Final Initial Study and Mitigated Negative Declaration, Responses to Comments, and Mitigation Monitoring and Reporting Plan

WHITTIER NARROWS EQUESTRIAN CENTER REFURBISHMENT PROJECT

September 2019

Lead Agency:

County of Los Angeles
Department of Public Works
900 S. Fremont Avenue
Alhambra, California 91803

Prepared by:

215 North 5th Street
Redlands, CA 92374

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Final

Initial Study/Mitigated Negative Declaration

September 2019

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FINAL MITIGATED NEGATIVE DECLARATION
WHITTIER NARROWS EQUESTRIAN CENTER RFURBISHMENT PROJECT

Lead Agency: County of Los Angeles

Project Proponent: County of Los Angeles (Department of Public Works)

Project Location: Whittier Narrows Equestrian Center, 12191 Rooks Road, Los Angeles County, CA 90601, APN: 8125-012-904, 8125-012-910, 8125-062-904, 8125-062-003, and 8125-062-903

Project Description: The Whittier Narrows Equestrian Center is an existing equestrian center, located in Los Angeles County along the San Gabriel River. The project site measures approximately 20 acres and is bound by Rooks Road to the southeast, Peck Road to the east, the San Gabriel River to the northwest, and Pico Rivera Bicentennial Park to the southwest. The equestrian center provides access to riding trails, including part of the Juan Bautista De Anza National Historic Trail. The equestrian center is characterized by large open areas, clusters of buildings, rows of ornamental trees, and scattered individual trees. The Whittier Narrows Equestrian Center has seven existing barns with 200 horse stalls, four arenas, and five round pens, dry material storage area, a restroom, security lighting, and utility service.

The existing facilities at the equestrian center are outdated and have several flooding and stormwater pollution issues. There are several low spots in the center of the project site, particularly near the horse stables, that pool water during storm events. Stormwater runoff from the project site, which is often polluted from the equestrian uses on the site, eventually flows into the San Gabriel River and other sensitive habitats downstream.

The Whittier Narrows Equestrian Center Refurbishment Project (Proposed Project) would provide updated and improved equestrian facilities for horse boarders and the general public and alleviate on-site and downstream flooding and stormwater pollution issues. Proposed improvements include:

Equestrian Facilities

- One new large arena measuring 125 feet (ft.) by 200 ft. with 4-rail pipe fencing and gates.
- One medium sized arena measuring 125 ft. by 180 ft.

- Three new 60 ft. diameter round pens with 4-rail pipe fencing and gates.
- Three new 40 ft. diameter round pens.
- Two existing renovated arenas.
- One new small arena measuring 80 ft. by 140 ft. with 4-rail fencing and gates.
- One new rental corral with 4-rail pipe fencing and gates and an American with Disabilities Act (ADA) accessible mounting platform.
- Three 50 ft. by 50 ft. turnouts with 4-rail pipe fencing and gates.
- Bleachers.
- One covered 7-bay wash stall.
- Eight grooming rack areas with room for two to four grooming stalls.
- Hitching posts.

Building Structures

- One new approximately 460 square (sq.) ft. prefabricated ADA compliant restroom structure.
- One existing restroom will be upgraded to comply with standards of the Americans with Disabilities Act (ADA).
- One approximately 150 sq. ft. new prefabricated public rental office facility that includes lockers.
- Nine various sized (5,870 sq. ft. – 9,010 sq. ft.) roofed barns that can accommodate up to 180 horses with various sized metal pipe stalls.
- One future roofed barn measuring approximately 7,300 sq. ft. that can accommodate 20 horses with each metal pipe stall measuring 12 feet by 24 feet.
- A hay and dry materials storage structure.
- A service yard vehicle/equipment storage structure.
- A new pre-fabricated manure waste storage and composting area covered structure. The new structure would measure 25 feet by 27 feet and would have a metal roof and concrete slab with a drainage system connected to the sewer system. This structure would replace an

existing composting and manure area that is not covered by a roof structure, but is covered by tarps.

Site Infrastructure

- Vehicular parking areas with 83 parking spaces, including four ADA compliant parking spaces to be paved with crushed miscellaneous base (CMB).
- Parking areas for up to 31 horse trailers and standard vehicles to be paved with CMB.
- Security lighting throughout the facility. The facility currently has 11 pole mounted security lights. The Proposed Project would include 23 new pole mounted security lights located along the new internal access road, and 28 new pole mounted flood lights in the barn, picnic, and turnout corral areas.
- New fire hydrants.
- Low Impact Development (LID) features, such as bio-swales and detention basins, including an overflow spillway.
- An automatic irrigation system for all equestrian arenas and proposed planting areas.
- Asphalt paved internal access road. There is no existing internal access road, vehicles can drive and park anywhere throughout the equestrian facility. The new paved 1380 linear foot internal access road would formalize the area vehicles can drive and park within the equestrian facility.

Other Features

- Monument entry sign.
- Drought resistant trees and landscaping.
- Picnic tables and benches near the public rental facility.
- Lockers at both sides of all barn ends.
- Informational, directional, and regulatory signage will be included.

During construction temporary facilities for existing equestrian boarders would be provided, including temporary stables/barns, restrooms, and security lighting. Proposed security lighting would be located at the periphery of the temporary barn/stable areas. The exact locations would be determined during construction. Construction staging would occur within the boundaries of the

existing equestrian facility. Earthwork would be balanced onsite. No hauling of dirt to and from the site is anticipated. It is anticipated that trucking needs during demolition would be minimal because the type of structures that would be demolished would generate small amounts of waste. Structures to be demolished consist of pipe barns, corrals, and portions of the existing restroom.

The existing equestrian facility can accommodate up to 200 horses/stalls, and the renovated facility would have the same amount (200).

Public Review Period: December 10, 2018 to January 8, 2019

Mitigation Measures Incorporated into the Project to Avoid Significant Effects:

Biological Resources

BIO-1: Preconstruction Surveys for Nesting Birds: Any ground-disturbing activities and/or vegetation or structure removal activities within the project site shall be conducted during the non-breeding season for birds (approximately September 1 through January 31). This will avoid violations of the MBTA and California FGC Sections 3503, 3503.5 and 3513. If activities with the potential to disrupt nesting birds are scheduled to occur during the bird breeding season (February through August for raptors and March through August for songbirds), a preconstruction nesting bird survey shall be conducted by a qualified biologist no more than three (3) days prior to the start of construction activities. The nest survey shall include the project site and adjacent areas within 500 feet where project activities have the potential to cause nest failure. If no nesting birds are observed during the survey, site preparation and construction activities may begin. If nesting birds (including nesting raptors) are found to be present, then avoidance or minimization measures shall be undertaken to avoid nest disturbance. Measures will include the following at a minimum: (1) establishment of an avoidance buffer until nesting has been completed and (2) periodic monitoring of the nest status by a biological monitor. The width of the buffer will be determined by the project biologist. Typically, this is a minimum of 300 feet from the nest site in all directions (500 feet is typically recommended by CDFW for raptors), until the juveniles have fledged and there has been no evidence of a second attempt at nesting. The monitoring biologist will monitor the nest(s) during construction and document any findings.

BIO-2: Preconstruction Sensitive Wildlife Survey: A preconstruction survey shall be conducted for sensitive biological resources within all areas of potential permanent and temporary disturbance, including a 500-foot buffer. The preconstruction survey shall take place no more than 14 days prior to the start of any ground-disturbing activities and/or vegetation or structure removal activities. The preconstruction survey shall take place regardless of nesting bird season timing and shall focus on identifying the presence of least Bell's vireo, coastal California gnatcatcher, burrowing owl, and yellow-breasted chat within the project site and 500-foot buffer within suitable habitat for these species. Should special-status species be identified during the preconstruction survey, additional

mitigation measures may need to be implemented to avoid or minimize impacts to these species, and consultation between the County of Los Angeles and the appropriate agency (CDFW, USFWS) may be necessary to determine the appropriate additional mitigation measures.

If burrowing owls are observed during the preconstruction survey, a specific mitigation methodology for the owl shall be determined in consultation between the County of Los Angeles and CDFW. Mitigation measures for any owls present could include avoidance of the owl burrows during their nesting season and/or passive relocation of burrowing owls.

If western red bat or western yellow bat are observed or detected during the preconstruction survey, a specific mitigation methodology shall be determined in consultation between the County of Los Angeles and CDFW. Mitigation measures for any bats present may include the development of a bat protection and relocation plan, and/or avoidance of bat roost tree removal. If tree removal cannot be avoided and a qualified bat biologist determines that roosting bats may be present in a tree at any time of year, then the removal of that tree shall take place under the supervision of a qualified bat biologist. Tree removal methods shall consist of using heavy machinery to slowly push the tree over after nudging the tree two to three times with approximately 30 seconds in between nudging to allow bats to escape. Downed trees will be allowed to remain in place until inspected by the qualified bat biologist. If the downed tree is determined to be a bat roost, then a minimum of 24 hours shall be allowed to pass (preferably 48 hours) before the tree may be sawed up or mulched.

If least Bell's vireo, coastal California gnatcatcher, or yellow-breasted chat are detected during the preconstruction survey, additional mitigation measures may need to be implemented to avoid or minimize impacts to these species, and consultation between the County of Los Angeles and the appropriate agency may be required (CDFW, USFWS). Measures provided under BIO-1 would avoid direct and indirect impacts to nesting yellow-breasted chat should they be located during preconstruction surveys. Mitigation measures for the federally and state-listed least Bell's vireo or the federally listed coastal California gnatcatchers would be included to ensure that impacts to these species do not occur during vegetation removal. Mitigation measures for coastal California gnatcatcher and least Bell's vireo if habitat is determined to be occupied will include (at the discretion of the monitoring biologist) additional focused surveys, biological monitoring during ground-disturbing activities and/or vegetation or structure removal activities, the establishment of a minimum 500-foot non-disturbance buffer around active nest locations during construction activities, and/or noise monitoring to ensure that noise levels will not exceed 60 decibels.

BIO-3: Regulatory Permitting: Prior to the commencement of project construction activities that will impact the ephemeral drainage on the project site, authorization for impacts shall be acquired through the permitting process from the USACE, RWQCB, and CDFW pursuant to the CWA Section 404 and 401 and California Fish and Game Code Section 1600, respectively. Project specific permitting conditions for impacts to features jurisdictional to state and federal agencies will be determined during the permitting process.

Cultural Resources

CUL-1: If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 60-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

1. If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required.
2. If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the County of Los Angeles ("County"). The County shall consult with the Project Archaeologist and, for Native American or associated finds, interested affiliated Tribes on a finding of eligibility. Appropriate treatment measures, such as avoidance or data recovery, shall be implemented if the find is determined to be eligible for inclusion in the CRHR. Work may not resume within the no-work radius until the County, through consultation with the Project Archaeologist and interested affiliated Tribes, determine that the site either: 1) is not eligible for the CRHR; or 2) that the treatment measures have been completed to their satisfaction.

3. If the find includes human remains, or remains that are potentially human, the archaeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Los Angeles County Coroner (per §7050.5 of the Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, §5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

CUL-2: A qualified paleontologist shall be retained prior to the start of construction. If, during ground-disturbing activities, paleontological resources are discovered the paleontologist will examine the find. Based on the findings of the paleontologist, additional paleontological monitoring may be needed. Any paleontological monitoring shall be restricted to older Quaternary deposits or exposures of older Quaternary Alluvium, which might be present below the surface. To avoid construction delays, the monitor shall be prepared to quickly salvage fossils, as they are unearthed. The monitor shall remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor shall have the authority to temporarily halt or divert grading equipment to allow for the removal of abundant or large specimens. If the paleontologist

determines that monitoring is not necessary, the paleontologist shall prepare a memo documenting such to the satisfaction of the County.

CUL-3: If the qualified paleontologist deems recovered resources as rare, substantial, or otherwise unique, the resources shall be prepared and stabilized for formal identification and permanent preservation. A report shall be prepared describing the results of the evaluation and shall be submitted to the County.

CUL-4: Identification and curation of recovered paleontological specimens into an established accredited museum repository with permanent retrievable paleontological storage shall be required for recovered resources identified by the qualified paleontologist (retained via Mitigation Measure CUL-2) as rare, substantial, or otherwise unique.

Geology and Soils

GEO-1: Design and construction of project structures shall incorporate recommendations from the Geotechnical Evaluation Whittier Narrows Equestrian Center 12191 Rooks Road Whittier, California prepared by Ninyo & Moore dated April 2, 2018.

Tribal Cultural Resources

TCR-1: Ground-disturbing activities shall be monitored by a Tribal Monitor representing the Kizh Nation. Based on soil conditions, the Tribal Monitor may conclude that there is little likelihood that archaeological materials will be uncovered by construction activities. In this event, the Tribal Monitor may adjust the frequency of monitoring needed. Monitoring may be discontinued or may consist of periodic spot checking, as deemed appropriate by the Tribal Monitor in consultation with the Archaeologist. The Tribal Monitor shall have the authority to temporarily halt construction operations within 60 feet of a tribal cultural resource (TCR) or a potential TCR to determine if significant or potentially significant resources will be adversely affected by continuing construction activities. The tribal monitor shall use flagging around the find. Within the flagged off area construction shall halt until a qualified archaeologist evaluates the find. Construction shall not take place within the delineated find area until the County consults on appropriate treatment with a qualified archaeologist and the Kizh Nation. The Tribal Monitor may suggest options for treatment of finds for consideration. The County shall have ultimate authority over the treatment of new finds while complying with all rules and regulations including, but not limited to, AB 2641, Section 7050.5 pf the California Health and Safety Code, and Public Resources Code Section 5097.94 and 5097.98.

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SECTION 1.0 INTRODUCTION

This document is the Final Initial Study/Mitigated Negative Declaration (IS/MND), including the Responses to Comments and the Mitigation Monitoring and Reporting Plan (MMRP), for the Whittier Narrows Equestrian Center Refurbishment Project (Proposed Project). It has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resource Code Section 21000 et. seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.), as amended. This Final IS/MND document supplements the Draft IS/MND released for public review on May 15, 2018. The Draft IS/MND is incorporated into this Final IS/MND by reference and included as Appendix A.

The County of Los Angeles is the Lead Agency for the Proposed Project. On December 10, 2018 the County of Los Angeles distributed the Draft IS/MND for the Proposed Project to public agencies and the general public for review and comment. In accordance with the State CEQA Guidelines, a 30-day review period, which ended on January 8, 2019, was completed. During the public review period, four comment letters on the Draft IS/MND were received. This Final IS/MND and MMRP document is organized as follows:

- Section 1.0 provides a discussion of the purpose of the document and discusses the structure of the document;
- Section 2.0 contains a summary of the project description;
- Section 3.0 includes the comment letters received and responses to these comments;
- Section 4.0 includes corrections and clarifications made to the Draft IS/MND in response to comments and a discussion regarding why these changes do not require recirculation for the Draft IS/MND; and
- Section 5.0 contains the Mitigation Monitoring and Reporting Plan (MMRP).

This Final IS/MND and MMRP document and the Draft IS/MND together constitute the environmental document for the Proposed Project. For reference purposes the Draft IS/MND has been included as part of this Final IS/MND as Appendix A.

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SECTION 2.0 PROJECT OVERVIEW

2.1 Project Location

The Proposed Project is located at the existing Whittier Narrows Equestrian Center located at 12191 Rooks Road, Los Angeles County, CA 90601. The Whittier Narrows Equestrian Center measures approximately 20 acres and is bound by Rooks Road to the southeast, Peck Road to the east, the San Gabriel River to the northwest, and Pico Rivera Bicentennial Park to the southwest

2.2 Project Background

The Whittier Narrows Equestrian Center provides access to riding trails, including part of the Juan Bautista De Anza National Historic Trail. The equestrian center is characterized by large open areas, clusters of buildings, rows of ornamental trees, and scattered individual trees. The Whittier Narrows Equestrian Center has seven existing barns with 200 horse stalls, four arenas, and five round pens, dry material storage area, a restroom, security lighting, and utility service.

The existing facilities at the equestrian center are outdated and have several flooding and stormwater pollution issues. There are several low spots in the center of the project site, particularly near the horse stables, that pool water during storm events. Stormwater runoff from the project site, which is often polluted from the equestrian uses on the site, eventually flows into the San Gabriel River and other sensitive habitats downstream.

2.3 Project Characteristics

The Whittier Narrows Equestrian Center Refurbishment Project (Proposed Project) would provide updated and improved equestrian facilities for horse boarders and the general public and alleviate on-site and downstream flooding and stormwater pollution issues. Proposed improvements include:

Equestrian Facilities

- One new large arena measuring 125 feet (ft.) by 200 ft. with 4-rail pipe fencing and gates.
- One medium sized arena measuring 125 ft. by 180 ft.
- Three new 60 ft. diameter round pens with 4-rail pipe fencing and gates.
- Three new 40 ft. diameter round pens.
- Two existing renovated arenas.
- One new small arena measuring 80 ft. by 140 ft. with 4-rail fencing and gates.
- One new rental corral with 4-rail pipe fencing and gates and an American with Disabilities Act (ADA) accessible mounting platform.

- Three 50 ft. by 50 ft. turnouts with 4-rail pipe fencing and gates.
- Bleachers.
- One covered 7-bay wash stall.
- Eight grooming rack areas with room for two to four grooming stalls.
- Hitching posts.

Building Structures

- One new approximately 460 square (sq.) ft. prefabricated ADA compliant restroom structure.
- One existing restroom will be upgraded to comply with standards of the Americans with Disabilities Act (ADA).
- One approximately 150 sq. ft. new prefabricated public rental office facility that includes lockers.
- Nine various sized (5,870 sq. ft. – 9,010 sq. ft.) roofed barns that can accommodate up to 180 horses with various sized metal pipe stalls.
- One future roofed barn measuring approximately 7,300 sq. ft. that can accommodate 20 horses with each metal pipe stall measuring 12 feet by 24 feet.
- A hay and dry materials storage structure.
- A service yard vehicle/equipment storage structure.
- A new pre-fabricated manure waste storage and composting area covered structure. The new structure would measure 25 feet by 27 feet and would have a metal roof and concrete slab with a drainage system connected to the sewer system. This structure would replace an existing composting and manure area that is not covered by a roof structure, but is covered by tarps.

Site Infrastructure

- Vehicular parking areas with 83 parking spaces, including four ADA compliant parking spaces to be paved with crushed miscellaneous base (CMB).
- Parking areas for up to 31 horse trailers and standard vehicles to be paved with CMB.
- Security lighting throughout the facility. The facility currently has 11 pole mounted security lights. The Proposed Project would include 23 new pole mounted security lights located along the new internal access road, and 28 new pole mounted flood lights in the barn, picnic, and turnout corral areas.
- New fire hydrants.
- Low Impact Development (LID) features, such as bio-swales and detention basins, including an overflow spillway.

- An automatic irrigation system for all equestrian arenas and proposed planting areas.
- Asphalt paved internal access road. There is no existing internal access road, vehicles can drive and park anywhere throughout the equestrian facility. The new paved 1,380 linear foot internal access road would formalize the area vehicles can drive and park within the equestrian facility.

Other Features

- Monument entry sign.
- Drought resistant trees and landscaping.
- Picnic tables and benches near the public rental facility.
- Lockers at both sides of all barn ends.
- Informational, directional, and regulatory signage will be included.

During construction temporary facilities for existing equestrian boarders would be provided, including temporary stables/barns, restrooms, and security lighting. Proposed security lighting would be located at the periphery of the temporary barn/stable areas. The exact locations would be determined during construction. Construction staging would occur within the boundaries of the existing equestrian facility. Earthwork would be balanced onsite. No hauling of dirt to and from the site is anticipated. It is anticipated that trucking needs during demolition would be minimal because the type of structures that would be demolished would generate small amounts of waste. Structures to be demolished consist of pipe barns, corrals, and portions of the existing restroom.

The existing equestrian facility can accommodate up to 200 horses/stalls, and the renovated facility would have the same amount (200).

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SECTION 3.0 COMMENTS AND RESPONSES

This section of the document contains copies of the comment letters received during the 30-day public review period, which began on December 10, 2018 and ended on January 8, 2019. In conformance with Section 15088(a) of the State CEQA Guidelines, the County of Los Angeles has considered comments on four (4) letters received during the review period. These letters and the responses to the comments are provided in this section.

3.1 List of Comment Letters

Letter Number	Sender	Date Received
1	California Department of Transportation (Caltrans)	12/27/2018
2	California Department of Fish and Wildlife	1/4/2019
3	California Department of Toxic Substance Control	1/7/2019
4	Governor's Office of Planning and Research	1/17/2019

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Letter 1 – California Department of Transportation (Caltrans)

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 7 – Office of Regional Planning
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE (213) 897-6536
FAX (213) 897-9140
TTY 711
www.dot.ca.gov

RECEIVED
DEC 27 2018
PROJECT MANAGEMENT DIVISION I
DEPARTMENT OF PUBLIC WORKS

Making Conservation a California Way of Life.

December 20, 2018

David Palma
County of Los Angles
Department of Public Works
P.O. BOX 1460
Alhambra, CA 91802-1460

RE: Whittier Narrows Equestrian Center
Refurbishments Project
GTS # 07-LA-2018-02085
SCH# 2018121018

Mr. Palma:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for this Equestrian Refurbishment Project. The Whittier Narrows Equestrian Center is an existing equestrian center, located in Los Angeles County along the San Gabriel River. The project site measures approximately 20 acres and is bound by Rooks Road to the southeast, Peck Rd to the east, the San Gabriel River to the northwest, and Pico Rivera Bicentennial Park to the southwest. The equestrian center provides access to riding trails, including part of the Juan Bautista De Anza National Historic Trail. The equestrian center is characterized by large open areas, clusters of buildings, rows of ornamental trees, and scattered non-native individual trees. The Whittier Narrows Equestrian Center has seven existing barns with 200 horse stalls, four arenas, and five round pens, dry material storage area, a restroom, security lighting, and utility service. The existing facilities at the equestrian center are outdated and have several flooding and stormwater pollution issues. There are several low spots in the center of the project site, particularly near the horse stables, that pool water during storm events. Stormwater runoff from the project site, which is often polluted from the equestrian uses on the site, eventually flow into the San Gabriel River and other sensitive habitats downstream. The Whittier Narrows Equestrian Center Refurbishment project would provide updated and improved equestrian facilities for horse boarders and the general public and alleviate on-site and downstream flooding and stormwater pollution issues.

After reviewing the Mitigated Negative Declaration (MND), Caltrans has the following comments:

The WNEC Draft IS states that: The Proposed Project would be limited to the refurbishment of an equestrian center and operational traffic is anticipated to be similar to existing conditions, and this would yield less than significant impacts.

However, it is stated in the Equestrian Facilities, Building Structures and Site Infrastructure Sections of the DEIR's Project Description that new facilities (rental office, arenas, pens, parking area) will be built.

1-1

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

Letter 1 – continued

Mr. Palma
December 20, 2018
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The construction of these facilities and infrastructures will add significantly more traffic to the area and because of this, the impact needs to be analyzed. 1-1 cont.

If you have any questions regarding these comments, please contact project coordinator Reece Allen, at reece.allen@dot.ca.gov and refer to GTS# 07-LA-2018-02085

Sincerely,

MIYA EDMONSON
IGR/CEQA Branch Chief

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

Letter 1 Response to Comments

Response to Comment 1-1:

Thank you for your comment. The comment states that the Proposed Project includes new facilities; therefore, the Proposed Project would add significantly more traffic to the area and that such increase in traffic needs to be analyzed. This comment as well as the County's response will be part of the Final IS/MND that will be provided to the County of Los Angeles Board of Supervisors for their consideration.

The Proposed Project would refurbish the existing Whittier Narrows Equestrian Center and provide updated and improved equestrian facilities. Table 3-1 lists current and proposed facilities at the Whittier Narrows Equestrian Center.

Table 3-1 Summary of Existing and Proposed Facilities

Existing Equestrian Center	Proposed Project
Existing Facilities:	***New Facilities:***
Seven horse barns (200 horse stalls; all to be demolished)	One new large arena (125 ft. by 200 ft.)
Four arenas (two to be demolished)	One new medium arena (125 ft. by 180 ft.)
Five round pens (all to be demolished)	Three new round pens (60 ft. diameter)
Dry material storage area	Three new round pens (40 ft. diameter)
Restroom (to be renovated)	One new small arena (80 ft. by 140 ft.)
Unofficial parking areas throughout the equestrian center	New rental corral (ADA accessible)
	Three turnouts (50 ft. by 50 ft.)
	Bleachers
	Wash stall (7-bay)
	Grooming rack (8 areas)
	Hitching posts
	One new restroom structure (460 sq. ft.; ADA compliant)
	Prefabricated public rental office (150 sq. ft.)
	Nine various sized (180 horse stalls; 5,870 sq. ft. – 9,010 sq. ft.) roofed barns

Existing Equestrian Center	Proposed Project
	One future roofed barn (20 horse stalls; 7,300 sq. ft.)
	Hay and dry materials storage structure
	Service yard vehicle/equipment storage structure
	New pre-fabricated manure waste storage and composting area
	Bio-retention basins
	Existing facilities to be renovated:
	Two arenas
	Existing restroom to be upgraded to comply with ADA standards

The County agrees with the comment that the Proposed Project would add new facilities to the equestrian center. However, the new facilities are intended to meet the needs of existing equestrian center users. Currently the equestrian center has a 200 horse stall capacity and in the past has had the capacity to store up to 280 horses. The Proposed Project would maintain the current capacity of 200 horse stalls; no increases in horse stalls are proposed. As such, no increase in traffic from new users boarding horses at the equestrian center are anticipated.

The comment letter also lists the addition of new parking areas as a source of significantly more traffic to the area. Currently there are no formal parking areas at the equestrian center. The Proposed Project would formalize and designate parking areas and internal roads. These improvements are intended to provide improved operating conditions to the existing equestrian users by providing a more efficient and organized use of space within the existing equestrian center. The formalization of parking areas is not anticipated to generate new traffic over existing conditions because no new land use is being introduced to the project site.

As stated in Section 4.17 in the response to question a) of the Initial Study, operational traffic is anticipated to be similar to existing conditions because the Proposed Project would not increase the number of horse stalls and would not increase the footprint of the equestrian center. The facility additions and improvements are intended to meet the needs of existing equestrian center users. No changes to the IS/MND are required in response to this comment.

Letter 2 – California Department of Fish and Wildlife

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 82123
(858) 467-4201
www.wildlife.ca.gov

EDMUND G. BROWN, Jr., Governor
CHARLTON H. BONHAM, Director

January 4, 2019

Mr. David Palma
County of Los Angeles
Department of Public Works
P.O. Box 1460
Alhambra, CA 91802-1460
DPalma@dpw.lacounty.gov

Subject: Draft Mitigated Negative Declaration for the Whittier Narrows Equestrian Refurbishment Project, City of Whittier, Los Angeles County

Dear Mr. Palma:

The California Department of Fish and Wildlife (CDFW) has reviewed the above-referenced Draft Mitigated Negative Declaration (MND) for the Whittier Narrows Equestrian Refurbishment Project (Project). The MND's supporting documentation includes the "Whittier Narrows Equestrian Center Refurbishment Project Environmental Checklist Form (Initial Study)" provided by the County of Los Angeles Department of Public Works (County).

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW's Role

CDFW is California's Trustee Agency for fish and wildlife resources, and holds those resources in trust by statute for all the people of the State [Fish & Game Code, §§ 711.7, subdivision (a) & 1802; Public Resources Code, § 21070; California Environmental Quality Act (CEQA) Guidelines, § 15386, subdivision (a)]. CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect state fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Public Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code, including lake and streambed alteration regulatory authority (Fish & Game Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take", as defined by state law, of any species protected under the California Endangered Species Act (CESA) (Fish & Game Code, § 2050 et seq.), or State-listed rare plant pursuant to the Native Plant Protection Act (NPPA; Fish

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& Game Code, § 1900 et seq.) authorization as provided by the applicable Fish and Game Code will be required.

Project Description and Summary

Objective: The Whittier Narrows Equestrian Center is located in Los Angeles County along the San Gabriel River. The Project site is approximately 20 acres and highly disturbed with mostly open, bare ground. The equestrian center is characterized by large open areas, clusters of buildings, rows of ornamental trees, and scattered individual trees. The proposed Project would provide updated and improved equestrian facilities for horse boarders and the general public and alleviate on-site and downstream flooding and stormwater pollution issues. Proposed improvements include:

- Improvements to the equestrian facilities including three new arenas, six new pens, two renovated arenas, and two new corrals.
- On-site construction includes multiple new structures and new parking areas.
- Site infrastructure improvements include a new irrigation system, bio-swales, detention basins, and internal access roads.

The footprint of the Project site is expected to remain the same size.

Location: The Project is located in the City of Whittier at 12191 Rooks Road, Los Angeles County, CA 90601. The Project site is bound by Rooks Road to the southeast, Peck Road to the east, the San Gabriel River to the northwest, and Pico Rivera Bicentennial Park to the southwest. Parcel numbers for the Project are: APNs 8125-012-904, 8125-012-910, 8125-062-904, 8125-062-003, and 8125-062-903.

Comments and Recommendations

CDFW offers the comments and recommendations below to assist the County in adequately identifying, avoiding, and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. CDFW recommends the measures or revisions below be included in a science-based monitoring program that contains adaptive management strategies as part of the Project's CEQA mitigation, monitoring, and reporting program (Public Resources Code, § 21081.6 and CEQA Guidelines, § 15097).

Project Description and Related Impact Shortcoming

Comment #1: Impacts to Bats

Issue: According to the Initial Study, western red bat (*Lasiurus blossevillii*) and western yellow bat (*Lasiurus xanthinus)*, both CDFW species of special concern (SSC), are found in the open space along the San Gabriel River adjacent to the Project site.

2-1

A review of California Natural Diversity Database (CNDDB) indicates historic observations of pallid bat (*Antrozous pallidus*), a SCC, found in the adjacent open space about two miles north of the Project site. With the proximity of the Project site to the San Gabriel River and the Whittier Narrows Natural Area to the north and the Puente Hills to the southeast, there is potential for multiple sensitive bat species to be found on site or adjacent to the Project site.

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Specific impact: As stated in the Initial Study, "the removal or trimming of suitable roost trees on the project site during project construction may result in direct impacts to western red bat or western yellow bat should they be actively using these trees for roosting." Similar impacts may occur to pallid bat as well.

