires that occurred in 2009. Brian monitored vegetation removal on the Middle Sediment Placement Site.

Centennial Corridor Biological Resources Services, Bakersfield and unincorporated Kern County, CA: Ornithologist for this project, which proposes to extend the State Route (SR) 58 in a westerly direction from its current terminus at SR-99 to provide an ultimate connection to Interstate (I) 5. Psomas completed vegetation mapping; general plant and wildlife surveys; and focused surveys for special status plants (over multiple years), western burrowing owl, and Swainson's hawk. Psomas prepared the Natural Environment Study (NES) that evaluated project impacts of three alternatives on biological resources and provided mitigation measures consistent with the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP), the Kern Water Bank Habitat Conservation Plan (HCP), and the Kern Valley Floor HCP. Psomas also completed a Biological Assessment (BA) to address project impacts on the San Joaquin kit fox. Brian conducted nesting Swainson's hawk surveys for this project.

Bouquet Canyon Development Project Biological Technical Report and Focused Surveys, Santa Clarita, CA: Senior Biologist for the Bouquet Canyon Development project, a proposed residential development near Santa Clarita in Los Angeles County. The project involved the construction of 334 large-lot, single-family residential dwelling units; parks; 1 elementary school; and approximately 237 acres of open space, including horse trails. Off-site improvements, including water tanks and improvements to Bouquet Canyon Road, would be required to provide sufficient utilities and vehicular access. Brian provided baseline documentation of the biological resources associated with the project, and served as an Ornithologist for focused surveys for the southwestern willow flycatcher, least Bell's vireo, and coastal California gnatcatcher. Additionally, he also helped prepare the Biological Technical Report for the project.

Yerba Buena School Biological Constraints Report, Oak Tree Survey and Focused Surveys, Los Angeles and Ventura Counties, CA: Senior Biologist for a proposed school on the Los Angeles/Ventura County line near the City of Agoura. Brian conducted general wildlife surveys; conducted focused surveys for the least Bell's vireo and southwestern willow flycatcher; and prepared a Biological Constraints Report for the project. During construction, Brian served as biological monitor.

Presidential Substation Project, Ventura County, CA: Senior Biologist for Southern California Edison's project, which involved (1) a biological constraints analysis of two potential sites for construction of an energy substation and of several potential transmission line alignments to and from the potential sites; (2) focused surveys for coastal California gnatcatcher and special status plants in order to determine presence or absence of listed species; and (3) analysis of potential impacts to the Riverside fairy shrimp and its critical habitat along with potential impacts to jurisdictional drainages. Psomas prepared a Biological Resources Technical Report and the Biological Resources section of the Proponent's Environmental Assessment (PEA). Brian performed assessments used to determine which special status species require focused surveys and conducted focused surveys for the coastal California gnatcatcher. Brian also provided support in preparation of a Biological Resources Technical Report for the project.

Mascot Substation Project Biological Services, Hanford, CA: Ornithologist for Southern California Edison's (SCE's) project, which included multiple alternative sites and transmission line alignments in the City of Hanford. This project involved a biological assessment of two potential sites for construction of an energy substation and several potential sites for transmission lines to and from the sites. Brian performed habitat assessments for the project and was Ornithologist for 2012 focused Swainson's hawks surveys.

Mountain Cove Residential Development Project Regulatory Agency Coordination and Mitigation Monitoring, Azusa, CA: Biologist for the regulatory agency coordination and monitoring that mitigates for impacts as a result of this restoration project. The project enhanced and restored over 15 acres of alluvial sage scrub and willow riparian scrub and included a giant reed eradication program in the San Gabriel River. Specific monitoring activities included developing a Landscape Maintenance Manual; training and overseeing the Landscape Contractor regarding the implementation of the Landscape Maintenance Manual; monitoring long-term vegetation growth and health; and developing regular progress reports and annual site-status reports that document site conditions. Brain performed baseline surveys and studies used in preparation of a Biological Technical Report.

Soft-Bottom Channel Project Focused Surveys and Survey Report, Los Angeles County, CA: Senior Biologist for the Los Angeles County Department of Public Works' Soft-Bottom Channel project. Lead Biologist for monitoring of annual clearing activities in over 100 soft-bottom flood control channel reaches maintained by the Los Angeles County Flood Control District (LACFCD). On-going tasks include pre- and post-clearing documentation of biological resources within these channel reaches and monitoring during annual clearing activities to facilitate compliance with permits issued by the USACE, the CDFW, and the RWQCB. On-call tasks have included nesting bird surveys, constraints analysis, and biological assessments of other flood control facilities ranging from structures as large as dams (e.g., Pacoima and Santa Anita Dams) to small outlets in sensitive habitats (e.g., Santa Monica Canyon ocean outlet). Since 2002, Brian has managed and conducted focused surveys for the southwestern willow flycatcher and least Bell's vireo at those soft-bottom flood control channels with

Brian Daniels (Continued)

suitable habitat. He is also the Lead Ornithologist for monitoring of the LACFCD clearing activities in those channel reaches that support occupied least Bell's vireo habitat in accordance with USFWS conditions included in the USACE permit through formal and informal consultations. Brian has also served as the Lead Biologist for managing the performance of focused surveys in these channel reaches for other listed species such as the Santa Ana sucker, unarmored threespine stickleback, and arroyo and red-legged frogs.

Santa Anita Stormwater Management and Seismic Strengthening Project, Biological Technical Report, Focused Biological Surveys, Mitigated Negative Declaration, Biological Assessment/Biological Evaluation, Management Indicator Species Report, Arcadia, Los Angeles County, CA: Ornithologist for this project located in Arcadia. The proposed project would modify Santa Anita Dam, the Headworks facility, and the Debris Dam to strengthen them and to automate operations. The project also includes constructing a helipad and new facility structures at the Dam; repairing a slope and upgrading a water line from a water tank to the Dam facilities; replacing the entrance gate to the Dam facilities and making it automated (including installation of power along the access road to the gate); and replacing a bridge to the Arcadia Wilderness Park. As Senior Ornithologist since 2009 for this project, Brian has conducted focused southwestern willow flycatcher and least Bell's vireo surveys. He has provided biological monitoring during site preparation for a sediment placement site that required the removal of approximately 180 coast live oak and western sycamore trees.

Santa Anita Debris Basin Project Biological Services, Los Angeles County, CA: Senior Biologist for the Los Angeles County Department of Public Works' Santa Anita Debris Basin project. Brian conducted a biological reconnaissance surveys of the debris basin in 2005. Since that time, he has provided a variety of biological services including being a biological monitor for emergency repairs at the debris basin that included construction of a finger levee for diverting flows from a failed slope. He was also the biological monitor for the clearing of a low-flow channel to reach the debris basin tower in accordance with the LACFCD's Long-Term Streambed Alteration Agreement with the CDFW for debris basins. As required by the agreement for this particular debris basin, Brian prepared a vegetation management plan. He has also served as Senior Ornithologists for focused surveys for the southwestern willow flycatcher and least Bell's vireo.

As-Needed Biological Services for Debris Basins, Los Angeles County, CA: Senior Biologist for various tasks at debris basins maintained by the Los Angeles County Department of Public Works Flood Maintenance Division. Tasks under this contract have included baseline biological surveys and habitat assessments of over 150 debris basins located primarily in the watersheds of the Los Angeles, San Gabriel, and Santa Clara Rivers. Brian was the lead for these surveys and habitat assessments. He also performed focused surveys at those debris basins with potentially suitable habitat for southwestern willow flycatcher and least Bell's vireo. Brian prepared environmental documentation that was used to obtain a Long-Term Streambed Alteration Agreement permit from the CDFW for the LACFCD annual

maintenance activities at 162 debris basins from August 18, 2011, to December 31, 2029.

Southern California Gas Company North-South Pipeline Project, Riverside and San Bernardino Counties, CA: Ornithologist for this project, which proposes to construct a new pipeline from Adelanto to Moreno Valley to ensure a reliable supply of gas to Southern California. The project includes the construction and installation of an approximate 65-mile-long, 36-inch-diameter natural gas transmission pipeline, including compressor and pressure limiting stations. Psomas conducted focused surveys and prepared reports for many special status plant and wildlife species, including bat species, burrowing owl, coastal California gnatcatcher, desert tortoise, fairy shrimp, Mohave ground squirrel, raptors, and riparian birds. Psomas also performed small mammal trapping, weed surveys, tree surveys, and a jurisdictional delineation. In addition, Psomas prepared a Biological Technical Report, a Jurisdictional Water Resources Existing Conditions Report, a Biological Assessment/Biological Evaluation (pursuant to U.S. Forest Service Standards), a Hydrology and Water Quality Assessment, and a Land Use Assessment. Psomas also prepared the Application for Federal Clean Water Act Section 401 Water Quality Certification, Pre-Construction Notification under the Federal Clean Water Act Section 404 Nationwide Permit, and Notification of Lake or Streambed Alteration Agreement in accordance with Section 1602 of the California Fish and Game Code. Brian conducted surveys for sensitive avian species including all project surveys for the Endangered southwestern willow flycatcher. He prepared sections of the Project's Biological Technical Report for the Environmental Impact Report (EIR).

Pacoima Dam Sediment Removal Project, Los Angeles County, CA: Ornithologist for various biological surveys associated with this project. The Department of Public Works has proposed to remove excess sediment from Pacoima Reservoir to restore its original water storage capacity by sluicing material to a downstream debris basin. In order to evaluate the impacts associated with sediment removal and dam operations, a variety of biological surveys and analysis have been performed. Brian served as Senior Ornithologist for focused surveys for the southwestern willow flycatcher and least Bell's vireo.

Cogswell, San Gabriel, and Morris Dams Maintenance Project, Los Angeles County, CA: Senior Biologist for a biological constraints analysis of maintenance activities conducted by the LACFCD at Cogswell, San Gabriel, and Morris Dams on the San Gabriel River in the Angeles National Forest. This project required surveys, analysis, and identification of potential biological constraints, if any, at 84 separate maintenance sites for the three dams. The biological constraints analysis provided recommendations for managing the identified biological constraints.

Tehachapi Renewable Transmission Project Biological Resources Support, Southern California, CA: Biologist for this Southern California Edison project. The Tehachapi Renewable Transmission Project (TRTP) consists of the construction of several substations and a total of 175 miles of transmission lines running from the Antelope Valley through the Angeles National Forest (ANF) and into the City of Ontario. The project's objective is to bring wind and solar sourced energy from

the Tehachapi Mountains and western Antelope Valley to the Los Angeles basin. As part of a large, multi-company team, Psomas has provided a full range of biological services including vegetation mapping; focused surveys for plants, trees, birds, herpetofauna, and bats; nesting bird surveys; raptor surveys; pre-construction surveys and construction monitoring; and seed collection. Brian provided biological monitoring services to facilitate geotechnical testing of electrical transmission tower installation sites in the Angeles National Forest (ANF). In 2010 and 2011, Brian conducted habitat assessments for spotted owl and southwestern willow flycatcher along two transmission line corridors through the ANF including areas burned during the 2009 Station Fire. Brian also provided biological monitoring services at material yards that included pre-construction surveys (sweeps) and construction monitoring in vicinity of active bird nests. Additionally, Brian conducted focused surveys for spotted owl, southwestern willow flycatcher, and least Bell's vireo.

Big Tujunga Dam Operation and Maintenance Update Project, Los Angeles County, CA: Ornithologist for the Big Tujunga Dam Operation and Maintenance project. The project involved approval of a revised Operation and Maintenance Plan for water releases from the Big Tujunga Reservoir resulting from seismic retrofit and spillway modifications of the Big Tujunga Dam and the associated increase in reservoir capacity. The impact analysis addressed a 13-mile segment of the Big Tujunga Wash from Big Tujunga Dam to Hansen Dam within the Angeles National Forest and unincorporated Los Angeles County. Brian has served as Senior Ornithologists for focused surveys for the southwestern willow flycatcher and least Bell's vireo.

Marc Blain

Biological Resources Manager/Associate

EDUCATION

1997/MS/Applied Ecology and Conservation Biology/Frostburg State University. Frostburg, MD

1994/BS/Environmental Biology/California State University, Northridge

CERTIFICATIONS

Independent Researcher for Psomas' CDFW Entity Scientific Collecting Permit/SC-004535/California Department of Fish and Wildlife

PROFESSIONAL AFFILIATIONS

Association of Environmental Professionals

Union of Concerned Scientists

TRAINING

California Grasses Identification Class Rancho Santa Ana Botanic Garden

Plant Families Class Rancho Santa Ana Botanic Garden

EXPERIENCE

With Psomas: 13 years/With Other Firms for: 13 years

Marc Blain, Biological Resources Manager, has over 26 years of experience in wildlife biology, conservation biology, natural resource planning, and training in various other areas in the environmental field. He has a wide range of knowledge on the plants, wildlife, and vegetation communities of Southern California, especially those listed as Threatened or Endangered. As the Biological Resources Manager, he has managed a wide variety of project types including flood control, utility, private development, transportation, and dam/reservoir project. He is an expert on development of sustainable management practices relative to natural resources. More specific areas of expertise include avian ecology, wildlife movement, and conservation biology. He is also experienced with the natural resources regulations and compliance requirements of the Federal Endangered Species Act (FESA), the California Endangered Species Act (CESA), CEQA, NEPA, NCCP Act, CWA, MBTA, California Fish and Game Code, and other biological statutes of regional Counties and Cities.

Experience

City of Arcadia General Plan Update Program Environmental Impact Report, Arcadia, CA: Biological Resources Manager for the Program EIR for the City's General Plan Update, which emphasized the maintenance of existing land uses and redevelopment in a few select areas, as the City is largely built out. The General Plan was developed to accommodate the Gold Line station proposed in the City and anticipated the revitalization of aging commercial areas through the incorporation of mixed-use zones along major transit corridors. Additionally, the redevelopment of approximately 80 acres of existing quarry along Lower Azusa Road was anticipated in the General Plan. Marc managed the biological resources field studies; assessments for special status species potential; biological resource impact analysis; and the associated documentation presented in the EIR.