Why impact would occur: Project-related tree clearing could lead to direct and indirect effects of loss of roosting habitat, foraging habitat, loss of breeding habitat, direct mortality, and navigational disruptions during migration.

Evidence impacts would be significant: Project impacts may result in substantial adverse effects, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or U.S. Fish and Wildlife Service. Adverse impacts to bats may occur because without implementing take avoidance surveys prior to operations, including, but not limited to, ground and vegetation disturbing activities. Take of special status bat species could require a mandatory finding of significance by the Lead Agency (CEQA Guidelines, § 15065). In addition, bats are considered non-game mammals and are afforded protection by state law from take and/or harassment (Fish and Game Code § 4150, Cal. Code Regs, tit. 14, § 251.1).

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: The CEQA document should provide a thorough discussion of potential impacts to bats from construction and operation of the Project to adequately disclose potential impacts and to identify appropriate avoidance and mitigation measures. **2-1 cont.**

Mitigation Measure #2: Measures to mitigate for impacts to bats should include pre-construction surveys to detect species, use of bat roost installations, and preparation of a bat protection and relocation plan to be submitted to CDFW for approval prior to commencement of project activities.

Mitigation Measure #3: CDFW recommends the Project avoid removal of trees that may be used by bats, or avoid buildings or other occupied habitat for any species of bat. If bats cannot be avoided by Project activities and a bat specialist determines that roosting bats may be present at any time of year, it is preferable to push any tree down using heavy machinery rather than felling the tree with a chainsaw. To ensure the optimum warning for any roosting bats that may still be present, the tree should be pushed lightly two to three times, with a pause of approximately 30 seconds between each nudge to allow bats to become active. The tree should then be pushed to the ground slowly. The bat specialist should determine the optimal time to disturb occupied bat habitat to maximize bats escaping during low light levels. Downed trees should remain in place until they are inspected by a bat specialist. Trees that are known to be bat roosts should not be sawn-up or mulched immediately. A period of at least 24 hours (preferably 48 hours) should elapse prior to such operations to allow bats to escape. Bats should be allowed to escape prior to demolition of buildings. This may be accomplished by placing one-way exclusionary devices into areas where bats are entering a building that allow bats to exit but not enter the building. In addition, CDFW recommends that the Project include measures to ensure that bat habitat remains available for evicted bats or loss of bat habitat resulting from the Project, including information on the availability of other potential roosts that could be used by bats within protected open space on or near the project site.

Comment #2: Impacts to nesting birds **2-2**

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Issue: According to the Initial Study, "[T]he Project site provides suitable nesting habitat for raptors and songbirds," and multiple sensitive bird species have potential to occur on site in the adjacent open space. While the Project is not expected to have direct impacts to the habitat within the San Gabriel River corridor, "significant indirect impacts to least Bell's vireo and coastal California gnatcatcher may occur from construction noise, vibrations, and increased human activity should the species be present and/or nesting within 500 feet of the project site during construction." Mitigation Measure BIO-1 of the Initial Study also addresses concerns for the yellow-breasted chat (*Icteria virens*) and nesting birds, in general, but overlooks the yellow-billed cuckoo (*Coccyzus americanus occidentalis*). According to CNDDB, there are records of the yellow-billed cuckoo within a mile of the Project site in the San Gabriel River corridor.

Specific impacts: Construction during the breeding season of nesting birds could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. The Project could also lead to the loss of foraging habitat.

Why impact would occur: Impacts to nesting birds could result from vegetation clearing and other ground disturbing activities. Project disturbance activities could result in mortality or injury to nestlings, as well temporary or long-term loss of suitable nesting and foraging habitats. Construction during the breeding season of nesting birds could result in the incidental loss of breeding success or otherwise lead to nest abandonment.

2-2 cont.

Evidence impact would be significant: The loss of occupied habitat or reductions in the number of nesting bird species, either directly or indirectly through nest abandonment or reproductive suppression, would constitute a significant impact absent appropriate mitigation. Furthermore, nests of all native bird species are protected under both federal and state laws and regulations, including the Migratory Bird Treaty Act (MBTA; U.S.C., §§ 703 - 712) and California Fish and Game Code sections 3503 and 3503.5, respectively.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: To protect nesting birds that may occur on site, CDFW recommends that the final environmental document include a measure that no construction shall occur from February 15 through August 31 unless a qualified biologist completes a survey for nesting bird activity within a 500-foot radius of the construction site. The nesting bird surveys should be conducted at appropriate nesting times and concentrated on potential roosting or perch sites. If any nests of birds of prey are observed, these nests should be designated as an ecologically sensitive area and protected (while occupied) by a minimum 500-foot radius during Project construction.

Comment #3: Impacts to least Bell's vireo

Issue: According to the above referenced MND, least Bell's vireo (*Vireo bellii pusillus*), a State-listed endangered species, have a potential to be impacted by Project-related activities. A review of CNDDB indicates that there are historic records of least Bell's vireo less than half a mile north of the Project site. Because the Project site is located adjacent to the San Gabriel River Corridor and Whittier Narrows Open Space, demolition and construction activities related to the Project may impact nearby sensitive species.

2-3

Specific impacts: Impacts to least Bell's vireo could result from noise and artificial light

Letter 2 – continued

sources related to construction and demolition activities taking place on the Project site.

Why impact would occur: Project disturbance activities could result in temporary or long-term loss of suitable nesting and foraging habitats. Construction during the breeding season of nesting birds could result in the incidental loss of breeding success or otherwise lead to nest abandonment.

Noise from road use, generators, and other equipment may disrupt least Bell's vireo mating calls or songs, which could impact reproductive success (Patricelli and Blickley 2006, Halfwerk et al. 2011). Noise has been shown to reduce the density of nesting birds (Francis et al. 2009), and Bayne et al. (2008) found that songbird abundance and density was significantly reduced in areas with high levels of noise. Additionally, noise exceeding 70 dB(A) may affect feather and body growth of young birds (Kleist et al. 2018).

Artificial light may attract or disorient migrating least Bell's vireo by disrupting navigation (Ogden 1996, Longcore and Rich 2004, 2016) and may also suppress their immune system (Moore and Siopes 2000). In addition, songbirds that live in areas with artificial light often begin morning choruses during night hours (Derrickson 1988, Miller 2006, Fuller et al. 2007), which may disrupt typical breeding behaviors.

Evidence impact would be significant: Consistent with CEQA Guidelines, Section 15380, the status of the least Bell's vireo as an endangered species pursuant to the federal Endangered Species Act (16 U.S.C. § 1531 *et seq.*) and the California Endangered Species Act (Fish & G. Code, § 2050 *et seq.*) qualifies it as an endangered, rare, or threatened species under CEQA.

2-3 cont.

Least Bell's vireo were abundant and widespread in the U.S. until the 1950s (Grinnell and Miller 1944). By the 1960s, they were considered scarce (Monson 1960), and by 1980, there were fewer than 50 pairs remaining (Edwards 1980), although this number had increased to 2,500 by 2004 (Kus and Whitfield 2005). The primary cause of decline for this species has been the loss and alteration of riparian woodland habitats (USFWS 2006).

Project impacts may result in substantial adverse effects, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS. Adverse impacts to least Bell's vireo may occur without implementing take avoidance surveys prior to operations, including, but not limited to, ground and vegetation disturbing activities.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW recommends conducting focused surveys for least Bell's vireo and incorporating the results into the MND. Prior to initiation of construction within or adjacent to suitable nesting habitat, a CDFW-approved biologist with experience surveying for and observing least Bell's vireo should conduct preconstruction surveys in accordance with established protocols to establish use of nesting habitat. Surveys should be conducted within and adjacent to suitable habitat, where access allows, during the nesting season (generally March 15 to July 31). If a nesting colony is found, no activity should occur within a 500-foot buffer of the colony until a qualified biologist determines and CDFW confirms that all chicks have fledged and are no longer reliant on the nest site.

Mitigation Measure #2: If take of least Bell's vireo would occur from Project construction or

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operation, a state incidental take permit (ITP) under CESA would be required for the Project. CDFW may consider the Lead Agency's CEQA documentation for its CESA-related actions if it adequately analyzes/discloses impacts and mitigation to State-listed species. Additional documentation may be required as part of an ITP application for the Project in order for CDFW to adequately develop an accurate take analysis and identify measures that would fully mitigated for take of state-listed species.

2-3 cont.

Comment #4: Impacts to Burrowing Owl

Issue: According to the Initial Study, there is a documented burrowing owl (*Athene cunicularia*), a CDFW SSC, occurrence approximately two miles south of the Project site. Due to the proximity of the Project site to the San Gabriel River and the Whittier Narrows Natural Area to the north and the Puente Hills to the southeast, there is potential for burrowing owls to be found onsite or adjacent to the Project site.

Specific impact: The Project may result in direct and indirect burrowing owl mortality or injury, the disruption of natural burrowing owl breeding behavior, and loss of breeding, wintering and foraging habitat for the species. Project impacts would contribute to statewide population declines for burrowing owl. Within the highly urbanized Los Angeles Basin, the species persists in low densities and continues to experience significant direct and cumulative habitat loss.

Why impact would occur: Impacts to burrowing owl could result from vegetation clearing and other ground disturbing activities. Project disturbance activities may result in crushing or filling of active burrowing owl burrows causing the death or injury of adults, eggs, and young. The Project will remove burrowing owl foraging habitat by eliminating native vegetation that supports essential rodent, insect, and reptile that are prey for burrowing owl. Rodent control activities could result in direct and secondary poisoning of burrowing owl ingesting treated rodents.

2-4

Evidence impact would be significant: Take of individual burrowing owls and their nests is defined by Fish and Game Code section 86, and prohibited by sections 3503, 3503.5 and 3513. Take is defined in Fish and Game Code section 86 as "hunt, pursue, catch, capture or kill, or attempt to hunt, pursue, catch, capture or kill." Without appropriate take avoidance surveys prior to project operations including, but not limited to, ground and vegetation disturbing activities and rodent control activities, adverse impacts to burrowing owl may occur because species presence/absence has not been verified. In addition, burrowing owl qualifies for enhanced consideration afforded to species under CEQA, which can be shown to meet the criteria for listing as endangered, rare or threatened (CEQA Guidelines, § 15380(d)).

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: To reduce Project impacts to burrowing owl to less than significant, CDFW recommends that the Project adhere to CDFW's March 7, 2012, *Staff Report on Burrowing Owl Mitigation* (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843). All survey efforts should be conducted prior to any Project habitat disturbance to soil, vegetation, or other sheltering habitat for burrowing owl.

Mitigation Measure #2: Permanent impacts to occupied owl burrows and adjacent foraging habitat should be offset by setting aside replacement habitat to be protected in perpetuity under a conservation easement dedicated to a local land conservancy or other appropriate entity. CDFW recommends that the County require a burrowing owl mitigation plan be submitted to

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CDFW for review and comment prior to Project implementation, which should include an appropriate endowment to provide for the long-term management of mitigation lands.

Mitigation Measure #3: For proposed preservation and/or restoration, the final environmental document should include measures to protect the targeted habitat values in perpetuity from direct and indirect negative impacts. The objective should be to offset the project-induced qualitative and quantitative losses of burrowing owl habitat values. Issues that should be addressed include, but are not limited to, restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, and increased human intrusion. An appropriate endowment should be provided for the long-term monitoring and management of mitigation lands. CDFW recommends that mitigation occur at a state-approved bank or via an entity that has been approved to hold and manage mitigation lands pursuant to Assembly Bill 1094 (2012), which amended Government Code sections 65965-65968. Under Government Code section 65967(c), the lead agency must exercise due diligence in reviewing the qualifications of a governmental entity, special district, or nonprofit organization to effectively manage and steward land, water, or natural resources on mitigation lands it approves.

2-4 cont.

Mitigation Measure #4: Project use of rodenticides that could result in direct or secondary poisoning to burrowing owl should be avoided.

Comment #5: Impacts to Streams

Issue: According to the Initial Study, there are 0.013 acres of ephemeral streams found on the Project site that would be directly impacted by Project-related grading and construction activities. Mitigation Measure BIO-03 of the Initial Study suggests that there may be a need for CDFW notification for a Lake and Streambed Alteration Agreement under Fish and Game code section 1600 *et seq*. Based on the location of the Project site, CDFW has concerns about the water quality of runoff from the site. As acknowledged in the Initial Study, organic matter deposits were present in the drainage feature. Animal waste contains high levels of nitrogen and phosphorus, as well as bacteria and other known pathogens.

Specific impacts: The Project may result in the loss of streams and associated watershed function and biological diversity. With each rain event, organic waste can wash off the Project site and into the adjacent San Gabriel River, thereby potentially degrading water quality in the immediate vicinity of the site.

2-5

Why impacts would occur: Ground disturbing activities from grading, filling, diverting water, and dewatering would physically remove or otherwise alter streams or their function and associated riparian habitat on the Project site. Biological resources, including numerous sensitive wildlife and plant species, associated downstream of the Project footprint may also be impacted by Project-related releases of sediment, organic matter, pathogens, and other contaminants.

Evidence impacts would be significant: The Project may substantially adversely affect the water quality of adjacent stream flows because of runoff from the Project site. Water discharges from agricultural operations in California include irrigation runoff, flows from tile drains, and storm water runoff. These discharges can affect water quality by transporting pollutants, including pesticides, sediment, nutrients, salts (including selenium and boron), pathogens, and heavy metals, from agricultural fields into surface waters. Many surface water bodies and

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groundwater are impaired because of pollutants from agricultural sources. Project-related activities may yield impacts that substantially diminish the existing water quality of the adjacent stream and its associated habitat.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW has concluded that the Project may result in the alteration of streams. For any such activities, the Project applicant (or "entity") must provide written notification to CDFW pursuant to section 1600 *et seq.* of the Fish and Game Code. Based on this notification and other information, CDFW shall determine whether a Lake and Streambed Alteration (LSA) Agreement is required prior to conducting the proposed activities. A notification package for a LSA may be obtained by accessing CDFW's web site at https://www.wildlife.ca.gov/conservation/lsa.

2-5 cont.

CDFW's issuance of an LSA Agreement for a Project that is subject to CEQA will require CEQA compliance actions by CDFW as a Responsible Agency. As a Responsible Agency, CDFW may consider the CEQA document of the Lead Agency for the Project. To minimize additional requirements by CDFW pursuant to section 1600 *et seq.* and/or under CEQA, the CEQA document should fully identify the potential impacts to the stream or riparian resources and provide adequate avoidance, mitigation, monitoring, and reporting commitments for issuance of the LSA Agreement.

Mitigation measure #2: Any LSA Agreement issued for the Project by CDFW may include additional measures protective of streambeds on and downstream of the Project such as additional erosion and pollution control measures. To compensate for any on-site and off-site impacts to riparian resources, additional mitigation conditioned in any LSA Agreement may include the following: avoidance of resources, on-site or off-site creation, enhancement or restoration, and/or protection and management of mitigation lands in perpetuity.

Filing Fees

The project, as proposed, could have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required for the underlying project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & Game Code, § 711.4; Pub. Resources Code, § 21089).

2-6

Conclusion

We appreciate the opportunity to comment on the project to assist the County in adequately analyzing and minimizing/mitigating impacts to biological resources. CDFW requests an opportunity to review and comment on any response that the County has to our comments and to receive notification of any forthcoming hearing date(s) for the project. If you have any questions or comments regarding this letter, please contact Andrew Valand, Environmental Scientist, at Andrew.Valand@wildlife.ca.gov or (562) 342-2142.

2-7

Letter 2 – continued

Sincerely,

FOR Erinn Wilson
Environmental Program Manager I

ec: CDFW
Victoria Tang – Los Alamitos
Andrew Valand – Los Alamitos
Kelly Schmoker – Glendora
Jeff Humble – Los Alamitos

Scott Morgan (State Clearinghouse)

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Letter 2 Response to Comments

Response to Comment 2-1:

Thank you for your comment. This comment as well as the County's response will be part of the Final IS/MND that will be provided to the County of Los Angeles Board of Supervisors for their consideration. Comment 2-1 relates to the evaluation of Proposed Project impacts to bat species. The comment raises concern regarding the evaluation of impacts to bat species of special concern in the Initial Study. The commenter states that the pallid bat (*Antrozous pallidus*) should also be considered potentially present on the project site due to historic observations within two miles of the project site.

The potential for the presence of pallid bat was evaluated in Appendix E of the Biological Technical Report prepared in 2018 for the Proposed Project. The Biological Technical Report is included as part of this Final IS/MND as Appendix A for ease of reference. Based on the site conditions during the habitat assessment conducted in 2017, pallid bat was presumed absent from the project site due to a lack of suitable habitat. Although pallid bat is known to utilize trees as roosts, tree roost habitats for this species include trees that provide crevice and/or cavity roosting habitat such as old snags with large cavities or trees with exfoliating bark. Such trees are not present on the project site. Pallid bat is not a foliage-roosting species. Further, the documented occurrences of the pallid bat in the CNDDB in the vicinity of the project site are historic, with the most recent nearby occurrence being over 80 years old. The Proposed Project would not be expected to adversely affect pallid bat.

The project site does however contain palm trees and cottonwood trees which provide suitable roosting habitat for foliage roosting species such as Western red bat and Western yellow bat, which were determined to be potentially present in the Initial Study. However, the mature cottonwood trees on the project site are not anticipated to be removed.

Recommended Mitigation Measure #1 on page 3 of the comment letter requests that additional discussion of potential impacts to bats from construction and operation of the Proposed Project be added to the Initial Study. Impacts to sensitive bat species were evaluated in Section 4.4 of the Initial Study and in Section 5.1 and Appendix E of the Biological Technical Report prepared for the Proposed Project (please refer to Appendix B of this Final IS/MND). As stated in these documents, impacts to these species would be limited to the trimming and/or removal of individual trees on the project site that may provide roosting habitat for these species. The trimming and/or removal of these individual trees would not be expected to contribute substantially to the decline of these species. No changes to the IS/MND are required in response to this comment.

Recommended Mitigation Measures #2 and #3 on page 3 of the comment letter request that the mitigation measures for biological resources provided in the Initial Study be revised to include preconstruction surveys for bat species and associated avoidance and minimization measures should bat roosts be identified on the project site. Mitigation Measure BIO-2 of the Initial Study has been revised to include preconstruction

surveys for western yellow bat and western red bat at the potential roost trees within the project site. The mitigation measure has also been revised to include the implementation of specific tree removal techniques should bat roosts be determined to be potentially present.

The revisions are provided below. Changes in text are identified by ~~strikeout~~ where text is removed and by underline where text is added.

BIO-2: **Preconstruction Sensitive Wildlife Survey:** A preconstruction survey shall be conducted for sensitive biological resources within all areas of potential permanent and temporary disturbance, including a 500-foot buffer. The preconstruction survey shall take place no more than 14 days prior to the start of any ground-disturbing activities and/or vegetation or structure removal activities. The preconstruction survey shall take place regardless of nesting bird season timing and shall focus on identifying the presence of least Bell's vireo, coastal California gnatcatcher, burrowing owl, and yellow-breasted chat within the project site and 500-foot buffer within suitable habitat for these species. Should special-status species be identified during the preconstruction survey, additional mitigation measures may need to be implemented to avoid or minimize impacts to these species, and consultation between the County of Los Angeles and the appropriate agency (CDFW, USFWS) may be necessary to determine the appropriate additional mitigation measures.

If burrowing owls are observed during the preconstruction survey, a specific mitigation methodology for the owl shall be determined in consultation between the County of Los Angeles and CDFW. Mitigation measures for any owls present could include avoidance of the owl burrows during their nesting season and/or passive relocation of burrowing owls.

If western red bat or western yellow bat are observed or detected during the preconstruction survey, a specific mitigation methodology shall be determined in consultation between the County of Los Angeles and CDFW. Mitigation measures for any bats present may include the development of a bat protection and relocation plan, and/or avoidance of bat roost tree removal. If tree removal cannot be avoided and a qualified bat biologist determines that roosting bats may be present in a tree at any time of year, then the removal of that tree shall take place under the supervision of a qualified bat biologist. Tree removal methods shall consist of using heavy machinery to slowly push the tree over after nudging the tree two to three times with approximately 30 seconds in between nudging to allow bats to escape. Downed trees will be allowed to remain in place until inspected by the qualified bat biologist. If the downed tree is determined to be a bat roost, then a minimum of 24 hours shall be allowed to pass (preferably 48 hours) before the tree may be sawed up or mulched.

If least Bell's vireo, coastal California gnatcatcher, or yellow-breasted chat are detected during the preconstruction survey, additional mitigation measures may need to be implemented to avoid or minimize impacts to these species, and consultation between the County of Los

Angeles and the appropriate agency may be required (CDFW, USFWS). Measures provided under BIO-1 would avoid direct and indirect impacts to nesting yellow-breasted chat should they be located during preconstruction surveys. Mitigation measures for the federally and state-listed least Bell's vireo or the federally listed coastal California gnatcatchers would be included to ensure that impacts to these species do not occur during vegetation removal. Mitigation measures for coastal California gnatcatcher and least Bell's vireo if habitat is determined to be occupied will include (at the discretion of the monitoring biologist) additional focused surveys, biological monitoring during ground-disturbing activities and/or vegetation or structure removal activities, the establishment of a minimum 500-foot non-disturbance buffer around active nest locations during construction activities, and/or noise monitoring to ensure that noise levels will not exceed 60 decibels.

Response to Comment 2-2:

Thank you for your comment. Comment 2-2 relates to the evaluation of Proposed Project impacts to nesting birds. The comment raises concern that the yellow-billed cuckoo (*Coccyzus americanus occidentalis*) was overlooked in the Initial Study. This comment as well as the County's response will be part of the Final IS/MND that will be provided to the County of Los Angeles Board of Supervisors for their consideration.

The potential for the presence of yellow-billed cuckoo on the project site was evaluated in Appendix E of the Biological Technical Report (Appendix B of this Final IS/MND). It was determined during the analysis that the riparian habitat within 500 feet of the project site lacks the size and vegetative density to support the yellow-billed cuckoo. Therefore, the yellow-billed cuckoo was presumed absent from the project site. No changes to the IS/MND are required in response to this comment.

The recommended Mitigation Measure #1 presented on page 4 of the comment letter describes measures to protect nesting birds that may occur on the project site. Mitigation Measure BIO-1 provided in the Initial Study for the Proposed Project contains equivalent language to what is described in the suggested mitigation measure in the comment letter.

The recommended mitigation measure states:

"Mitigation Measure #1: To protect nesting birds that may occur on site, CDFW recommends that the final environmental document include a measure that no construction shall occur from February 15 through August 31 unless a qualified biologist completes a survey for nesting bird activity within a 500-foot radius of the construction site. The nesting bird surveys should be conducted at appropriate nesting times and concentrated on potential roosting or perch sites. If any nests of birds of prey are observed, these nests should be designated as an ecologically sensitive area and protected (while occupied) by a minimum 500-foot radius during Project construction."

Mitigation Measure BIO-1 included in the Initial Study states:

BIO-1: ***Preconstruction Surveys for Nesting Birds:*** *Any ground-disturbing activities and/or vegetation or structure removal activities within the project site shall be conducted during the non-breeding season for birds (approximately September 1 through January 31). This will avoid violations of the MBTA and California FGC Sections 3503, 3503.5 and 3513. If activities with the potential to disrupt nesting birds are scheduled to occur during the bird breeding season (February through August for raptors and March through August for songbirds), a preconstruction nesting bird survey shall be conducted by a qualified biologist no more than three (3) days prior to the start of construction activities. The nest survey shall include the project site and adjacent areas within 500 feet where project activities have the potential to cause nest failure. If no nesting birds are observed during the survey, site preparation and construction activities may begin. If nesting birds (including nesting raptors) are found to be present, then avoidance or minimization measures shall be undertaken to avoid nest disturbance. Measures will include the following at a minimum: (1) establishment of an avoidance buffer until nesting has been completed and (2) periodic monitoring of the nest status by a biological monitor. The width of the buffer will be determined by the project biologist. Typically, this is a minimum of 300 feet from the nest site in all directions (500 feet is typically recommended by CDFW for raptors), until the juveniles have fledged and there has been no evidence of a second attempt at nesting. The monitoring biologist will monitor the nest(s) during construction and document any findings.*

As shown in the text above the recommended mitigation measure and the measure included in the Initial Study have the same intent and implementation parameters. No changes to the Initial Study would be required in response to Comment 2-2.

Response to Comment 2-3:

Thank you for your comment. Comment 2-3 relates to the evaluation of Proposed Project impacts to least Bell's vireo (*Vireo bellii pusillus*). The comment acknowledges the findings of the Initial Study that the Proposed Project has the potential to indirectly impact the least Bell's vireo. The comment recommends that the mitigation measures to protect the least Bell's vireo be expanded to include focused surveys. This comment as well as the County's response will be part of the Final IS/MND that will be provided to the County of Los Angeles Board of Supervisors for their consideration.

Recommended Mitigation Measure #1 on page 5 of the comment letter would require focused surveys and preconstruction surveys for least Bell's vireo. Focused surveys are not recommended for the Proposed Project because the Proposed Project would not have any direct impacts to least Bell's vireo or its habitat. Further, it was presumed that the least Bell's vireo is likely to occur in the habitat adjacent to the project site, thus focused surveys for this species were determined to be unnecessary. No changes to the IS/MND are required in response to this comment.

Mitigation Measure #1 on page 5 of the comment letter also recommends that preconstruction surveys be conducted to identify any potentially nesting least Bell's vireo adjacent to the project site. Mitigation Measure BIO-1 and BIO-2 described in the Initial Study for the Proposed Project contain equivalent language for preconstruction surveys for least Bell's vireo as what is described in the suggested measure in the letter.

The recommended mitigation measure states:

"Mitigation Measure #1: CDFW recommends conducting focused surveys for least Bell's vireo and incorporating the results into the MND. Prior to initiation of construction within or adjacent to suitable nesting habitat, a CDFW-approved biologist with experience surveying for and observing least Bell's vireo should conduct preconstruction surveys in accordance with established protocols to establish use of nesting habitat. Surveys should be conducted within and adjacent to suitable habitat. where access allows, during the nesting season (generally March 15 to July 31). If a nesting colony is found, no activity should occur within a 500-foot buffer of the colony until a qualified biologist determines and CDFW confirms that all chicks have fledged and are no longer reliant on the nest site.

Mitigation Measures BIO-1 and BIO-2 included in the Initial Study states:

BIO-1: ***Preconstruction Surveys for Nesting Birds:*** *Any ground-disturbing activities and/or vegetation or structure removal activities within the project site shall be conducted during the non-breeding season for birds (approximately September 1 through January 31). This will avoid violations of the MBTA and California FGC Sections 3503, 3503.5 and 3513. If activities with the potential to disrupt nesting birds are scheduled to occur during the bird breeding season (February through August for raptors and March through August for songbirds), a preconstruction nesting bird survey shall be conducted by a qualified biologist no more than three (3) days prior to the start of construction activities. The nest survey shall include the project site and adjacent areas within 500 feet where project activities have the potential to cause nest failure. If no nesting birds are observed during the survey, site preparation and construction activities may begin. If nesting birds (including nesting raptors) are found to be present, then avoidance or minimization measures shall be undertaken to avoid nest disturbance. Measures will include the following at a minimum: (1) establishment of an avoidance buffer until nesting has been completed and (2) periodic monitoring of the nest status by a biological monitor. The width of the buffer will be determined by the project biologist. Typically, this is a minimum of 300 feet from the nest site in all directions (500 feet is typically recommended by CDFW for raptors), until the juveniles have fledged and there has been no evidence of a second attempt at nesting. The monitoring biologist will monitor the nest(s) during construction and document any findings.*

BIO-2: ***Preconstruction Sensitive Wildlife Survey:*** *A preconstruction survey shall be conducted for sensitive biological resources within all areas of potential permanent and temporary disturbance,*

including a 500-foot buffer. The preconstruction survey shall take place no more than 14 days prior to the start of any ground-disturbing activities and/or vegetation or structure removal activities. The preconstruction survey shall take place regardless of nesting bird season timing and shall focus on identifying the presence of least Bell's vireo, coastal California gnatcatcher, burrowing owl, and yellow-breasted chat within the project site and 500-foot buffer within suitable habitat for these species. Should special-status species be identified during the preconstruction survey, additional mitigation measures may need to be implemented to avoid or minimize impacts to these species, and consultation between the County of Los Angeles and the appropriate agency (CDFW, USFWS) may be necessary to determine the appropriate additional mitigation measures.

If burrowing owls are observed during the preconstruction survey, a specific mitigation methodology for the owl shall be determined in consultation between the County of Los Angeles and CDFW. Mitigation measures for any owls present could include avoidance of the owl burrows during their nesting season and/or passive relocation of burrowing owls.

If western red bat or western yellow bat are observed or detected during the preconstruction survey, a specific mitigation methodology shall be determined in consultation between the County of Los Angeles and CDFW. Mitigation measures for any bats present may include the development of a bat protection and relocation plan, and/or avoidance of bat roost tree removal. If tree removal cannot be avoided and a qualified bat biologist determines that roosting bats may be present in a tree at any time of year, then the removal of that tree shall take place under the supervision of a qualified bat biologist. Tree removal methods shall consist of using heavy machinery to slowly push the tree over after nudging the tree two to three times with approximately 30 seconds in between nudging to allow bats to escape. Downed trees will be allowed to remain in place until inspected by the qualified bat biologist. If the downed tree is determined to be a bat roost, then a minimum of 24 hours shall be allowed to pass (preferably 48 hours) before the tree may be sawed up or mulched.

If least Bell's vireo, coastal California gnatcatcher, or yellow-breasted chat are detected during the preconstruction survey, additional mitigation measures may need to be implemented to avoid or minimize impacts to these species, and consultation between the County of Los Angeles and the appropriate agency may be required (CDFW, USFWS). Measures provided under BIO-1 would avoid direct and indirect impacts to nesting yellow-breasted chat should they be located during preconstruction surveys. Mitigation measures for the federally and state-listed least Bell's vireo or the federally listed coastal California gnatcatchers would be included to ensure that impacts to these species do not occur during vegetation removal. Mitigation measures for coastal California gnatcatcher and least Bell's vireo if habitat is determined to be occupied will include (at the discretion of the monitoring biologist) additional focused surveys, biological monitoring during ground-disturbing activities and/or vegetation or structure removal activities, the establishment

of a minimum 500-foot non-disturbance buffer around active nest locations during construction activities, and/or noise monitoring to ensure that noise levels will not exceed 60 decibels.