Los Angeles County Department of Public Works, Flood Maintenance Division As-Needed Biological Services Contract, Los Angeles County, CA: Project Manager for an As-Needed services contract with the Los Angeles County Department of Public Works (LACDPW), Flood Maintenance Division. Marc is responsible for managing a variety of projects and on-going consultation services. Projects range from focused surveys for special status plants and animals within County-operated flood-control channels to emergency Section 7 Consultations with the USFWS; he has also conducted CEQA documentation for long-term maintenance permits from the CDFW. Responsibilities involve daily communication with LACDPW staff to assist in environmental compliance issues as they arise. Projects frequently require Marc to communicate directly with regulatory agencies such as the USACE, CDFW, RWQCB, and USFWS to resolve potential impacts issues.

Los Angeles County Department of Public Works, West Fork Road Emergency Bank Stabilization Project Biological Mitigation and Monitoring, Los Angeles County, CA: Project Manager for this project for the LACDPW. The project involved potential impacts resulting from repair work to federally Endangered species in a section of the West Fork of the San Gabriel River. Marc coordinated biological monitoring and mitigation requirements among several State and federal agencies and the LACDPW. Biological surveys, fish surveys, and construction monitoring for several special status species were conducted. The project was successfully completed following the submittal of a detailed Biological Assessment, prepared under Marc's direction, to the regulatory agencies.

Los Angeles County Department of Public Works, Bouquet Channel Emergency Clearing and Biological Monitoring, County of Los Angeles, CA: Project Manager for the Bouquet Channel Emergency Clearing project. This project involved potential impacts from repair activities to a State- and federally-listed Endangered fish species and required oversight of the listed species' capture and relocation and the preparation of the associated documents. Marc directed biological monitoring to ensure biological resources protection during channel vegetation clearing activities. He also coordinated among several State and federal agencies and LACDPW maintenance and management personnel, and he negotiated with resource agencies to determine the most appropriate measures to ensure minimal impacts to sensitive resources.

Pitchess Detention Center Women's Village Project Environmental Impact Report, Los Angeles County, CA: Biologist for the Pitchess Detention Center (PDC) Women's Village Project EIR. The proposed Project, which is located in Los Angeles County, would involve the partial demolition and redevelopment of approximately 23 acres of the PDC and the construction of a 1,156-bed medium-security, rehabilitation-based, female inmate detention facility with a 26-bed medical clinic and appurtenant facilities. Several existing structures would remain and be incorporated into the Project, including the Ranch Field Office, the central kitchen, the chapel, and four dormitories, while several other buildings would be demolished. A total of 16 cottages would be constructed and configured as a village-style setting, which maximizes rehabilitative, educational, and vocational opportunities to reduce recidivism and associated long-term detention costs. Areas of special consideration include public outreach and coordination with interested stakeholders; regulatory permitting from the USACE, Los Angeles RWQCB, and CDFW; and utility infrastructure improvements, including the potential expansion of the County's co-generation facility to accommodate increased energy demands. Marc performed biological resources assessment, including general surveys, vegetation mapping, wildlife constraints analysis, and jurisdictional determination

Triton Power Substation Project Focused Surveys and Technical Documents, Temecula, CA: Project Manager for Southern California Edison's (SCE's) project, which involved a biological assessment of 15 potential substation sites and several transmission lines in Temecula. He determined which special status species required focused surveys, implemented and managed focused surveys, and prepared biological

technical documents pursuant to CEQA and suitable for the California Energy Commission. Due to the Client's status as a special participating member of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), Marc conducted a unique analysis that compares the regulatory requirements should the project be pursued under the Western Riverside County MSHCP with the requirements should the project proceed without relying on the Western Riverside County MSHCP. This analysis provided the Client with the means to make an informed decision on how to proceed with environmental compliance.

Brea Area Development, California Environmental Quality Act Biological Assessment, Los Angeles County, CA: Biologist for a CEQA-level assessment of a 3,000-acre property that involved a constraints analysis; vegetation mapping; focused surveys for the federally listed coastal California gnatcatcher, Quino checkerspot butterfly, least Bell's vireo, southwestern willow flycatcher, and sensitive plants; a CEQA Biological Resources Assessment; and a Biota Report for the Los Angeles County Significant Ecological Area Technical Advisory Committee (SEATAC).

Pechanga Reservation Biological Surveys, Riverside County, CA: Biologist for annual avian inventory and special status bird surveys for the coastal California gnatcatcher, southwestern willow flycatcher, and least Bell's vireo throughout the Pechanga Reservation. Project responsibilities include review of annual environmental documentation and a constraints analysis for specific proposed projects. Due to the highly sensitive nature of the property, all surveys are conducted with Cultural Resources Monitors and often involve communication with tribal council leaders and other tribal members. Marc annually provides maps of all raptor nests detected during survey work and actively tracks the status of golden eagles on site.

Arroyo Seco Drainage Improvement Projects, Biological Survey Coordination and Documentation, Pasadena, CA: Project Manager for a series of projects associated with the Arroyo Seco drainage improvements in Pasadena. In the Upper Arroyo Seco, projects included focused surveys for the California red-legged frog, a habitat assessment for the California gnatcatcher, nesting bird surveys, and a review of a CDFW Streambed Alteration Agreement issued for a bridge replacement project. Lower Arroyo Seco projects have consisted of nesting bird surveys, nesting raptor surveys, streambed maintenance monitoring, and individual plant identification for preservation within a restoration area. Marc was responsible for coordinating all biological surveys and documentation associated with the various projects and providing consultation services to City staff.

Portrero 2007 DSP Circuit Project Biological Surveys and Impact Assessment, Ventura County, CA: Biological Resources Manager for biological surveys and evaluated the impact assessment for SCE utility line repairs in Ventura County. He coordinated special status plant surveys to identify special status plant species within the survey area, which includes a 30-foot buffer around each utility pole and the access route from the roadway to the pole along the entire 3-mile alignment.

Rio Vistancia Development Project, Biological Surveys and Construction Monitoring, Needles, CA: Project Manager for the Rio Vistancia Development project. He coordinated focused surveys for special status species and conducted a biological impact assessment. He also conducted protocol surveys for the southwestern willow flycatcher in 2004, which resulted in the detection of Arizona Bell's vireo. Additionally, Marc conducted a desert tortoise habitat assessment, performed construction monitoring, and reviewed the project's CDFW Streambed Alteration Agreement conditions pertaining to wildlife.

Interstate 15/California Oaks Road Interchange Improvement Project, Biological Surveys and Natural Environment Study, Murrieta, CA: Biologist for this project to modify the existing Interstate 15/California Oaks Road interchange by relocating and widening the existing northbound and southbound off-ramps; providing transitions for eastbound and westbound turn pockets to California Oaks Road; and providing northbound and southbound Interstate 15 loop on-ramps. Marc completed a literature review, mapped vegetation, and completed general plant surveys. He also assisted in the completion of a Natural Environment Study for Caltrans.

Castaic Lake Water Agency Recycled Water Master Plan Program Environmental Impact Report, Los Angeles County, CA: Biologist for this Program EIR. The project included the construction of a distribution system throughout the City of Santa Clarita and some unincorporated areas of Los Angeles County; eight aboveground reservoir tanks; recycled water pump station(s); booster pump stations; and aquifer storage and recovery-related facilities. Sources of recycled water would include the Valencia Water Reclamation Plant, the Berry Petroleum Oil Field, and the Newhall Ranch Water Reclamation Plant. The first phase of implementation involved the Northwest Spur Pipeline, which was analyzed at a project level in the EIR. Marc conducted a general plant and wildlife survey and mapped vegetation for the Northwest Spur Pipeline component of the Castaic Lake Water Agency's Recycled Water Master Plan. He also prepared the CEQA-level Biological Resource Assessment, which is included as an appendix to the Program EIR.

Santa Clarita Valley Sanitation District Reduced Discharge Technical Biological Study of the Upper Santa Clara River, Los Angeles County, CA: Project Manager for a biological study, which involved detailed analysis of the existing river conditions throughout the study area, including hydrology, vegetation, substrate, and stream bed morphology. Field studies included monitoring for flow change over 24-hour periods at various locations in the River. Modeling was prepared to assess potential project changes on stream flows within the section of the River. Using the field study results, hydrological modeling, and historical analysis, the potential effects of the projected changes in stream flow were assessed. The findings were documented in detail in a technical report which provided the client with necessary data to proceed with project design and regulatory compliance. As the Project Manager, he was responsible for managing the technical study and directed surveys to determine presence or absence and relative abundance of special status fish species with special attention to the federally Threatened unarmored three-spine stickleback.

Silver Lake Reservoir Improvement Project Biological Study and Public Outreach, Silver Lake, CA: Project Manager for a biological study and outreach program for the Silver Lake Reservoir Improvement project. He managed a study to determine the potential effects on wildlife resources that might result from allowing public access to the "meadow area" of the Silver Lake Reservoir. A substantial element of this project was public outreach, and Marc assisted the City of Los Angeles by speaking to members of the community to reassure them of the project's sensitivity to biological resources. Marc was able to successfully communicate with project skeptics and speak with many members of the public with various opinions at once.

Monk Hill Treatment Project Habitat Assessment, Pasadena, CA: Biologist for a biological assessment of this project. A habitat assessment was conducted to determine potential biological constraints to the proposed pipeline repair project located on the Jet Propulsion Laboratory (JPL) facility in Pasadena. Based on the thorough documentation Marc prepared for the assessment, the City was able to convince the USFWS that protocol surveys for the California gnatcatcher were not warranted. Nesting bird surveys were recommended and successfully conducted within the impact area, and the project was completed with minimal constraints.

Cagney Ranch Focused Survey Reports, Los Angeles County, CA: Senior Biologist for this project, located in the Santa Susana Mountains just north of State Route 118. He prepared the focused survey reports and analyzed potential impacts to coastal sage scrub within the nexus of USACE's jurisdictional waters. Marc also managed the team that monitored riparian and upland habitat and he completed annual surveys and documentation.

Centennial Project Biological Resources Services, Los Angeles County, CA: Biologist for the development of a planned new community located at the northwestern tip of Los Angeles County along the Kern County border. In support of the project's EIR, Psomas mapped vegetation; completed focused surveys for plants, fairy shrimp, special status herpetological species, least Bell's vireo, southwestern willow flycatcher, mountain plover, Swainson's hawk, and spotted owl; managed Tehachapi pocket mouse trapping and grassland studies; completed a jurisdictional delineation and report and an oak tree survey; and completed tricolored blackbird and condor studies. Psomas also prepared a biological constraints analysis and Biota Report and managed the Significant Ecological Area Technical Advisory Committee review process of these documents. Psomas organized and managed the project's Mitigation Preserve Review and created a Conceptual Oak Woodland Mitigation Plan. Finally, the Biological Resources Team prepared the documents Biological Resources EIR Section, which summarized the complete work effort. Marc's primary responsibility involved the preparation of a Biological Resources Assessment Technical Report for the Los Angeles County SEATAC and the biological resources section of the EIR. He is also responsible for directing a team of biologists conducting a diverse array of studies for the biological resources documentation and the assessment of the resources' regional distribution. Marc assists the Client with the development of strategies for biological resources mitigation and with

permit acquisitions from resource agencies; he also represents the Client in consultations with the Los Angeles County Department of Regional Planning.

Westlake Village Business Park Specific Plan Program Environmental Impact Report, Westlake Village, CA: Biological Resources Manager for the preparation of the Program EIR. The proposed Specific Plan would promote the revitalization of underutilized or obsolete properties and the intensification and adaptive reuse of existing developments within a 200-acre planning area north of the Ventura Freeway (Interstate 101). The proposed Specific Plan would allow higher development intensities and mixed use developments to replace the existing land uses, along with infrastructure improvements throughout the planning area. The Program EIR analyzes the indirect impacts of adoption of the Specific Plan on all environmental issues, as associated with future redevelopment and planned infrastructure improvements. Marc manages all aspects of Biological Resources for this project, including managing surveys for the project and the preparation of all biological resources-related documentation.

Tesoro del Valle Supplemental Biological Resources Assessment and Environmental Impact Report, Los Angeles County, CA: Biological Resources Manager for Tesoro del Valle project, which involves the buildout of Phases B and C. The project involves the construction of 710 single-family residential dwelling units; a fire station site; parks and recreational amenities (i.e., clubhouse, pool, trails); and supporting roadway and utility infrastructure within Phases B and C of the Tesoro del Valle project. The project involves a density transfer of 474 un-built residential units from Phase A into Phases B and C. The proposed project would not increase the total 1,791 residential units previously approved for the Tesoro development. A revision to the existing Conditional Use Permit for Hillside Management and Density Controlled Development would be required, as would renewed permits for oak tree and jurisdictional impacts. Areas of special consideration include impacts to biological and jurisdictional resources, land use, and water supply. Marc was responsible for overseeing plant and wildlife focused surveys for Threatened and Endangered species; assessing biological resources impacts of the proposed project; and providing documentation in technical reports and the EIR.

Presidential Substation Project, Ventura County, CA: Biological Resources Manager for Southern California Edison's project, which involved (1) a biological constraints analysis of two potential sites for construction of an energy substation and of several potential transmission line alignments to and from the potential sites; (2) focused surveys for coastal California gnatcatcher and special status plants in order to determine presence or absence of listed species; and (3) analysis of potential impacts to the Riverside fairy shrimp and its critical habitat along with potential impacts to jurisdictional drainages. Psomas prepared a Biological Resources Technical Report and the Biological Resources section of the Proponent's Environmental Assessment (PEA). He is responsible for overseeing the preparation of a Biological Resources Technical Report (recently completed) and the Biological Resources section of a Proponent’s Environmental Assessment (PEA).

Marc Blain
(Continued)

Lancaster Solar Energy Project Initial Study/Mitigated Negative Declaration, Lancaster, CA: Biological Resources Manager for the IS/MND for the development of a Solar Energy Project capable of generating up to two megawatts (MW) of electricity under peak solar conditions, with future expansion to four MW. The project site includes approximately 63 acres of undeveloped portions of 2 County-owned parcels in Lancaster. The initial two-MW facility has been constructed and provides offsets for energy use from the adjacent Mira Loma Detention Center and the Challenger Memorial Youth Center. The site contains a potentially historic on-site wastewater treatment facility, which was avoided during construction. Marc managed the general and focused biological resources field studies; assessments for special status species potential; biological resource impact analysis; and the associated documentation presented in the MND.

Tehachapi Renewable Transmission Project Biological Resources Support, Southern California, CA: Project Manager for this SCE project. The Tehachapi Renewable Transmission Project (TRTP) consists of the construction of several substations and a total of 175 miles of transmission lines running from the Antelope Valley through the Angeles National Forest (ANF) and into the City of Ontario. The project's objective is to bring wind and solar sourced energy from the Tehachapi Mountains and western Antelope Valley to the Los Angeles basin. As part of a large, multi-company team, Psomas has provided a full range of biological services including vegetation mapping; focused surveys for plants, trees, birds, herpetofauna, and bats; nesting bird surveys; raptor surveys; pre-construction surveys and construction monitoring; and seed collection. Marc serves as a consulting project manager and he supports SCE's biology team in all aspects of biological resources. Responsibilities include managing a suite of focused surveys in remote country of the ANF and other project areas; preparing notice to proceed reports to be submitted to the California Public Utility Commission; preparing permit applications for a Special Use Permit from the U.S. Forest Service (USFS); managing construction monitoring; preparing avoidance and mitigation plans; coordinating with construction contractors to ensure compliance with permit conditions; and completing a multitude of other tasks. Due to the presence of several State and federally listed species in the project area, compliance with the State 2081 Incidental Take Permit and the USFWS Biological Opinion requires his constant attention. Marc is an integral part of the management team for TRTP and works daily to keep the project's aggressive schedule on track.

High Desert Health System Multi-Service Ambulatory Care Center Project Environmental Impact Report, Lancaster, CA: Biological Resources Manager for the combined Program and Project EIR for a new High Desert Health System Multi-Ambulatory Care Center facility in the City of Lancaster. The project site included 23 acres of vacant land surrounded by low-density residential and commercial development. The project involved construction of a new 2-story, 142,000-square-foot (sf) medical building with surface parking on 1 parcel and 67,250 sf of supporting public service/commercial uses on a second parcel, potentially including uses such as doctors' offices, senior care services, and mental health services, among others. Other project-related improvements include roadway improvements; landscaping; utility

connections; and a new turn-out for the existing Antelope Valley Transit Authority bus stop on East Avenue I. The project has a Silver-Rated Leadership in Energy and Environmental Design (LEED) certification for its incorporation of solar panels and wind turbines on the parking lot's light fixtures. Marc was responsible for oversight of plant and wildlife focused surveys, the assessment of biological resources impacts of the proposed project, and documentation within technical reports and the EIR.

NorthLake Specific Plan Environmental Impact Report, Los Angeles County, CA: Biological Resources Manager for the development of an approximate 1,330-acre project site near Castaic Lake in unincorporated Los Angeles County. This project involves the development of a mix of single-family units; multi-family units; commercial, industrial, and recreational uses; open space; and school and park facilities.

BRIAN LEATHERMAN
WILDLIFE BIOLOGIST

EDUCATION
California State University, Fullerton, California
Master of Arts, Biological Science, 1993.
Bachelor of Arts, Biological Science, 1991.

PROFESSIONAL EXPERIENCE
Leatherman BioConsulting, Inc. 2006 – present; White & Leatherman BioServices 2000-2006; Psomas and Associates, 1997-2000; Chambers Group 1996-1997; Dames and Moore 1993-1996; Independent Consulting Biologist 1991-1993. Primarily responsible for biological surveys, report preparation, project management, and agency coordination. Specialties include habitat assessments, general wildlife documentation, focused surveys for endangered species, construction and mitigation compliance monitoring, and wildlife corridor assessment and monitoring. Prepares biological technical reports to document field work and propose mitigation strategies to meet requirements of CEQA and NEPA, and to initiate formal consultation under the federal Endangered Species Act.

Guest Lecturer: California State University, Fullerton, Victor Valley College, 2009-present. Prepare and teach two part lecture on federal and state environmental and endangered species laws in California, and how those laws translate into the assessment, focused survey, and monitoring work conducted by professional consulting biologists.

Part Time Instructor: California State University, Fullerton, 1991-1993. General Biological Science Laboratory Instructor.

MEMBERSHIPS
- Society for the Study of Amphibians and Reptiles
- The Desert Tortoise Council
- The Wildlife Society
- Western Field Ornithologists
- Declining Amphibian Populations Task Force
- Southern California Botanists
- California Native Plant Society
- California Botanical Society

CERTIFICATIONS/PERMITS
- Section 10(a)(1)(A) Permit for Southwestern Willow Flycatcher, California Gnatcatcher, Least Bell's Vireo (Permit No. TE827493-6).

- California Department of Fish and Game Scientific Collecting/Trapping Permit #801221-02; MOU for Southwestern Willow Flycatcher, Western Yellow-billed Cuckoo, Least Bell's Vireo; nest monitoring for California gnatcatcher; trapping for southern rubber boa and southwestern pond turtle.
- California Department of Fish and Game Letter of Agreement for Conducting Brown-headed Cowbird Capture and Removal Programs

PUBLICATIONS

- Leatherman, Brian M., and Mark. R. Jennings. 2007. *Actinemys marmorata* (Pacific Pond Turtle) and *Trachemys scripta* (Red-eared Slider): Reproductive Behavior. Herpetological Review 38:327.
- Leatherman, Brian M. 2004. *Spea hammondii* (Western Spadefoot): Geographic Distribution. Herpetological Review 35(4): 407.
- Leatherman, Brian M. 1996. San Diego Horned Lizard (*Phrynosoma coronatum blainvillei*): Conservation. Herpetological Review 27(2): 80.
- Strong, Dennis. J., Brian M. Leatherman, and Bayard H. Brattstrom. 1993. Two new simple methods for catching small fast lizards. Herpetological Review 24(1): 23.
- Leatherman, Brian M. 1993. Impacts of habitat changes on prey species taken by barn owls (*Tyto alba*) in Owens Valley, California. Thesis: California State University Fullerton.

SEMINARS AND SPECIALIZED TRAINING

- 20th Annual Desert Tortoise Surveying, Monitoring, and Handling Techniques Workshop. The Desert Tortoise Council. Ridgecrest, California. November 2011.
- Mohave Ground Squirrel Workshop, Sponsored by The Wildlife Society Western Section, Ridgecrest, April 2005
- California Anastraca and Notostraca Identification Class (Fairy Shrimp Workshop). Belk Consulting: Santa Rosa Plateau, January 2005
- The Wildlife Society Western Section Annual Conference: Irvine, March 2003
- The Wildlife Society Western Section Annual Conference: Riverside, March 2000
- Planning for Biodiversity: Bringing Management and Research Together. Cal Poly Pomona, Sponsored by US Forest Service and US Geological Survey. Feb 2000
- 79th Annual Meeting and Symposium of the Western Society of Naturalists, December 1998
- Annual CEQA Workshop. Association of Environmental Professionals, February 1998
- Sensitive herpetofauna of Southern California: San Diego Natural History Museum, March 1997
- Southwestern Willow Flycatcher Field Workshop, U. S. Fish and Wildlife Service and U. S. Forest Service 1996, 1997
- Quino Checkerspot Butterfly Workshop, U. S. Fish and Wildlife Service and Friends of Entomology Research Museum 1997
- Desert Tortoise Survey/Handling Techniques Workshop, Desert Tortoise Council 1993, 1996
- Symposium on the Biology of the California Gnatcatcher, UC Riverside, 1995

GENERAL EXPERIENCE

Mr. Leatherman has twenty years of experience as a professional biologist conducting general and focused avian, herpetological, mammalian, and special status species surveys, and preparing biological reports and biological resources sections for environmental documents. His expertise lies in documenting wildlife diversity and habitat utilization, evaluating habitats for their potential to support rare, threatened, and endangered wildlife species, and analyzing impacts of proposed projects on biological resources. He has designed and implemented studies to monitor wildlife usage of restoration sites and movement corridors, and has developed and implemented relocation efforts for several special status species. He has monitored a variety small- and large-scale construction projects to ensure and document compliance with project permits or mitigation monitoring plans. A list of some of the special status species he has worked with includes the quino checkerspot butterfly, arroyo toad, California red-legged frog, southwestern pond turtle, desert tortoise, southwestern willow flycatcher, least Bell's vireo, California gnatcatcher, San Joaquin kit fox, and many others.

REPRESENTATIVE PROJECT EXPERIENCE

Focused Survey for Least Bell's Vireo and Southwestern Willow Flycatcher, Big Tujunga Canyon, Los Angeles County. BonTerra Consulting. Assisted with focused surveys for the least Bell's vireo and southwestern willow flycatcher under the supervision of a permitted biologist upstream of the Big Tujunga Dam in the San Gabriel Mountains. Documented other special status species observed incidentally including western pond turtle, two-striped garter snake, yellow warbler, and southern California rufous-crowned sparrow.

L.A. Department of Public Works San Gabriel River Brown-headed Cowbird Trapping Program, Whittier. Mr. Leatherman developed the cowbird trapping program plan in 2005 and has conducted the program on an annual basis since that time. LBC anticipates being retained for the remaining years of the ten-year program (through 2014).

Focused Southwestern Willow Flycatcher Surveys, Los Angeles Dept. of Water and Power's Big Tujunga Wash Mitigation Bank, Los Angeles County, Chambers Group, Inc. Conducted focused survey for southwestern willow flycatcher within cottonwood willow riparian forest within the Big Tujunga Wash floodplain upstream of Hansen Dam, where LADWP has purchased and is restoring habitat as mitigation for a variety of projects. Retained contract to conduct surveys for three consecutive years.

Prima Deshecha Landfill Brown-headed Cowbird Trapping Program, BonTerra Consulting and County of Orange Waste Management Department. Under contract to BonTerra Consulting, developed a detailed Brown-Headed Cowbird Management Program for the Waste Management Department to provide a reference for implementing all aspects of a successful trapping program. Conducted the first three year of trapping program since 2002,

which includes daily trap monitoring for six consecutive months; retained to conduct the 2005 program.

Desert Tortoise Studies/Monitoring, Los Angeles Department of Water and Power. Performed preconstruction surveys and monitored for desert tortoise for LADWP during construction of a 200-mile power line in the Mojave Desert through portions of Nevada and California. Provided education training to contractor personnel as needed to comply with conditions of the Biological Opinion. Filed compliance and tortoise report forms on a weekly basis. Tagged and processed desert tortoises, removed tortoises from construction zones, and excavated and constructed desert tortoise burrows.

Southern Water Snake Control Program for Los Angeles Dept. of Public Works, Wilmington Drain, BonTerra Consulting. Contracted to trap and remove the southern water snake (*Nerodia fasciata*) in an effort to control the population in the Wilmington Drain tributary to Lake Machado in San Pedro, Los Angeles County. Effort was coordinated with similar effort by Dr. Robert Reed of the USGS to control/eradicate the population from Lake Machado. Project included use of 30 traps placed along the shore of Wilmington Drain in the spring and summer of 2010 and 2011.

Western Spadefoot Toad Relocation Program, SunCal Companies and BonTerra Consulting. Developed a detailed western spadefoot toad relocation plan to capture and relocate a breeding population of western spadefoot toads from the Northlake development site to a series of created mitigation ponds in northern Los Angeles County. The plan has been reviewed and approved by the California Department of Fish and Game. Currently under contract to implement the plan.

Wildlife Corridor Use Study at Alamos Canyon, Unocal Properties. Designed and implemented a study to document wildlife use of the State Route 118 bridge over Alamos Canyon Road in Simi Valley. Used scent stations and wildlife tracking under the bridge to record wildlife diversity and frequency of travel over a seven night period of July 1999. The undercrossing was identified (conceptually) as a critical wildlife corridor between the Santa Suzanna Mountains and the Simi Hills. A draft report titled Update of Biological Resources, Wildlife Movement Corridors, and Jurisdictional Waters of the US, Streambeds, and Wetlands for Unocal Tentative Tract 4565 was prepared for Unocal.

California Gnatcatcher Survey, Nature Reserve of Orange County, 2011. Leatherman BioConsulting, Inc. was contracted to plan and implement a study to collect baseline data to estimate the current status of the California gnatcatcher on the Central and Coastal Reserves, an area encompassing approximately 37,000 acres. Three rounds of focused surveys were conducted at 150 randomly selected plots located throughout the reserve system, and vegetation data at each of the plots was recorded to develop and evaluate habitat suitability models for the gnatcatcher. Leatherman BioConsulting, Inc. provided oversight of the entire project, including

coordination of access among the many landowners signatory to the NCCP, management of the seven permitted biologists conducting the surveys, data review and compilation, and report preparation.

Cactus Wren Habitat Assessment and Survey, Nature Reserve of Orange County, 2008. Leatherman BioConsulting, Inc. mapped and assessed the quality of the cactus scrub habitat throughout the recently burned and unburned portions of the 19,900-acre Central Reserve. Two rounds of focused surveys for the Cactus Wren were subsequently conducted in all habitat judged to be suitable for nesting wrens. A detailed report of the results of the surveys, including data on the aerial extent of cactus and occupied habitat patches within burned and unburned areas, was prepared for the NROC, and a presentation was given to the Board of Directors.