As shown in the text above the recommended mitigation measure and the mitigation measures included in the Initial Study have the same intent and implementation parameters to protect nesting birds, including least Bell's vireo.

Recommended Mitigation Measure #2 on page 5 of the comment letter further describes the Incidental Take Permit process that would be necessary should take of least Bell's vireo occur. The Proposed Project would have no direct impacts to least Bell's vireo or its habitat and no take would occur. Therefore, it is not necessary for the Proposed Project to engage in the Incidental Take Permit process.

No changes to the Initial Study would be required in response to Comment 2-3.

Response to Comment 2-4:

Thank you for your comment. Comment 2-4 relates to the evaluation of Proposed Project impacts to burrowing owl. This comment acknowledges the findings of the Initial Study that the Proposed Project has the potential for direct and indirect impacts to the burrowing owl through ground disturbing activities. Suggested Mitigation Measure #1 recommends that the Proposed Project adhere to the Staff Report on Burrowing Owl Mitigation (CDFW 2012). This comment as well as the County's response will be part of the Final IS/MND that will be provided to the County of Los Angeles Board of Supervisors for their consideration.

Recommended Mitigation Measure #1 on page 6 of the comment letter recommends that focused burrowing owl surveys adhere to CDFW's March 7, 2017, Staff Report on Burrowing Owl Mitigation and that all survey efforts be conducted prior to any project habitat disturbance to soil, vegetation, or other sheltering habitat. Focused burrowing owl surveys were conducted at the project site in 2012 per the Staff Report guidelines (ECORP 2012). These surveys were negative, and no burrowing owls or burrowing owl sign were observed. Mitigation Measure BIO-2 presented in the Initial Study includes preconstruction surveys for burrowing owl which would be conducted consistent with the 2012 Staff Report guidelines. No changes to the IS/MND are required in response to this comment.

Recommended Mitigation Measure #2 on page 6 of the comment letter recommends that permanent impacts to occupied owl burrows and adjacent foraging habitat should be offset by setting aside replacement habitat to be protected in perpetuity under a conservation easement dedicated to a local land conservancy or other appropriate entity. Recommended Mitigation Measure #3 on page 7 of the comment letter, which works in conjunction with recommended Mitigation Measure #2, would require an endowment for the long-term monitoring and management of mitigation lands and measures to protect habitat values in perpetuity. While California ground squirrel (*Otospermophilus beecheyi*) burrows were noted on the project site during the 2017 survey, no burrowing owl sign was present, and no occupied burrows were identified. There is currently no occupied burrowing owl habitat on the project site. As such, the acquisition

and management of a conservation easement for burrowing owl habitat is not anticipated or necessary at this time. No changes to the IS/MND are required in response to this comment.

Recommended Mitigation Measure #4 on page 7 of the comment letter recommends that rodenticides use resulting from Proposed Project activities be avoided. Rodenticide use from Proposed Project activities is not anticipated per Los Angeles County Department of Public Works (LACDPW) Best Management Practices. No changes to the Initial Study would be required in response to Comment 2-4.

Response to Comment 2-5:

Thank you for your comment. This comments states CDFW's concern regarding impacts to streams, including impacts from the water quality of runoff from the site. This comment as well as the County's response will be part of the Final IS/MND that will be provided to the County of Los Angeles Board of Supervisors for their consideration.

One of the primary purposes of the Proposed Project is to address flooding and water quality issues associated with the site. Treatment of runoff from the horse corrals, pens, and stables that would prevent waste products from entering the San Gabriel River is an important issue. We recognize that equestrian facilities can lead to an increased level of nitrogen, phosphorus and bacteria, as well as other pathogens, in the environment if these pollutants are not handled properly. In addition, we recognize that the San Gabriel River is a recognized regional resource that supports highly sensitive animal and plant species.

From the Draft Initial Study for the Proposed Project (Section 2.1 Project Background):

"The existing facilities at the equestrian center are outdated and have several flooding and stormwater pollution issues. There are several low spots in the center of the project site, particularly near the horse stables, that pool water during storm events. Stormwater runoff from the project site, which is often polluted from the equestrian uses on the site, eventually flows into the San Gabriel River and other sensitive habitats downstream."

The Project Description contained within the Initial Study notes that the Proposed Project would provide updated and improved equestrian facilities for horse boarders and the general public and alleviate on-site and downstream flooding and stormwater pollution issues. The new site design would feature an updated configuration for the site, including Low Impact Development (LID) features such as bio-retention basins and sand filters, specifically to reduce and eliminate pollutants entering the San Gabriel River. Three pairs of bio-retention basins are to be used for the site and located at the northwestern boundary and along the northern site boundary. Internal roads would feature curb and gutter to collect storm flows and direct them to the bio-retention basins. Please refer to the site plan, Figure 3 within the Initial Study for more details. Full civil drawings have been developed and will be made available along with the Notification of Lake or Streambed Alteration.

As a part of the IS/MND process, Hydrology and Water Quality were addressed for both the construction period and the long-term operations as well as several other related factors (pp. 42-46). With the measures proposed to be implemented, both the construction and operational impacts for the Proposed Project were concluded to be less than significant. The operational impacts are further considered to be beneficial.

Recommended Mitigation Measure #1 on page 8 of the comment letter requires that a written notification to CDFW pursuant to section 1600 et seq. of the Fish and Game Code be submitted. The County of Los Angeles has submitted a Notification of Lake or Streambed Alteration for the Proposed Project, in recognition of the impact to CDFW-jurisdictional features and the need to address potential water quality impacts.

Recommended Mitigation Measure #2 on page 8 of the comment letter states that any LSA Agreement issued for the Project by CDFW may include additional measures protective of streambeds on and downstream of the Project. This comment is noted and is consistent with Mitigation Measure BIO-3.

Response to Comment 2-6:

Thank you for your comment. Comment 2-6 is a reminder that filing fees are necessary for the Proposed Project. This comment as well as the County's response will be part of the Final IS/MND that will be provided to the County of Los Angeles Board of Supervisors for their consideration.

The comment is noted. The County will pay the necessary fees as required under state law. No changes to the IS/MND are required in response to this comment.

Response to Comment 2-7:

Thank you for your comment. Comment 2-7 acknowledges the opportunity of the state agency to provide comments on the Proposed Project. Comment 2-7 also requests the opportunity to review and comment on any responses that the County provides to these comments and to receive notification of any hearing date(s) for the Proposed Project. This comment as well as the County's response will be part of the Final IS/MND that will be provided to the County of Los Angeles Board of Supervisors for their consideration.

The comment is noted. No changes to the IS/MND are required in response to this comment.

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Letter 3 – California Department of Toxic Substance Control

Department of Toxic Substances Control

Barbara A. Lee, Director
9211 Oakdale Avenue
Chatsworth, California 91311

Matthew Rodriquez
Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

December 21, 2018

RECEIVED
JAN 07 2019
PROJECT MANAGEMENT DIVISION I
DEPARTMENT OF PUBLIC WORKS

County of Los Angeles, Department of Public Works
Project Management Division I, 5th Floor
Attention: David Palma, Capital Projects Manager
P.O. Box 1460
Alhambra, CA 91802-1460

MITIGATED NEGATIVE DECLARATION FOR THE WHITTIER NARROWS EQUESTRIAN CENTER REFURBISHMENT PROJECT (PROJECT)

Dear Mr. Palma:

The Department of Toxic Substances Control (DTSC) has received your Notice of Intent to Adopt the Mitigated Negative Declaration for the above-mentioned project.

Based on the review of the document, the DTSC comments are as follows:

1) The document needs to identify and determine whether current or historic uses at the project site have resulted in any release of hazardous wastes/substances at the project area. **3-1**

2) The document needs to identify any known or potentially contaminated site within the proposed project area. For all identified sites, the document needs to evaluate whether conditions at the site pose a threat to human health or the environment. **3-2**

3) The document should identify the mechanism to initiate any required investigation and/or remediation for any site that may require remediation, and which government agency will provide appropriate regulatory oversight. **3-3**

4) If during construction of the project, soil contamination is suspected, construction in the area should stop and appropriate health and safety procedures should be implemented. If it is determined that contaminated soil exists, the document should identify how any required investigation or remediation will be conducted, and which government agency will provide appropriate regulatory oversight. **3-4**

Printed on Recycled Paper

Letter 3 – continued

Mr. David Palma
December 21, 2018
Page 2

DTSC provides guidance for Preliminary Endangerment Assessment (PEA) preparation, and cleanup oversight through the Voluntary Cleanup Program (VCP). For additional information on the VCP, please visit DTSC's web site at www.dtsc.ca.gov. If you would like to meet and discuss this matter further, please contact me at (818) 717-6555 or Pete.Cooke@dtsc.ca.gov.

Sincerely,

Pete Cooke
Site Mitigation and Restoration Program - Chatsworth Office

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044

Dave Kereazis
Hazardous Waste Management Program, Permitting Division
CEQA Tracking
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Letter 3 Response to Comments

Response to Comment 3-1:

Thank you for your comment. Comment 3-1 requests the identification and determination of current or historic uses of the project site that have resulted in any release of hazardous wastes/substances. This comment as well as the County's response will be part of the Final IS/MND that will be provided to the County of Los Angeles Board of Supervisors for their consideration.

The response to question d) in Section 4.9, Hazards and Hazardous Materials of the Initial Study prepared for the Proposed Project states that a search of the Department of Toxic Substances Control's (DTSC) Hazardous Waste and Substance List (Cortese List) and EnviroStor online database and the State Water Resources Control Board's (SWRCB) GeoTracker online database was conducted for the project area (DTSC 2018a and 2018b; SWRCB 2018). The results of the searches indicated that there are no known hazardous materials sites on the project site; and therefore, no impact would occur. No changes to the Initial Study would be required in response to Comment 3-1.

Response to Comment 3-2:

Thank you for your comment. Comment 3-2 requests the identification of any known or potentially contaminated site within the Proposed Project area. This comment as well as the County's response will be part of the Final IS/MND that will be provided to the County of Los Angeles Board of Supervisors for their consideration.

The response to question d) in Section 4.9, Hazards and Hazardous Materials of the Initial Study prepared for the Proposed Project states that a search of the Department of Toxic Substances Control's (DTSC) Hazardous Waste and Substance List (Cortese List) and EnviroStor online database and the State Water Resources Control Board's (SWRCB) GeoTracker online database was conducted for the project area (DTSC 2018a and 2018b; SWRCB 2018). The results of the searches indicated that there are no known hazardous materials sites on the project site; and therefore, no impact would occur. No changes to the Initial Study would be required in response to Comment 3-2.

Response to Comment 3-3:

Thank you for your comment. Comment 3-3 requests the identification of a mechanism to initiate any required investigation and/or remediation for any site that may require remediation, and which government agency will provide appropriate regulatory oversight. This comment as well as the County's response will be part of the Final IS/MND that will be provided to the County of Los Angeles Board of Supervisors for their consideration.

The response to question d) in Section 4.9, Hazards and Hazardous Materials of the Initial Study prepared for the Proposed Project states that the construction phase of the Proposed Project may include the transport, storage, and short-term use of petroleum-based fuels, lubricants, pesticides, and other similar materials. The transport of hazardous materials by truck is regulated by federal safety standards under the jurisdiction of the U.S. Department of Transportation. Additionally, the implementation of best management practices (BMPs) stipulating proper storage of hazardous materials and vehicle refueling would be implemented during construction as part of the Stormwater Pollution Prevention Plan (SWPPP). All transport, handling, use, and disposal of substances such as petroleum products paints, and solvents related to the operation and maintenance of the Proposed Project would comply with all Federal, State, and local laws regulating management and use of hazardous materials. Therefore, the use of such material would not create a significant hazard to the public and impacts would be less than significant. No changes to the Initial Study would be required in response to Comment 3-3.

Response to Comment 3-4:

Thank you for your comment. Comment 3-4 requests that the Initial Study prepared for the Proposed Project identify how any required investigation and/or remediation for soil contamination will be conducted, and which government agency will provide appropriate regulatory oversight. This comment as well as the County's response will be part of the Final IS/MND that will be provided to the County of Los Angeles Board of Supervisors for their consideration.

The response to question d) in Section 4.9, Hazards and Hazardous Materials of the Initial Study prepared for the Proposed Project states that on-site storage and/or use of large quantities of hazardous materials capable of affecting soil and groundwater are not proposed. However, during construction some hazardous materials, such as diesel fuel, would be used. A SWPPP, listing BMPs to prevent construction pollutants and products from violating any water quality standard or waste discharge requirements would be prepared for the Proposed Project. The potential risk associated with accidental discharge during use and storage of equipment-related hazardous materials would be low since the handling of such materials would be addressed through the implementation of BMPs. The Proposed Project would continue the existing equestrian uses at the project site. Operation of the improved equestrian facility would not result in a new hazard to the public or the environment. Impacts would be less than significant. No changes to the Initial Study would be required in response to Comment 3-4.

Letter 4 – Governor's Office of Planning and Research

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Gavin Newsom
Governor

RECEIVED
JAN 17 2019
PROJECT MANAGEMENT DIVISION I
DEPARTMENT OF PUBLIC WORKS

January 8, 2019

David Palma
Los Angeles County
PO Box 1460
Alhambra, CA 91802-1460

Subject: Whittier Narrows Equestrian Center Refurbishment Project
SCH#: 2018121018

Dear David Palma:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on January 7, 2019, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

4-1

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL 1-916-445-0613 state.clearinghouse@opr.ca.gov www.opr.ca.gov

Letter 4 – continued

Document Details Report
State Clearinghouse Data Base

SCH#	2018121018
Project Title	Whittier Narrows Equestrian Center Refurbishment Project
Lead Agency	Los Angeles County
Type	MND Mitigated Negative Declaration
Description	The Whittier Narrows Equestrian Center is an existing equestrian center, located in Los Angeles County along the San Gabriel River. The project site measures approx 20 acres and is bound by Rooks Road to the southeast, Peck Rd to the east, the San Gabriel River to the northwest, and Pico Rivera Bicentennial Park to the southwest. The equestrian center provides access to riding trails, including part of the Juan Bautista De Anza National Historic Trail. The equestrian center is characterized by large open areas, clusters of buildings, rows of ornamental trees, and scattered non-native individual trees. The Whittier Narrows Equestrian Center has seven existing barns with 200 horse stalls, four arenas, and five round pens, dry material storage area, a restroom, security lighting, and utility service. The existing facilities at the equestrian center are outdated and have several flooding and stormwater pollution issues. There are several low spots in the center of the project site, particularly near the horse stables, that pool water during storm events. Stormwater runoff from the project site, which is often polluted from the equestrian uses on the site, eventually flow into the San Gabriel River and other sensitive habitats downstream. The Whittier Narrows Equestrian Center Refurbishment project would provide updated and improved equestrian facilities for horse boarders and the general public and alleviate on-site and downstream flooding and stormwater pollution issues.

Lead Agency Contact

Name	David Palma		
Agency	Los Angeles County		
Phone	626-300-2339	*Fax*	
email			
Address	PO Box 1460		
City	Alhambra	*State* CA	*Zip* 91802-1460

Project Location

County	Los Angeles		
City	Whittier		
Region			
Lat / Long	34° 01' 43.6" N / 118° 02' 32.7" W		
Cross Streets	Whittier Narrows Equestrian Center (12191 Rooks Rd)		
Parcel No.	various		
Township	*Range*	*Section*	*Base*

Proximity to:

Highways	SR 60
Airports	
Railways	UPRR
Waterways	San Gabriel River
Schools	Various
Land Use	equestrian center, GP Z: O-S, A-1-5

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Cumulative Effects; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Growth Inducing; Landuse; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Septic System; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Tribal Cultural Resources; Vegetation; Water Quality; Water Supply; Wetland/Riparian

Note: Blanks in data fields result from insufficient information provided by lead agency.

Letter 4 – continued

Document Details Report
State Clearinghouse Data Base

Reviewing Agencies	Resources Agency; Department of Fish and Wildlife, Region 5; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 7; Regional Water Quality Control Board, Region 4; Department of Toxic Substances Control; State Water Resources Control Board, Division of Water Quality; Air Resources Board, Transportation Projects; Native American Heritage Commission; Public Utilities Commission

Date Received 12/07/2018 *Start of Review* 12/07/2018 *End of Review* 01/07/2019

Note: Blanks in data fields result from insufficient information provided by lead agency.

Letter 4 – continued

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

RECEIVED
JAN 17 2019
PROJECT MANAGEMENT DIVISION I
DEPARTMENT OF PUBLIC WORKS

November 26, 2018

TO: CEQA LEAD AND REVIEWING AGENCIES

RE: ANNOUNCEMENT OF CHANGE, NEW CEQA DATABASE

The **Office of Planning and Research, State Clearinghouse (SCH)** is preparing the transition to a new CEQA database. We would like to inform you that our office will be transitioning from providing hard copies of certain letters and notices to an electronic mail system. Copies of environmental documents, notices and comment letters from state agencies will also be available for view and download.

CEQA lead and reviewing agencies should include an e-mail address (at least one (1)) to receive electronic notifications.

The letters and notifications from the SCH that will now be e-mailed include: acknowledgement of receipt and close of environmental documents, comments received from state reviewing agencies on environmental documents, as well as notices of determinations and exemptions.

Updates on when the database will be accessible for lead agencies to upload and submit environmental documents and notices, along with the ability for state agencies to review and comment on environmental documents through the database, will be provided as those functions become available.

For this transition process, please send your e-mail address to:

State.clearinghouse@opr.ca.gov

Should you have any questions, please do not hesitate in contacting the State Clearinghouse at (916) 445-0613 or state.clearinghouse@opr.ca.gov .

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Letter 4 Response to Comments

Response to Comment 4-1:

This letter is an acknowledgement that the County of Los Angeles has complied with the review requirements of CEQA. Responses to commenting agencies are included in the responses to Letters 1 through 3.

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SECTION 4.0 CLARIFICATIONS TO THE DRAFT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

4.1 Introduction

As a result of comments received on the Proposed Project, clarifications have been made to the Draft IS/MND text, which include:

1. Minor changes to Mitigation Measure BIO-2 to clarify the scope of the mitigation measure.
2. Revisions to the text of Mitigation Measure BIO-3 to clarify the scope and intent of the mitigation measure.
3. Addition of text to Section 4.18, Tribal Cultural Resources, to note that consultation was also conducted under NHPA Section 106 by the USACE for NEPA compliance.
4. Revision of the response to question c of Section 4.20, Mandatory Findings, of Significance, to use the project list approach for the analysis of cumulative impacts.

According to Section 15073.5 of the CEQA Guidelines, "a substantial revision shall mean:

(1) A new, avoidable significant effect is identified, and mitigation measures or project revisions must be added in order to reduce the effect to insignificance, or

(2) The lead agency determines that the proposed mitigation measures or project revisions will not reduce potential effects to less than significance and new measures or revisions must be required."

The clarifications are provided below along with substantiation as to why the change does not constitute a "substantial revision" pursuant to Section 15073.5. Changes in text are identified by ~~strikeout~~ where text is removed and by <u>underline</u> where text is added.

1. Change to Mitigation Measure BIO-2: Addition of language to clarify Mitigation Measure BIO-2. This change was made to clarify the scope of the Mitigation Measure and in response to CDFW comment 2-1. This clarification does not constitute a substantial revision because the clarifications do not identify a new avoidable significant effect or require a new mitigation measure.

Page 25 of the Draft IS/MND:

BIO-2: **Preconstruction Sensitive Wildlife Survey:** A preconstruction survey shall be conducted for sensitive biological resources within all areas of potential permanent and temporary disturbance, including a 500-foot buffer. The preconstruction survey shall take place no more than 14 days prior to the start of any ground-disturbing activities and/or vegetation or structure removal activities. The preconstruction survey shall take place regardless of nesting bird season timing and shall focus on identifying the presence of least Bell's vireo, coastal California gnatcatcher, burrowing owl, and yellow-breasted chat within the project site and 500-foot

buffer within suitable habitat for these species. Should special-status species be identified during the preconstruction survey, additional mitigation measures may need to be implemented to avoid or minimize impacts to these species, and consultation between the County of Los Angeles and the appropriate agency (CDFW, USFWS) may be necessary to determine the appropriate additional mitigation measures.

If burrowing owls are observed during the preconstruction survey, a specific mitigation methodology for the owl shall be determined in consultation between the County of Los Angeles and CDFW. Mitigation measures for any owls present could include avoidance of the owl burrows during their nesting season and/or passive relocation of burrowing owls.

If western red bat or western yellow bat are observed or detected during the preconstruction survey, a specific mitigation methodology shall be determined in consultation between the County of Los Angeles and CDFW. Mitigation measures for any bats present may include the development of a bat protection and relocation plan, and/or avoidance of bat roost tree removal. If tree removal cannot be avoided and a qualified bat biologist determines that roosting bats may be present in a tree at any time of year, then the removal of that tree shall take place under the supervision of a qualified bat biologist. Tree removal methods shall consist of using heavy machinery to slowly push the tree over after nudging the tree two to three times with approximately 30 seconds in between nudging to allow bats to escape. Downed trees will be allowed to remain in place until inspected by the qualified bat biologist. If the downed tree is determined to be a bat roost, then a minimum of 24 hours shall be allowed to pass (preferably 48 hours) before the tree may be sawed up or mulched.

If least Bell's vireo, coastal California gnatcatcher, or yellow-breasted chat are detected during the preconstruction survey, additional mitigation measures may need to be implemented to avoid or minimize impacts to these species, and consultation between the County of Los Angeles and the appropriate agency may be required (CDFW, USFWS). Measures provided under BIO-1 would avoid direct and indirect impacts to nesting yellow-breasted chat should they be located during preconstruction surveys. Mitigation measures for the federally and state-listed least Bell's vireo or the federally listed coastal California gnatcatchers would be included to ensure that impacts to these species do not occur during vegetation removal. Mitigation measures for coastal California gnatcatcher and least Bell's vireo if habitat is determined to be occupied will include (at the discretion of the monitoring biologist) additional focused surveys, biological monitoring during ground-disturbing activities and/or vegetation or structure removal activities, the establishment of a minimum 500-foot non-disturbance buffer around active nest locations during construction activities, and/or noise monitoring to ensure that noise levels will not exceed 60 decibels.

2. The text of Mitigation Measure BIO-3 was revised to clarify the purpose of the measure. This clarification does not constitute a substantial revision because the clarifications do not identify a new avoidable significant effect or require a new mitigation measure.

Page 27 of the Draft IS/MND:

Mitigation Measure:

BIO-3: **Regulatory Permitting:** ~~Although no mitigation is being proposed for the impacts to jurisdictional areas, because the impacts are to existing disturbed drainage features only, there is a requirement for authorization for these impacts through the permitting process with~~ Prior to the commencement of project construction activities that will impact the ephemeral drainage on the project site, authorization for impacts shall be acquired through the permitting process from the USACE, RWQCB, and CDFW pursuant to the CWA Section 404 and 401 and California Fish and Game Code Section 1600, respectively. ~~During this process,~~ Project specific ~~mitigation~~ permitting conditions for impacts to features jurisdictional to state and federal agencies ~~may be requested by the respective agencies as part of~~ will be determined during the permitting process.

3. Text was added to Section 4.18, Tribal Cultural Resources, of the Draft IS/MND to clarify that tribal consultation was also conducted under NHPA Section 106 by the USACE for NEPA compliance. This text addition does not constitute a substantial revision because the added text does not identify a new avoidable significant effect or require a new mitigation measure.

Page 57 of the Draft IS/MND:

On May 17, 2018, the County initiated consultation via email with the Gabrieleno Band of Mission Indians–Kizh Nation. The Kizh Nation requested a site meeting and review of the project site. A formal on-site meeting was scheduled with the Kizh Nation for Jun 7, 2018. Attendees included representatives from the County, Kizh Nation, and ECORP Consulting, Inc. (the IS/MND preparer for the Proposed Project). Topics discussed during this meeting included, but were not limited to: the locations of several nearby Gabrieleño villages; depth of fill at the site and previous cultural studies conducted on the property. The Kizh noted that although no known resources are located on the property, the surrounding area contains known TCRs. The Kizh Nation requested that a Native American monitor be present during construction for at least the initial phases of the Proposed Project. On June 21, 2018, the Kizh Nation provided the County via email with an official request for Tribal monitoring of ground disturbing activities. The request stated that, should the monitor feel that there is no need to continue monitoring in certain areas, they would inform the County that monitoring was no longer needed. The TCR mitigation measure was updated based on this request. Consultation with the Kizh Nation was concluded on September 11, 2018 via letter (Appendix D).

It should be noted that the Kizh Nation was the only Tribe that requested consultation under AB 52. Consultation with other tribes was conducted by the U.S. Army Corps of Engineers (USACE) as part of their

National Historic Preservation Act (NHPA) Section 106 process. This was a separate consultation than that done for AB 52 and the results of the USACE's consultation is included in the National Environmental Policy Act (NEPA) Categorical Exclusion (CE) prepared for the Project.

4. The cumulative impacts discussion in the response to question c of Section 4.20, Mandatory Findings, of Significance, of the Draft IS/MND was revised using the project list approach versus the general plan method of analysis. This revision does not constitute a substantial revision because the changes do not identify a new avoidable significant effect or require a new mitigation measure. Furthermore, the revisions arrive at the same impact determination as was previously included in the document.

Page 62 of the Draft IS/MND:

Cumulative impacts are defined as two or more individual (and potentially less than significant) project effects that, when considered together or in concert with other projects combine to result in a significant impact within an identified geographic area. Cumulative considerable impacts are defined in Section 15065(c) of the CEQA guidelines as the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

To analyze the cumulative impacts of a project in combination with other expected future growth, the amount and location of growth expected to occur must be predicted. Section 15130(b) of the CEQA Guidelines allows two methods of prediction:

Either:

1. A list of relevant past, present and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the Agency, or

2. A summary of projections contained in adopted general plan or related planning document or in a prior adopted or certified environmental document that described or evaluated regional or area-wide conditions contributing to the cumulative impact.

For the purpose of this Initial Study, the project list~~general plan projections~~ approach was used. ~~The Los Angeles County General Plans and EIR (Los Angeles County 2014) was reviewed~~.

~~In order for a project to contribute to cumulative impacts, it must result in some level of impact on a project specific level. As described in this Initial Study, many of the Proposed Project effects are identified as "No Impact," including most or all of the topic areas under aesthetics, agriculture and forestry resources, land use and planning, mineral resources, population and housing, and recreation. The following discussion looks only at those effects for which some level of potential impact was identified. This includes topics for which "Less Than Significant Impacts" were identified, as well as those for which the threshold question assumed some level of impact (i.e., those for which consideration of a potential "substantial" or "significant" effect was considered, per CEQA Guidelines Section 15382).~~

Air Quality

The Los Angeles County General Plan EIR evaluated potential air quality and GHG emission impacts and determined that construction emissions associated with future development would be significant. The General Plan EIR also determined that operational air quality emissions from implementation of the General Plan would be significant. The General Plan EIR also determined that GHG impacts would be significant and unavoidable.

With regard to determining the significance of the cumulative contribution from the Proposed Project, the SCAQMD recommends that any given project's potential contribution to cumulative impacts be assessed using the same significance criteria as for project-specific impacts. Therefore, individual projects that do not generate operational or construction emissions that exceed the SCAQMD's daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the air basin is in nonattainment and therefore would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable. As previously discussed under the response to question b of Section 4.3 Air Quality, the Proposed Project would not exceed the applicable SCAQMD regional thresholds for construction and operations. Therefore, the Proposed Project would not result in cumulative considerable increase in emissions.

Biological Resources

The Los Angeles County General Plan EIR determined that implementation of the General Plan would result in:

- Impacts to special-status species that would be cumulatively significant;
- Impacts to wetlands that would be less than significant; and
- Policies that do not conflict with local ordinances, LCPs, HCPs, or NCCPs, nor would it conflict on a cumulative level.

Implementation of the Proposed Project would incrementally add to cumulative impacts to sensitive biological resources in the Project vicinity. However, as a result of mitigation described in Section 4.4 Biological resources these impacts would be reduced to a less than significant level. As such, the Proposed Project would not result in a cumulatively considerable impact to biological resources.

Cultural and Paleontological Resources

The Los Angeles County General Plan EIR determined that the implementation of the General Plan, in combination with cumulative projects, would have the potential to result in a significant cumulative impact associated with historical resources.