MICHAEL C. COUFFER
CONSULTING BIOLOGIST

Michael Couffer is a Senior Biologist with 17 years of experience in biological surveys and natural resource photography. He has held the federal and state permits necessary to conduct focused surveys for and monitor the nests of the federally Threatened California gnatcatcher since 1995, and has surveyed over 61,000 acres for the gnatcatcher. Mr Couffer has surveyed over 25,000 acres for the federally Endangered Quino checkerspot butterfly since the species was listed in 1998. Mr. Couffer also conducts surveys for special status species such as the burrowing owl, Hermes copper butterfly, flat-tailed horned lizard, and others. Mr. Couffer has also acted as primary biological field consultant and onsite monitor for numerous coastal sage scrub vegetation removal projects.

Updated July 13, 2010. Multi-year projects are presented in the last year worked. Use Microsoft Word's "Find" function to search the document.

Permits and Listings

- Federal Fish and Wildlife Permit granted 1995 allowing for focused surveys & nest monitoring of federally-threatened coastal California gnatcatcher, and focused surveys for the federally-endangered Quino checkerspot butterfly since that species was listed in 1998
- California Department of Fish & Game (CDFG) Scientific Collecting Permit allowing for capture & release of non-protected small mammals, reptiles, amphibians, freshwater fishes, & invertebrates, as well as "take" of the two listed species above
- On approved Biological Consultant's List for Counties of Riverside and San Bernardino
- Completed Range Safety Officer training for civilian consultants working within & adjacent to US Marine Corps Base Camp Pendleton gunnery ranges
- U.S. Fish & Wildlife Service-approved desert tortoise surveying, handling, & monitoring workshop
- CDFG Letter of Authorization to capture, possess, & transport flat-tailed horned lizard during surveys and biological monitoring

Publications

California Gnatcatcher Feeds Bewick's Wren Nestlings in an Abandoned Rodent Burrow. 2005. Western Birds, Volume 36.

Education Bachelor of Arts, Biology and Journalism, San Diego State University, 1990

Employment History

Independent Biological Consultant - Grey Owl Biological Consulting - 1993 to Present
Grey Owl Pictures, Inc., Partner, Photographer, Stock Photo Manager – 1980 to Present
Scientific Resource Surveys, Paleontological and Archaeological Monitor – 1980

Contact Information

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Corona del Mar, California 92625
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Phone: (949) 644-7127

2010 Projects

During the spring of 2010, Mr. Couffer was contracted to conduct focused surveys for federally threatened and rare butterfly species from April 1 through June 30 on three different projects in eastern San Diego County. The only days off were when poor weather precluded surveys.

Campo Wind Energy Project, Eastern San Diego County, California. Conducted daily focused surveys for the federally Endangered Quino checkerspot butterfly on a 4,417-acre existing and planned expansion of a wind energy project site on the Campo Band of Mission Indians Reservation. As one of 24 federally-permitted biologists, Mr Couffer located half of all Quino found during the surveys, and over three times as many Quino as any other permitted biologist. Mr. Couffer incidentally located special status bird, reptile, amphibian, and plant species, and found a GPS unit dropped by one of the other project biologists over a month after the unit was lost, retrieving the recorded data within. Received wind turbine safety training for ground crews, and participated with report preparation, editing, and internal planning meetings.

Client: Edaw/AECOM, and Invenergy Wind California, LLC, April to late May, 2010

Manzanita Wind Energy Project, Eastern San Diego County, California. Conducted focused surveys for the federally Endangered Quino checkerspot butterfly on a 1,297-acre project site within the Manzanita Band of Mission Indians Reservation. As one of 22 federally-permitted biologists, Mr Couffer located over one quarter of all Quino found during the surveys of this project site. Mr. Couffer also incidentally located special status bird, reptile, and plant species.

Client: Edaw/AECOM, and Sempra Energy/San Diego Gas & Electric Co., April to late May, 2010

Cleveland National Forest Surveys, Eastern San Diego County, California. Responsible for surveying 13 miles of existing overhead utility alignment for the exceedingly rare Hermes copper butterfly. Mr Couffer made 47 Hermes copper observations on the project site as well as other special status bird, reptile, and plant species. Other Hermes coppers at a personally-located high-elevation reference population on public land was also periodically visited to keep track of Hermes copper flight status near a portion of a given survey alignment.

Client: Chambers Group, Inc., and Sempra Energy/San Diego Gas & Electric Co., late May to July, 2010

Falcon Ridge Sub-station, City of Fontana, San Bernardino County, California. Conducted focused surveys for the western burrowing owl along 9 miles of existing overhead utility alignment and several planned sub-stations.

Client: BonTerra Consulting, and Sempra Energy/San Diego Gas & Electric Company, July, 2010

Tehachapi Renewable Transmission Project, Los Angeles, Orange, San Bernardino Counties. Conducted Clearance Surveys and Biological Monitoring during geotechnical investigations at 103 planned transmission tower locations along five segments of this alignment. Located special status species such as California gnatcatcher and burrowing owl and monitored special status wildlife behavior during adjacent drilling operations. Work was undertaken for Southern California Edison Company between August 2009 and April 2010.

2009 Projects

Southern California Edison Company, Western Riverside County. Conducted protocol-level western burrowing owl surveys along 18 miles of utility alignment during the burrowing owl breeding season of 2009. Located the burrowing owl during the surveys.

Client: Sempra Energy/San Diego Gas and Electric Company, 2009

Imperial Irrigation District, Imperial Valley, Imperial County. Team member participating in Baseline Surveys for Imperial Irrigation District's Draft Habitat Conservation Plan. Focused presence/absence surveys for special status wildlife species were conducted within fixed "Sentinel Sites" (visited annually) and "Rotating Panels" (1/3 of sites visited each year) within a 135,000-acre study area. Work included surveys for flat-tailed horned lizard, special status bird species within agricultural drains and surrounding desert, trapping for Andrew's dune scarab beetle and Yuma hispid cotton rat. Work was contracted through EcoSystems Restoration Associates/AECOM during 2009.

Client: EcoSystems Restoration Associates /AECOM/Imperial Irrigation District, 2009

2008 Projects

Sunrise Powerlink Utility Line, San Diego County. Conducted habitat assessments and presence/absence surveys for the federally-Endanged Quino checkerspot butterfly, and the exceedingly rare Hermes copper butterfly along 15 miles of two proposed utility alignments near Alpine and the Anza Borrego Desert State Preserve. Located 54 butterfly species onsite.

Client: Sempra Energy/San Diego Gas and Electric Company, March to July, 2008

Sunrise Powerlink Utility Line, San Diego County. Conducted a habitat assessment and presence/absence surveys for the exceedingly rare Hermes copper butterfly along 5 1/2 miles of two proposed utility alignments near Alpine. Located 33 butterfly species, including Hermes copper, on the project site. Also conducted habitat assessments and focused presence/absence surveys for the federally-Endangered Quino checkerspot butterfly along 15 miles of this utility alignment and another in the vicinity of Alpine and the Anza Borrego Desert State Preserve.

Client: Sempra Energy/San Diego Gas and Electric Company, March to July, 2008

Sunrise Powerlink Utility Line, Eastern San Diego County. Conducted habitat assessments and presence/absence butterfly surveys for the federally-endangered Quino checkerspot butterfly and the exceedingly rare Hermes copper butterfly along 15 miles of two proposed utility alignments for Sempra Energy/San Diego Gas and Electric Company from March to July of 2008. Identified 64 butterfly species, including Hermes copper.

1800-Acre Tesoro del Valle, Santa Clarita, Los Angeles County. Conducted focused surveys for the California gnatcatcher during 1997, 2005, and 2008. Conducted gnatcatcher surveys, general surveys for sensitive wildlife, and surveys for nesting raptors. Assisted with special

status plant surveys during 2005. Conducted site-wide burrowing owl assessment and burrow survey during 2007 within this project site located near the City of Santa Clarita.

Client: Evans-Collins Community Builders, 1997, 2000, 2005, 2007, 2008

520-Acre Bouquet Canyon Site, Santa Clarita, Los Angeles County. Conducted unassisted focused burrowing owl surveys during 2008. Conducted unassisted focused surveys for the California gnatcatcher during 1999 and 2005. Assisted with rare plant surveys during 2005.

Client: Bouquet Canyon Land Fund, LLC., 1999, 2005, 2008

417-Acre Adelanto Gateway Site, Adelanto, San Bernardino County. Conducted unassisted preconstruction clearance surveys for the desert tortoise, western burrowing owl, and nesting birds prior to vegetation removal. Monitored vegetation removal in order to preserve Joshua trees and nesting birds during the bird nesting season.

Client: RBF Consulting, 2008

2007 Projects

1,330-Acre Northlake Specific Plan Project Site, Castaic, Unincorporated Los Angeles County. Principal Biological Field Consultant and Biological Monitor during vegetation removal operations covering several hundred acres within Grasshopper Canyon and adjacent slopes. Located a previously undocumented population of burrowing owls during the monitoring process. Conducted additional burrow surveys and monitoring of active and previously-occupied burrows to determine whether or not this wintering population remained onsite to breed. These breeding season surveys are currently ongoing. Conducted nesting loggerhead shrike and nesting raptor surveys. Consulted on equipment deployment so as to avoid special status or protected resources such as burrowing owls. Assisted contractors in avoiding breaches of resource agency permit stipulations while assisting construction to proceed.

Client: SunCal Companies, 2007

600-Acre Montebello Hills Oil Field, City of Montebello, Los Angeles County. Biological field consultant and monitor assisting in the conversion of a 600-acre oil field to modern production. Advised field crews on avoiding direct take of coastal California gnatcatchers and coastal sage scrub during the gnatcatcher breeding season. Conducted California gnatcatcher surveys and located and monitored nests to ensure that crews avoided nesting areas. Created educational slide shows designed to assist management and field crews in understanding environmental concerns and in avoiding and minimizing impacts to sensitive resources. Monitored crews clearing weeds and trimming trees for fire protection near sensitive habitat, marked several hundred electrical poles either to be weeded or avoided during the gnatcatcher breeding season, consulted with field crews on avoiding nests, surveyed proposed oil pumping unit sites for nesting gnatcatchers, and consulted on pipe routing to avoid and minimize damage to coastal sage scrub. Mapped road margins to be edged during the breeding season and warned of road margins to avoid due to proximity to gnatcatcher nests. Met with electricians and city fire officials to discuss fire prevention and avoid loss of gnatcatchers due to fire. Surveyed for nesting gnatcatchers near oil pads proposed to be returned to production. Monitored the removal of 1200 non-native trees using an excavator within and adjacent to

coastal sage scrub habitat occupied by the California gnatcatcher as a part of native habitat restoration activities.

Clients: Stocker Resources, Incorporated, 1997, 1998, 1999, 2001
Plains Exploration and Production Company 2007

996-Acre Former Whittaker-Bermite Facility, Los Angeles County. Conducted focused presence/absence surveys for the California gnatcatcher, burrowing owl, special-status plant species, and nesting birds within portions of this former munitions and explosives manufacturing facility. Also conducted focused surveys for burrowing owls across the entire project site. Monitored heavy equipment and teams of hand laborers during vegetation removal. Assisted in planning soil excavation to avoid disturbing special status resources and jurisdictional drainages. Conducted biological monitoring during vegetation grubbing prior to excavation of contaminated soil. Captured and relocated western spadefoot toads during vegetation grubbing. Assisted with vegetation mapping, flagged special status plants and habitat patches for avoidance, and evaluated the site for potential biological constraints to development. Currently on call for biological surveys and construction monitoring.

Client: Camp Dresser and McKee, 2005 to 2007

240-Acre Skyline Drive Project Site, Los Angeles County. Conducted focused presence/absence surveys for the California gnatcatcher across 240 acres of this project site in Santa Clarita.

Client: Pardee Homes, 2007

550-Acre Walnut Village, City of Walnut, Los Angeles County. Mapped vegetation, and conducted focused presence/absence surveys for California gnatcatchers. Located a previously-unknown gnatcatcher population after previous surveys had not located gnatcatchers. Planned and implemented a vegetation clearing strategy on a 550-acre site designed to avoid direct take of California gnatcatchers in accordance with resource agency permits. Orchestrated the movement of heavy equipment and laborers across the site to minimize wildlife losses by herding wildlife into appropriate onsite preserve areas and offsite habitat. Directed heavy equipment, located and monitored California gnatcatchers, and protected the boundaries of designated preserves during heavy equipment operation. Consulted onsite with resource agency personnel.

Client: Standard Pacific Homes, 1998, 2002, 2003, 2007

548-Acre Five Bridges Specific Plan Project Site, City of Beaumont, Western Riverside County. Conducted unassisted focused presence/absence surveys for the burrowing owl across the entire project site. Surveys were conducted in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) guidelines. Located evidence of previous occupation by the burrowing owl.

Client: Lennar Communities, 2007

996-Acre Former Whittaker-Bermite Facility, Los Angeles County. Conducted focused presence/absence surveys for the burrowing owl within 132-acres of this former munitions and explosives manufacturing facility. Located evidence of past occupation by the burrowing owl. Currently on call for biological surveys and construction monitoring.

Client: Camp Dresser and McKee, and SunCal Companies, 2007

226-Acre City of Santa Clarita Site, and 20 Acre Via Princessa Roadway Extension, Los Angeles County. Conducted an assessment for the burrowing owl on a 226-acre site as well as a 20-acre roadway extension in the City of Santa Clarita.

Client: SunCal Companies, 2007

1,167-Acre Tapia Canyon Project Site, Los Angeles County. Conducted a habitat assessment and burrow survey for the burrowing owl within potentially-occupied habitat across a project site near the city of Santa Clarita.

Client: Toll Brothers, 2007

2006 Projects

1,530 Acre Prima Deshecha Landfill, South Orange County. Conducted unassisted site-wide focused presence/absence surveys for the California gnatcatcher on this 1,530-acre site. Site-wide surveys were conducted annually from 2003 to 2006.

Client: County of Orange, Integrated Waste Management Department, 2003 to 2006

Talega Development, San Clemente, Orange County. Conducted focused surveys for the California gnatcatcher on the 3,510-acre Talega Development. Conducted pre-construction surveys for gnatcatchers. Conducted surveys for and monitored gnatcatchers during weed removal prior to, during, and upon completion of the installation of 130 acres of restored native coastal sage scrub habitat. Conducted biological constraints analyses for various onsite projects prior to construction. Staked coastal sage scrub habitat for surveyors to determine specific habitat acreage. Consulted on and monitored the removal of weedy vegetation with sensitive coastal sage scrub habitat. Monitored gnatcatchers adjacent to construction. Located nesting gnatcatchers within restored habitat.

Client: Standard Pacific & Talega Associates LLC, 1999 to 2006

Foothill Transportation Corridor South, Orange County. Conducted focused presence/absence surveys for coastal California gnatcatchers along various proposed alignments. Consulted on geotechnical boring site locations adjacent to sensitive habitats, and monitored geotechnical operations along proposed alignments.

Client: Transportation Corridor Agencies, 1999, 2000, 2001, 2002, 2006

300 Acres East of Perris, Western Riverside County. Conducted a Habitat Assessment, focused Burrow Surveys, and focused Crepuscular Surveys for the burrowing owl in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) guidelines. Located several previously-occupied owl burrows onsite.

Client: Laing-Sequoia Partners, LLC, 2006

220-Acre McCanna Village 1, Western Riverside County. Conducted a Habitat Assessment, focused Burrow Surveys, and focused Crepuscular Surveys for the burrowing owl in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) guidelines. Located previously-occupied owl burrows onsite.

Client: Laing-Sequoia Partners, LLC, 2006

228-Acre Park Place, City of Ontario, Western Riverside County. Conducted a Habitat Assessment, focused Burrow Surveys, and focused Crepuscular Surveys for the burrowing owl on this project site in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) guidelines. Located several burrowing owls onsite.

Client: RBF Consulting, 2006

120-Acre McCanna Village 5, Western Riverside County. Conducted a Habitat Assessment, focused Burrow Surveys, and focused Crepuscular Surveys for the burrowing owl in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) guidelines. Located a previously-occupied owl burrow onsite.

Client: Laing-Sequoia Partners, LLC, 2006

66-Acre Lake Nuevo Village, Western Riverside County. Conducted a Habitat Assessment, focused Burrow Surveys, and focused Crepuscular Surveys for the burrowing owl in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) guidelines. Located a previously-occupied owl burrow onsite.

Client: Laing-Sequoia Partners, LLC, 2005, 2006

Interstate 10 and Jefferson Interchange Project, City of Indio, Riverside County. Conducted surveys for Coachella Valley round-tailed ground squirrel burrows, and burrowing owls on this interchange project. Located nesting burrowing owls on the project site.

Client: RBF Consulting, 2006

Interstate 10 and Jefferson Interchange Project, City of Indio, Riverside County. Conducted surveys for Coachella Valley round-tailed ground squirrels, and burrowing owls. Located nesting burrowing owls on the project site.

Client: RBF Consulting, 2006

32-Acre Deer Canyon Project, Orange County. Conducted onsite biological monitoring and focused surveys related to the California gnatcatcher during geotechnical investigations prior to development.

Client: Stonegate Development Company, LLC, 2004, 2005, 2006

2005 Projects

Rich Haven and West Haven Specific Plans, Ontario, San Bernardino County. Conducted unassisted focused presence/absence surveys for burrowing owls on 720 acres in the City of Ontario. Located a burrowing owl colony, and several other separate pairs.

Client: RBF Consulting, 2005

16 Debris Basins, Los Angeles County. Conducted focused surveys for the California gnatcatcher at 16 debris basins within Los Angeles County.

Client: County of Los Angeles, Department of Public Works, 2005

Crown Valley Parkway Bridge Widening Project, Orange County. Team member participating in various biological monitoring tasks. Conducted focused surveys for and monitored the breeding status of California gnatcatchers prior to and during construction. Conducted focused surveys for nesting owls within the interior of the 800-foot-long concrete bridge, as well as surveys for other nesting birds within a buffer zone surrounding the bridge in order to assist the county in complying with the Migratory Bird Treaty Act. Coordinated with noise monitoring consultants. Field consultant on issues relating to resource agency permits.
Client: County of Orange, 1999, 2004, 2005

Client: County of Orange, 1999, 2004, 2005

Weir Canyon Road and La Palma Avenue Intersection, City of Anaheim, Orange County. Located the federally Threatened California gnatcatcher during focused surveys for the species adjacent to a road intersection to be upgraded.

Client: City of Anahiem, 2005

186-Acre Burnam Site, Santa Clarita, Los Angeles County. Conducted focused presence/absence surveys for the gnatcatcher on a 186-acre site in San Francicquito Canyon, north of the City of Santa Clarita.

Client: SunCal Companies, 2004, 2005

790-Acre Tonner Hills Site, Brea, Orange County. Assisted ECORP Consulting biologists with focused California gnatcatcher surveys on this oil field.

Client: Plains Exploration and Production, 2005

Cao Property, Western Riverside County. Conducted a Habitat Assessment, focused Burrow Surveys, and focused Crepuscular Surveys for the burrowing owl in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) guidelines on a 38-acre site in Meade Valley in accordance with Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) guidelines. Located the species onsite.

Client: Cadre Environmental Services, 2005

70-Acre Winchester Site, Western Riverside County. Conducted a Habitat Assessment, focused Burrow Surveys, and focused Crepuscular Surveys for the burrowing owl in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) guidelines. Subsequently conducted a pre-construction survey prior to the initiation of construction.

Client: Griffin Communities and Stonegate Development Company, 2005

Sun City, Western Riverside County. Conducted a Habitat Assessment, focused Burrow Surveys, and focused Crepuscular Surveys for the burrowing owl in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) guidelines on this 10-acre site. Located the species onsite.

Client: Signature Realty Capital Corporation, 2005

26-Acre Mira Loma Site, Western Riverside County. Conducted a Habitat Assessment, focused Burrow Surveys, and focused Crepuscular Surveys for the burrowing owl in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) guidelines.

Client: Lyon Homes, 2005

52-Acre Edgemont Community Services District Property, Western Riverside County. Conducted a biological constraints analysis and subsequent burrowing owl Habitat Assessment, focused Burrow Surveys, and focused Crepuscular Surveys in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) guidelines.

Client: Trammel Crow Company, 2004, 2005

Native Habitat Restoration Monitoring, **Orange and Los Angeles Counties*.*** Located the federally Threatened California gnatcatcher within restored coastal sage scrub on seven native habitat restoration sites managed by BonTerra Consulting within Orange and Los Angeles counties.

Client: Various clients, 2005

Upper Chiquita Reservoir Project, Orange County. Conducted onsite biological monitoring and focused surveys related to the California gnatcatcher during geotechnical investigations for the design of an open water storage reservoir. Coordinated onsite with geologists to route equipment so as to avoid and minimize disturbance to special status resources in compliance with agency permits. Assessed impacts to special status vegetation occupied by the gnatcatcher, in accordance with agency permits. This project is ongoing.

Client: Santa Margarita Water District (SMWD), 2005

Other Projects

900-Acre Preissman Property, Perris, Western Riverside County. Conducted unassisted focused surveys for the California gnatcatcher on this 900-acre site prior to implementation of

the Western Riverside County Multiple Species Habitat Conservation Plan. Also mapped vegetation and conducted focused surveys for the burrowing owl.

Client: Liang-Sequoia, LLC, 2004

800-Acre Shell Oil/Aera Energy, LLP oil field conversion, Orange County. Biological field consultant and monitor tasked to ensure that field crews converting an 800-acre oil field to a golf course and residential development over the span of several years proceeded according to a Habitat Conservation Plan and U. S. Fish and Wildlife Service permit written for this specific project site; the project proponents were to avoid directly harming the federally-Threatened coastal California gnatcatcher. Created slide show training sessions designed to assist management, field crews, and geologists in understanding environmental concerns on the project site and in avoiding and minimizing impacts to the California gnatcatcher and its habitat. Collected information on the changing nesting status of 20 gnatcatcher pairs to help crews avoid nests. Planned and implemented a vegetation clearing strategy designed to avoid direct take of California gnatcatchers in accordance with the project's Habitat Conservation Plan and U. S. Fish and Wildlife Service permit. Orchestrated the movement of heavy equipment and laborers across the site to minimize wildlife losses by herding wildlife into appropriate off-site habitat. Supervised and assisted up to five biological monitors directing equipment, monitoring wildlife, and protecting staked open space and property boundaries during three separate phases of the development spanning several years.

Client: Shell Oil/Aera Energy, LLP, and Toll Brothers, LLP, 1996 through 2001

Capistrano Valley Water District South Connector Pipeline, San Juan Capistrano, Orange County. Principal biological monitor for the Capistrano Valley Water District South Connector Pipeline Project. Duties included management of field issues relating to 14 pairs of California gnatcatchers within 500 feet of the pipeline, encompassing 500 linear acres. Conducted focused gnatcatcher surveys, gnatcatcher nest searches and nest monitoring. Assisted contractors in avoiding breaches of resource agency permit stipulations, monitored geotechnical operations, coordinated construction noise monitoring consultants, assisted contractors in avoiding nesting gnatcatchers, special status plant species, nesting raptors, and special status habitat. Monitored construction on a daily basis, and consulted with contractors on avoiding special status resources while assisting construction to proceed.

Client: Capistrano Valley Water District, 2002, 2003

790-Acre Roripaugh Ranch, Western Riverside County. Conducted unassisted focused presence/absence surveys for coastal California gnatcatchers and Quino checkerspot butterflies on the 790-acre Roripaugh Ranch project site. Located both species on the project site. The resulting report was included in a multiple species subarea habitat conservation plan covering the project site.

Client: Hewitt & McGuire, LLP, 1999, 2000

1200-Acre Johnson Ranch, Western Riverside County. Conducted focused surveys for California gnatcatchers and Quino checkerspot butterflies. Documented a previously-unknown metapopulation of Quino. The information was included in the western Riverside County Multiple Species Habitat Conservation Plan; the site was purchased and set aside as a reserve.

Client: Hewitt & McGuire, LLP, 1996, 1998

900-Acre Forster Ranch, Orange County. Co-investigator conducting focused presence/absence surveys for California gnatcatchers and the state-Endangered threadleaf brodiaea plant on the 900-acre Forster Ranch site in San Clemente, Orange County. Located and mapped gnatcatchers and brodiaea patches. Hand-collected over a thousand brodiaea bulbs for storage and transplanting. Planned and implemented a vegetation clearing strategy designed to avoid direct take of California gnatcatchers in accordance with the project's Habitat Conservation Plan and U. S. Fish and Wildlife Service permit. Orchestrated the movement of heavy equipment and laborers across the site to minimize wildlife losses by herding wildlife into appropriate off-site habitat. Supervised and assisted up to five biological monitors directing equipment, monitoring wildlife, and protecting staked open space and property boundaries.

Client: Laing Forster Ranch, 1997, 1998, 2000

157-Acre Obed Project Site, City of Murrieta, Western Riverside County. Conducted focused presence/absence survey for the Quino checkerspot butterfly on the controversial 157-acre "Obed" project site. Located the species onsite. My discovery of Quino on this site was the impetus for the USFWS to open the 1999 Quino flight season for presence/absence surveys in western Riverside County.

Client: Hewitt & McGuire, LLP, 1999

2700-Acre Laborde Canyon Proposed Development Site, Western Riverside County. Assisted with vegetation community mapping and California gnatcatcher habitat assessment and sensitive species surveys.

Client: Douglas Wood and Associates, 1995

150-Acre Whittlesey Doyle Site, Western Riverside County. Conducted a habitat assessment for the Quino checkerspot butterfly on a site in the City of Temecula. Located a previously unknown metapopulation of Quino during the assessment.

Client: Natural Resource Consultants, 1998

900-Acre Preissman Property, Perris, Western Riverside County. Conducted unassisted focused surveys for the burrowing owl on this 900-acre site prior to implementation of the Western Riverside County Multiple Species Habitat Conservation Plan. Also conducted focused surveys for the California gnatcatcher, and mapped vegetation. Located a previously-occupied burrow onsite.

Client: Liang-Sequoia, LLC, 2004

8,200-Acre Ontario Sphere of Influence, City of Ontario, San Bernardino County. Surveyed the 8,200 acre Ontario Sphere of Influence to provide information about the potential of trees and wind rows to afford opportunities for raptor nesting during 1998. Located burrowing owls within the project area.

Client: City of Ontario, 1998

Los Angeles County, Department of Public Works Earthen-bottom Improved Channels project. Field consultant for the Los Angeles County, Department of Public Works' Routine Maintenance Activities in Earthen-bottom Improved Channels project. Assisted County field crews in complying with documentation relating to preservation of native riparian vegetation within Los Angeles County-maintained flood control channels. Crews were to remove non-native vegetation without damaging native riparian vegetation.

Client: Los Angeles County, Department of Public Works, 2000, 2004

Santa Ana River Sewer Line, Orange County. Biological Monitor assisting contractors constructing roads through riparian habitat supporting Threatened and Endangered bird and fish species during maintenance on 19 manholes accessing a sewer line Beneath the Santa Ana River bed. Routes were chosen to minimize damage to special status resources.

Client: County of Orange, Department of Sanitation, 2001

300 Acres in Yorba Linda, Orange County. Conducted focused surveys for the California gnatcatcher prior to and during resource permitting for two adjacent sites totaling 300 acres. Planned and implemented a vegetation clearing strategy designed to avoid direct take of gnatcatchers in accordance with resource agency permits. Orchestrated the movement of heavy equipment and hand laborers across the site to minimize wildlife losses by herding wildlife into appropriate onsite preserve areas and offsite habitat. Directed heavy equipment, located and monitored gnatcatchers, trained and managed biological monitors, and protected designated preserved habitat and property boundaries during heavy equipment operations.