~~Potential regional cumulative effects were considered for cultural and paleontological resources for which the Proposed Project was found to result in less than significant impacts with mitigation incorporated. The Proposed Project has the potential to encounter significant cultural resources, TCRs, and paleontological resources during ground-disturbing activities; however, mitigation would preclude loss of such resources, and, thus, no cumulative impacts are anticipated.~~

~~Hazards and Hazardous Materials~~

~~With regard to hazards and hazardous materials, no regional problem is identified. In the event that the Proposed Project would result in accidental discharge associated with transport, use, storage, and/or disposal of hazardous materials during construction of the proposed facility, there are prescribed activities to be conducted in accordance with NPDES Construction General Permit that would reduce impacts associated with the discharge of contaminants to less than significant levels. As such, any contribution would be less than cumulatively considerable.~~

~~Hydrology and Water Quality~~

~~The Los Angeles County General Plan EIR determined that implementation of the General Plan and cumulative projects would be required to comply with regulatory and local requirements to address water-quality, drainage, and flood safety requirements. Therefore, significant cumulative impacts would not occur with the implementation of the General Plan.~~

~~Potential regional cumulative effects were considered for the topic of water quality for which the Proposed Project was found to result in less than significant impacts. Potential water quality impacts associated with the Proposed Project would be limited to short-term construction-related erosion/sedimentation; no long-term impacts to water quality would occur. Implementation of BMPs, in accordance with NPDES permit conditions, would effectively eliminate the potential for drainage- and water quality-related impacts; no cumulative impacts are anticipated.~~

~~Geology and Soils~~

~~The Los Angeles County General Plan EIR determined that implementation of the General Plan in combination with other cumulative projects, would not contribute to a potentially significant cumulative impact in regards to geology and soil impacts.~~

~~Geology/soils impacts are inherently restricted to the project area, and would not contribute to cumulative impacts associated with other planned or proposed development. Therefore, it is not necessary to address this issue on a cumulative scale.~~

~~Greenhouse Gas Emissions~~

~~Climate change is a global phenomenon that is cumulative by nature, as it is the result of combined worldwide contributions of GHGs to the atmosphere over many years. The Los Angeles County General Plan~~

~~EIR determined that implementation of the General Plan would result in GHG emissions impacts that would be significant and unavoidable. The CCAP would ensure that GHG emissions from buildout of the General Plan would be minimized. However, additional statewide measures would be necessary to reduce GHG emissions under General Plan implementation to meet the long-term GHG reduction goals under Executive Order S-03-05, which identified a goal to reduce GHG emissions to 80 percent of 1990 levels by 2050.~~

~~In accordance with the OPR, the County of Los Angeles' CCAP (2015) includes an inventory of GHG emissions and measures for reducing future emissions to achieve a specific reduction target. The Proposed Project is consistent with the GHG inventory and forecast in the CCAP. The Proposed Project is meeting its requirements to comply with GHG reduction goals.~~

~~Noise~~

~~The Los Angeles County General Plan EIR determined that cumulative projects in the Los Angeles County region would have the potential to result in a cumulative noise impact if they would, in combination with regional growth in the immediate area, create excessive community noise levels.~~

~~As shown in Section 4.13 Noise of this Initial Study, all Proposed Project related noise impacts would be less than significant; therefore, excessive community noise levels would not be created. Furthermore, the Proposed Project is continuing an existing land use with no projected growth in vehicles or people visiting the site and no increase in the number of horse stall. As such, operational noise generated at the project site is expected to be similar to existing conditions.~~

~~Transportation/Traffic~~

~~The Los Angeles County General Plan EIR determined that implementation of the General Plan could result in cumulatively significant traffic impacts if regional traffic programs are not implemented by responsible agencies.~~

~~As discussed in Section 4.17, the Proposed Project would result in nominal, short-term traffic impacts during construction. The Proposed Project is continuing an existing land use with no projected growth in vehicles or people visiting the site and no increase in the number of horse stall. As such, operational traffic generated by the Proposed Project is expected to be similar to existing conditions. Therefore, the Proposed Project is not anticipated to contribute to cumulative traffic impacts within Los Angeles County.~~

~~Utilities and Service Systems~~

~~The Los Angeles County General Plan EIR determined that implementation of the General Plan would not result in significant cumulative impact to wastewater treatment capacity, water supplies, water treatment, landfill capacity, or energy supplies (electricity, natural gas).~~

~~The Proposed Project would not induce population growth and thereby would not, directly or indirectly, contribute to cumulative impacts to utilities and public services. Furthermore, the Proposed Project is~~

~~continuing an existing land use and would not increase the need for wastewater treatment capacity, water supplies, water treatment, landfill capacity, or energy supplies because the refurbished equestrian center would have the same capacity of the existing equestrian center.~~

The project site is located within the Whittier Narrows Dam Reservoir (Reservoir). Land uses within the Reservoir include USACE project operations (including flood risk management), recreation, environmentally sensitive land, multiple resource management, and easement lands. Development within and surrounding the Reservoir has contributed to impacts to air quality, water quality, biological resources, cultural resources, and noise. The growing population and urbanization would increase the demand on the environmental resources at the Reservoir.

Past Projects

The area surrounding the project site has undergone significant population growth and urbanization. This has brought more industry and commercial uses to the nearby communities, thereby increasing vehicular traffic, noise, and air quality impacts. Construction of the Whittier Narrows Dam was completed in October 1957 with the intention of providing flood risk management to the downstream communities along the San Gabriel, Rio Hondo, and Los Angeles Rivers. Dating back to 1947, a preliminary report for potential recreation activities at the Basin was published. In 1973, the first Master Plan was published and was superseded by another Master Plan in 1974. Because of the increasing urbanization and development of the surrounding area, the preservation of the Reservoir's flora and fauna and its opportunity for recreation and open space has been a valued resource for the nearby communities.

Present Projects

The USACE presently operates and maintains the Reservoir, which includes the dam, recreation areas, and a golf course. LACDPR proposed the Whittier Narrows Equestrian Center Refurbishment Project to update and improve the existing equestrian center, which would be consistent with the existing lease on the property and provide the community with a social benefit. The operation and maintenance of the Proposed Project would be consistent with Whittier Narrows Dam Master Plan and Environmental Assessment published in 2011. The Proposed Project would continue the existing use and function in harmony with the various other land uses and environmental resources within the Reservoir.

Probable Future Projects

Future proposed development would be subject to project-specific CEQA and/or NEPA documentation, which would ensure that any adverse environmental or cumulative impacts are evaluated. Adherence to the Master Plan would maintain the Reservoir area as a resource for recreation and continue to protect the wildlife habitats and need for open space within an urban area. Compared to present conditions, the Proposed Project would not have a significant impact to the existing equestrian center or overall Reservoir because it would be consistent with the leisure and recreational goals and any potential construction impacts to air quality and noise would be temporary.

Eastside Transit Corridor Phase 2

The Los Angeles Metropolitan Transportation Authority (Metro) is currently evaluating a light rail transit alternative for the Eastside Transit Corridor Phase 2 that would have aerial stations along SR-60. Stations in Montebello and South El Monte would potentially be within a couple miles of the project site. The Eastside Transit Corridor Phase 2 would extend the existing Metro Gold Line from Atlantic Station in East Los Angeles into eastern Los Angeles County.

Whittier Narrows Dam Modification Study

The USACE is proposing risk-management plans to reduce the potential for and consequences of catastrophic flooding resulting from failure of the Whittier Narrows Dam during very rare flood events. These risk-management plans include structural modifications to the dam to eliminate or minimize the potential for the dam to fail as a result of overtopping or seepage.

San Gabriel River Discovery Center

The proposed San Gabriel River Discovery Center is being planned to replace the existing Whittier Narrows Nature Center. The Discovery Center would present the story of the San Gabriel River watershed, emphasize the importance of water resources and the natural values of the watershed, and provide educational and outdoor experiences for people of all ages.

Emerald Necklace

The proposed Emerald Necklace is a 17-mile long network of existing and future parks, greenways, and trails located along the Rio Hondo and San Gabriel River between Peck Road Water Conservation Park to the north and Whittier Narrows Recreation Area to the south. This planning project has identified a series of proposed trail and greening projects which would provide a continuous, looped network of bike paths and multi-use trails while providing improved connections to communities within and adjacent to the San Gabriel Valley.

Montebello Hills Community

The Montebello Hills, once a high-producing oil field for Standard Oil, is in a secondary recovery stage. Years of drilling relieved pressure in the ground so the oil doesn't come up as fast as it did during the field's heyday in the 1930s. Future plans for the Montebello Hills Community to be developed on the west side of the Montebello Hills would include approximately 1,200 luxury homes with retail centers, parks, and trails. The eastern side of the Montebello Hills would be preserved and restored as habitat for the California gnatcatcher, a federally endangered avian species.

Cumulative Impact Analysis

Cumulative air quality impacts from the Proposed Project could occur as a result of short-term increased worker traffic, construction traffic, and construction equipment. The exposure of sensitive receptors to

project-generated construction equipment and operation emissions, in combination with the emissions of other proposed or ongoing projects in the area, if construction periods were to overlap, would result in short-term high cumulative impacts on sensitive receptors. The Proposed Project would comply with all applicable regulatory requirements, including SCAQMD Rule 403 requirements. Construction-related emissions at the project site would not exceed any of the SCAQMD's significance thresholds. Thus, the Proposed Project's contribution to cumulative construction-related emissions would not be cumulatively considerable and therefore would be less than significant.

Implementation of the Proposed Project would incrementally add to cumulative impacts to sensitive biological resources in the Project vicinity. However, as a result of mitigation described in Section 4.4 Biological resources these impacts would be reduced to a less than significant level. As such, the Proposed Project would not result in a cumulatively considerable impact to biological resources.

Potential regional cumulative effects were considered for cultural and paleontological resources for which the Proposed Project was found to result in less than significant impacts with mitigation incorporated. The Proposed Project has the potential to encounter significant cultural resources, TCRs, and paleontological resources during ground-disturbing activities; however, mitigation would preclude loss of such resources, and, thus, no cumulative impacts are anticipated.

Potential regional cumulative effects were considered for the topic of water quality for which the Proposed Project was found to result in less than significant impacts. Potential water quality impacts associated with the Proposed Project would be limited to short-term construction-related erosion/sedimentation; no long-term impacts to water quality would occur. Implementation of BMPs, in accordance with NPDES permit conditions, would effectively eliminate the potential for drainage- and water quality-related impacts; no cumulative impacts are anticipated.

As discussed in Section 4.17, Transportation/Traffic of the Draft IS/MND, the Proposed Project would result in nominal, short-term traffic impacts during construction. The Proposed Project is continuing an existing land use with no projected growth in vehicles or people visiting the site and no increase in the number of horse stalls. As such, operational traffic generated by the Proposed Project is expected to be similar to existing conditions. Therefore, the Proposed Project is not anticipated to contribute to cumulative traffic impacts within Los Angeles County.

Several projects have been identified above in the vicinity of the project site, which include the Metro's Eastside Transit Corridor Phase 2, Whittier Narrows Dam Modification Study, San Gabriel River Discovery Center, Emerald Necklace, and Montebello Hills Community. Noise from construction of development projects is typically localized and has the potential to affect areas within 500 feet from the construction site. Thus, noise from construction activities for two projects within 1,000 feet of each other can contribute to a cumulative noise impact for sensitive receptors located midway between the two construction sites. The nearest related projects are the Multi-Use Trail and Multi-Use Bridge proposed by the Emerald Necklace Implementation Plan, which are directly north of the project site. Other related projects are located further

from the project site. Due to the distance attenuation, cumulative noise impacts from construction activities would be less than significant.

For these reasons, impacts associated with cumulative effects would be less than significant.

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SECTION 5.0 MITIGATION MONITORING AND REPORTING PLAN

5.1 Introduction

In accordance with CEQA, an IS/MND that identified adverse impacts related to the construction activity for the Whittier Narrows Equestrian Center Refurbishment Project was prepared. The MND identified mitigation measures that would reduce or eliminate these impacts to below the level of significance.

Section 21081.6 of the Public Resources Code and Sections 15091(d) and 15097 of the State CEQA Guidelines require public agencies to adopt a reporting and monitoring plan (MMRP) for changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. A MMRP is required for the Proposed Project, because the IS/MND identified potentially significant adverse impacts related to construction activity, and mitigation measures have been identified to mitigate these impacts. Adoption of the MMRP will occur along with approval of the Proposed Project.

5.2 Purpose of the Mitigation Monitoring and Reporting Plan

This MMRP has been prepared to ensure that all required mitigation measures are implemented and completed according to schedule and maintained in a satisfactory manner during the construction and operation of the Proposed Project, as required. The MMRP may be modified by the County of Los Angeles during project implementation, as necessary, in response to changing conditions or other project refinements. Table 5-1 has been prepared to assist the responsible parties in implementing the MMRP. This table identifies the category of significant environmental impact(s), individual mitigation measures, monitoring and mitigation timing, responsible person/agency for implementing the measure, monitoring and reporting procedure, and notation space to confirm implementation of the mitigation measures. The numbering of the mitigation measures follows the numbering sequence in the IS/MND.

5.3 Roles and Responsibilities

The County of Los Angeles, as Lead Agency, is responsible for oversight of compliance of the mitigation measures in the MMRP.

5.4 Mitigation Monitoring and Reporting Plan

The column categories identified in the MMRP table (Table 5-1) are described below.

- **Mitigation Measure** – This column lists the mitigation measures by number.
- **Monitoring Activity/Timing/Frequency/Schedule** – This column lists the activity to be monitored for each mitigation measure, the timing of each activity, and the frequency/schedule of monitoring for each activity.

- **Implementation Responsibility/Verification** – This column identifies the entity responsible for complying with the requirements of the mitigation measure, and provides space for verification initials and date.
- **Responsibility for Oversight of Compliance/Verification** – This column provides the agency responsible for oversight of the mitigation implementation, and is to be dated and initialed by the agency representative based on the documentation provided by the construction contractor or through personal verification by agency staff.
- **Outside Agency Coordination** – this column lists any agencies with which the County of Los Angeles may coordinate for implementation of the mitigation measure.
- **Comments** – this column provides space for written comments, if necessary.

Table 5-1
Whittier Narrows Equestrian Center Refurbishment Project
Mitigation Monitoring and Reporting Plan

Mitigation Measure	Monitoring Activity/Timing/ Frequency/ Schedule	Implementation Responsibility/ Verification	Responsibility for Oversight of Compliance/ Verification	Outside Agency Coordination	Comments
Biology Resources Mitigation Measures					
BIO-1: Preconstruction Surveys for Nesting Birds: Any ground-disturbing activities and/or vegetation or structure removal activities within the project site shall be conducted during the non-breeding season for birds (approximately September 1 through January 31). This will avoid violations of the MBTA and California FGC Sections 3503, 3503.5 and 3513. If activities with the potential to disrupt nesting birds are scheduled to occur during the bird breeding season (February through August for raptors and March through August for songbirds), a preconstruction nesting bird survey shall be conducted by a qualified biologist no more than three (3) days prior to the start of construction activities. The nest survey shall include the project site and adjacent areas within 500 feet where project activities have the potential to cause nest failure. If no nesting birds are	**Activity:** Preconstruction survey for nesting birds. **Timing:** No more than three (3) days prior to ground disturbing activities. **Frequency:** One time.	**Project Biologist** Initials Date	**County of Los Angeles** Initials Date	Possible coordination with CDFW.	

Mitigation Measure	Monitoring Activity/Timing/ Frequency/ Schedule	Implementation Responsibility/ Verification	Responsibility for Oversight of Compliance/ Verification	Outside Agency Coordination	Comments
observed during the survey, site preparation and construction activities may begin. If nesting birds (including nesting raptors) are found to be present, then avoidance or minimization measures shall be undertaken to avoid nest disturbance. Measures will include the following at a minimum: (1) establishment of an avoidance buffer until nesting has been completed and (2) periodic monitoring of the nest status by a biological monitor. The width of the buffer will be determined by the project biologist. Typically, this is a minimum of 300 feet from the nest site in all directions (500 feet is typically recommended by CDFW for raptors), until the juveniles have fledged and there has been no evidence of a second attempt at nesting. The monitoring biologist will monitor the nest(s) during construction and document any findings					
BIO-2: Preconstruction Sensitive Wildlife Survey: A preconstruction survey shall be conducted for sensitive biological resources within all areas of potential permanent and temporary disturbance, including a 500-foot buffer. The preconstruction survey shall take	**Activity:** Preconstruction Sensitive Wildlife Survey **Timing:** No more than 14	**Project Biologist** Initials	**County of Los Angeles** Initials	None	

Mitigation Measure	Monitoring Activity/Timing/ Frequency/ Schedule	Implementation Responsibility/ Verification	Responsibility for Oversight of Compliance/ Verification	Outside Agency Coordination	Comments
place no more than 14 days prior to the start of any ground-disturbing activities and/or vegetation or structure removal activities. The preconstruction survey shall take place regardless of nesting bird season timing and shall focus on identifying the presence of least Bell's vireo, coastal California gnatcatcher, burrowing owl, and yellow-breasted chat within the project site and 500-foot buffer within suitable habitat for these species. Should special-status species be identified during the preconstruction survey, additional mitigation measures may need to be implemented to avoid or minimize impacts to these species, and consultation between the County of Los Angeles and the appropriate agency (CDFW, USFWS) may be necessary to determine the appropriate additional mitigation measures. If burrowing owls are observed during the preconstruction survey, a specific mitigation methodology for the owl shall be determined in consultation between the County of Los Angeles and CDFW. Mitigation measures for any owls present could include avoidance of the owl burrows during their nesting season and/or	days prior to the start of any ground-disturbing activities and/or vegetation or structure removal activities. **Frequency:** One time.	Date	Date		

Mitigation Measure	Monitoring Activity/Timing/ Frequency/ Schedule	Implementation Responsibility/ Verification	Responsibility for Oversight of Compliance/ Verification	Outside Agency Coordination	Comments
passive relocation of burrowing owls. If western red bat or western yellow bat are observed or detected during the preconstruction survey, a specific mitigation methodology shall be determined in consultation between the County of Los Angeles and CDFW. Mitigation measures for any bats present may include the development of a bat protection and relocation plan, and/or avoidance of bat roost tree removal. If tree removal cannot be avoided and a qualified bat biologist determines that roosting bats may be present in a tree at any time of year, then the removal of that tree shall take place under the supervision of a qualified bat biologist. Tree removal methods shall consist of using heavy machinery to slowly push the tree over after nudging the tree two to three times with approximately 30 seconds in between nudging to allow bats to escape. Downed trees will be allowed to remain in place until inspected by the qualified bat biologist. If the downed tree is determined to be a bat roost, then a minimum of 24 hours shall be allowed to pass (preferably 48 hours) before the tree may be sawed up or mulched.					

Mitigation Measure	Monitoring Activity/Timing/ Frequency/ Schedule	Implementation Responsibility/ Verification	Responsibility for Oversight of Compliance/ Verification	Outside Agency Coordination	Comments
If least Bell's vireo, coastal California gnatcatcher, or yellow-breasted chat are detected during the preconstruction survey, additional mitigation measures may need to be implemented to avoid or minimize impacts to these species, and consultation between the County of Los Angeles and the appropriate agency may be required (CDFW, USFWS). Measures provided under BIO-1 would avoid direct and indirect impacts to nesting yellow-breasted chat should they be located during preconstruction surveys. Mitigation measures for the federally and state-listed least Bell's vireo or the federally listed coastal California gnatcatchers would be included to ensure that impacts to these species do not occur during vegetation removal. Mitigation measures for coastal California gnatcatcher and least Bell's vireo if habitat is determined to be occupied will include (at the discretion of the monitoring biologist) additional focused surveys, biological monitoring during ground-disturbing activities and/or vegetation or structure removal activities, the establishment of a minimum 500-foot non-disturbance buffer around active nest locations during construction					

Mitigation Measure	Monitoring Activity/Timing/ Frequency/ Schedule	Implementation Responsibility/ Verification	Responsibility for Oversight of Compliance/ Verification	Outside Agency Coordination	Comments
activities, and/or noise monitoring to ensure that noise levels will not exceed 60 decibels.					
BIO-3: Regulatory Permitting: Prior to the commencement of project construction activities that will impact the ephemeral drainage on the project site, authorization for impacts shall be acquired through the permitting process from the USACE, RWQCB, and CDFW pursuant to the CWA Section 404 and 401 and California Fish and Game Code Section 1600, respectively. Project specific permitting conditions for impacts to features jurisdictional to state and federal agencies will be determined during the permitting process.	**Activity:** Acquire necessary authorization for impacts to jurisdictional features. **Timing:** Prior to impacts to the jurisdictional feature occurring. **Frequency:** One time.	**Regulatory Specialist** Initials Date	**County of Los Angeles** Initials Date	Coordination with the USACE, RWQCB, and CDFW.	
Cultural Resources Mitigation Measures					
CUL-1: If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 60-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and	**Activity:** Archaeological evaluation of potential cultural resources. **Timing:**	**Qualified Archaeologist** Initials	**County of Los Angeles** Initials	Consulting Native American Tribal Governments	

Mitigation Measure	Monitoring Activity/Timing/ Frequency/ Schedule	Implementation Responsibility/ Verification	Responsibility for Oversight of Compliance/ Verification	Outside Agency Coordination	Comments
historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find: 1. If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required. 2. If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the County of Los Angeles ("County"). The County shall consult with the Project Archaeologist and, for Native American or associated finds, interested affiliated Tribes on a finding of eligibility. Appropriate treatment measures, such as avoidance or data recovery, shall be implemented if the find is determined to be eligible for inclusion in the CRHR. Work may not resume within the no-work	During ground disturbing construction activities. **Frequency:** As necessary during construction.	Date	Date		

Mitigation Measure	Monitoring Activity/Timing/ Frequency/ Schedule	Implementation Responsibility/ Verification	Responsibility for Oversight of Compliance/ Verification	Outside Agency Coordination	Comments
radius until the County, through consultation with the Project Archaeologist and interested affiliated Tribes, determine that the site either: 1) is not eligible for the CRHR; or 2) that the treatment measures have been completed to their satisfaction. 3. If the find includes human remains, or remains that are potentially human, the archaeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Los Angeles County Coroner (per §7050.5 of the Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, §5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the Public Resources Code). The designated MLD will					

Mitigation Measure	Monitoring Activity/Timing/ Frequency/ Schedule	Implementation Responsibility/ Verification	Responsibility for Oversight of Compliance/ Verification	Outside Agency Coordination	Comments
have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.					
CUL-2: A qualified paleontologist shall be retained prior to the start of construction. If, during ground-disturbing activities, paleontological resources are discovered the paleontologist will examine the find. Based on the findings of the paleontologist, additional paleontological monitoring may be needed. Any paleontological monitoring shall be restricted to older Quaternary deposits or exposures of older Quaternary Alluvium, which might be present below the surface. To avoid construction delays, the monitor shall be prepared to quickly salvage fossils, as they are unearthed. The monitor shall remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor shall have the	**Activity:** Evaluation of potential paleontological resources by a qualified paleontologist. **Timing:** During ground disturbing construction activities. **Frequency:** As necessary during construction.	**Qualified Paleontologist** _____ Initials _____ Date	**County of Los Angeles** _____ Initials _____ Date	None	

Mitigation Measure	Monitoring Activity/Timing/ Frequency/ Schedule	Implementation Responsibility/ Verification	Responsibility for Oversight of Compliance/ Verification	Outside Agency Coordination	Comments
authority to temporarily halt or divert grading equipment to allow for the removal of abundant or large specimens. If the paleontologist determines that monitoring is not necessary, the paleontologist shall prepare a memo documenting such to the satisfaction of the County.					
CUL-3: If the qualified paleontologist deems recovered resources as rare, substantial, or otherwise unique, the resources shall be prepared and stabilized for formal identification and permanent preservation. A report shall be prepared describing the results of the evaluation and shall be submitted to the County.	**Activity:** Prepare and stabilize paleontological resources for formal identification and permanent preservation. **Timing:** If recovered resources are rare, substantial, or otherwise unique. **Frequency:** As necessary during construction.	**Qualified Paleontologist** Initials Date	**County of Los Angeles** Initials Date	None	

Mitigation Measure	Monitoring Activity/Timing/ Frequency/ Schedule	Implementation Responsibility/ Verification	Responsibility for Oversight of Compliance/ Verification	Outside Agency Coordination	Comments
CUL-4: Identification and curation of recovered paleontological specimens into an established accredited museum repository with permanent retrievable paleontological storage shall be required for recovered resources identified by the qualified paleontologist (retained via Mitigation Measure CUL-2) as rare, substantial, or otherwise unique.	**Activity:** Identification and curation of recovered paleontological specimens. **Timing:** If resources are recovered. **Frequency:** As necessary.	**Qualified Paleontologist** Initials Date	**County of Los Angeles** Initials Date	Possible coordination with into an established accredited museum repository.	
Geology and Soils Mitigation Measures					
GEO-1: Design and construction of project structures shall incorporate recommendations from the Geotechnical Evaluation Whittier Narrows Equestrian Center 12191 Rooks Road Whittier, California prepared by Ninyo & Moore dated April 2, 2018.	**Activity:** Incorporate recommendations from the project's geotechnical report into the project's design. **Timing:** During project	**County of Los Angeles** Initials	**County of Los Angeles** Initials	None	

Mitigation Measure	Monitoring Activity/Timing/ Frequency/ Schedule	Implementation Responsibility/ Verification	Responsibility for Oversight of Compliance/ Verification	Outside Agency Coordination	Comments
	design. **Frequency:** Once.	Date	Date		
Tribal Cultural Resources Mitigation Measures					
TCR-1: Ground-disturbing activities shall be monitored by a Tribal Monitor representing the Kizh Nation. Based on soil conditions, the Tribal Monitor may conclude that there is little likelihood that archaeological materials will be uncovered by construction activities. In this event, the Tribal Monitor may adjust the frequency of monitoring needed. Monitoring may be discontinued or may consist of periodic spot checking, as deemed appropriate by the Tribal Monitor in consultation with the Archaeologist. The Tribal Monitor shall have the authority to temporarily halt construction operations within 60 feet of a tribal cultural resource (TCR) or a potential TCR to determine if significant or potentially significant resources will be adversely affected by continuing construction activities. The tribal monitor shall	**Activity:** Tribal monitor shall be present during ground disturbing activities. **Timing:** During construction. **Frequency:** As needed.	**County of Los Angeles** Initials Date	**County of Los Angeles** Initials Date	Kizh Nation	

Mitigation Measure	Monitoring Activity/Timing/ Frequency/ Schedule	Implementation Responsibility/ Verification	Responsibility for Oversight of Compliance/ Verification	Outside Agency Coordination	Comments
use flagging around the find. Within the flagged off area construction shall halt until a qualified archaeologist evaluates the find. Construction shall not take place within the delineated find area until the County consults on appropriate treatment with a qualified archaeologist and the Kizh Nation. The Tribal Monitor may suggest options for treatment of finds for consideration. The County shall have ultimate authority over the treatment of new finds while complying with all rules and regulations including, but not limited to, AB 2641, Section 7050.5 pf the California Health and Safety Code, and Public Resources Code Section 5097.94 and 5097.98.					

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SECTION 6.0 LIST OF APPENDICES

Appendix A – Draft Initial Study/Mitigated Negative Declaration

Appendix B – Biological Technical Report

Appendix C – Staff Resumes

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APPENDIX A

Draft Initial Study/Mitigated Negative Declaration

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Whittier Narrows Equestrian Center Refurbishment Project
Draft Mitigated Negative Declaration

December 2018

Lead Agency:

County of Los Angeles
Department of Public Works
900 S. Fremont Avenue
Alhambra, California 91803

Prepared by:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

215 N. Fifth Street
Redlands, California 92374

Draft Mitigated Negative Declaration
County of Los Angeles Department of Public Works

Project title: Whittier Narrows Equestrian Center Refurbishment Project

Lead agency name and address: County of Los Angeles Department of Public Works, 900 S. Fremont Avenue, Alhambra, California 91803

Contact Person, phone number, and email: David Palma, (626) 300-2339, DPalma@dpw.lacounty.gov

Project sponsor's name and address: Same as Lead Agency.

Project location: Whittier Narrows Equestrian Center, 12191 Rooks Road, Los Angeles County, CA 90601 *APN*: 8125-012-904, 8125-012-910, 8125-062-904, 8125-062-003, and 8125-062-903 *USGS Quad*: El Monte

Description of project: The Whittier Narrows Equestrian Center is an existing equestrian center, located in Los Angeles County along the San Gabriel River. The project site measures approximately 20 acres and is bound by Rooks Road to the southeast, Peck Road to the east, the San Gabriel River to the northwest, and Pico Rivera Bicentennial Park to the southwest. The equestrian center provides access to riding trails, including part of the Juan Bautista De Anza National Historic Trail. The equestrian center is characterized by large open areas, clusters of buildings, rows of ornamental trees, and scattered individual trees. The Whittier Narrows Equestrian Center has seven existing barns with 200 horse stalls, four arenas, and five round pens, dry material storage area, a restroom, security lighting, and utility service.

The existing facilities at the equestrian center are outdated and have several flooding and stormwater pollution issues. There are several low spots in the center of the project site, particularly near the horse stables, that pool water during storm events. Stormwater runoff from the project site, which is often polluted from the equestrian uses on the site, eventually flows into the San Gabriel River and other sensitive habitats downstream.

The Whittier Narrows Equestrian Center Refurbishment Project (Proposed Project) would provide updated and improved equestrian facilities for horse boarders and the general public and alleviate on-site and downstream flooding and stormwater pollution issues. Proposed improvements include:

Equestrian Facilities

- One new large arena measuring 125 feet (ft.) by 200 ft. with 4-rail pipe fencing and gates.
- One medium sized arena measuring 125 ft. by 180 ft.
- Three new 60 ft. diameter round pens with 4-rail pipe fencing and gates.
- Three new 40 ft. diameter round pens.
- Two existing renovated arenas.
- One new small arena measuring 80 ft. by 140 ft. with 4-rail fencing and gates.
- One relocated horse rental corral with 20 stalls, a roof, and 4-rail pipe fencing and gates to be located adjacent to the public rental facility.
- One new rental corral with 4-rail pipe fencing and gates and an American with Disabilities Act (ADA) accessible mounting platform.
- Three 50 ft. by 50 ft. turnouts with 4-rail pipe fencing and gates.
- Bleachers.

- One covered 7-bay wash stall.
- Eight grooming rack areas with room for two to four grooming stalls.
- Hitching posts.

Building Structures

- One new approximately 460 square (sq.) ft. prefabricated ADA compliant restroom structure.
- One existing restroom will be upgraded to comply with standards of the Americans with Disabilities Act (ADA).
- One approximately 150 sq. ft. new prefabricated public rental office facility that includes lockers.
- Nine various sized (5,870 sq. ft. – 9,010 sq. ft.) roofed barns that can accommodate up to 180 horses with various sized metal pipe stalls.
- One future roofed barn measuring approximately 7,300 sq. ft. that can accommodate 20 horses with each metal pipe stall measuring 12 feet by 24 feet.
- A hay and dry materials storage structure.
- A service yard vehicle/equipment storage structure.
- A new pre-fabricated manure waste storage and composting area covered structure. The new structure would measure 25 feet by 27 feet and would have a metal roof and concrete slab with a drainage system connected to the sewer system. This structure would replace an existing composting and manure area that is not covered by a roof structure, but is covered by tarps.

Site Infrastructure

- Vehicular parking areas with 83 parking spaces, including four ADA compliant parking spaces to be paved with crushed miscellaneous base (CMB).
- Parking areas for up to 31 horse trailers and standard vehicles to be paved with CMB.
- Security lighting throughout the facility. The facility currently has 11 pole mounted security lights. The Proposed Project would include 23 new pole mounted security lights located along the new internal access road, and 28 new pole mounted flood lights in the barn, picnic, and turnout corral areas.
- New fire hydrants.
- Low Impact Development (LID) features, such as bio-swales and detention basins, including an overflow spillway.
- An automatic irrigation system for all equestrian arenas and proposed planting areas.
- Asphalt paved internal access road. There is no existing internal access road, vehicles can drive and park anywhere throughout the equestrian facility. The new paved 1380 linear foot internal access road would formalize the area vehicles can drive and park within the equestrian facility.