Client: Shapell Industries, 1996, 2000, 2002 through 2004

U.S. Marine Corps Base Camp Pendleton, San Diego County. Specialist Biological Monitor assisting field maintenance crews in avoiding impacts to the federally Endangered Pacific pocket mouse during maintenance activities along transmission lines located within the most densely-occupied habitat currently known for the species.

Client: Sempra Energy/San Diego Gas & Electric Co., 2001, 2002

Dana Point Headlands, Orange County. Specialist hired to assist the U. S. Fish and Wildlife Service trap for the federally-endangered Pacific pocket mouse. Photo-documented occupied habitat, trapping procedures, and tagging of pocket mice.

Clients: Conservation Biology Institute and U. S. Fish and Wildlife Service, 2001

Tijuana Estuary Pacific Pocket Mouse Trapping Survey, San Diego County. Co-investigator hired by the U. S. Fish and Wildlife Service to trap for the Pacific pocket mouse in the Tijuana Estuary National Wildlife Reserve, in San Diego County during 1995.

Client: U.S. Fish and Wildlife Service, 1995

Eagle Mountain Landfill and Adjacent Desert, edge of Joshua Tree National Park, Riverside County - Desert Tortoise Survey. Conducted unassisted focused surveys for nesting ravens within the closed Eagle Mountain mine, the town of Eagle Mountain, along the Eagle Mountain Railroad, and in the surrounding desert as part of a study of desert tortoises. The survey was carried out unassisted in remote areas, and covered approximately 20,000 acres. Assisted biologists permitted to handle the desert tortoise in locating occupied tortoise burrows prior to attaching radio telemetry to investigate tortoise home ranges during 1993. Assisted with focused desert tortoise surveys.

Client: RECON Environmental, 1993

U.S. Marine Corps Base Camp Pendleton, San Diego County. Volunteer periodically assisting the USFWS on an annual basis during mark and recapture trapping studies of the Pacific pocket mouse on USMCB Camp Pendleton from the year the species was discovered onsite in 1994 to 2004.

SANDRA LEATHERMAN
PRINCIPAL BIOLOGIST

EDUCATION
California State University, Fullerton, California

Bachelor of Arts, Biological Science, 1991.

PROFESSIONAL EXPERIENCE
Leatherman BioConsulting, Inc. 2011– present; BonTerra Consulting 1998-2011; P&D Consultants 1993-1998; MBA 1992-1993; USFS Stanislaus 1991. Primarily responsible for biological surveys, report preparation, project management, and agency coordination. Specialties include habitat assessments, general vegetation documentation, vegetation mapping, focused surveys for endangered species, restoration plan development, restoration monitoring, and construction and mitigation compliance monitoring. Prepares biological technical reports to document field work and propose mitigation strategies to meet requirements of CEQA and NEPA, and to initiate formal consultation under the federal Endangered Species Act. Also prepares Habitat Mitigation Plans.

MEMBERSHIPS
- Southern California Botanists (Past President)
- California Native Plant Society
- California Botanical Society
- Society of Ecological Restoration
- California Native Grasslands Association
- California Invasive Plant Council
- The Desert Tortoise Council

PERMITS AND CERTIFICATIONS
- CDFG Rare, Threatened and Endangered Plant Voucher Collecting Permit (No. 06022)

SEMINARS AND SPECIALIZED TRAINING

- Southern California Botanists Symposiums Annually 1991-2012
- California Native Plant Society Conservation Conference January 2012
- 20th Annual Desert Tortoise Surveying, Monitoring, and Handling Techniques Workshop. The Desert Tortoise Council. Ridgecrest, California. November 2011.
- California Native Plant Society Conservation Conference November 2009
- SERCAL's 14th Annual Conference "Restoration from Sea to Shining Sea" October 2007
- SERCAL's 13th Annual Conference "Shovel to Science: A Full Range of Restoration Practice in California" October 2006

- California Exotic Pest Plant Council Symposium October 1998
- California Exotic Pest Plant Council Symposium October 1995

GENERAL EXPERIENCE

Sandra Leatherman has twenty years of experience as a professional biologist conducting general biological surveys, focused special status plant surveys, vegetation mapping, and preparing biological reports and biological resources sections for environmental documents. Ms. Leatherman's professional experience has focused on plant ecology and taxonomy. She has conducted and/or managed both general and directed surveys for biological resources, including plants listed as special status or endangered under State and federal laws and regulations. She has been responsible for developing habitat restoration programs and evaluating restoration site conditions on a quantitative and qualitative basis for public-sector and private-sector clients throughout southern California. Ms. Leatherman has developed and monitored numerous restoration projects, six of which were approved by the resource agencies and released from further maintenance and monitoring. Ms. Leatherman has also authored the biological resources sections of numerous environmental impact reports (EIRs) and separate biological reports, including biological assessments (pursuant to Section 7 consultations with the U.S. Fish and Wildlife Service [USFWS]), Natural Environmental Studies (pursuant to California Department of Transportation [Caltrans] guidelines), and reports in accordance with NCCP guidelines (e.g. Western Riverside MSHSP). She has also authored focused survey reports for special status species, tree reports, and general biological assessments.

REPRESENTATIVE PROJECT EXPERIENCE

Project Management/General Biological/Botanical

Santa Anita Dam, Los Angeles County, BonTerra Consulting for County of Los Angeles Department of Public Works
Served as lead botanist for the Santa Anita Dam Proposition 1E Stormwater Management and Seismic Strengthening Project in Arcadia in Los Angeles. Performed vegetation mapping and focused surveys for special status plant species. These studies included preparation of detailed field notes, California Natural Diversity Data Base data forms, mapping population locations, collecting voucher specimens, and related analyses. Responsibilities also included: preparation of detailed special status species report, which included a complete plant list, and preparation of the vegetation descriptions for the Biological Technical report.

On-Call Biological Services, Biological Technical Reports/Biological Constraints Reports/Focused Surveys/Endangered Species Permitting, Los Angeles County Department of Public Works, BonTerra Consulting
Served as the Botanist for an on-call biological services contract with the Los Angeles County Department of Public Works (LADPW). Mapped vegetation of approximately 30 detention basins and conducted focused surveys for numerous others. Conducted focused surveys for

Brauton's milk-vetch, slender-horned spineflower, and Nevin's barberry. Prepared detailed field notes and California Natural Diversity Database (CNDDB) data forms; mapped population locations; collected voucher specimens; and performed other related analyses. Also prepared a detailed Special status species report and vegetation descriptions, and attended several meetings with the California Department of Fish and Game (CDFG). In addition transects were conducted for post and pre-clearing transects for the Los Angeles River and San Gabriel River. This included supervising field crews, data collection and compilation.

Big Tujunga Reservoir Sediment, Los Angeles County, California, BonTerra Consulting
Served as a botanist on the Big Tujunga Reservoir Sediment project site in Los Angeles County. Performed focused surveys for numerous special status plant species. Prepared detailed field notes and California Natural Diversity Database (CNDDB) data forms; mapped population locations; collected voucher specimens; and performed other related analyses for these studies.

Saugus Split Edison Transmission Line, Los Angeles County, California, BonTerra Consulting
Served as the lead botanist for the Saugus Split Line project in Los Angeles County. Performed vegetation mapping and focused surveys for special status plant species. These studies included preparation of detailed field notes, California Natural Diversity Data Base data forms, mapping population locations, collecting voucher specimens, and related analyses. Responsibilities also included: preparation of detailed special status species report, which included a complete plant list.

Tehachapi Renewal Transmission Project, California, BonTerra Consulting
Served as a botanist on the Tehachapi Renewal Transmission Project. Performed focused surveys for numerous special status plant species. Prepared detailed field notes and California Natural Diversity Database (CNDDB) data forms; mapped population locations; collected voucher specimens; and performed other related analyses for these studies.

Whittier Narrows Master Plan, Los Angeles County, California, BonTerra Consulting
Served as lead biologist for the development of the Whittier Narrows Master Plan. Conducted vegetation mapping and assessed the habitats for the revegetation potential. Worked with GIS to develop high and low priority areas for revegetation. Suggested plant palettes and recommendations for restored habitats. Also developed a detailed plant list for the area.

South Fork Lytle Creek Bridge Construction, San Bernardino County, County of San Bernardino
Served as the lead monitor for the biological monitors for the South Fork of Lytle Creek Bridge Construction in San Bernardino County for the protection of the Santa Ana Sucker. Organized monitors for the job, inspected the job site to ensure compliance with California Department of Fish and Game (CDFG), U.S. Army Corps of Engineers, and Regional Water Quality Board. Also conducted meetings with CDFG, County of San Bernardino and on site construction crews.

Seven Oaks Dam Fish Salvage, San Bernardino County, California, Aspen Environmental Group
Served as biologist assisting in salvage of the Santa Ana Sucker with permitted fisheries biologists under the existing agreement with resource agencies.

San Diego County Water Authority and Desalinization Plant and Pipelines, San Diego County, BonTerra Consulting
Served as project manager and lead botanist for the San Diego County Water Authority and Desalinization Plant and Pipelines. Organized field biologists and vegetation mapped several miles of pipeline. Responsibilities also included: compiling and editing the final Biological Technical Report for inclusion in the EIR.

Dayton Canyon EIR, Los Angeles County, BonTerra Consulting
Served as the lead botanist for a approximately 250 acre parcel in Dayton Canyon. Performed focused surveys for Plummer's mariposa lily, slender mariposa lily, and Braunton's milk-vetch. These studies included preparation of detailed field notes, California Natural Diversity Data Base data forms, mapping population locations, collecting voucher specimens, and related analyses. Responsibilities also included: preparation of detailed special status species report, which included mitigation recommendations and a complete plant list, and coordination with USFWS following the finding of the endangered Braunton's milk-vetch.

Bouquet Canyon, Los Angeles County, BonTerra Consulting
Served as the lead botanist for the approximately 400 acre Bouquet Canyon development. Mapped the vegetation on the project site and performed focused surveys for Plummer's mariposa lily, slender mariposa lily, and San Fernando Valley spineflower. These studies included preparation of detailed field notes, California Natural Diversity Data Base data forms, mapping population locations, collecting voucher specimens, and related analyses. Responsibilities also included: preparation of detailed special status species report, which included mitigation recommendations, a complete plant list, and a Biological Technical Report for the EIR.

Pathfinder Road Gap Closure, Los Angeles County, BonTerra Consulting
Served as the lead botanist for the Pathfinder Road Gap project in Los Angeles County and performed focused surveys for special status plant species. Prepared detailed field notes and California Natural Diversity Database (CNDDB) data forms; mapped population locations; collected voucher specimens; and performed other related analyses. Responsibilities also included: preparation of a detailed special status species report, which includes a complete plant list.

Tesoro del Valle Environmental Impact Report, Los Angeles County, BonTerra Consulting
Served as a Botanist for the Tesoro del Valle pre-construction surveys. Performed focused surveys for slender mariposa lily and Nevin's barberry. Prepared detailed field notes and California Natural Diversity Database (CNDDB) data forms; mapped population locations; assisted in the preparation of the Habitat Mitigation Monitoring Program (HMMP); collected

voucher specimens; and performed other related analyses. Prepared a detailed Special Status Species Report, which included mitigation recommendations and a complete plant list.

Interstate 5/State Route 126 Interchange, State Route 126/Commercial Center Drive Interchange and Interstate 5/Hasley Canyon Road Interchange, Los Angeles County, BonTerra Consulting
Served as the lead botanist for the Interstate 5/State Route 126, State Route 126/Commerce Center Drive, and Interstate 5/Hasley Canyon Road infrastructure improvement projects in Santa Clarita. Mapped vegetation and completed detailed plant lists for this project, and Natural Environment Studies (NESs) were prepared for two of these three projects.

Northlake Specific Plan for Northlake Development, Los Angeles County, BonTerra Consulting
Served as the lead botanist for the Northlake Specific Plan project site. Conducted general plant and vegetation mapping of the approximate 2,115 acres of open space in Grasshopper Canyon adjacent to Castaic Lake. Coordinated focused survey efforts on the project site and focused plant surveys for three years. A Biological Technical Report was prepared for the project.

Restoration Mitigation and Monitoring

Peninsula Point Tract #45667 for Vintage Communities, Los Angeles County, BonTerra Consulting
Served as the project manager and biologist for the Peninsula Point coastal sage scrub reference site in Los Angeles County. Responsibilities included: a quantitative evaluation of plant growth performance, data compilation, the development of remedial maintenance measures, and a revised conceptual planting plan. Quantitative monitoring included line intercept transects and seeding count. Conducted field meetings with the U.S. Fish and Wildlife Service (USFWS).

Crown Valley Parkway Widening Project for Rancho Mission Viejo, Orange County, BonTerra Consulting Served as the project manager and lead biologist for the Crown Valley Parkway riparian habitat mitigation site. Conducted qualitative assessments of overall site conditions and quantitative measurements of plant growth performance (including line intercept transects and tree survivability assessments). Conducted meetings with the U.S. Army Corps of Engineers (USACE) and the California Department of Fish and Game (CDFG) for the project.

Pipeline C-1666 and C-1669 Biological Services, Orange County, BonTerra Consulting
Served as the project manager and lead biologist for the Santa Margarita Water District's C-1669 and C-1669 pipeline project in Las Flores, Orange County. Prepared documentation for a 4(d) Permit and a Habitat Mitigation Monitoring Plan for the construction of the pipelines. Conducted field meetings with the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG) and the County of Orange, and prepared a construction monitoring program for compliance with a Streambed Alteration Agreement.

Brief resume of key persons, specialists, and individual consultants anticipated for this project

MICHAEL R. SAN MIGUEL

Ornithologist · Wildlife Biologist

Field biologist for Biological Resources Assessment and Monitoring for 95 Stream Channels throughout Los Angeles County, Los Angeles County Department of Public Works. BonTerra Consulting conducted an evaluation of the biological resources in the natural bottom stream channels to determine the presence of riparian or other sensitive resources in preparation for clearing of vegetation to increase channel capacity for anticipated El Nino storms in winter 1997-1998. Requirements of permits issued to the County of Los Angeles by the U.S. Army Corps of Engineers (USACE) and the California Department of Fish and Game (CDFG) dictated that non-sensitive and invasive species (e.g., Arundo) be considered the key priority for vegetation removal. Sensitive habitat areas that had to be removed to insure adequate channel capacity were mapped in the field to document acres of habitat lost and to set the stage for development of post-clearing mitigation programs (allowed by the USACE and CDFG permits). Impending winter storms required accelerated responses from BonTerra Consulting biologists and overtime/weekend work shifts starting in late October 1997 and continuing through early December. All work requirements were met, and vegetation clearing was completed prior to the onset of the winter storm period. Subsequent to vegetation clearing, BonTerra field-verified habitat maps that were prepared on CADD to document the remaining vegetation in the channels.

Conducted avian surveys in the Puente and Chino Hills, Los Angeles County, to determine the breeding status for the University of California at Riverside.

EDUCATION/EXPERIENCE

1968 B.S. ENGINEERING

3 YEARS EXPERIENCE
BONTERRA CONSULTING

25 YEARS EXPERIENCE
OTHER FIRMS

ACTIVE REGISTRATION

1989
REGISTERED ENVIRONMENTAL ASSESSOR I, (CA REGISTRATION NO. 00988)
U.S. Fish and Wildlife Service Certification (Permit # TE-931910-1) allowing focused surveys of California Gnatcatcher, Southwestern Willow Flycatcher, and Least Bell's Vireo

1966
US FISH AND WILDLIFE SERVICE, MASTER BIRD BANDING PERMIT, (NO. 09466)

OTHER EXPERIENCE AND QUALIFICATIONS RELEVANT TO THE PROPOSED PROJECT:

Mr. San Miguel recently left the Southern California Edison Company after 25 years as an Environmental Engineer/Project Manager. During his successful engineering career, Mr. San Miguel also became one of the leading field ornithologists in California with over 36 years of experience in avian surveys and bird banding. He obtained his Master bird banding permit in 1966 and has banded over 25, 000 birds. Presently, he is an instructor for The Institute for Bird Populations, where he trains students in various bird banding techniques. He is past president of the Western Bird Banding Association and is currently a member of the California Bird Records Committee, Vice President of the Western Field Ornithologists, and is on the Steering Committee for the Los Angeles County Breeding Bird Atlas.

He has managed a large variety of environmental projects, including preparation or management of environmental reports and documentation required for permitting and licensing of electric utility restructuring and several projects involving the clean up of sites contaminated with hydrocarbons and other contaminants.

These projects and others required an in-depth knowledge and expertise of the National Environmental Policy Act of 1969 (NEPA) and California Environmental Quality Act (CEQA).

ATTACHMENT D

RECENT EBIRD RECORD FOR CALIFORNIA CONDOR

eBird Menu

Checklist S45830914

Older | All Checklists | Newer

Location

Old Ridge Route, Castaic, California, US (34.572, -118.663), Los Angeles County, California, US (Map)

Date and Effort

Sat May 19, 2018 11:25 AM

Protocol: Stationary

Party Size: 1

Duration: 20 minute(s)

Observers: **Naresh Satyan**

Comments: Condors!! Sunny with a decent breeze, 70F.

Submitted from eBird Android, version 1.8.2

Species

6 species total

Hide Media

8 California Condor

Condors are unmistakeable and descriptions of the birds are mostly unnecessary, so I will just describe the circumstances of the sighting. I have dozens of photos and videos, some of which I will upload in a day or two. I first saw a single condor low overhead while driving north on the I-5, about a mile south of the Templin Hwy exit. Obvious adult condor, from red head and underside of the wing pattern. I hoped to get a better look and took the Templin Hwy exit and back south on the old Ridge route road. The condor was overhead and I drove up to a point where it looked like it was about to land. As I snapped a couple of pictures from the car a shadow passed overhead and a juvenile condor was 50 feet above me. Soon after, 5 condors took off from the side of the road not far from where I was parked, rising on the thermals. In another 5 minutes, 5 birds became 7, and then there was another perched on the ground on some trash, making it 8 in all. 6 adults and 2 juveniles, undoubtedly from the Sespe sanctuary across the freeway. The count is accurate, though I don't know if I got photos of all the tags. The condors took no notice of me, flapping and soaring within 30 horizontal feet and 50 vertical feet of me. They flew Northeast, deeper into LA county. The sound a condor's wings make when the bird is that close is something else. When they rose on the thermals, it sounded like a car was approaching on the road. I feel privileged to have shared the mountains with them for 20 minutes, just me and the condors. I've seen condors multiple times before, in CA/UT/AZ, but this was easily the most thrilling encounter.

Age & Sex

	Juvenile	Immature	Adult	Age Unknown
Male		**1**	**2**	
Female			**2**	
Sex Unknown		**1**	**2**	



ML101450531 Macaulay Library

© Naresh Satyan
98, male, born San Diego 1998

Age:	Adult
Sex:	Male

1 Turkey Vulture
Passed overhead as I was sat in the car typing notes.

1 Red-tailed Hawk
Juvenile

3 Common Raven

1 Dark-eyed Junco
Heard only

2 Western Meadowlark
Heard only

Are you submitting a **complete checklist** of the birds you were able to identify?

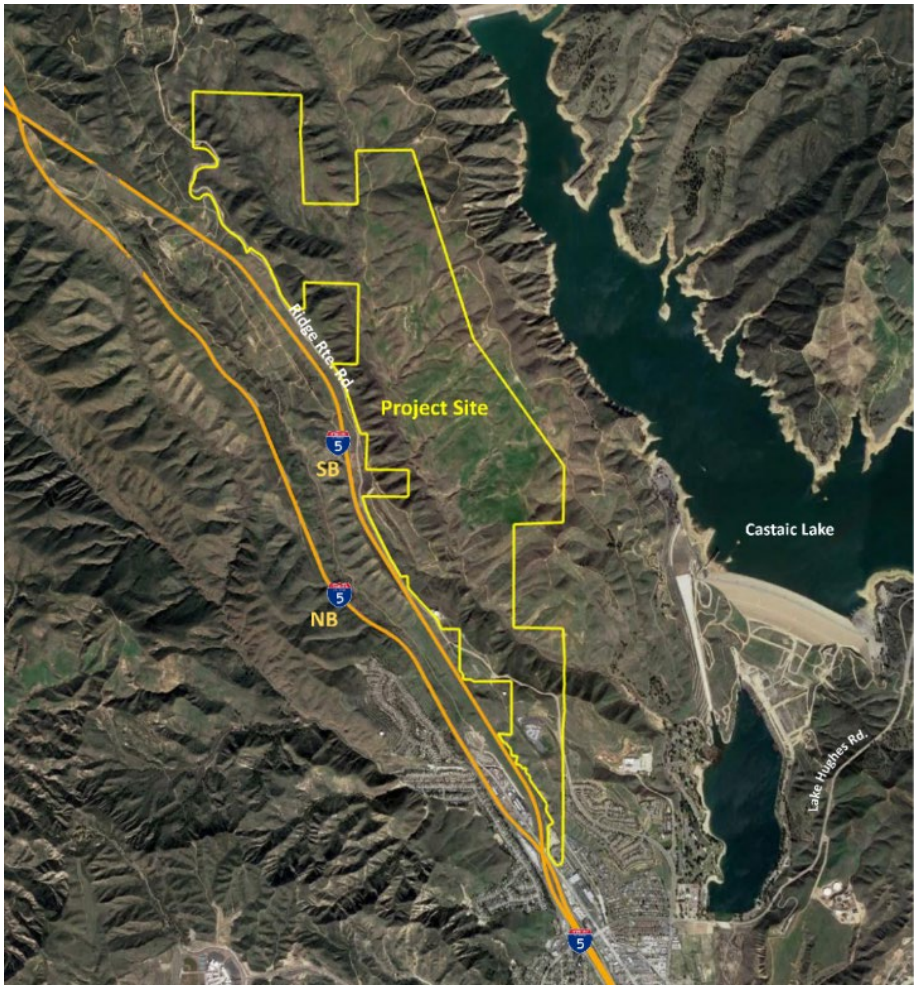
Yes

© Cornell Lab of Ornithology | Contact | FAQ

APPENDIX K

WILDLAND FIRE RISK REPORT NORTHLAKE PROJECT ADDENDUM #1, DECEMBER 2024

Wildland Fire Risk Report
NorthLake Project
Addendum #1



Prepared for:
Northlake Associates, LLC
10250 Constellation Boulevard, STE 2750
Los Angeles, CA 90067

and

Los Angeles County Fire Department

Prepared By:

firesafe PLANNING, INC.

Included in the assessment of exacerbation of wildfire risk (CEQA Guidelines section 15126.2(a)) is the increased wildfire risk from increased human habitation in a wildlife-urban interface as recognized in the recent case, *People of the State of California Ex Rel. Rob Bonta, Attorney General v. County of Lake & Lotusland Investment Holdings, Inc. (Case No. A165677; "Lotusland")).* The following analysis assesses the additional risk from the proposed new project population at the project site and concludes that while the project increases the general potential for human-ignited wildfires, that risk is less than significant based on regulatory compliance, project design and mitigation measures.

It is important to first quantify the increased risk that may be caused by development in areas which have not been previously developed. This needs to be done by describing the "additional wildfire risk factors as compared to existing conditions" that the project would "introduce" to the area. Specific studies for the project site region on this subject are not readily available, however, more regional, national and international findings are available on the general subject.

Bringing in new residents to the largely undeveloped project site increases the risk of human-caused wildfire over the existing baseline risk. This is a well-established fact. **Humans cause nearly 90% of wildfires in the United States according to the latest report from the Congressional Research Service in its report on Wildfire Statistic data June 1, 2023. These fires are primarily from discarded cigarettes, unattended campfires, burning debris, or through equipment malfunctions.**

As noted in the publication, *Conservation Threats Due to Human-Caused Increases in Fire Frequency in Mediterranean-Climate Ecosystems, by* Alexandra D. Syphard, et. Al (May 2009) which indicated that "*human ignitions increase with population density*":

> *The association of people with the spatial distribution of fire occurrence is likely due to the fact that humans now cause the majority of ignitions in all five Mediterranean-climate regions (Bond & van Wilgen 1996), and human ignitions are likely to occur close to roads and human infrastructure (e.g., Yang et al. 2007; Syphard et al. 2008). Nevertheless, our results also showed that fire occurrence consistently peaked where population densities were intermediate, which suggests that fire patterns in Mediterranean-climate regions are related to the spatial arrangement between people, urban development, and fuel. When population density is lowest, human ignitions are also low but increase with population density. Nevertheless, there appears to be a threshold above which fire occurrence declines, possibly due to less open space and fuel fragmentation caused by urban development or other land-use change. Fire-suppression resources also tend to be concentrated near urban areas (Calkin et al. 2005), and intermediate-density housing when located within wildland vegetation is classified as the wildland–urban interface (WUI) in the United States and given special fire-management considerations (Radeloff et al. 2005).*
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> **Conservation Threats Due to Human-Caused Increases in Fire Frequency in Mediterranean-Climate Ecosystems**, Alexandra D. Syphard, Volker C. Radeloff, Todd J. Hawbaker, Susan I. Stewart, First published: 15 May 2009, **https://doi.org/10.1111/j.1523-1739.2009.01223**

There is no doubt that that increased human habitation in a wildlife-urban interface increases the fire risk from human activities such as arson, children playing with fire, debris-burning; increased vehicular traffic, increased fire risk from sparks, catalytic converters, and smoking/discarded smoking materials and accidental fires. The development itself introduces residences within the site creating a wildland-urban interface that increases the general potential for human-ignited wildfires. All of these factors could expose project occupants to pollutant concentrations from wildfire or the uncontrolled spread of wildfire near or into the development footprint.

The probability of increased ignitions cannot be ignored. However, the reality is that while more opportunities for fires will exist, factors associated with the changes in the wildland fuels and topography will have an offsetting effect.

> *Studies in California show that area burned and number of fires are highest when population and housing densities are intermediate (Keeley 2005; Syphard et al. 2007). Fires initially increase with population and housing density and then decline where a threshold density is reached. There are several interrelated reasons for this. Ninety-five percent of California's fires are human caused; therefore, anthropogenic ignitions are lower in areas with low population density. As population and housing densities increase, fuels are still abundant and contiguous enough to carry fire, and the number and frequency of fires increase (Syphard et al. 2007). As population density increases further and an area is developed, wildland fuel is reduced and fragmented and fire-suppression resources are concentrated, resulting in lower fire frequencies at high population densities. Finally, even if fire frequency remains stable, fires may cluster in certain areas (e.g., human settlements) or land-cover types (Nunes et al. 2005; Forsyth & van Wilgen 2008), resulting in high fire frequency in localized areas.* Syphard, A. D., Radeloff, V. C., Hawbaker, T. J., & Stewart, S. I. (2009). Conservation threats due to human-caused increases in fire frequency in Mediterranean-climate ecosystems. Conservation Biology, 23(3), 758–769.

A study out of Texas (Effects of changing development patterns and ignition locations within Central Texas, Mobley, W, (Feb 2019)) indicated the ignition gradient along lateral development could lower ignition probabilities when the new development areas were nearest to the previous urban development, while outlying development patterns in the wildland had higher probabilities.

This builds on the concept that, at a point of development density, wildland fuels are reduced/eliminated or fragmented to a point where fire suppression effort are more effective. This higher level of development also has a greater concentration of emergency services resources to aid the protective actions needed to bring the incident to a close.