Other Features

- Monument entry sign.
- Drought resistant trees and landscaping.
- Picnic tables and benches near the public rental facility.
- Lockers at both sides of all barn ends.
- Informational, directional, and regulatory signage will be included.

During construction temporary facilities for existing equestrian boarders would be provided, including temporary stables/barns, restrooms, and security lighting. Proposed security lighting would be located at the periphery of the temporary barn/stable areas. The exact locations would be determined during construction. Construction staging would occur within the boundaries of the existing equestrian facility.

Earthwork would be balanced onsite. No hauling of dirt to and from the site is anticipated. It is anticipated that trucking needs during demolition would be minimal because the type of structures that would be demolished would generate small amounts of waste. Structures to be demolished consist of pipe barns, corrals, and portions of the existing restroom.

The existing equestrian facility can accommodate up to 200 horses/stalls, and the renovated facility would have the same amount (200).

Public Review Period: December 10, 2018 to January 8, 2019

Mitigation Measures Incorporated into the Project to Avoid or Reduce Significant Impacts to Below the Level of Significance:

Biological Resources

BIO-1: **Preconstruction Surveys for Nesting Birds:** Any ground-disturbing activities and/or vegetation or structure removal activities within the project site shall be conducted during the non-breeding season for birds (approximately September 1 through January 31). This will avoid violations of the MBTA and California FGC Sections 3503, 3503.5 and 3513. If activities with the potential to disrupt nesting birds are scheduled to occur during the bird breeding season (February through August for raptors and March through August for songbirds), a preconstruction nesting bird survey shall be conducted by a qualified biologist no more than three (3) days prior to the start of construction activities. The nest survey shall include the project site and adjacent areas within 500 feet where project activities have the potential to cause nest failure. If no nesting birds are observed during the survey, site preparation and construction activities may begin. If nesting birds (including nesting raptors) are found to be present, then avoidance or minimization measures shall be undertaken to avoid nest disturbance. Measures will include the following at a minimum: (1) establishment of an avoidance buffer until nesting has been completed and (2) periodic monitoring of the nest status by a biological monitor. The width of the buffer will be determined by the project biologist. Typically, this is a minimum of 300 feet from the nest site in all directions (500 feet is typically recommended by CDFW for raptors), until the juveniles have fledged and there has been no evidence of a second attempt at nesting. The monitoring biologist will monitor the nest(s) during construction and document any findings.

BIO-2: **Preconstruction Sensitive Wildlife Survey:** A preconstruction survey shall be conducted for sensitive biological resources within all areas of potential permanent and temporary disturbance, including a 500-foot buffer. The preconstruction survey shall take place no more than 14 days prior to the start of any ground-disturbing activities and/or vegetation or structure removal activities. The preconstruction survey shall take place regardless of nesting bird season timing and shall focus on identifying the presence of least Bell's vireo, coastal California gnatcatcher, burrowing owl, and yellow-breasted chat within the project site and 500-foot buffer within suitable habitat for these species. Should special-status species be identified during the preconstruction survey, additional mitigation measures may need to be implemented to avoid or minimize impacts to these species, and consultation between the County of Los Angeles and the appropriate agency (CDFW, USFWS) may be necessary to determine the appropriate additional mitigation measures.

If burrowing owls are observed during the preconstruction survey, a specific mitigation methodology for the owl shall be determined in consultation between the County of Los

Angeles and CDFW. Mitigation measures for any owls present could include avoidance of the owl burrows during their nesting season and/or passive relocation of burrowing owls.

If least Bell's vireo, coastal California gnatcatcher, or yellow-breasted chat are detected during the preconstruction survey, additional mitigation measures may need to be implemented to avoid or minimize impacts to these species, and consultation between the County of Los Angeles and the appropriate agency may be required (CDFW, USFWS). Measures provided under BIO-1 would avoid direct and indirect impacts to nesting yellow-breasted chat should they be located during preconstruction surveys. Mitigation measures for the federally and state-listed least Bell's vireo or the federally listed coastal California gnatcatchers would be included to ensure that impacts to these species do not occur during vegetation removal. Mitigation measures for coastal California gnatcatcher and least Bell's vireo if habitat is determined to be occupied will include (at the discretion of the monitoring biologist) additional focused surveys, biological monitoring during ground-disturbing activities and/or vegetation or structure removal activities, the establishment of a minimum 500-foot non-disturbance buffer around active nest locations during construction activities, and/or noise monitoring to ensure that noise levels will not exceed 60 decibels.

BIO-3: **Regulatory Permitting:** Although no mitigation is being proposed for the impacts to jurisdictional areas, because the impacts are to existing disturbed drainage features only, there is a requirement for authorization for these impacts through the permitting process with the USACE, RWQCB, and CDFW pursuant to the CWA Section 404 and 401 and California Fish and Game Code Section 1600, respectively. During this process, project specific mitigation for impacts to features jurisdictional to state and federal agencies may be requested by the respective agencies as part of the permitting process.

Cultural Resources

CUL-1: If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 60-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

1. If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required.

2. If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the County of Los Angeles ("County"). The County shall consult with the Project Archaeologist and, for Native American or associated finds, interested affiliated Tribes on a finding of eligibility. Appropriate treatment measures, such as avoidance or data recovery, shall be implemented if the find is determined to be eligible for inclusion in the CRHR. Work may not resume within the no-work radius until the County, through consultation with the Project Archaeologist and interested affiliated Tribes, determine that the site either: 1) is not eligible for the CRHR; or 2) that the treatment measures have been completed to their satisfaction.

3. If the find includes human remains, or remains that are potentially human, the archaeologist shall ensure reasonable protection measures are taken to protect the discovery from

disturbance (AB 2641). The archaeologist shall notify the Los Angeles County Coroner (per §7050.5 of the Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, §5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

CUL-2: A qualified paleontologist shall be retained prior to the start of construction. If, during ground-disturbing activities, paleontological resources are discovered the paleontologist will examine the find. Based on the findings of the paleontologist, additional paleontological monitoring may be needed. Any paleontological monitoring shall be restricted to older Quaternary deposits or exposures of older Quaternary Alluvium, which might be present below the surface. To avoid construction delays, the monitor shall be prepared to quickly salvage fossils, as they are unearthed. The monitor shall remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor shall have the authority to temporarily halt or divert grading equipment to allow for the removal of abundant or large specimens. If the paleontologist determines that monitoring is not necessary, the paleontologist shall prepare a memo documenting such to the satisfaction of the County.

CUL-3: If the qualified paleontologist deems recovered resources as rare, substantial, or otherwise unique, the resources shall be prepared and stabilized for formal identification and permanent preservation. A report shall be prepared describing the results of the evaluation and shall be submitted to the County.

CUL-4: Identification and curation of recovered paleontological specimens into an established accredited museum repository with permanent retrievable paleontological storage shall be required for recovered resources identified by the qualified paleontologist (retained via Mitigation Measure CUL-2) as rare, substantial, or otherwise unique.

Geology and Soils

GEO-1: Design and construction of project structures shall incorporate recommendations from the *Geotechnical Evaluation Whittier Narrows Equestrian Center 12191 Rooks Road Whittier, California* prepared by Ninyo & Moore dated April 2, 2018.

Tribal Cultural Resources

TCR-1: Ground-disturbing activities shall be monitored by a Tribal Monitor representing the Kizh Nation. Based on soil conditions, the Tribal Monitor may conclude that there is little likelihood that archaeological materials will be uncovered by construction activities. In this event, the Tribal Monitor may adjust the frequency of monitoring needed. Monitoring may be discontinued or may consist of periodic spot checking, as deemed appropriate by the Tribal Monitor in consultation with the Archaeologist. The Tribal Monitor shall have the authority to temporarily halt construction operations within 60 feet of a tribal cultural resource (TCR) or a potential TCR to determine if significant or potentially significant resources will be adversely affected by

continuing construction activities. The tribal monitor shall use flagging around the find. Within the flagged off area construction shall halt until a qualified archaeologist evaluates the find. Construction shall not take place within the delineated find area until the County consults on appropriate treatment with a qualified archaeologist and the Kizh Nation. The Tribal Monitor may suggest options for treatment of finds for consideration. The County shall have ultimate authority over the treatment of new finds while complying with all rules and regulations including, but not limited to, AB 2641, Section 7050.5 pf the California Health and Safety Code, and Public Resources Code Section 5097.94 and 5097.98.

Whittier Narrows Equestrian Center Refurbishment Project
Environmental Checklist Form (Initial Study)

December 2018

Lead Agency:

County of Los Angeles
Department of Public Works
900 S. Fremont Avenue
Alhambra, California 91803

Prepared by:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

215 N. Fifth Street
Redlands, California 92374

CONTENTS

Appendices

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Acronyms and Abbreviations

AB	Assembly Bill
AQMP	Air Quality Management Plan
BMPs	Best Management Practices
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CO Plan	Federal Attainment Plan for Carbon Monoxide

CRHR	California Register of Historic Places
CWA	California Water Act
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GHGs	Greenhouse Gases
LSTs	Localized Significance Thresholds
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendent
MMT	Million Metric Tons
MND	Mitigated Negative Declaration
$MTCO_2eq$	Metric Tons of Carbon Dioxide Equivalent
NAHC	Native American Heritage Commission
ND	Negative Declaration
NPDES	National Pollutant Discharge Elimination System
N_2O	Nitrous Oxide
NO_x	Nitrogen Oxides
NRHP	National Register of Historic Places
OPR	California Office of Planning and Research
PM_{10} and $PM_{2.5}$	Particulate Matter
ROG	Reactive Organic Gases
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
USACE	United States Army Corps of Engineers
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SIP	State Implementation Plan
SoCAB	South Coast Air Basin
SR	State Route
SRA	Sensitive Receptor Area
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board

SECTION 1.0 Background

Project title: Whittier Narrows Equestrian Center Refurbishment Project

Lead agency name and address: County of Los Angeles (Department of Public Works), 900 S. Fremont Avenue, Alhambra, California 91803

Contact Person, phone number, and email: David Palma, (626) 300-2339, DPalma@dpw.lacounty.gov

Project sponsor's name and address: Same as Lead Agency.

Project location: Whittier Narrows Equestrian Center, 12191 Rooks Road, Los Angeles County, CA 90601 *APN*: 8125-012-904, 8125-012-910, 8125-062-904, 8125-062-003, and 8125-062-903 *USGS Quad*: El Monte

Gross Acreage: 20 acres

General plan designation: OS-PR – Parks and Recreation, W – Water

Community/Area wide Plan designation: Not Applicable

Zoning: O-S – Open Space, A-1-5 – Light Agriculture

SECTION 2.0 Project Description

2.1 Project Background

The Whittier Narrows Equestrian Center is an existing equestrian center, located in Los Angeles County along the San Gabriel River (Figure 1). The project site measures approximately 20 acres and is bound by Rooks Road to the southeast, Peck Road to the east, the San Gabriel River to the northwest, and Pico Rivera Bicentennial Park to the southwest (Figure 2). The equestrian center provides access to riding trails, including part of the Juan Bautista De Anza National Historic Trail. The equestrian center is characterized by large open areas, clusters of buildings, rows of ornamental trees, and scattered individual trees. The Whittier Narrows Equestrian Center has seven existing barns with 200 horse stalls, four arenas, and five round pens, dry material storage area, a restroom, security lighting, and utility service.

The existing facilities at the equestrian center are outdated and have several flooding and stormwater pollution issues. There are several low spots in the center of the project site, particularly near the horse stables, that pool water during storm events. Stormwater runoff from the project site, which is often polluted from the equestrian uses on the site, eventually flows into the San Gabriel River and other sensitive habitats downstream.

2.3 Project Characteristics

The Whittier Narrows Equestrian Center Refurbishment Project (Proposed Project) would provide updated and improved equestrian facilities for horse boarders and the general public and alleviate on-site and downstream flooding and stormwater pollution issues. Proposed improvements are shown in Figure 3 (site plan) and include:

Equestrian Facilities

- One new large arena measuring 125 feet (ft.) by 200 ft. with 4-rail pipe fencing and gates.
- One medium sized arena measuring 125 ft. by 180 ft.
- Three new 60 ft. diameter round pens with 4-rail pipe fencing and gates.
- Three new 40 ft. diameter round pens.
- Two existing renovated arenas.
- One new small arena measuring 80 ft. by 140 ft. with 4-rail fencing and gates.
- One relocated horse rental corral with 20 stalls, a roof, and 4-rail pipe fencing and gates to be located adjacent to the public rental facility.
- One new rental corral with 4-rail pipe fencing and gates and an American with Disabilities Act (ADA) accessible mounting platform.
- Three 50 ft. by 50 ft. turnouts with 4-rail pipe fencing and gates.
- Bleachers.
- One covered 7-bay wash stall.
- Eight grooming rack areas with room for two to four grooming stalls.
- Hitching posts.

Building Structures

- One new approximately 460 square (sq.) ft. prefabricated ADA compliant restroom structure.
- One existing restroom will be upgraded to comply with standards of the Americans with Disabilities Act (ADA).
- One approximately 150 sq. ft. new prefabricated public rental office facility that includes lockers.

- Nine various sized (5,870 sq. ft. – 9,010 sq. ft.) roofed barns that can accommodate up to 180 horses with various sized metal pipe stalls.
- One future roofed barn measuring approximately 7,300 sq. ft. that can accommodate 20 horses with each metal pipe stall measuring 12 feet by 24 feet.
- A hay and dry materials storage structure.
- A service yard vehicle/equipment storage structure.
- A new pre-fabricated manure waste storage and composting area covered structure. The new structure would measure 25 feet by 27 feet and would have a metal roof and concrete slab with a drainage system connected to the sewer system. This structure would replace an existing composting and manure area that is not covered by a roof structure, but is covered by tarps.

Site Infrastructure

- Vehicular parking areas with 83 parking spaces, including four ADA compliant parking spaces to be paved with crushed miscellaneous base (CMB).
- Parking areas for up to 31 horse trailers and standard vehicles to be paved with CMB.
- Security lighting throughout the facility. The facility currently has 11 pole mounted security lights. The Proposed Project would include 23 new pole mounted security lights located along the new internal access road, and 28 new pole mounted flood lights in the barn, picnic, and turnout corral areas.
- New fire hydrants.
- Low Impact Development (LID) features, such as bio-swales and detention basins, including an overflow spillway.
- An automatic irrigation system for all equestrian arenas and proposed planting areas.
- Asphalt paved internal access road. There is no existing internal access road, vehicles can drive and park anywhere throughout the equestrian facility. The new paved 1,380 linear foot internal access road would formalize the area vehicles can drive and park within the equestrian facility.

Other Features

- Monument entry sign.
- Drought resistant trees and landscaping.
- Picnic tables and benches near the public rental facility.
- Lockers at both sides of all barn ends.
- Informational, directional, and regulatory signage will be included.

During construction temporary facilities for existing equestrian boarders would be provided, including temporary stables/barns, restrooms, and security lighting. Proposed security lighting would be located at the periphery of the temporary barn/stable areas. The exact locations would be determined during construction. Construction staging would occur within the boundaries of the existing equestrian facility. Earthwork would be balanced onsite. No hauling of dirt to and from the site is anticipated. It is anticipated that trucking needs during demolition would be minimal because the type of structures that would be demolished would generate small amounts of waste. Structures to be demolished consist of pipe barns, corrals, and portions of the existing restroom.

The existing equestrian facility can accommodate up to 200 horses/stalls, and the renovated facility would have the same amount (200).

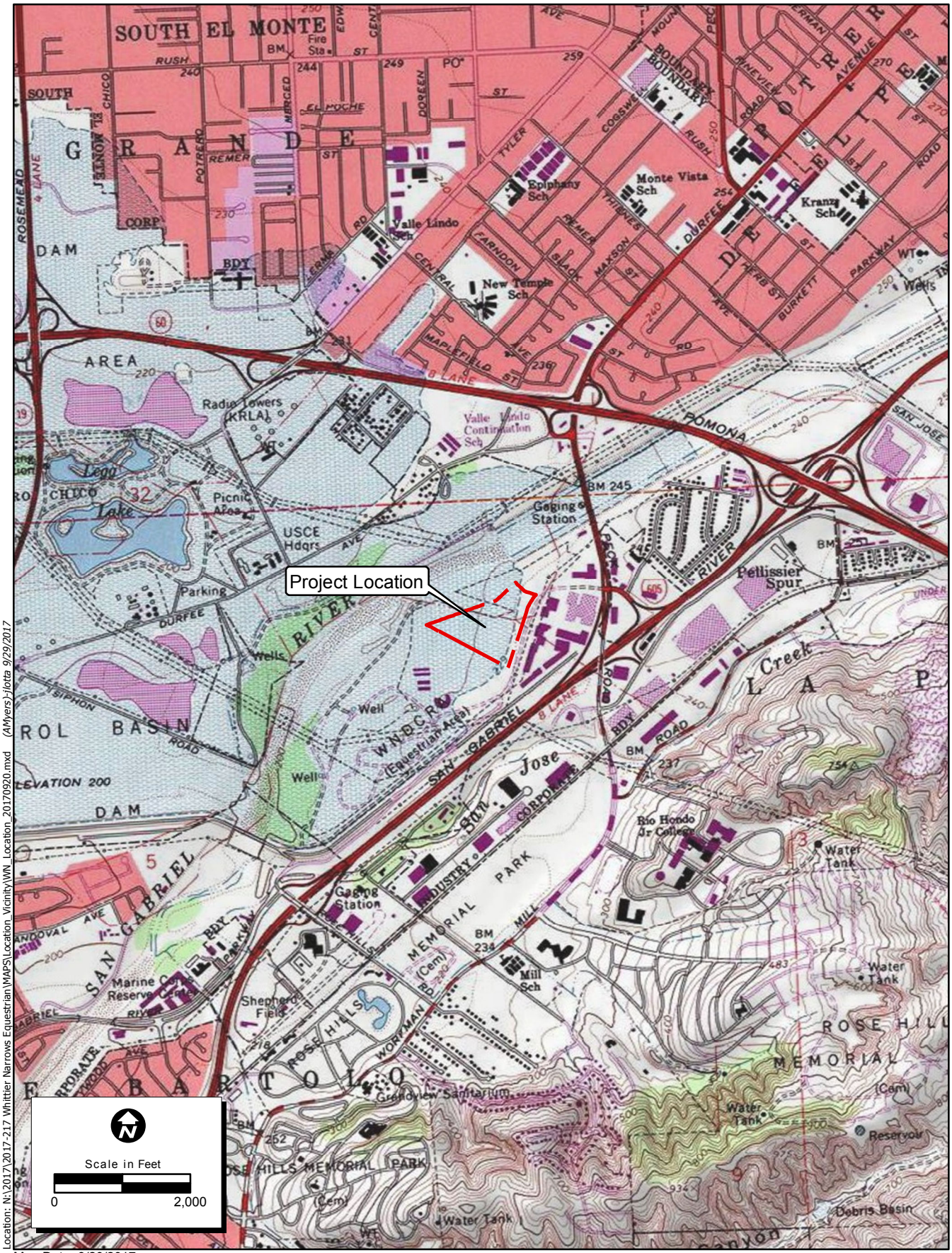
Location: N:\2017\2017-217 Whittier Narrows Equestrian\MAPS\Location_Vicinity\WN_Vicinity_20170920.mxd (AMyers)-jlotta 9/29/2017

Map Date: 9/20/2017
Service Layer Credits: ESRI

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Vicinity

2017-217 Whittier Narrows



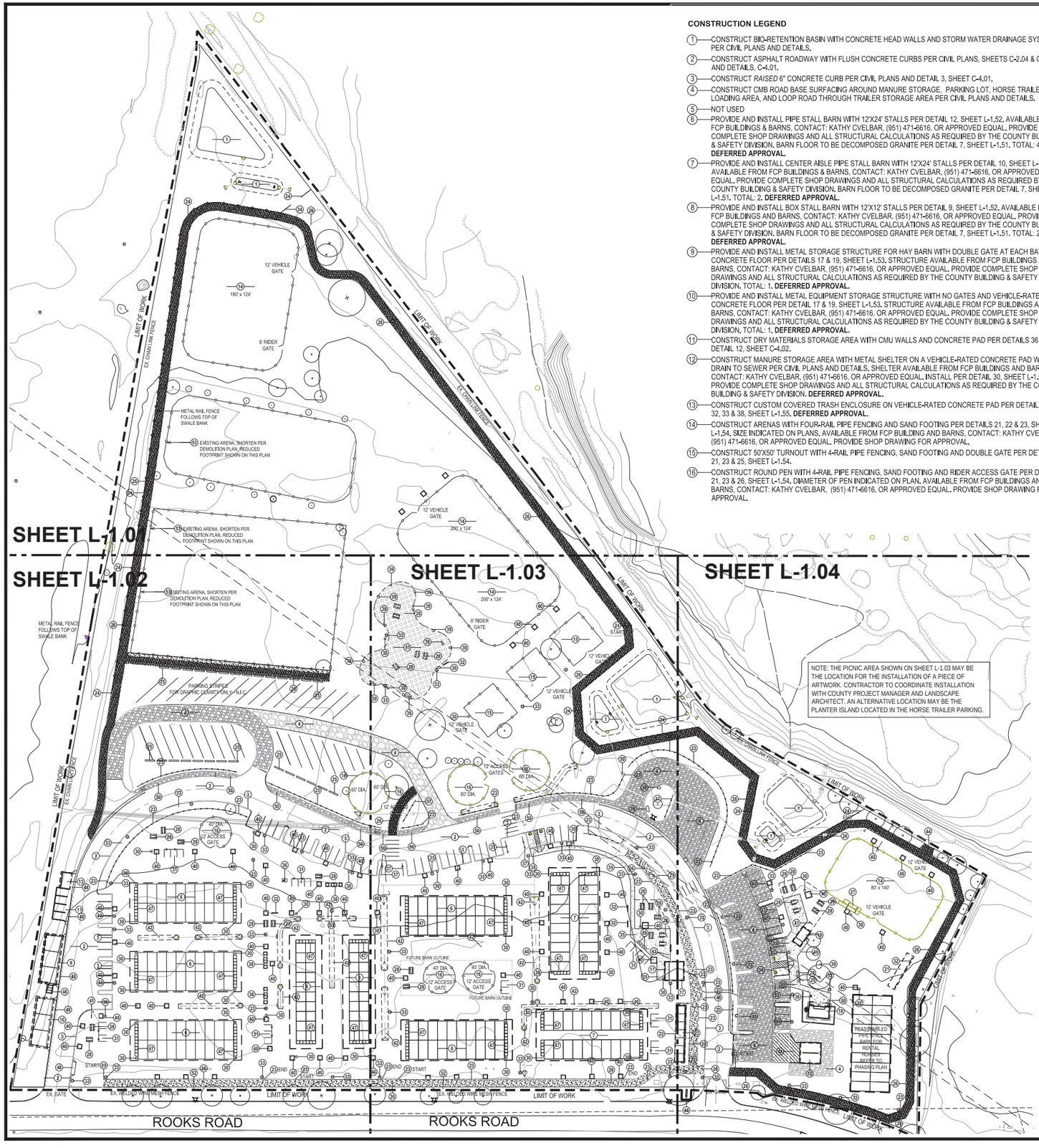
Location: N:\2017\2017-217 Whittier Narrows Equestrian\MAPS\Location_Vicinity\WN_Location_20170920.mxd (AMyers)-jlotta 9/29/2017