Wildland fires are primarily from discarded cigarettes, unattended campfires, burning debris, or through equipment malfunctions. Restricting smoking in hazardous areas coupled with roadside protection zones will be greatly beneficial to reducing the impacts of smoking materials within the project site. Campfires will not be allowed in the project site nor will solid fuel appliances or open flame devices which do not have spark arrestors in accordance with the Fire Code and local ordinance requirements. Burning of debris will not be allowed within the project site and will be enforced by the project site HOA in addition to the local law enforcement and fire agencies. While it is impossible to stop all of the equipment malfunctions, it is possible

to reduce the impact of equipment failure by regulation of the type and nature of equipment used in or near the wildland interface. Internal combustion engines are required to have spark arrestors under the current fire code, but compliance is a matter of operational orientation. The common areas of the project site will be under the jurisdiction of the HOA and as such, it can and will hold those doing working in the interface, especially the fuel modification zones, accountable for wildland fire safety practices in accordance with Calfire/Local Fire agency and NFPA (Nation Fire Protection Association) standards.

A study out of Canada summed the relationship of population to increased wildland fire ignitions up very well:

> *The prevalence of human-caused wildfires near population centers and in interface areas* is not just a Canadian phenomenon, but *has been observed all over the world. However, the relationship between human population density and wildland fire is complex and has been shown to be non-linear in many regions across the world because population centers can offer both sources of ignition and enhanced protection from wildland fire spread owing to increased suppression activity (Bistinas et al. 2013; Price and Bradstock 2014).*
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> *In such cases, the incidence of wild land fire ignitions increases with population density up to a local threshold, then decreases. In their research, they found that population centers of all sizes were associated with individual clusters, which further supports the notion that the relationships between human-caused wildfires and population density are non-linear and involve other factors.*
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> Human- and lightning-caused wildland fire ignition clusters in British Columbia, Canada
> Sean C. P. Coogan A * , Olivia Aftergood A and Mike D. Flannigan B., International Journal of Wildland Fire 1043-1055 https://doi.org/10.1071/WF21177 Published: 11 October 2022

The total number of structures in or near the WUI (Wildland Urban Interface) have increased significantly over the past few decades. If the probability of ignition was increased in a linear manner by the increase in population, it could be assumed that the number of wildland fires would have increased over the same period as well. The opposite has occurred. According the CalFire database (https://www.frontlinewildfire.com/wildfire-news-and-resources/california-wildfires-history-statistics/), the number of wildland fires is trending down over the past 37 years (Figure 1).

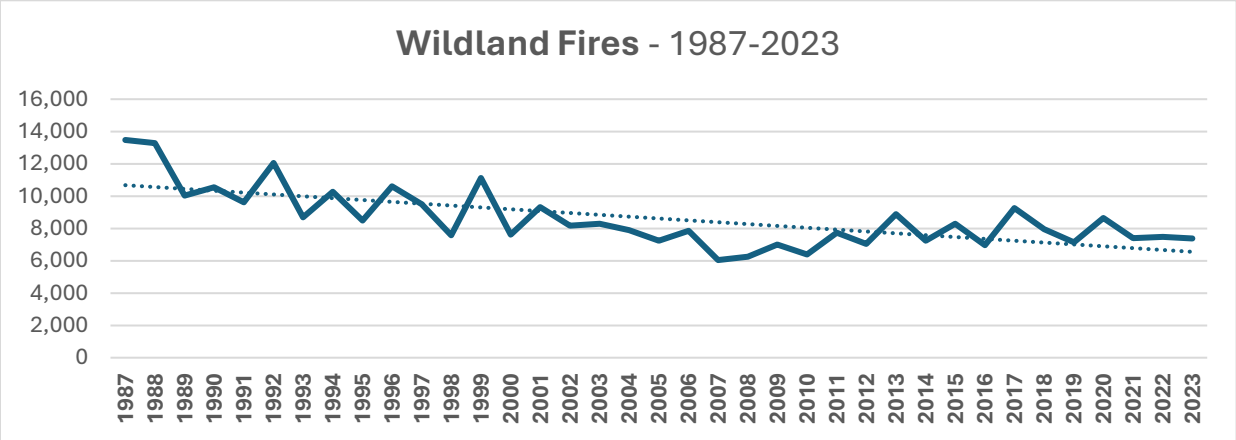

Figure 1 – California Wildland Fires 1987 to 2023

While it is impossible to isolate the WUI factor within the myriad of issues which drive the number of wildland fires in a year, it is possible to say that the inclusion of a large amount of new residential population into the WUI over this period has not produced a significant increase in the number of wildland fires. Correlation is not causation, and this is not presented as proof, but the correlation is one factor to consider.

The impacts to the community are from large wildland fires (100 acres or more) are sustained in many ways. First and foremost is the direct threat of the flames and smoke damaging or destroying structures, property and putting lives at risk. Secondary to that are air and water pollution during and after the fire event. Also potential for flooding and earth movement from the loss of vegetation and other stabilizing aspects of the environment. Each of these impacts has multiple precautions or mitigations that can and do lessen the impact or in many cases eliminate the impacts entirely.

These include:

a) Fuel break and fire breaks in the wildland
b) Fuel modification zones in the wildland interface
c) Defensible space around structures
d) Hardening of structures to be more resistive to wildland fires (Chapter 7A of the Building Code and/or Section R337 of the Residential Code
e) Roadside clearance to create buffers between the roadway and native wildland fuels
f) Use of prescribed fire for fuels reductions
g) Design of the community roadways to include multiple paths of travel for ingress/egress and evacuation
h) Undergrounding of critical infrastructure to make it more resistant to wildland fire impacts (electrical transmission, water supply storage and distribution, wastewater infrastructure, traffic control systems, and petroleum storage and distribution)
i) Protection of emergency medical system components
j) Preplanned evacuation zones and routes
k) Back up systems for continuity of government and provision of emergency services.
l) Public education on wildland hazards, mitigation and improvements (Ready Set Go, Know Your Way, EDITH (exit drills in the home))
m) Annual inspections of interface, at-risk locations and equipment needed to provide essential services
n) Community information and communications system
o) Emergency Alert Systems
p) Community sponsored Clean Up days
q) Firewise Community certification.

Mitigation measures are “feasible changes in any or all activities involved in the project in order to substantially lessen or avoid significant effects on the environment.” (Guidelines, § 15041, subd. (a).)

The CEQA Guidelines define “mitigation” to include:

Avoiding /minimizing the impact

Preventing/reducing potential adverse impacts by protection of values at risk by elimination or suppression of impacts

Reducing or eliminating the impact by preservation, intrinsic design and maintenance operations,

Offsetting/ Countering impacts with features, resources or programs

Intrinsic Safety is a method for ensuring safety by removing or lowering the causes of danger to a level where the risk is significantly reduced; whereas Functional Safety is reducing risks to an acceptable level to ensure safety by changing the form and function of the hazard interface. Both are necessary to achieve the required protection against wildland fires.

The project's design (or mitigation measures) alleviates the stated risks as follows:

Avoidance by:

- Prohibiting smoking in wildland and wildland interface
- Banning solid fuel outfire fires within the community without spark arrestor and only in approved devices.
- Limiting access to vulnerable open space

Minimization/Prevention/ Reduction by providing:

- Fuel Breaks and Fire Breaks which reduce fire intensity and forward progress in the direction of the community
- Undergrounding of utilities, pump stations, switch gear to make them less impacted by wildfires
- Annual inspections for wildland interface (common areas) to insure readiness
- Defensible space inspections to educate and inform homeowners on what can be accomplished to make the structure more resistant to wildland fires
- Community cleanup programs (ongoing) to assist in removing wildland fuels from the interface and the community as a whole
- Back up of critical infrastructure (water, communications, traffic control, electrical) to ensure that they are functional when needed
- Fuel modification zones which slow or stop the forward progression of the wildland fire
- Defensible space which eliminates or greater reduces the fire pathways between the native fuels and the ignition zone around the structure
- Roadside clearance zones which increase the utility of the roads for evacuation while reducing the impact of possible ignition sources by reducing fuels near the roads by creating a buffer area
- New fire suppression resources which are closer/faster to the incident in order to intercede before the fire reaches a point where it exceeds the local resources and become a large wildland fire
- Hardened structures to wildland fire impacts through physical construction, distance and configuration of items on or near the structure which might ignite

- Placement of structures relative to the potential wildland fires to reduce or eliminate the possible ignition of the structure or the vegetation around it

Compensation/Offsetting risk by:

- Increased detection of ignition which result in actions which limit the size and scope of the fire with early intervention by citizens or emergency personnel
- Rapid suppression capabilities (as opposed to longer responses to areas without immediate access)
- Fire prevention and public education programs to reduce, eliminate and prevent wildland fires by changing behavior and practice which could elevate the risk of a wildland fire or its impacts
- Community information and communication systems to keep residents informed and aware of risks, actions needed and increases the ability to plan for future actions such as evacuation prior to being in harm's way
- Preplanned evacuation areas/routes which are known to residents to insure that, if evacuation is needed, it can be completed quickly and in the most efficient and effective manner

Conclusion

The California Governor's Wildland Strike Forse (2014) said it succinctly:

> *California has made progress in developing and adopting stringent wildland building codes. Since 2008, new construction in California's wildlands must use ember-resistant building materials. For homes built before the 2008 standards, CAL FIRE is working to develop a list of low-cost retrofit steps homeowners can take. In addition, the Office of the State Fire Marshal (OSFM) maintains an advisory committee of fire and building officials that continuously considers building code updates to improve fire safety. Most recently, OSFM advanced building code changes including sealing of garage door gaps, sealing skylights and safety improvements to outbuildings.*
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> *Developing new housing in Very High Fire Hazard Severity Zones presents challenges. Since 2015, CAL FIRE has assisted local governments in land use planning. CAL FIRE is working to identify subdivisions at significant fire risk without secondary evacuation routes and to make recommendations to improve access.*
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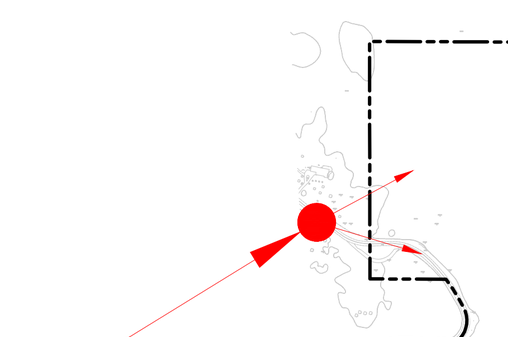
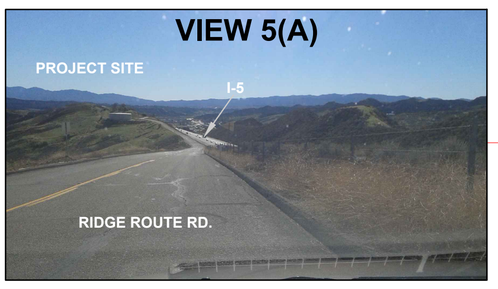
> *Homeowners are encouraged to actively maintain defensible space, which is defined as a minimum 100-foot area around a home. Maintenance is an ongoing task. California inspected more than 217,600 homes for defensible space compliance in 2017-2018 alone.*
>
> *It is critical that roads and other infrastructure be more fire defensible and evacuation ready for the populations in the WUI. All levels of government must establish clear contingency plans with local communities to identify and create temporary refuge areas and shelter-in-place procedures to help fire evacuees survive when unable to escape a wildfire.*

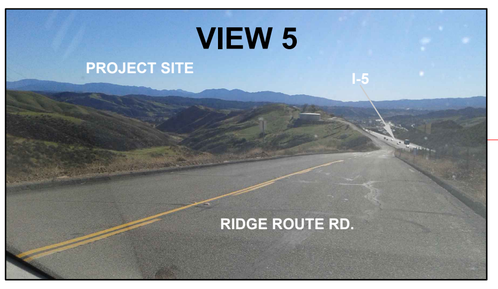
Wildfires and Climate Change: California's Energy Future., A report from Governor Newsom's Strike Force April 12, 2019

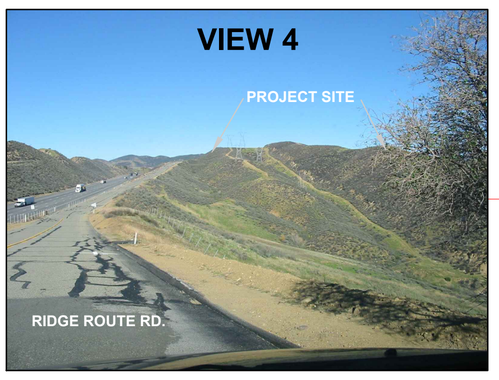
All of the issues addressed above are or will be included in the new development areas by the approved design, ordinance, statute or regulation. As such, the increased wildfire risk from human-ignited wildfire is less than significant.

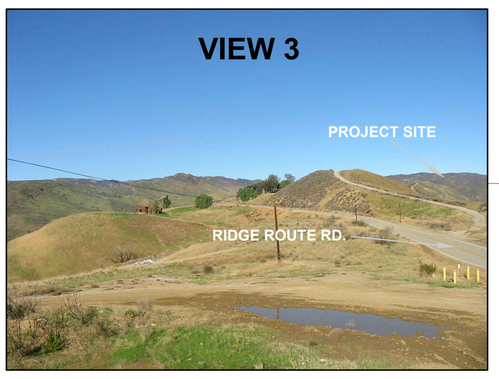


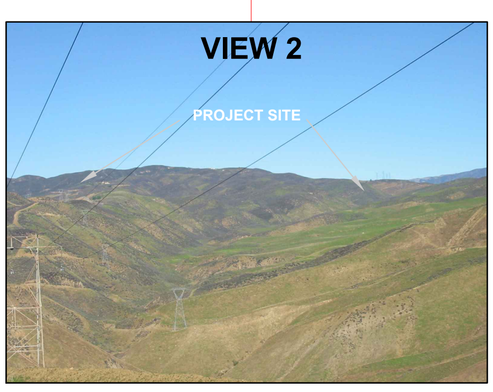














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