Map Date: 9/20/2017
Base Source: USGS

Figure 2. Project Location

2017-217 Whittier Narrows

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS



CONSTRUCTION LEGEND

1. CONSTRUCT BIO-RETENTION BASIN WITH CONCRETE HEAD WALLS AND STORM WATER DRAINAGE SYSTEM PER CIVIL PLANS AND DETAILS.
2. CONSTRUCT ASPHALT ROADWAY WITH FLUSH CONCRETE CURBS PER CIVIL PLANS, SHEETS C-2.04 & C-2.05 AND DETAILS, C-4.01.
3. CONSTRUCT *RAISED* 6" CONCRETE CURB PER CIVIL PLANS AND DETAIL 3, SHEET C-4.01.
4. CONSTRUCT CMB ROAD BASE SURFACING AROUND MANURE STORAGE, PARKING LOT, HORSE TRAILER LOADING AREA, AND LOOP ROAD THROUGH TRAILER STORAGE AREA PER CIVIL PLANS AND DETAILS.
5. NOT USED
6. PROVIDE AND INSTALL PIPE STALL BARN WITH 12'X24' STALLS PER DETAIL 12, SHEET L-1.52, AVAILABLE FROM FCP BUILDINGS & BARNS, CONTACT: KATHY CVELBAR, (951) 471-6616, OR APPROVED EQUAL. PROVIDE COMPLETE SHOP DRAWINGS AND ALL STRUCTURAL CALCULATIONS AS REQUIRED BY THE COUNTY BUILDING & SAFETY DIVISION. BARN FLOOR TO BE DECOMPOSED GRANITE PER DETAIL 7, SHEET L-1.51. TOTAL: 4. **DEFERRED APPROVAL.**
7. PROVIDE AND INSTALL CENTER AISLE PIPE STALL BARN WITH 12'X24' STALLS PER DETAIL 10, SHEET L-1.52. AVAILABLE FROM FCP BUILDINGS & BARNS, CONTACT: KATHY CVELBAR, (951) 471-6616, OR APPROVED EQUAL. PROVIDE COMPLETE SHOP DRAWINGS AND ALL STRUCTURAL CALCULATIONS AS REQUIRED BY THE COUNTY BUILDING & SAFETY DIVISION. BARN FLOOR TO BE DECOMPOSED GRANITE PER DETAIL 7, SHEET L-1.51. TOTAL: 2. **DEFERRED APPROVAL.**
8. PROVIDE AND INSTALL BOX STALL BARN WITH 12'X12' STALLS PER DETAIL 9, SHEET L-1.52. AVAILABLE FROM FCP BUILDINGS AND BARNS, CONTACT: KATHY CVELBAR, (951) 471-6616, OR APPROVED EQUAL. PROVIDE COMPLETE SHOP DRAWINGS AND ALL STRUCTURAL CALCULATIONS AS REQUIRED BY THE COUNTY BUILDING & SAFETY DIVISION. BARN FLOOR TO BE DECOMPOSED GRANITE PER DETAIL 7, SHEET L-1.51. TOTAL: 2. **DEFERRED APPROVAL.**
9. PROVIDE AND INSTALL METAL STORAGE STRUCTURE FOR HAY BARN WITH DOUBLE GATE AT EACH BAY AND CONCRETE FLOOR PER DETAILS 17 & 19, SHEET L-1.53. STRUCTURE AVAILABLE FROM FCP BUILDINGS AND BARNS, CONTACT: KATHY CVELBAR, (951) 471-6616, OR APPROVED EQUAL. PROVIDE COMPLETE SHOP DRAWINGS AND ALL STRUCTURAL CALCULATIONS AS REQUIRED BY THE COUNTY BUILDING & SAFETY DIVISION. TOTAL: 1. **DEFERRED APPROVAL.**
10. PROVIDE AND INSTALL METAL EQUIPMENT STORAGE STRUCTURE WITH NO GATES AND VEHICLE-RATED CONCRETE FLOOR PER DETAIL 17 & 19, SHEET L-1.53. STRUCTURE AVAILABLE FROM FCP BUILDINGS AND BARNS, CONTACT: KATHY CVELBAR, (951) 471-6616, OR APPROVED EQUAL. PROVIDE COMPLETE SHOP DRAWINGS AND ALL STRUCTURAL CALCULATIONS AS REQUIRED BY THE COUNTY BUILDING & SAFETY DIVISION, TOTAL: 1. **DEFERRED APPROVAL.**
11. CONSTRUCT DRY MATERIALS STORAGE AREA WITH CMU WALLS AND CONCRETE PAD PER DETAILS 36 & DETAIL 12, SHEET C-4.02.
12. CONSTRUCT MANURE STORAGE AREA WITH METAL SHELTER ON A VEHICLE-RATED CONCRETE PAD WITH DRAIN TO SEWER PER CIVIL PLANS AND DETAILS. SHELTER AVAILABLE FROM FCP BUILDINGS AND BARNS, CONTACT: KATHY CVELBAR, (951) 471-6616, OR APPROVED EQUAL. INSTALL PER DETAIL 30, SHEET L-1.54. PROVIDE COMPLETE SHOP DRAWINGS AND ALL STRUCTURAL CALCULATIONS AS REQUIRED BY THE COUNTY BUILDING & SAFETY DIVISION. **DEFERRED APPROVAL.**
13. CONSTRUCT CUSTOM COVERED TRASH ENCLOSURE ON VEHICLE-RATED CONCRETE PAD PER DETAILS 31, 32, 33 & 38, SHEET L-1.55. **DEFERRED APPROVAL.**
14. CONSTRUCT ARENAS WITH FOUR-RAIL PIPE FENCING AND SAND FOOTING PER DETAILS 21, 22 & 23, SHEET L-1.54, SIZE INDICATED ON PLANS, AVAILABLE FROM FCP BUILDING AND BARNS, CONTACT: KATHY CVELBAR, (951) 471-6616, OR APPROVED EQUAL. PROVIDE SHOP DRAWING FOR APPROVAL.
15. CONSTRUCT 50'X50' TURNOUT WITH 4-RAIL PIPE FENCING, SAND FOOTING AND DOUBLE GATE PER DETAILS 21, 23 & 25, SHEET L-1.54.
16. CONSTRUCT ROUND PEN WITH 4-RAIL PIPE FENCING, SAND FOOTING AND RIDER ACCESS GATE PER DETAILS 21, 23 & 26, SHEET L-1.54. DIAMETER OF PEN INDICATED ON PLAN. AVAILABLE FROM FCP BUILDINGS AND BARNS, CONTACT: KATHY CVELBAR, (951) 471-6616, OR APPROVED EQUAL. PROVIDE SHOP DRAWING FOR APPROVAL.
17. PROVIDE AND INSTALL PRE-FABRICATED RESTROOM PER DETAIL 5, SHEET A-1.00. AVAILABLE FROM PUBLIC RESTROOM COMPANY (PRC), CONTACT: CHAD KAUFMAN, (888) 888-2060 EXT. 109. PROVIDE COMPLETE MANUFACTURER'S SHOP DRAWINGS AND ALL STRUCTURAL CALCULATIONS AS REQUIRED BY THE COUNTY BUILDING & SAFETY DIVISION FOR A DELAYED PERMIT. CONTRACTOR TO COORDINATE DELIVERY TO SITE, PREPARATION OF THE SITE AND CONSTRUCTION OF THE FOOTING AS DIRECTED BY MANUFACTURER. RESTROOM TO BE DELIVERED IN TWO PIECES. CONTRACTOR IS RESPONSIBLE FOR CONCRETE PAD UNDER FRONT PORCH AREA.
    PRC DELIVERS A TURNKEY PRODUCT TO THE SITE. CONTRACTOR IS RESPONSIBLE FOR THE EXTENSION OF ALL NECESSARY UTILITIES TO WITHIN 6' OF THE BUILDING. MANUFACTURER WILL INSTALL AND CONNECT ALL UTILITIES WITHIN THE BUILDING AND EXTEND THESE LINES TO THE CONNECTION POINT. **DEFERRED APPROVAL.**
18. RECONSTRUCT EXISTING RESTROOM BUILDING PER ARCHITECTURE PLANS AND DETAILS.
19. PROVIDE AND INSTALL PRE-FABRICATED OFFICE BUILDING PER DETAIL 1, SHEET A-1.00. AVAILABLE FROM PUBLIC RESTROOM COMPANY (PRC), CONTACT: CHAD KAUFMAN, (888) 888-2060 EXT. 109. PROVIDE COMPLETE MANUFACTURER'S SHOP DRAWINGS AND ALL STRUCTURAL CALCULATIONS AS REQUIRED BY THE COUNTY BUILDING & SAFETY DIVISION FOR A DELAYED PERMIT. CONTRACTOR TO COORDINATE DELIVERY TO SITE, PREPARATION OF THE SITE AND CONSTRUCTION OF FOOTING AS DIRECTED BY MANUFACTURER.
    PRC DELIVERS A TURNKEY PRODUCT TO THE SITE. CONTRACTOR IS RESPONSIBLE FOR THE EXTENSION OF ALL NECESSARY UTILITIES TO WITHIN 6' OF THE BUILDING. MANUFACTURER WILL INSTALL AND CONNECT ALL UTILITIES WITHIN THE BUILDING AND EXTEND THESE LINES TO THE CONNECTION POINT. **DEFERRED APPROVAL.**
20. CONTRACTOR TO DISMANTLE AND REASSEMBLE EXISTING PIPE CORRAL BARN. REFER TO PHASING PLAN, SHEET G-3.00. PROVIDE COMPLETE UTILITIES AND DECOMPOSED GRANITE SURFACING PER DETAIL 7, SHEET L-1.51.
21. PROVIDE AND INSTALL COVERED HITCHING SHELTER WITH HITCHING POSTS AND DECOMPOSED GRANITE SURFACING FOR RENTAL HORSES PER DETAILS 34 & 37, SHEET L-1.55. AVAILABLE FROM FCP BUILDINGS AND BARNS, CONTACT: KATHY CVELBAR, (951) 471-6616, OR APPROVED EQUAL. PROVIDE COMPLETE SHOP DRAWINGS AND ALL STRUCTURAL CALCULATIONS AS REQUIRED BY THE COUNTY BUILDING & SAFETY DIVISION. **DEFERRED APPROVAL.**
22. CONSTRUCT COVERED PIPE CORRAL WASH RACK WITH CONCRETE PAD AND END CMU WALL TO MOUNT HOT WATER HEATER PER DETAIL 13, SHEET L-1.53. METAL SHELTER AND PIPE CORRAL STALLS AVAILABLE FROM FCP BUILDINGS AND BARNS, CONTACT: KATHY CVELBAR, (951) 471-6616, OR APPROVED EQUAL. CMU WALL AND CONCRETE PAD WITH TRENCH DRAIN AND SEWER CONNECTION PER CIVIL PLANS AND DETAILS. REFER TO PLUMBING AND ELECTRICAL PLANS FOR INSTALLATION OF HOT WATER HEATER, HOSE BIBS AND 15' HOSE IN EACH STALL. **DEFERRED APPROVAL.**
23. CONSTRUCT TWO-RAIL LODGE POLE FENCING ALONG ACCESS ROAD PER DETAIL 24, SHEET L-1.54. REFER TO FENCING PLAN, SHEET L-1.08. AVAILABLE FROM GANAHL LUMBER COMPANY, (714) 239-2172 OR APPROVED EQUAL.
24. CONSTRUCT SINGLE-RAIL METAL FENCE ALONG PERIMETER TRAIL PER DETAIL 27 SHEET L-1.54. REFER TO FENCING PLAN, SHEET L-1.08.
25. CONSTRUCT WHEEL STOP BARRIER AT EDGE OF TRAILER STORAGE WITH PARTIALLY BURIED UTILITY POLES SALVAGED FROM THE SITE DURING DEMOLITION.
26. CONSTRUCT 10' WIDE RIDING TRAIL BY CLEARING AND REMOVING TOP 2" OF NATIVE SOIL. SPREAD 2" DECOMPOSED GRANITE ON FINE GRADED SURFACE PER DETAIL DETAIL 7, SHEET L-1.51.
27. PROVIDE AND INSTALL CUSTOM ADA-ACCESSIBLE MOUNTING PLATFORM PER DETAIL 29, SHEET L-1.54. CUSTOM PRODUCT AVAILABLE FROM HANDI-RAMP, (800) 876-RAMP. PROVIDE SHOP DRAWINGS AND ALL NECESSARY STRUCTURAL CALCULATIONS REQUIRED BY THE COUNTY. **DEFERRED APPROVAL.**
28. PROVIDE AND INSTALL QUICKCRETE CONCRETE PICNIC TABLES, MODELS QLAT96PT AND QLBT102PT-ADA. COLOR: LATTE, LIGHT SAND-BLAST. TOTAL TABLE TO PURCHASE: 7 STANDARD TABLES AND 4 ADA TABLES. 16 EXISTING TABLES ARE AVAILABLE ON SITE, CONTRACTOR IS RESPONSIBLE FOR SALVAGING AND RELOCATING TABLES PER PLAN. REFER TO DEMOLITION PLAN.
29. PROVIDE AND INSTALL PARKWAY WOOD BENCHES WITH DIRECT BURY POSTS PER DETAIL 6, SHEET L-1.51. AVAILABLE FROM TIMBERFORM, MODEL # 2006-6, (800) 547-1940, TOTAL: 4
30. 50-GALLON DRUM TRASH RECEPTACLE, PAINTED FOREST GREEN TO MATCH EXISTING. TOTAL NO. TO PURCHASE: 16, 33 EXISTING DRUMS ON SITE TO BE RE PAINTED.
31. PROVIDE AND INSTALL GROOMING STALLS PER DETAIL 28, SHEET L-1.54. AVAILABLE FROM FCP BUILDINGS AND BARNS, CONTACT: KATHY CVELBAR, (951) 471-6616, OR APPROVED EQUAL. TOTAL: 8 (23 BAYS)
32. PROVIDE AND INSTALL HITCHING POST PER DETAIL 37, SHEET L-1.55 AVAILABLE FROM FCP BUILDINGS AND BARNS, CONTACT: KATHY CVELBAR, (951) 471-6616, OR APPROVED EQUAL. TOTAL:9.
33. PROVIDE AND INSTALL PARKING AND FLOOD LIGHTING PER ELECTRICAL PLAN AND DETAILS.
34. CONSTRUCT CONCRETE PAD FOR ADA PARKING PER CIVIL PLANS AND DETAILS, SHEET C-4.03. PAINT STRIPING AND INSTALL ALL SIGNAGE AS REQUIRED BY CODE.
35. CONSTRUCT PEDESTRIAN CONCRETE PAVING PER CIVIL DETAIL 10, SHEET C-4.01.
36. PROVIDE AND INSTALL MURDOCK PEDESTAL MOUNTED BOTTLE FILLER WITH ACCESSIBLE DRINKING FOUNTAIN AND PET BOWL, MODEL GYM 74 PER MANUFACTURER'S RECOMMENDATIONS. SEE DETAIL 1, SHEET L-1.50 FOR LAYOUT AT EX. RESTROOM. SECOND FOUNTAIN TO BE INSTALLED WITH SUMP PER PLUMBING DETAIL, SEE PLUMBING PLANS. AVAILABLE FROM MURDOCK MANUFACTURING, (800) 453-7465. TOTAL: 2, COLOR: GREEN.
37. CONSTRUCT LOW UTILITY POLE BARRIER PER DETAIL 35, SHEET L-1.55.
38. EXISTING WOOD FRAME LOCKERS TO BE RELOCATED, REFER TO DEMOLITION PLAN. PAINT EXTERIOR OF LOCKERS FCP BARN RED TO MATCH BARNS. PROVIDE SAMPLE FOR APPROVAL.
39. RELOCATED BOULDER, REFER TO DEMOLITION PLAN.
40. CONSTRUCT LANDSCAPE TIMBER TREE WELL PER DETAIL 2, SHEET L-1.50. REFER TO PLANTING PLAN FOR TREE SPECIES INFORMATION.
41. PROVIDE AND INSTALL WAVE-STYLE BICYCLE RACK PER DETAIL 8, SHEET L-1.51. 7-BICYCLE RACK ADJACENT TO OFFICE BLDG., SEE SHEET L-1.50 FOR LAYOUT. 5-BICYCLE RACK OPPOSITE STORAGE BLDG.
42. CONSTRUCT EARTHEN DRAINAGE SWALE PER CIVIL GRADING PLAN AND DETAILS.
43. PROVIDE AND INSTALL BOLLARD-STYLE CYCLOOPS BICYCLE RACK, MODEL #2172 WITH TWO LOOPS PER DETAIL 4, SHEET L-1.50. AVAILABLE FROM COLUMBIA CASCADE, (503) 223-1157, TOTAL: 6, COLOR: DARK BROWN OR BRONZE, PROVIDE SAMPLE FOR APPROVAL.
44. CONSTRUCT 12' WIDE DOUBLE CHAIN LINK GATE PER DETAIL 39, SHEET L-1.56. MATCH EXISTING FENCE HEIGHT. PROVIDE AND INSTALL MATCHING SHADE CLOTH ON GATE PANELS.
45. CONSTRUCT ENTRY SIGN PER DETAILS 40 & 44, SHEET L-1.56. SIGNAGE ARTWORK AVAILABLE FROM THE COUNTY, CONTACT INFORMATION PER DETAIL. SIGN PANELS AND FRAME AVAILABLE FROM GOPHER SIGNAGE COMPANY PER DETAIL.
46. PROVIDE AND INSTALL THREE DL2 TWO-BICYCLE LOCKERS ON CONCRETE PAD PER DETAIL 43, SHEET L-1.56. AVAILABLE FROM DURA BICYLE LOCKERS, (916) 363-7225.
47. CONSTRUCT CUSTOM LOCKERS AT ENDS OF EACH BARN PER DETAILS 16 & 20, SHEET L-1.53. PROVIDE COMPLETE SHOP DRAWINGS FOR APPROVAL. MATERIALS TO MATCH FCP BARNS, AVAILABLE FROM FCP BUILDINGS & BARN, CONTACT: KATHY CVELBAR, (951) 471-6616.
48. CONSTRUCT CONCRETE DRIVEWAY PER CIVIL PLANS AND DETAILS.
49. REINSTALL COMMUNITY BULLETIN BOARD, REFER TO DEMOLITION PLAN.
50. CONSTRUCT PEA GRAVEL SURFACING ALONG EDGE OF ROAD PER DETAIL 3, SHEET L-1.50.
51. PROVIDE AND INSTALL 2" MULCH IN CENTRAL PICNIC AREA. PROVIDE SAMPLE FOR APPROVAL.
52. CONSTRUCT NEW PEDESTRIAN GATE FOR FIRE ACCESS IN EXISTING WELD WIRE FENCE. REFER TO FIRE SITE PLAN, SHEET G-2.00 AND DETAIL 41, SHEET L-1.56. AVAILABLE FROM AMERICAN FENCE, (760) 744-4124.
53. EXISTING ARENAS SHORTENED PER LAYOUT SHOWN IN DEMOLITION PLAN, SEE SHEETS D-1.01 AND D-1.02. SALVAGE EXISTING FENCING AND REINSTALL PER PLAN.

Figure 3. Site Plan

NOTE: SELECTED MANUFACTURER OF BARNS AND OTHER SIMILAR STRUCTURES TO BE CAPABLE OF DESIGN-BUILD AND PROVIDE STRUCTURAL ENGINEERING CALCULATIONS AS REQUIRED BY LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS / BUILDING & SAFETY DIVISION FOR DELAYED PERMITTING.

FIRE NOTE: PROVIDE AND INSTALL FIRE EXTINGUISHERS IN NEW STABLES AND NEW OFFICE/RESTROOM PER CODE. SEE FIRE NOTES, SHEET G-1.00.

PEDESTRIANS SHALL BE PROTECTED DURING CONSTRUCTION, REMODELING AND DEMOLITION ACTIVITIES AS REQUIRED BY THE COUNTY OF LOS ANGELES BUILDING CODE CHAPTER 33.3306.

0 25 50 100
1" = 50'

WITHERS & SANDGREN
LANDSCAPE ARCHITECTURE + PLANNING
PO BOX 276
MONTROSE, CA 91021
Deliveries:
20948 TULSA STREET
CHATSWORTH, CA 91311
818-291-0200
mail@withersandsandgren.com

SHEET TITLE
COMPREHENSIVE CONSTRUCTION SITE PLAN

OWNER
COUNTY OF LOS ANGELES
PLANNING & DEVELOPMENT AGENCY
DEPARTMENT OF PARKS & RECREATION
1000 SOUTH FREMONT AVE.
ALHAMBRA, CA 91803

PROJECT TITLE
WHITTIER NARROWS EQUESTRIAN CENTER REFURBISHMENT PROJECT
12191 ROOKS ROAD WHITTIER, CA 90601

REVISIONS	DATE
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	

DRAWN BY:	PBN/ DH
CHECKED BY:	LW
PROJECT NO.	0900
DATE:	25 OCT 2018

REGISTERED LANDSCAPE ARCHITECT
LEVI W. WITHERS, RLA
Expires:
30 AUG 2019
Signed:
15 AUG 2018
STATE OF CALIFORNIA

Surrounding land uses and setting: The Proposed Project is located within unincorporated Los Angeles County within the West San Gabriel Planning Area. The Proposed Project is located at 12191 Rooks Road in the West San Gabriel Planning Area, north of the City of Pico Rivera (Figures 1 and 2). Land uses for the project site and surrounding areas are described in Table 1-1 below.

Table 1-1. Surrounding Land Uses

Title	General Plan Land Use Designation[1]	Existing Land Use
Project Site	OS-PR – Parks and Recreation, W – Water	Equestrian Center
North	W – Water	San Gabriel River
East	IL- Light Industrial	Automotive/Truck Service Center and Retail
South	IL – Light Industrial, OS-PR – Parks and Recreation	Commercial and Industrial Businesses, Open Space
West	OS-PR – Parks and Recreation, P-OS – Park/Open Space[2]	Open Space, Pico Rivera Bicentennial Park, Pico Rivera Sports Arena

Source: Los Angeles County 2018, City of Pico Rivera 2014
Notes: 1 - All land use designations from the Los Angeles County Land Use Policy unless otherwise noted. 2 - Designated by the City of Pico Rivera Land Use Plan.

Other public agencies whose approval may be required (e.g., permits, financing approval, or participation agreement):

Public Agency	*Approval Required*
USACE	Clean Water Act Section 404 Permit
RWQCB	Clean Water Act Section 401 Permit
	Stormwater Construction General Permit (including the development and implementation of a Stormwater Pollution Prevention Plan)
CDFW	Fish and Game Code Section 1602 Streambed Alteration Agreement

Reviewing Agencies:

Responsible Agencies

- ☐ None
- Regional Water Quality Control Board:
  - ☒ Los Angeles Region
  - ☐ Lahontan Region
- ☐ Coastal Commission
- ☐ Army Corps of Engineers

Special Reviewing Agencies

- ☒ None
- ☐ Santa Monica Mountains Conservancy
- ☐ National Parks
- ☐ National Forest
- ☐ Edwards Air Force Base
- ☐ Resource Conservation District of Santa Monica Mountains Area
- ☐

Regional Significance

- ☒ None
- ☐ SCAG Criteria
- ☐ Air Quality
- ☐ Water Resources
- ☐ Santa Monica Mtns. Area
- ☐

Trustee Agencies

- ☐ None
- ☒ State Dept. of Fish and Wildlife
- ☐ State Dept. of Parks and Recreation
- ☐ State Lands Commission
- ☐ University of California (Natural Land and Water Reserves System)

County Reviewing Agencies

- ☒ DPW:
  - Land Development Division (Grading & Drainage)
  - Geotechnical & Materials Engineering Division
  - Watershed Management Division (NPDES)
  - Traffic and Lighting Division
  - Environmental Programs Division
  - Waterworks Division
  - Sewer Maintenance Division
- ☒ Department of Regional Planning (DPR)
  - Impact Analysis
  - Community Studies East
  - Zoning Permits East
  - Zoning Enforcement East
- ☒ Fire Department
  - Forestry, Environmental Division
  - Planning Division
  - Land Development Unit
  - Health Hazmat
- ☒ Sanitation District
- ☒ Public Health/Environmental Health Division: Land Use Program (OWTS), Drinking Water Program (Private Wells), Solid Waste Management Program/Local Enforcement Agency, Toxics Epidemiology Program (Noise)
- ☐ Sheriff Department
- ☒ Parks and Recreation
- ☐ Subdivision Committee
- ☐

SECTION 3.0 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project.

☐ Aesthetics	☐ Greenhouse Gas Emissions	☐ Public Services
☐ Agriculture/Forest	☐ Hazards/Hazardous Materials	☐ Recreation
☐ Air Quality	☐ Hydrology/Water Quality	☐ Transportation/Traffic
☒ Biological Resources	☐ Land Use/Planning	☒ Tribal Cultural Resources
☒ Cultural Resources	☐ Mineral Resources	☐ Utilities/Services
☐ Energy	☐ Noise	☐ Mandatory Finding of Significance
☒ Geology and Soils	☐ Population/Housing	

DETERMINATION: (To be completed by the Lead Department.)
On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Joan A. Allmon

Signature (Prepared by) — Date: 12/3/2018

Signature (Approved by) — Date: 12/3/2018

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources the Lead Department cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the Lead Department has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level. (Mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced.)

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA processes, an effect has been adequately analyzed in an earlier EIR or negative declaration. (State CEQA Guidelines § 15063(c)(3)(D).) In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of, and adequately analyzed in, an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

7) The explanation of each issue should identify: the significance threshold, if any, used to evaluate each question, and; mitigation measures identified, if any, to reduce the impact to less than significance. Sources of thresholds include the County General Plan, other County planning documents, and County ordinances. Some thresholds are unique to geographical locations.

8) Climate Change Impacts: When determining whether a project's impacts are significant, the analysis should consider, when relevant, the effects of future climate change on : 1) worsening hazardous conditions that pose risks to the project's inhabitants and structures (e.g., floods and wildfires), and 2) worsening the project's impacts on the environment (e.g., impacts on special status species and public health).

SECTION 4.0 Environmental Checklist and Discussion

4.1 Aesthetics

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒

The project site is located at the existing Whittier Narrows Equestrian Center. Surrounding areas are primarily composed of commercial, industrial, park, and transportation infrastructure land uses. The project site is not located in the vicinity of a hillside or ridgeline.

Scenic viewsheds vary by location and community and can include ridgelines, unique rock outcroppings, waterfalls, ocean views or various other unusual or scenic landforms (Los Angeles County 2015a). In the project area, the Puente Hills are located approximately one mile to the southeast, the San Gabriel River is located immediately to the north, and the San Gabriel Mountains are located approximately ten miles to the north, all of which provide scenic resources within the San Gabriel Valley. People visiting or working within the project site would have line of sight to these scenic resources.

The Proposed Project would refurbish an existing equestrian center and would not affect scenic vistas within the project area because it is not proposing structures that could block views to scenic vistas that are available to people visiting or working within the project site. Proposed structures are similar in style and size to the existing structures. **No impact would occur**.

b) Be visible from or obstruct views from a regional riding or hiking trail?	☐	☐	☒	☐

There are two existing trails north of the project site, which include the San Gabriel River – Schabarum Connector and the San Gabriel River Trail – Eastern Bank. Both of these trails are multi-use trails. The San Gabriel River – Schabarum Connector links the San Gabriel River Trail to the Schabarum/Skyline Trail. The Schabarum-Skyline Trail is a long connector trail through open spaces and flood control channels connecting communities from Covina to Whittier. The San Gabriel River Trail – Eastern Bank runs parallel to the San Gabriel River on its eastern bank and adjacent to I-605. This San Gabriel River Trail – Eastern Bank measures approximately 3.6 miles in length and eventually connects to the San Gabriel River Trail approximately 0.5 mile southwest of the project site.

With the implementation of the Proposed Project the equestrian center would continue to be connected to this trail. The equestrian center would also serve as a resting area for users of the trail.

The project site is currently in view of both of these trails. Implementation of the Proposed Project would continue the existing equestrian use of the project site; therefore, views from trails in the vicinity would not change or be affected. **Impacts would be less than significant**.

c) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

The project site is located approximately 660 feet northwest of I-605 and approximately 0.5 mile south of SR-60. Neither of these highways is designated as a State Scenic Highway by Caltrans (Caltrans 2018). **No impact would occur**.

d) Substantially degrade the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, character, or other features?	☐	☐	☐	☒

The Proposed Project would refurbish the existing Whittier Narrows Equestrian Center. Proposed improvements would include demolishing existing barns and associated structures and constructing new barns, a new service yard, a hay and dry material storage structure, new arenas and round pens, a horse rental facility, a new stormwater management system, a manure storage/composting area, vehicular and horse trailer parking lots, prefabricated restroom and office, renovated existing restroom, and new landscaping and lighting.

The Proposed Project would be compatible with the visual character of the surrounding development because it would continue the equestrian use of the site. Proposed improvements would introduce similar structures to what already occur on the project site; therefore, the visual character of the project site would not be degraded compared to existing conditions. The Proposed Project would also include new landscaping along Rooks Road and throughout the equestrian center which could provide beneficial visual impacts to the project site. **No impact would occur**.

e) Create a new source of substantial shadows, light, or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

There are approximately 11 existing pole mounted security lights at the equestrian facility. The Proposed Project would add lighting fixtures to the project site for wayfinding, security, and to highlight elements of buildings and landscaping. The Proposed Project would install 23 new pole mounted security lights located along the new internal access road and 28 pole mounted flood type lights in the barn, picnic, and turn out corrals areas. Light fixtures at the edge of the project site would be shielded and directed downward to avoid spillover effects on surrounding properties. Glare impacts from the proposed structures are not anticipated because materials and colors with low glare properties would be used. **Impacts would be less than significant**.

4.2 Agriculture/Forest

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

The project site has a Los Angeles County General Plan land use designation of Parks and Recreation (OS-PR) and Water (W) and a zoning designation of Open Space (O-S) with a small portion zoned Light Agricultural (A-1-5) (Los Angeles County 2018). The project area is not within an Agricultural Resource Area (ARA) (Los Angeles County 2015a). The project area is not mapped by the California Department of Conservation (CDC) as part of its California Important Farmlands data set (CDC 2018). The project site is currently not being used for agricultural uses.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

The project area is not mapped by the CDC as part of its California Important Farmlands data set (CDC 2018). The project site is not currently being used for agricultural uses. **No impact would occur**.

b) Conflict with existing zoning for agricultural use, with a designated Agricultural Opportunity Area, or with a Williamson Act contract?	☐	☐	☐	☒

The project site is zoned Open Space (O-S) with a small portion zoned Light Agricultural (A-1-5) (Los Angeles County 2018). The project site is not under a Williamson Act contract (CDC 2016). The project site is not currently being used for agricultural. The Proposed Project would continue the existing equestrian use of the project site which would be compatible with the site's zoning designations. **No impact would occur**.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220 (g)), timberland (as defined in Public Resources Code § 4526), or timberland zoned Timberland Production (as defined in Government Code § 51104(g))?	☐	☐	☐	☒

The project site is not zoned for forest land, timberland, or timberland production (Los Angeles County 2018). **No impact would occur**.

d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

The Proposed Project is located in an existing equestrian center and would not result in the loss of forest land or the conversion of forest land to non-forest use. **No impact would occur**.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

The project site and the surrounding properties are not currently being used for agriculture or considered forest land. The Proposed Project would continue the existing equestrian use of the project site. **No impact would occur**.

4.3 Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Conflict with or obstruct implementation of applicable air quality plans of either the South Coast AQMD (SCAQMD) or the Antelope Valley AQMD (AVAQMD)?	☐	☐	☐	☒

As part of its enforcement responsibilities, the U.S. Environmental Protection Agency (EPA) requires each state with nonattainment areas (areas that does not meet federal air quality standards) to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The project site is located within the South Coast Air Basin (SoCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the SoCAB is in nonattainment. In order to reduce such emissions, the SCAQMD drafted the 2016 Air Quality Management Plan (2016 AQMP). The 2016 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, the California Air Resources Board (CARB), the Southern California Association of Governments (SCAG), and the EPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. (SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.) The Proposed Project is subject to the SCAQMD's 2016 AQMP.

According to the SCAQMD, in order to determine consistency with SCAQMD's air quality planning two main criteria must be addressed.

Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) *Would the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new air quality violations?*

The Proposed Project would result in emissions that would be below the SCAQMD regional and localized thresholds during construction and operations. Therefore, the Proposed Project would not result in an increase in the frequency or severity of existing air quality violations and would not have the potential to cause or affect a violation of the ambient air quality standards.

b) *Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?*

The Proposed Project would not exceed the applicable SCAQMD regional thresholds for construction and operations. Because the Proposed Project would result in less than significant regional emission impacts, it would not delay the timely attainment of air quality standards or AQMP emissions reductions.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the SoCAB focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the Proposed Project exceeds the assumptions utilized in preparing the forecasts presented its air quality planning documents. Determining whether or not a project exceeds the assumptions reflected in the 2016 AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

a) *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?*

A project is consistent with regional air quality planning efforts in part if it is consistent with the population, housing, and employment assumptions that were used in the development of SCAQMD's AQMP. Generally, three sources of data form the basis for the projections of air pollutant emissions in the AQMP: The *County of Los Angeles General Plan*, SCAG's *Growth Management* Chapter of the *Regional Comprehensive Plan and Guide* (RCPG) (2009), and SCAG's *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS). The RTP/SCS also provides socioeconomic forecast projections of regional population growth.

The Proposed Project is consistent with the land use designation and development density presented in the County General Plan. The project site contains the General Plan designations of "OS-PR – Parks and

Recreation" and "W – Water", which allows for equestrian uses (the Proposed Project would continue the existing equestrian use of the project site). Furthermore, the Proposed Project does not involve any uses that would increase population beyond what is considered in the General Plan and, therefore, would not affect County-wide plans for population growth at the project site. Rather, the Proposed Project would address existing flooding and stormwater pollution issues and implement improvements to protect life and property.

Thus, the Proposed Project is consistent with the types, intensity, and patterns of land use envisioned for the site vicinity in the General Plan and RCPG. As a result, the Proposed Project would not conflict with the land use assumptions or exceed the population or job growth projections used by SCAQMD to develop the 2016 AQMP. The County's population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the County; these are used by SCAG in all phases of implementation and review. Additionally, as the SCAQMD has incorporated these same projections into their air quality planning efforts, it can be concluded that the Proposed Project would be consistent with the projections. (SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.) Therefore, the Proposed Project would be considered consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP.

b) Would the project implement all feasible air quality mitigation measures?

In order to further reduce emissions, the Proposed Project would be required to comply with emission reduction measures promulgated by the SCAQMD, such as SCAQMD Rules 402, 403, and 1113. SCAQMD Rule 402 prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. Rule 402 is enforced through citizen complaints. SCAQMD Rule 403 requires fugitive dust sources to implement Best Available Control Measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce coarse particulate matter (PM_{10}) emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM_{10} suppression techniques recommended by the SCAQMD are summarized below:

a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
b) All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
c) All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface.

SCAQMD 1113 requires manufacturers, distributors, and end-users of architectural and industrial

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

maintenance coatings to reduce reactive organic gas (ROG) emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories. This rule is enforced during the paint manufacturing process and at the point of architectural coating sale within the SoCAB. As such, the Proposed Project meets this consistency criterion.

c) Would the project be consistent with the land use planning strategies set forth by SCAQMD air quality planning efforts?

The AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The Proposed Project is consistent with the County General Plan, does not include development of new housing or employment centers, and would not induce population or employment growth. Therefore, the Proposed Project would not conflict with the land use planning strategies set forth by SCAQMD air quality planning efforts.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of a project on air quality. The Proposed Project would not result in a long-term impact on the region's ability to meet State and Federal air quality standards. The Proposed Project's long-term influence would also be consistent with the goals and policies of the SCAQMD's 2016 AQMP. **No impact would occur**.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐

Short-Term Construction Impacts

Construction of the Proposed Project is anticipated to commence in June 2019 and be completed within one year. Table 3-1 depicts the construction emissions associated with the Proposed Project. Emitted pollutants would include ROG, carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen oxide (NO_X), PM_{10}, and fine particulate matter ($PM_{2.5}$). PM_{10} and $PM_{2.5}$ emissions would occur from fugitive dust (due to earthwork and excavation) and from construction equipment exhaust. The majority of PM_{10} and $PM_{2.5}$ emissions would be generated by fugitive dust from earthwork activities. Exhaust emissions from construction activities include emissions associated with the vehicular transport of machinery and supplies to and from the project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to and from the site.

Table 3-1. Construction-Generated Air Pollutant Emissions

Construction Year	**Pollutant (pounds/day)**					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
2019	4.42	49.39	30.93	0.07	9.43	6.04
2020	83.40	34.08	29.35	0.07	3.26	1.70
SCAQMD Potentially Significant Impact Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Emissions were calculated by ECORP Consulting using CalEEMod 2016.3.2. Refer to Appendix A for Model Data Outputs.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

As depicted in Table 3-1, construction-related emissions would not exceed the established SCAQMD thresholds for criteria pollutants. **Therefore, construction-generated emissions would be less than significant**.

Long-Term Operational Impacts

Implementation of the Proposed Project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and SO_2 as well as ozone precursors such as ROG and NO_X, though not substantially greater than those associated with current operations at the project site. The Proposed Project would not represent a new type of land use on the site or a wholly new land use or air emissions generation source. Rather, the Proposed Project is the modernization of existing recreational facilities as opposed to the construction of an entire new facility. In addition, the Proposed Project would not increase existing traffic in the localized project area. Future activities would include the same activities that currently take place at the project site. Project-generated increases in emissions would be predominantly associated with the increase in energy use over existing conditions. This increase in energy use is attributable to the increase amount of building square footage proposed by the Project. Long-term operational emissions of the Proposed Project are summarized in Table 3-2.

Table 3-2. Operational-Generated Air Pollutant Emissions

Source	Pollutant (pounds/day)					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Summer Emissions	0.85	0.12	0.11	0.00	0.01	0.01
Winter Emissions	0.85	0.12	0.11	0.00	0.01	0.01
SCAQMD Potentially Significant Impact Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Emissions were calculated by ECORP Consulting using CalEEMod 2016.3.2. Refer to Appendix A for Model Data Outputs.

As shown in Table 3-2, the Proposed Project's emissions over the existing baseline would not exceed SCAQMD thresholds for any criteria air pollutants. **Therefore, regional operations emissions would result in a less than significant long-term regional air quality impact**.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? ☐ ☐ ☒ ☐

Projects could contribute to an existing or projected air quality exceedance because the SoCAB is currently designated as a nonattainment area for the federal ozone and $PM_{2.5}$ standards, and is also a nonattainment area for the state standards for state ozone, PM_{10}, and $PM_{2.5}$ standards.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

With regard to determining the significance of the cumulative contribution from the Proposed Project, the SCAQMD recommends that any given project's potential contribution to cumulative impacts be assessed using the same significance criteria as for project-specific impacts. Therefore, individual projects that do not generate operational or construction emissions that exceed the SCAQMD's daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the air basin is in nonattainment and therefore would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable. As previously discussed under Response (b), the Proposed Project would not exceed the applicable SCAQMD regional thresholds for construction and operations. **As such, the Proposed Project would result in a cumulatively less than significant impact**.

d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

In terms of air toxics, sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors are residences 550 meters east of the project site.

Localized Significance Thresholds (LST)

In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing Localized Significance Thresholds (LSTs) for construction (on-site construction activities only) and operations impacts (area sources only). LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level proposed projects. The SCAQMD provides the LST lookup tables for one, two, and five-acre projects emitting CO, NO_X, $PM_{2.5}$, or PM_{10}. The Proposed Project is located within Sensitive Receptor Area (SRA) 11, South San Gabriel Valley.

Short-Term Construction Impacts

The Proposed Project would disturb approximately 20 acres during construction. As previously described, the SCAQMD has produced look-up tables for projects that disturb less than or equal to 5 acres daily. The SCAQMD has also issued guidance on applying the CalEEMod emissions software to LSTs for projects greater than 5 acres. Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, Table 3-3 is used to determine the maximum daily disturbed-acreage for comparison to LSTs.

Table 3-3. Equipment-Specific Grading Rates

Construction Phase	Equipment Type	Acres Graded/Disturbed per 8-Hour Day	Equipment Quantity	Operating Hours per Day	Acres Graded per Day
Site Preparation	Rubber Tired Dozers	0.5	3	8	1.5
	Tractors/Loaders/ Backhoes	0.5	4	8	2.0
				Total	**3.5**
Grading	Rubber Tired Loaders	0.5	1	8	0.5
	Graders	0.5	1	8	0.5
	Tractors/Loaders/ Backhoes	0.5	1	8	0.5
	Scrapers	1.0	1	8	1.0
				Total	**2.5**
				Maximum Total Acres Disturbed per Day	**3.5**

As shown in Table 3-3, Proposed Project implementation could potentially disturb up to 3.5 acres daily during the site preparation phase, and 2.5 acres daily during the grading phase. Therefore, the site preparation phase of construction represents the most potent ground-disturbing construction activities. Thus, the LST threshold value for a 3.5-acre construction was sourced from the LST lookup tables.

The nearest sensitive receptors are residences 550 meters east of the project site. Other sensitive receptors in the vicinity include South El Monte High School, yet this campus is located over 600 meters to the north. These sensitive land uses may be potentially affected by air pollutant emissions generated during on-site construction activities. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Therefore, for a conservative analysis, LSTs for receptors located at 500 meters were utilized in this analysis.

Table 3-4 shows the construction-related emissions for NO_X, CO, PM_{10}, and $PM_{2.5}$ compared to the LSTs for SRA 11.

Table 3-4. Construction Localized Significance Thresholds

Construction Phase	Pollutant (pounds/day)			
	NO_x	**CO**	**PM_{10}**	**$PM_{2.5}$**
Site Preparation	45.57	22.06	9.30	6.00
Grading	49.32	28.59	2.55	1.85
SCAQMD Potentially Significant Impact Threshold	*225.5*	*8,436*	*174*	*96.5*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**

Source: Emissions were calculated by ECORP Consulting using CalEEMod 2016.3.2. Refer to Appendix A for Model Data Outputs.
Note: The Localized Significance Threshold was determined using Appendix C of the SCAQMD Final Localized Significant Threshold Methodology guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the daily disturbance during construction (3.5 acres), the distance to sensitive receptors (500 meters), and the source receptor area (SRA 11).

Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

As shown in Table 3-4, construction emissions would not exceed the LSTs for SRA 11. **Therefore, localized impacts to sensitive receptors from construction would be less than significant**.

Long-Term Operational Impacts

According to the SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project only if the project includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). The Proposed Project does not include such uses. Therefore, in the case of the Proposed Project, the operational phase LST protocol does not need to be applied.

Carbon Monoxide Hotspots

CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (i.e., adversely affecting residents, school children, hospital patients, the elderly, etc.).

The SoCAB is designated as an attainment area for the federal and state CO standards. There has been a decline in CO emissions even though vehicle miles traveled on U.S. urban and rural roads have increased. On-road mobile source CO emissions have declined 24 percent between 1989 and 1998, despite a 23 percent rise in motor vehicle miles traveled over the same 10 years. California trends have been consistent with national trends; CO emissions declined 20 percent in California from 1985 through 1997 while vehicle miles traveled increased 18 percent in the 1990s. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

A detailed CO analysis was conducted in the *Federal Attainment Plan for Carbon Monoxide* (*CO Plan*) for the SCAQMD's *2003 Air Quality Management Plan*. The locations selected for microscale modeling in the CO Plan are worst-case intersections in Southern California, and would likely experience the highest CO concentrations. Thus, CO analysis within the CO Plan is utilized in a comparison to the Proposed Project, since it represents a worst-case scenario with heavy traffic volumes.

Of these locations, the Wilshire Boulevard/Veteran Avenue intersection in Los Angeles experienced the highest CO concentration (4.6 parts per million [ppm]), which is well below the 35-ppm 1-hr CO Federal standard. The Wilshire Boulevard/Veteran Avenue intersection is one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection, it can be reasonably inferred that CO hotspots would not be experienced at any intersections near the project site due to the lower volume of traffic experienced in the project vicinity. Additionally, the Proposed Project would not increase traffic volumes at any intersection to more than 100,000 vehicles per day.

For the reasons described, **impacts to sensitive receptors would be less than significant**.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Short-Term Construction Impacts

During construction, the Proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. Odors are not expected to affect a substantial number of construction staff because as previously stated an unfamialiar odor is more easily detected than a familiar one due to odor fatigue. It can reasonably be assumed that construction workers are accustomed to odors associated with construction equipment. As such, construction workers would be less sensitive to construction odors associated with construction activities. It is also anticipated that the construction related odors would not affect a substantial number of people from the public because construction related odor emissions are short-term in nature and would rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area. As such, odor impacts during construction would not affect a substantial number of people. Construction odor impacts would be **less than significant**.

Long-Term Operational Impacts

The SCAQMD *CEQA Air Quality Handbook* (1993) identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants,

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. Although the Proposed Project includes livestock, on-site activities are similar to existing activities, thus it is not expected that there would be a significant increase in odors over current or past existing conditions. Furthermore, because the Proposed Project is continuing an existing use it is anticipated that members of the public working or visiting the project area would be familiar and desensitized to odors associated with the equestrian center. **A less than significant impact would occur**.

4.4 Biological Resources

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?	☐	☒	☐	☐

A biological technical report was prepared for the Proposed Project (ECORP 2018a). The project site consists of an equestrian center and open space containing stables, riding areas, and storage areas. The project site is generally classified as disturbed and developed and is characterized by large open areas, clusters of buildings, rows of ornamental trees, and scattered individual trees. The majority of the project site is enclosed with chain-link fencing. Much of the area is bare ground. The vegetated areas are dominated by non-native, ruderal species or by ornamental trees. Several large Fremont's cottonwood trees (*Populus fremontii*), a native tree, were present throughout the project site. These trees appear to have been planted for landscaping purposes rather than naturally occurring on the site.

Construction Impacts

Special Status Plants

The literature search documented 52 special-status plant species (five federally and/or state listed) in the project vicinity, all of which were presumed absent from the project site due to a lack of suitable habitat (ECORP 2018a). **No impact to special status plant species would occur**.

Special Status Wildlife

The literature search documented 36 special-status wildlife species (nine federally and/or state listed species) in the project vicinity. Of the 36 special-status wildlife species identified in the literature search, three were identified as having the potential to be present on the project site (burrowing owl [*Athene cunicularia*], western

red bat [*Lasiurus blossevillii*], western yellow bat [*Lasiurus xanthinus*]), and an additional seven species were identified as having the potential to be indirectly affected by the project in the areas adjacent to the project site (least Bell's vireo [*Vireo bellii pusillus*], coastal California gnatcatcher [*Polioptila californicus californicus*], coastal whiptail [*Aspidoscelis tigris stejnegeri*], arroyo toad [*Anaxyrus californicus*], coast horned lizard [*Phrynosoma blainvillii*], yellow-breasted chat [*Icteria virens*], and southern grasshopper mouse [*Onychomys torridus Ramona*]). The majority of wildlife detected during the reconnaissance survey included birds that are commonly found in disturbed and urban areas. In addition, birds and raptors protected by the Migratory Bird Treaty Act (MBTA) may utilize the area for foraging and nest in the trees and structures within the project site as well as the surrounding trees (ECORP 2018a).

Burrowing Owl. The burrowing owl is a California Species of Special Concern (SSC). The California Department of Fish and Wildlife (CDFW) California Natural Diversity Data Base (CNDDB) includes a documented burrowing owl occurrence from 2010 approximately two miles south of the project site (ECORP 2018a). The disturbed areas along the southwestern boundary of the project site and in the southern portion of the project site, between the horseback riding pens and the trailer storage area, had an abundance of ground squirrel burrows that provide suitable burrowing habitat for the species. Focused burrowing owl surveys conducted by ECORP in 2012 were negative and no owl or owl sign were observed (ECORP 2012b). However, based on the presence of the suitable habitat and the documented occurrence within five miles of the site, the burrowing owl has a high potential to occur within the project site, and could move onto the site prior to construction. As such, direct impacts to burrowing owl through ground disturbance and indirect impacts from construction noise and vibrations may occur. **Impacts to burrowing owl would be less than significant with the implementation of Mitigation Measures BIO-1 and BIO-2**.

Western Red Bat and Western Yellow Bat. The western red bat and western yellow bat are California SSC. Western red bat and western yellow bat were determined to have a low potential to occur within the project site. These bats may use the trees within and adjacent to the project site for roosting and may forage in nearby offsite habitat at any time throughout the year. While the removal or trimming of suitable roost trees on the project site during project construction may result in direct impacts to western red bat or western yellow bat should they be actively using the trees for roosting, the loss of the trees from project construction would not be expected to substantially contribute to the overall decline of the species. Additionally, no direct or indirect impacts to foraging habitat or roost trees located outside of the project site are anticipated to occur. **Therefore, impacts to western red bat and western yellow bat would be less than significant**.

Least Bell's Vireo and Coastal California Gnatcatcher. The least Bell's vireo is both federally and state-listed as endangered. The coastal California gnatcatcher is listed as threatened under Federal Endangered Species Act (FESA) and is a California SSC. Although not expected to occur on the project site, least Bell's vireo and coastal California gnatcatcher were determined to have a high potential to occur in the San Gabriel River corridor located immediately north and west of the project site. Suitable riparian habitat is present for least Bell's vireo nesting activities and designated critical habitat for coastal California gnatcatcher are present in this area. Both species have been documented less than one mile from the project site (ECORP 2018a). No direct impacts to the habitat within the San Gabriel River corridor are anticipated during construction and no direct impacts to these species or their habitat would be expected to occur. However, significant indirect impacts to least Bell's vireo and coastal California gnatcatcher may occur from construction noise, vibrations, and increased human activity should these species be present and/or nesting

within 500 feet of the project site during construction. **Impacts to least Bell's vireo and coastal California gnatcatcher would be less than significant with the implementation of Mitigation Measures BIO-1 and BIO-2**.

Arroyo Toad, Coastal Whiptail, Coast Horned Lizard, and Southern Grasshopper Mouse. The arroyo toad is a federally listed endangered amphibian species and California SSC. The coastal whiptail and coast horned lizard are California SSC reptiles. The southern grasshopper mouse is a California SSC. Arroyo toad, coastal whiptail, coast horned lizard, and southern grasshopper mouse are all ground-dwelling species that were determined to have a low to high potential to occur in the riparian habitat immediately adjacent to the project site. None of these species are expected to occur within the project site itself due to the lack of suitable habitat (ECORP 2018a). No direct impacts to the riparian habitat adjacent to the project site are anticipated during construction. Direct impacts to these species may occur if individuals enter the project site from the adjacent riparian area during construction activities and are accidentally injured or killed. However, loss of these individuals would not be expected to substantially contribute to the overall decline of these species. **Impacts would be less than significant**.

Yellow-Breasted Chat. Yellow-breasted chat was determined to have a low potential to nest within the riparian habitat immediately north of the project site. No direct impacts to the riparian habitat are anticipated during construction and no direct impacts to this species or its habitat would be expected to occur. Indirect impacts to yellow-breasted chat may occur from construction noise and vibrations should the species nest within 500 feet of the project site. **Impacts to yellow-breasted chat would be less than significant with the implementation of Mitigation Measure BIO-1**.

Nesting Birds. The project site provides suitable nesting habitat for raptors and songbirds. Nesting birds are protected under both the MBTA and the California Fish and Game Code (Sections 3503, 3503.5, 3513, and 3800) and cannot be subjected to take (as defined in California Fish and Game Code) during the bird breeding season, which typically runs from February 1 through August 31. If construction of the proposed project occurs during the bird breeding season (typically February 1 through August 31), ground-disturbing construction activities could directly affect birds protected by the MBTA and their nests through the removal of habitat on the project site and indirectly through increased noise, vibrations, and increased human activity. **Impacts to nesting birds would be less than significant with the implementation of Mitigation Measure BIO-1**.

Operational Impacts

The Proposed Project would continue the existing equestrian use of the project site. The Proposed Project would not expand beyond the existing project site. As such, impacts to special-status plants and wildlife are only anticipated during ground disturbing activities associated with construction. Impacts during operations would be similar to existing conditions and would be less than significant.

Mitigation Measures:

BIO-1: **Preconstruction Surveys for Nesting Birds:** Any ground-disturbing activities and/or vegetation or structure removal activities within the project site shall be conducted during the non-breeding season for birds (approximately September 1 through January 31). This will avoid violations of the MBTA and California FGC Sections 3503, 3503.5 and 3513. If activities with

the potential to disrupt nesting birds are scheduled to occur during the bird breeding season (February through August for raptors and March through August for songbirds), a preconstruction nesting bird survey shall be conducted by a qualified biologist no more than three (3) days prior to the start of construction activities. The nest survey shall include the project site and adjacent areas within 500 feet where project activities have the potential to cause nest failure. If no nesting birds are observed during the survey, site preparation and construction activities may begin. If nesting birds (including nesting raptors) are found to be present, then avoidance or minimization measures shall be undertaken to avoid nest disturbance. Measures will include the following at a minimum: (1) establishment of an avoidance buffer until nesting has been completed and (2) periodic monitoring of the nest status by a biological monitor. The width of the buffer will be determined by the project biologist. Typically, this is a minimum of 300 feet from the nest site in all directions (500 feet is typically recommended by CDFW for raptors), until the juveniles have fledged and there has been no evidence of a second attempt at nesting. The monitoring biologist will monitor the nest(s) during construction and document any findings.

BIO-2: **Preconstruction Sensitive Wildlife Survey:** A preconstruction survey shall be conducted for sensitive biological resources within all areas of potential permanent and temporary disturbance, including a 500-foot buffer. The preconstruction survey shall take place no more than 14 days prior to the start of any ground-disturbing activities and/or vegetation or structure removal activities. The preconstruction survey shall take place regardless of nesting bird season timing and shall focus on identifying the presence of least Bell's vireo, coastal California gnatcatcher, burrowing owl, and yellow-breasted chat within the project site and 500-foot buffer within suitable habitat for these species. Should special-status species be identified during the preconstruction survey, additional mitigation measures may need to be implemented to avoid or minimize impacts to these species, and consultation between the County of Los Angeles and the appropriate agency (CDFW, USFWS) may be necessary to determine the appropriate additional mitigation measures.

If burrowing owls are observed during the preconstruction survey, a specific mitigation methodology for the owl shall be determined in consultation between the County of Los Angeles and CDFW. Mitigation measures for any owls present could include avoidance of the owl burrows during their nesting season and/or passive relocation of burrowing owls.

If least Bell's vireo, coastal California gnatcatcher, or yellow-breasted chat are detected during the preconstruction survey, additional mitigation measures may need to be implemented to avoid or minimize impacts to these species, and consultation between the County of Los Angeles and the appropriate agency may be required (CDFW, USFWS). Measures provided under BIO-1 would avoid direct and indirect impacts to nesting yellow-breasted chat should they be located during preconstruction surveys. Mitigation measures for the federally and state-listed least Bell's vireo or the federally listed coastal California gnatcatchers would be included to ensure that impacts to these species do not occur during vegetation removal. Mitigation measures for coastal California gnatcatcher and least Bell's vireo if habitat is determined to be occupied will include (at the discretion of the monitoring biologist) additional focused surveys, biological monitoring during ground-disturbing activities and/or vegetation or structure removal activities, the establishment of a minimum 500-foot non-disturbance buffer around active nest

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

locations during construction activities, and/or noise monitoring to ensure that noise levels will not exceed 60 decibels.

b) Have a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations or by CDFW or USFWS?	☐	☐	☐	☒

Construction and Operational Impacts

The project site consists of land that is developed or highly disturbed and supports non-native weedy plant species and ornamental landscaping. No riparian communities or sensitive vegetation communities were identified on the project site (ECORP 2018a). All project improvements would occur within previously disturbed areas of the existing equestrian center. **Therefore, no impacts during construction or operations would occur to sensitive natural communities as a result of the Proposed Project**.

c) Have a substantial adverse effect on federally or state protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, and drainages) or waters of the United States, as defined by § 404 of the federal Clean Water Act or California Fish & Game code § 1600, et seq. through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐

A jurisdictional delineation was completed for the Proposed Project (ECORP 2018b). There were no areas identified within the project site suspected to contain the necessary criteria to meet the federal definition of wetlands.

An ephemeral drainage was mapped within the central portion of the project site. Ephemeral drainages are linear features that exhibit a bed and bank and an ordinary high water mark (OHWM). The ephemeral drainage mapped within the project site is fed by road runoff and is a man-made feature to convey runoff across the equestrian facility. Like most ephemeral features, it mostly carries flows during a storm event. The feature also collects some runoff generated internally on the project site, when water is used for the horses. The feature originates onsite from a culvert along Rooks Road, flows through a plastic pipe to enter the site, is an open channel for a distance of approximately 100 feet to another plastic pipe going under an internal dirt road, traverses another 150 feet as an open channel to enter a steel corrugated pipe under another dirt road, and is an open channel for approximately another 100 feet to another steel corrugated steel pipe. From the exit point of that pipe, the feature is an open channel for another 200 feet until it terminates the site on the northern boundary by flowing into a corrugated steel pipe. The entire feature is unvegetated other than a few scattered grasses and the drainage is a uniform three-foot wide, dirt bottomed channel. It was clearly defined by OHWM consisting of a defined bed and bank as well as surface relief in the bottom. Some organic matter deposits were also present within the drainage feature (ECORP 2018b).

Jurisdictional waters mapped on the project site and in adjacent areas are described in Table 4-1, below.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

Table 4-1. Potential Jurisdictional Waters

Feature[1]	Length (linear feet)	Waters of the U.S. Acreage (Wetland)[2] (acres)	Waters of the U.S. Acreage (Non-Wetland)[2] (acres)	CDFW Jurisdictional Areas (acres)[3]
ED-1	571	0	0.013	0.013
Total	**571**	**0**	**0.013**	**0.013**

Notes: 1 – ED=ephemeral drainage,
2 – Acreages represent a calculated estimation and are subject to modification following the USACE, RWQCB or CDFW verification process.

Construction Impacts

The Proposed Project would require work within the ephemeral drainage. The Proposed Project would grade the entire project site and construct a new stormwater management system to convey off-site and on-site stormwater through the project site. Ground disturbing activities (excavation, grading) during construction would impact the ephemeral drainage and would require authorization from the three regulatory agencies (USACE, RWQCB, and CDFW). **With the implementation of Mitigation Measure BIO-3 impacts would be less than significant**.

Operational Impacts

Impacts to jurisdictional features would only occur during ground disturbing activities associated with the construction of the Proposed Project. As such, **no operational impacts are anticipated**.

Mitigation Measure:

BIO-3: **Regulatory Permitting:** Although no mitigation is being proposed for the impacts to jurisdictional areas, because the impacts are to existing disturbed drainage features only, there is a requirement for authorization for these impacts through the permitting process with the USACE, RWQCB, and CDFW pursuant to the CWA Section 404 and 401 and California Fish and Game Code Section 1600, respectively. During this process, project specific mitigation for impacts to features jurisdictional to state and federal agencies may be requested by the respective agencies as part of the permitting process.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒

Construction and Operational Impacts

The project site does not support a wildlife movement corridor or any wildlife nursery sites. The San Gabriel River, located immediately north and west of the project site, serves as a wildlife corridor. This area has also been designated as critical habitat to promote dispersal, foraging, and nesting activities for the coastal California gnatcatcher (ECORP 2018a). No direct impacts to the wildlife corridor north of the

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

project site would occur. It is also expected that any wildlife using the San Gabriel River as a movement corridor would be adapted to urban environments and associated noise levels and would therefore not be subject to indirect impacts associated with project activities. **No impact would occur**.

e) Convert oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10% canopy cover with oaks at least 5 inch in diameter measured at 4.5 feet above mean natural grade) or otherwise contain oak or other unique native trees (junipers, Joshuas, southern California black walnut, etc.)?	☐	☐	☒	☐

Construction Impacts

The project site is generally classified as disturbed and developed and is characterized by large open areas, clusters of buildings, rows of ornamental trees, and scattered individual trees. Much of the project site is bare ground. The vegetated areas are dominated by non-native, ruderal species or by ornamental trees. The primary ornamental trees on the project site included Aleppo pine (*Pinus halepensis*), carrotwood (*Cupaniopsis anacardioides*), Mexican fan palm (*Washingtonia robusta*), king palms (*Archontophoenix cunninghamiana*), queen palms (*Syagrus romanzoffiana*), and Peruvian peppertree (*Schinus molle*). Several large Fremont's cottonwood trees (*Populus fremontii*), a native tree, are present throughout the project site. These trees appear to have been planted for landscaping purposes rather than naturally occurring on the site. There are no protected oak trees, as defined by the Los Angeles County Code Section 22.46.2100 - Oak Tree Regulations, present on the project site (ECORP 2018a). The Proposed Project would result in the removal of vegetation including trees. Trees that would be removed would include Peruvian pepper trees, king and queen palms, Aleppo pine trees and Mexican fan palms. Trees along Rooks Road would not be removed. The Proposed Project would include planting trees and shrubs around project components as part of the landscaping plan. The Proposed Project would comply with Los Angeles County Code Section 22.52.2120 - Tree Requirements, which requires a minimum of 3 trees for every 1,000 square feet of development. **A less than significant impact would occur**.

Operational Impacts

Impacts to oak woodlands or other unique native trees would not occur during project operations because ongoing equestrian facility operations would not require the removal of trees. **No impact would occur.**

f) Conflict with any local policies or ordinances protecting biological resources, including Wildflower Reserve Areas (L.A. County Code, Title 12, Ch. 12.36), the Los Angeles County Oak Tree Ordinance (L.A. County Code, Title 22, Ch. 22.56, Part 16), the Significant Ecological Areas (SEAs) (L.A. County Code, Title 22, § 22.56.215), and Sensitive Environmental Resource Areas (SERAs) (L.A. County Code, Title 22, Ch. 22.44, Part 6)?	☐	☐	☐	☒

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

Construction and Operational Impacts

The project site is not located within any Significant Ecological Area (SEA); however, the Puente Hills SEA abuts the project site to the north and west. This SEA was designated because this area provides an important linkage connection between the Puente Hills and the Chino Hills in Orange County, and because habitats in this SEA are occupied by core populations of special-status plant and wildlife species.

The Puente Hills SEA was mainly designated mainly as a wildlife corridor. The Proposed Project is not anticipated to degrade, remove, or otherwise disturb the habitat within the SEA that provides wildlife movement opportunities through the San Gabriel River corridor because all work activities are located outside of the SEA boundary. Erosion/stormwater protection measures implemented for the Proposed Project would further prevent degradation of the habitat in the adjacent SEA. No direct impacts to the habitat facilitating wildlife movement throughout the region would occur. No direct impacts to wildlife moving through the SEA are expected because no work activities would occur within the SEA, and the project site does not provide habitat that facilitates wildlife movement through the region because it does not contain suitable habitat, is fenced, and exhibits high amounts of human activity during the day as existing conditions.

Indirect impacts to wildlife moving through the SEA in the form of noise from project activities are also not expected to occur because the SEA is located within a very urban area and any wildlife using the area for regional movement are habituated to the existing level of urban noise and their movement activities would not be affected by noise resulting from the Proposed Project. Furthermore, the location of the SEA in a highly urbanized area likely precludes regional wildlife movement during diurnal hours, when construction activities would occur, which would promote wildlife travel throughout the SEA during nocturnal hours, when project activities are not occurring. Therefore, wildlife using the SEA for movement purposes are not anticipated to be exposed to project activities/noise.

The Proposed Project would continue the existing equestrian use of the site. Impacts to the Puente Hills SEA are not expected to occur for the reasons stated above. **No impact would occur**.

g) Conflict with the provisions of an adopted state, regional, or local habitat conservation plan?	☐	☐	☐	☒

Construction and Operational Impacts

The project site is not located in an area subject to a regional or local habitat conservation plan (ECORP 2018a). **No impact would occur**.

4.5 Cultural Resources

In 2011, ECORP Consulting, Inc. (ECORP) conducted a Phase I cultural resources study for proposed renovations to the Whittier Narrows Equestrian Center. The 2011 cultural resources investigation included a records search, Sacred Lands File search from the Native American Heritage Commission (NAHC), and field survey. In 2017, revisions to the Proposed Project scope reduced the project site from 41 acres to 20 acres and warranted partial updates of the 2011 study. The 2017 updated cultural study included both an

updated records search and Sacred Lands File search. The 2017 update did not include a new field survey of the project area (ECORP 2018c).

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines § 15064.5?	☐	☒	☐	☐

As a result of the 2011 and 2017 records searches conducted at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton, 43 previous cultural resources investigations have been conducted within one-half mile of the project site and 15 cultural resources have been previously recorded within one-half mile of the current project site. Of these, no previously recorded resources were identified within the project site (ECORP 2018c).

The 2017 updated studies included a search of the Sacred Lands File by the NAHC. The Sacred Lands File Search yielded positive results. Information about Native American sacred lands is considered confidential.

The 2011 Phase I cultural resources study included a pedestrian survey of the entire revised 20-acre project site. As a result, no archaeological sites and no historic buildings or structures were identified within the project site (ECORP 2018c). Therefore, the Proposed Project would not affect a known historical resource.

Although no historical resources were identified on the project site as a result of the records search and field survey, there always remains the potential for ground-disturbing activities to expose previously unrecorded cultural resources. **With the implementation of Mitigation Measure CUL-1, potential impacts to unanticipated cultural resources found during project construction would be less than significant**.

Mitigation Measures:

CUL-1: If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 60-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

1. If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required.

2. If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the County of Los Angeles ("County"). The County shall consult with the Project Archaeologist and, for Native American or associated finds, interested affiliated Tribes on a finding of eligibility. Appropriate treatment measures, such as avoidance or data recovery, shall be implemented if

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

the find is determined to be eligible for inclusion in the CRHR. Work may not resume within the no-work radius until the County, through consultation with the Project Archaeologist and interested affiliated Tribes, determine that the site either: 1) is not eligible for the CRHR; or 2) that the treatment measures have been completed to their satisfaction.

3. If the find includes human remains, or remains that are potentially human, the archaeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Los Angeles County Coroner (per §7050.5 of the Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, §5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines § 15064.5?	☐	☒	☐	☐

No archaeological resources have been previously recorded on the site and none were recorded during the field survey (ECORP 2018c). However, there remains the possibility that the Proposed Project may impact unknown buried archaeological resources as a result of ground disturbing construction activities. **With the implementation of Mitigation Measures CUL-1 impacts would be less than significant**.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or contain rock formations indicating potential paleontological resources?	☐	☒	☐	☐

A paleontological records search conducted by the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County indicates that no known vertebrate fossil localities are located within the project site. Surface deposits in the project area are composed of younger Quaternary gravels in the San Gabriel Channel with finer-grained sands on the banks and margins. North of the project area, near the San Jose Creek diversion channel, exposures of older Quaternary Alluvium may be present. Older Quaternary Alluvium may also be found at depth beneath the younger Quaternary deposits found in the project area. The older Quaternary Alluvium may contain significant vertebrate fossils. The closest vertebrate fossil locality in these older Quaternary deposits is LACM 3363 located approximately seven miles west of the project site just east of I-710 between I-10 and SR-60. LACM produced specimens of fossil horse (*Equus*) at unknown depth (NHMLAC 2013).

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

Surface grading or shallow excavations in the Quaternary gravels or younger Quaternary Alluvium located in the project area are unlikely to result in the discovery and/or disturbance of paleontological resources because the project site was previously graded during the construction of the existing equestrian center. However, deeper excavations that extend into older Quaternary deposits, as well as excavations in exposures of older Quaternary Alluvium, may encounter significant vertebrate remains that could result in significant impacts to buried and unknown paleontological resources. The deepest excavation that would result from the construction of the Proposed Project would be from light pole foundations, which would require excavations of approximately 4.5 feet from the finished grade. I**f fossil remains are encountered during construction Mitigation Measures CUL-2 through CUL-4 shall be implements. With the implementation of these mitigation measures impacts would be less than significant**.

Mitigation Measures:

CUL-2: A qualified paleontologist shall be retained prior to the start of construction. If, during ground-disturbing activities, paleontological resources are discovered the paleontologist will examine the find. Based on the findings of the paleontologist, additional paleontological monitoring may be needed. Any paleontological monitoring shall be restricted to older Quaternary deposits or exposures of older Quaternary Alluvium, which might be present below the surface. To avoid construction delays, the monitor shall be prepared to quickly salvage fossils, as they are unearthed. The monitor shall remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor shall have the authority to temporarily halt or divert grading equipment to allow for the removal of abundant or large specimens. If the paleontologist determines that monitoring is not necessary, the paleontologist shall prepare a memo documenting such to the satisfaction of the County.

CUL-3: If the qualified paleontologist deems recovered resources as rare, substantial, or otherwise unique, the resources shall be prepared and stabilized for formal identification and permanent preservation. A report shall be prepared describing the results of the evaluation and shall be submitted to the County.

CUL-4: Identification and curation of recovered paleontological specimens into an established accredited museum repository with permanent retrievable paleontological storage shall be required for recovered resources identified by the qualified paleontologist (retained via Mitigation Measure CUL-2) as rare, substantial, or otherwise unique.

d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

No formal cemeteries are located in the project site. While there is no reason to suspect the presence of human remains in the project area, it is possible that unknown remains may occur. **Potential impacts to unknown buried human remains would be reduced to a level that is less than significant with the implementation of Mitigation Measure CUL-1**.

4.6 Energy

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Conflict with Los Angeles County Green Building Standards Code (L.A. County Code Title 31)?	☐	☐	☐	☒

Structures to be constructed as part of the Proposed Project would be designed and built in compliance with Los Angeles County Green Building Standards Code (L.A. County Code Title 31). **No impact would occur.**

b) Involve the inefficient use of energy resources (see Appendix F of the CEQA Guidelines)?	☐	☐	☐	☒

The Proposed Project would maximize the use of energy resources by constructing sustainable structures that meet LEED criteria and incorporating native and drought tolerant plants. **No impact would occur.**

4.7 Geology and Soils

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known active fault trace? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐

The project site is not within an Alquist-Priolo Earthquake Fault Zone (California Department of Conservation 2017; Ninyo & Moore 2018). The project site is situated along the general trend of the Whittier-Elsinore Fault zone. The Whittier-Elsinore Fault is located approximately 2.4 miles southeast of the project site (Ninyo & Moore 2018; Appendix E). The Whittier-Elsinore Fault zone includes the Whittier Fault, Workman Hill Fault, and the Whittier Heights Fault. These fault traces and other secondary fault splays form a relatively wide zone of faulting and folding across the western Puente Hills. The northwesterly end of the Workman Hill Fault is mapped approximately 0.75 mile southeast of the project site. The Workman Hill Fault (extension) has been projected crossing the Whittier Narrows

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

and along the northeastern flank of the Montebello Hills approximately 0.75 mile west of the project site. There are no known active fault traces crossing the project site and the potential for surface rupture is relatively low, however, possible (Ninyo & Moore 2018).

Just like most of Southern California, in the event of an earthquake, strong ground shaking would occur at the project site. However, the Proposed Project would not increase the risk of exposing people or structures to potential substantial adverse effects, including risk of loss, injury, or death due to the rupture of a known earthquake fault because the project site already contains equestrian facilities and no land use change would occur. Design and construction of proposed structures would comply with current building codes and standards which would reduce the risk of loss, injury, or death resulting from strong ground-shaking **A less than significant impact would occur**.

ii) Strong seismic ground shaking? ☐ ☐ ☒ ☐

Seismic ground shaking is common in the entire southern California region, and may occur in the event of an earthquake. Therefore, the project facilities would be subject to strong seismic ground shaking, which could result in major damage to project facilities. The Proposed Project would be designed and constructed according to the seismic design criteria in the current California Building Code. **A less than significant impact would occur**.

iii) Seismic-related ground failure, including liquefaction and lateral spreading? ☐ ☒ ☐ ☐

Liquefaction is a phenomenon where water-saturated granular soil loses shear strength during strong ground shaking produced by earthquakes. The loss of soil strength occurs when cyclic pore water pressure increases below the groundwater surface and causes the soil to behave as a fluid for a short period of time. Potential hazards due to liquefaction include the loss of bearing strength beneath structures, possibly causing foundation failure and/or significant settlements.

The geotechnical investigation completed for the Proposed Project found that the project site is underlain by loose to very dense sandy alluvium. Based on the analyses, the relatively looser zones of alluvium at the project site, which may be found at depths up to approximately 15 feet below the ground surface, are susceptible to liquefaction. The relatively dense alluvium, which may be found below depths of approximately 15 feet, is generally not susceptible to liquefaction (Ninyo & Moore 2018). The geotechnical investigation estimated that a total dynamic settlement ranging from approximately 0 to 1.5 inches may occur at the project site as a result of liquefaction. The analysis also indicated that due to the proximity to the San Gabriel River liquefaction induced lateral spreading up to 15 inches may occur (Ninyo & Moore 2018). The geotechnical investigation concluded that the Proposed Project is feasible from a geotechnical standpoint provided that the recommendations presented in the geotechnical investigation are incorporated into the design and construction of the Proposed Project. These recommendations are incorporated into this Initial Study as Mitigation Measure GEO-1.

With the implementation of Mitigation Measure GEO-1 liquefaction and lateral spreading impacts are less than significant.

Mitigation Measure:

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

GEO-1: Design and construction of project structures shall incorporate recommendations from the *Geotechnical Evaluation Whittier Narrows Equestrian Center 12191 Rooks Road Whittier, California* prepared by Ninyo & Moore dated April 2, 2018.

iv) Landslides?	☐	☐	☐	☒

There are no hillsides in the vicinity of the Proposed Project. **No landslide impacts would occur**.

b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

Implementation of the Proposed Project would require ground-disturbing activities, such as grading, that could potentially result in soil erosion or loss of topsoil. Construction of the Proposed Project would be required to comply with the Construction General Permit, either through a waiver or through preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Best Management Practices (BMPs) are included as part of the SWPPP prepared for the Proposed Project and would be implemented to manage erosion and the loss of topsoil during construction-related activities (see Section 10. Hydrology and Water Quality). The Proposed Project's grading plan would also ensure that the proposed earthwork is designed to avoid soil erosion. **Soil erosion impacts would be reduced to a less than significant level**.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐

The project site is located in a relatively flat area with no threats from landslides. As previously stated, the alluvium on the project site is susceptible to liquefaction with a potential estimated total dynamic settlement ranging from approximately 0 to 1.5 inches. In addition, due to the close proximity to the San Gabriel River, liquefaction induced lateral spreading up to 15 inches may occur (Ninyo & Moore 2018). **With the implementation of Mitigation Measure GEO-1 impacts would be less than significant**.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐

The project site's soils are comprised predominantly of granular sandy materials and are considered to have a low potential for expansion (Ninyo & Moore 2018). **A less than significant impact would occur**.

e) Have soils incapable of adequately supporting the use of onsite wastewater treatment systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

The Proposed Project would include restrooms connected to the sewer system and would not use a septic

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

tank or an alternative waste water disposal system. **No impact would occur**.

f) Conflict with the Hillside Management Area Ordinance (L.A. County Code, Title 22, § 22.56.215) or hillside design standards in the County General Plan Conservation and Open Space Element?	☐	☐	☐	☒

The project site is not located within a Hillside Management Area (25 percent or greater slope) (Los Angeles County 2018). **No impact would occur**.

4.8 Greenhouse Gas Emissions

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Generate greenhouse gas (GHGs) emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

Since the early 1990s, scientific consensus holds that the world's population is releasing greenhouse gases (GHG) faster than the earth's natural systems can absorb them. These gases are released as byproducts of fossil fuel combustion, waste disposal, energy use, land-use changes, and other human activities. This release of gases, such as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system.

On September 28, 2010, the SCAQMD recommended an interim screening level numeric, bright-line threshold of 3,000 metric tons of carbon dioxide equivalents (CO_2e) annually and an efficiency-based threshold of 4.8 metric tons of CO_2e per service population (project employees + patrons + residents) per year in 2020 and 3.0 metric tons of CO_2e per service population per year in 2035. These thresholds were developed as part of the SCAQMD GHG CEQA Significance Threshold Working Group. The working group was formed to assist the SCAQMD's efforts to develop a GHG significance threshold and is composed of a wide variety of stakeholders including the state Office of Planning and Research (OPR), CARB, the Attorney General's Office, a variety of city and county planning departments in the SoCAB, various utilities such as sanitation and power companies throughout the basin, industry groups, and environmental and professional organizations. The numeric bright line and efficiency-based thresholds were developed to be consistent with CEQA requirements for developing significance thresholds, are supported by substantial evidence, and provide guidance to CEQA practitioners and lead agencies with regard to determining whether GHG emissions from a proposed project are significant.

For the purposes of this evaluation, the Proposed Project would first be compared to the SCAQMD interim screening level numeric bright-line threshold of 3,000 metric tons of CO_2e annually. If it is determined that the Proposed Project is estimated to exceed this screening threshold, it will then be compared to the SCAQMD-recommended efficiency-based threshold of 4.8 metric tons of CO_2e per service population per year in 2020, and 3.0 metric tons of CO_2e per service population per year in 2035.

Short-Term Construction Impacts

Project-related GHG emissions would include emissions from construction activities. Construction of the Proposed Project would result in direct emissions of CO_2, N_2O, and CH_4 from the operation of construction equipment. Transport of materials and construction workers to and from the project site would also result in GHG emissions. Construction activities would be short-term in duration and would cease upon Project completion.

Table 8-1 illustrates the specific construction-generated GHG emissions that would result from construction of the Project.

Table 8-1. Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/ Year)
2019	391
2020	835
Total Construction	**1,226**
Construction Amortized over 30 Years	**41**
SCAQMD Bright-line Screening Threshold	*3,000*
Exceeds SCAQMD Threshold?	**No**

Source: Emissions were calculated by ECORP Consulting using CalEEMod 2016.3.2. Refer to Appendix A for Model Data Outputs.

As shown in Table 8-1, Proposed Project construction would result in the generation of approximately 1,226 metric tons of CO_2e over the course of construction. Projected GHG emissions from construction have been quantified and amortized over the life of the Proposed Project (amortized over 30 years pursuant to SCAQMD guidance). The amortized construction emissions are added to the annual operational emissions.

Long-Term Operational Impacts

In terms of operational GHG emissions, the Proposed Project involves updating equestrian facilities and addressing flooding and stormwater pollution issues. The Project does not propose new automotive trips, the most potent source of GHG emissions in the state. Long-term operational emissions are identified in Table 8-2.

Table 8-2. Operational-Related Greenhouse Gas Emissions

Emissions Source	CO_2e
Construction Amortized over 30 Years	41
Area Source (landscaping, hearth)	0
Energy	117
Mobile	0
Waste	2
Water	65
Total	**225**
SCAQMD Bright-line Screening Threshold	*3,000*
Exceeds SCAQMD Threshold?	**No**

Source: Emissions were calculated by ECORP Consulting using CalEEMod 2016.3.2. Refer to Appendix A for Model Data Outputs.

As shown in Table 8-2, operational-generated emissions would not exceed the SCAQMD's interim screening level numeric bright-line threshold of 3,000 metric tons of CO_2e annually. **The impact is less than significant**.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

The Governor's Office of Planning and Research (OPR) encourages lead agencies to develop a GHG reduction plan that meets the requirements set forth in the latest OPR guidelines. In accordance with the OPR, the County of Los Angeles' Community Climate Action Plan (CCAP) (2015) includes an inventory of GHG emissions and measures for reducing future emissions to achieve a specific reduction target. The County's goal is to reduce GHG emissions from community activities in the unincorporated areas of Los Angeles County by at least 11percent below 2010 levels by 2020. The CCAP addresses ways to mitigate and avoid GHG emissions associated with community activities in unincorporated Los Angeles County. The CCAP includes emissions from building energy, land use and transportation, water consumption, and waste generation. The measures and actions outlined in the CCAP establish a GHG reduction target consistent with Assembly Bill (AB) 32, the Global Warming Solutions Act.

The CCAP is used to comply with project-level review requirements pursuant to CEQA. The CEQA Guidelines specify that CEQA project evaluation of GHG emissions can tier from a programmatic analysis of GHG emissions, such as the CCAP. The reduction measures proposed in the CCAP build on GHG emissions inventory results and key opportunities prioritized by the County of Los Angeles. The CCAP strategies consist of measures that identify the steps the County will take to support reductions in GHG emissions. The County will achieve these reductions in GHG emissions through a mix of voluntary programs and new strategic standards. All standards presented in the CCAP respond to the needs of development, avoiding unnecessary regulation, streamlining new development, and achieving more efficient use of resources.

The Proposed Project is consistent with the GHG inventory and forecast in the CCAP. Both the existing and the projected GHG inventories in the CCAP were derived based on the land use designations and associated densities defined in the County's General Plan. The County General Plan designates the project

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

site as "OS-PR – Parks and Recreation" and "W – Water". The Proposed Project is consistent with these land use designations, and is thereby consistent with the GHG inventory and forecast in the CCAP. As a result, the Proposed Project it would not conflict with the CCAP. **No impact would occur**.

4.9 Hazards and Hazardous Materials

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials?	☐	☐	☒	☐

The construction phase of the Proposed Project may include the transport, storage, and short-term use of petroleum-based fuels, lubricants, pesticides, and other similar materials. The transport of hazardous materials by truck is regulated by federal safety standards under the jurisdiction of the U.S. Department of Transportation. Additionally, the implementation of BMPs stipulating proper storage of hazardous materials and vehicle refueling would be implemented during construction as part of the SWPPP. All transport, handling, use, and disposal of substances such as petroleum products paints, and solvents related to the operation and maintenance of the Proposed Project would comply with all Federal, State, and local laws regulating management and use of hazardous materials. Therefore, the use of such material would not create a significant hazard to the public and **impacts would be less than significant**.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment?	☐	☐	☒	☐

On-site storage and/or use of large quantities of hazardous materials capable of affecting soil and groundwater are not proposed. However, during construction some hazardous materials, such as diesel fuel, would be used. A SWPPP, listing BMPs to prevent construction pollutants and products from violating any water quality standard or waste discharge requirements would be prepared for the Proposed Project. The potential risk associated with accidental discharge during use and storage of equipment-related hazardous materials would be low since the handling of such materials would be addressed through the implementation of BMPs. The Proposed Project would continue the existing equestrian uses at the project site. Operation of the improved equestrian facility would not result in a new hazard to the public or the environment. **Impacts would be less than significant**.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of sensitive land uses?	☐	☐	☐	☒

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

The closest school to the project site is South El Monte High School, located approximately 0.5 mile to the north. There are no other sensitive land uses (e.g. hospitals, day care facilities) within one-quarter mile of the project site. **No impact would occur**.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment? ☐ ☐ ☐ ☒

A search of the Department of Toxic Substances Control's (DTSC) Hazardous Waste and Substance List (Cortese List) and EnviroStor online database and the State Water Resources Control Board's (SWRCB) GeoTracker online database was conducted for the project area (DTSC 2018a and 2018b; SWRCB 2018). The results of the searches indicate that there are no known hazardous materials sites on the project site. **No impact would occur**.

e) For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? ☐ ☐ ☐ ☒

The closest airport to the project site is the El Monte Airport, located approximately 3.5 miles to the north. The project site is not located within the Airport Influence Area of the El Monte Airport (ALUC 2012). Given the distance between the airport and the project site there would be no safety hazards for people residing or working in the project area. **No impact would occur**.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? ☐ ☐ ☐ ☒

There are no private airstrips within the vicinity of the project site; however, Southern California Edison's heliport is located approximately 2.5 miles to the northwest and the City of Industry's heliport is located approximately 3 miles to the southeast. **Given the distance between the heliports and the project site no impact would occur**.

g) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan? ☐ ☐ ☐ ☒

The Proposed Project would continue the existing equestrian use of the project site. As such, the operation of the Proposed Project would not interfere with an adopted emergency response plan. Lane closures are not anticipated during construction of the Proposed Project. All activities related to the construction of the Proposed Project would occur within the existing equestrian center. The Proposed Project is not anticipated to interfere with an adopted emergency response plan or emergency evacuation plan. **No impact would occur**.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
h) Expose people or structures to a significant risk of loss, injury or death involving fires, because the project is located:				
i) within a Very High Fire Hazard Severity Zones (Zone 4)?	☐	☐	☐	☒

The Proposed Project is not located in an area classified as a very high fire hazard zone (County of Los Angeles 2018). The project site is located in a developed area abutting the San Gabriel River along its northern boundary. **No impact would occur**.

ii) within a high fire hazard area with inadequate access?	☐	☐	☐	☒

The Proposed Project is not located in an area classified as a very high fire hazard zone (County of Los Angeles 2018). **No impact would occur**.

iii) within an area with inadequate water and pressure to meet fire flow standards?	☐	☐	☐	☒

The Proposed Project would be implemented at the existing Whittier Narrows Equestrian Center which is currently served by existing water infrastructure with adequate pressure to meet fire flow standards. The Proposed Project would also include a new fire service, which will meet County of Los Angeles Fire Department requirements for hydrants and fire flows. **No impact would occur**.

iv) within proximity to land uses that have the potential for dangerous fire hazard?	☐	☐	☐	☒

Surrounding land uses are described in Table 9-1. The Proposed Project would continue the existing equestrian use of the project site. The project site and surrounding areas land uses would not result in a dangerous fire hazard. **No impact would occur**.

Table 9-1. Surrounding Land Uses

Title	Existing Land Use
Project Site	Equestrian Center
North	San Gabriel River
East	Automotive/Truck Service Center and Retail
South	Commercial and Industrial Businesses, Open Space
West	Open Space, Pico Rivera Bicentennial Park, Pico Rivera Sports Arena

i) Does the proposed use constitute a potentially dangerous fire hazard?	☐	☐	☐	☒

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

The Proposed Project would continue the equestrian use of the project site, which does not constitute a potentially fire hazard. **No impact would occur**.

4.10 Hydrology and Water Quality

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

The Proposed Project would update the existing equestrian facilities and address flooding and stormwater pollution issues. Impacts during construction and operation of the Proposed Project are discussed below.

Construction Impacts

During construction of the Proposed Project water quality impacts could occur without proper controls. Soils loosened during grading, as well as spills of fluids or fuels from vehicles and equipment, if mobilized or transported offsite in overland flow, have the potential to degrade water quality. Because the area of disturbance affected by construction of the Proposed Project exceeds one acre, the Proposed Project would be subject to the requirements of the statewide National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (General Permit; Order 2009-0009-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. During construction, to comply with the General Permit the applicant would be required to implement a SWPPP, which would include BMPs to prevent construction pollutants and products from violating any water quality standards or any waste discharge requirements. **Construction impacts would be less than significan**t.

Operation Impacts

The Proposed Project is categorized as a Designated Project per the County of Los Angeles Low Impact Development (LID) Manual and must retain 100 percent of the Stormwater Quality Design Volume (SWQDv) on-site.

The Proposed Project's stormwater drainage system has been designed to capture and collect runoff from throughout the site and new stable and hardscape areas, and direct it to proposed stormwater conveyance facilities that would connect to sand filters and bioretention basin areas located at the project site's boundary adjacent to the San Gabriel River. Due to the liquefaction potential of the project site and the variable depth to groundwater, infiltration was not selected as the primary LID BMP (Hall 2018). Instead, the chosen BMP is a treatment system consisting of a sand filter pretreatment discharging to bioretention basin areas for infiltration/evapotranspiration with an underdrain system with no impermeable liner. The sand filter would remove floatables, manure particles, and sediment prior to discharge to the bioretention basin. The

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

bioretention basin would remove additional dissolved pollutants prior to infiltration and/or discharge and would have an underdrain system to collect filtered, clean runoff for discharge to the river floodplain. Incidental infiltration of treated runoff is allowed by the absence of an impermeable liner. This would take advantage of infiltration during periods of low groundwater level but allow for discharge of runoff during periods of higher groundwater levels.

With the implementation of a treatment system, as described above, impacts to water quality would be improved from existing conditions. **A beneficial and less than significant impact would occur**.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐

Development of the Proposed Project would result in the creation of approximately 4.227 acres of impervious surfaces consisting of stables, surrounding hardscape, and parking areas, and approximately 15.012 acres of pervious surfaces consisting of bioretention basins, recreational areas, and landscaping (Hall 2018). Table 10-1 summarizes the pre- and post-development pervious/impervious conditions on the project site.

Table 10-1. Pre- and Post-Development Pervious/Impervious Areas

	Pre-Development Area		Post-Development	
Surface Type	**Total Acres**	**Percentage**	**Total Acres**	**Percentage**
Pervious	18.177	94.5%	15.012	78.0%
Impervious	1.062	5.5%	4.227	22.0%

Source: Hall 2018

As shown on Table 10-1, the Proposed Project would result in an increase in impervious surfaces from 5.5 percent to 22.0 percent, an increase of 16.5 percent. Even though the Proposed Project would result in an increase of impervious surfaces on the project site the Proposed Project would include a stormwater management system designed to allow infiltration and evapotranspiration of the additional stormwater runoff resulting from the increase of impervious surfaces. As discussed in the response to question a) of this section (10. Hydrology and Water Quality), the Proposed Project's stormwater management system consists of a treatment system that utilizes a sand filter for pretreatment before discharging to bioretention basins. The bioretention basins would allow for runoff infiltration. During periods of high groundwater and lower infiltration rates, the bioretention basins include an underdrain system that would collect and discharge the treated runoff to the alluvial terrace/floodplain of the San Gabriel River.

Pre- and post-development condition hydrology calculations for project site for the 10-, 25-, 50-, and 100-year storm events were computed (Hall 2018). The calculations indicate that peak flow rates and associated times of concentration for the 10-, 25-, and 50-year storms for the post-development results are generally consistent with the pre-development results. The calculations also indicated that the three bioretention

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

basins included in the Proposed Project's stormwater management system have sufficient capacity for the Stormwater Quality Design Volume (SWQDv).

As such, the Proposed Project is not anticipated to substantially deplete groundwater supplies or interfere with groundwater recharge. **Impacts would be less than significant**.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐

The existing surface drainage pattern on the project site currently drains in a northwesterly direction towards the San Gabriel River alluvial terrace/floodplain. The Proposed Project will slightly alter the existing drainage pattern by the development of a new stormwater drainage system. The Proposed Project's stormwater drainage system has been designed to capture and collect runoff from throughout the site and new stable and hardscape areas and direct it to proposed stormwater conveyance facilities that would connect to sand filters and bioretention basin areas located at the project site's boundary adjacent to the San Gabriel River. The Proposed Project would implement a BMP treatment system consisting of a sand filter pretreatment discharging to bioretention basin areas for infiltration/evapotranspiration with an underdrain system with no impermeable liner. The sand filter would remove floatables, manure particles, and sediment prior to discharge to the bioretention basin. The bioretention basin would remove additional dissolved pollutants prior to infiltration and/or discharge and would have an underdrain system to collect filtered, clean runoff for discharge to the river floodplain. Incidental infiltration of treated runoff is allowed by the absence of an impermeable liner. This would take advantage of infiltration during periods of low groundwater level but allow for discharge of runoff during periods of higher groundwater levels.

The Proposed Project is not anticipated to significantly impact stormwater runoff for the project site and with the implementation of this treatment system, as described above, impacts to water quality, as a result of erosion or siltation, **would be less than significant**.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	☒

Please see the responses to 10. Hydrology and Water Quality b) and c) above. **No impact would occur**.

e) Add water features or create conditions in which standing water can accumulate that could increase habitat for mosquitoes and other vectors that transmit diseases such as the West Nile virus and result in increased pesticide use?	☐	☐	☒	☐

As discussed, all runoff would be collected and conveyed to bioretention basins on the site to allow infiltration and evapotranspiration to occur. The sand filters and bioretention basin areas are designed with

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

overflow devices at the maximum ponding depth. Overflow risers allow runoff greater than the system's storage capacity to bypass the sand filters and bioretention basin areas and discharge via existing and proposed corrugated metal pipe culverts to the San Gabriel River alluvial terrace/floodplain. The stormwater management system would minimize ponding within the bioretention basins. **Impacts would be less than significant**.

f) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐

Please see the responses to 10. Hydrology and Water Quality a) and b) above. **Impacts would be less than significant**.

g) Generate construction or post-construction runoff that would violate applicable stormwater NPDES permits or otherwise significantly affect surface water or groundwater quality?	☐	☐	☒	☐

The Proposed Project's stormwater management system consists of a treatment system that utilizes a sand filter for pretreatment of runoff prior to discharging to a bioretention basin area. The sand filter would remove floatables, manure particles, and sediment prior to discharge to the bioretention basin. The bioretention basin would also remove additional dissolved pollutants prior to infiltration and/or discharge. Impacts to surface water or groundwater quality **would be less than significant**.

h) Conflict with the Los Angeles County Low Impact Development Ordinance (L.A. County Code, Title 12, Ch. 12.84)?	☐	☐	☐	☒

As discussed in the responses to 10. Hydrology and Water Quality a) and b) above, the Proposed Project would implement LID BMPs; thereby, complying with Los Angeles County's LID ordinance. **No impact would occur**.

i) Result in point or nonpoint source pollutant discharges into State Water Resources Control Board-designated Areas of Special Biological Significance?	☐	☐	☐	☒

The project site is not located near a State Water Resources Control Board (SWRCB) designated Areas of Special Biological Significance (SWRCB 2018). **No impact would occur**.

j) Use onsite wastewater treatment systems in areas with known geological limitations (e.g. high groundwater) or in close proximity to surface water (including, but not limited to, streams, lakes, and drainage course)?	☐	☐	☐	☒

The project site currently connects to the municipal sewer system located within Rooks Road. No onsite

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

wastewater treatment systems are proposed. **No impact would occur**.

k) Otherwise substantially degrade water quality?	☐	☐	☒	☐

Please see the responses to 10. Hydrology and Water Quality a) and b) above. **Impacts would be less than significant or beneficial**.

l) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, or within a floodway or floodplain?	☐	☐	☐	☒

The Proposed Project does not include housing. **No impact would occur**.

m) Place structures, which would impede or redirect flood flows, within a 100-year flood hazard area, floodway, or floodplain?	☐	☐	☐	☒

According to the Whittier Narrows Dam Basin Master Plan and Environmental Assessment, a portion of the project site is located within the 100-year flood elevation (USACE 2011; Appendix C). The Proposed Project would move all equestrian center structures outside of the 100-year flood zone. As such, **no impact would occur**.

n) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐

The Santa Fe Dam is located on the San Gabriel River approximately seven miles upstream. The project site is also located approximately 300 feet south of the San Gabriel River levee. The Proposed Project would continue the existing recreational equestrian use of the project site; therefore, it would not increase the risk of loss, injury, or death involving flooding over the existing conditions. Furthermore, the proposed structures (e.g. pre-fabricated restrooms, barns, storage areas) would be designed to withstand short-term inundation by flood waters. **Impacts would be less than significant**.

o) Place structures in areas subject to inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

The project site is located approximately 23 miles from the Pacific Ocean. The Proposed Project is not located near a mountain side or hillside; therefore, it would not be subject to mudflows. **No impact would occur**.

4.11 Land Use and Planning

The project site has a Los Angeles County General Plan land use designation of Parks and Recreation (OS-PR) and Water (W) and a zoning designation of Open Space (O-S) with a small portion zoned Light Agricultural (A-1-5) (Los Angeles County 2018).

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒

The Proposed Project would not change the existing equestrian use of the project site; it would improve the facilities minimizing the environmental impacts on adjacent water and habitat resources. The Proposed Project would not divide an established community. **No impact would occur**.

b) Be inconsistent with the applicable County plans for the subject property including, but not limited to, the General Plan, specific plans, local coastal plans, area plans, and community/neighborhood plans?	☐	☐	☐	☒

The Proposed Project would continue the existing equestrian use of the project site. Proposed infrastructure improvements would minimize environmental impacts on adjacent water and habitat resources. The Proposed Project would not conflict with the Los Angeles County General Plan. **No impact would occur**.

c) Be inconsistent with the County zoning ordinance as applicable to the subject property?	☐	☐	☐	☒

The project site has a zoning designation of Open Space (O-S) with a small portion zoned Light Agricultural (A-1-5) (Los Angeles County 2018). The Proposed Project would continue the existing equestrian use of the project site. **No impact would occur**.

d) Conflict with Hillside Management criteria, Significant Ecological Areas conformance criteria, or other applicable land use criteria?	☐	☐	☐	☒

The project site is not located within a Hillside Management Area (25 percent or greater slope) (Los Angeles County 2018). No impact would occur.

The project site is not located within any SEA; however, the Puente Hills SEA is located immediately adjacent to abutting the north and west boundary of the project site. This SEA was designated because this area provides an important linkage connection between the Puente Hills and the Chino Hills in Orange County, and because habitats in this SEA are occupied by core populations of special-status plant and wildlife species. The Proposed Project would continue the existing equestrian use of the site. Impacts to the Puente Hills SEA are not expected to occur, and wildlife using or inhabiting the SEA would be adapted to urban environments and associated noise levels and would therefore not be subject to indirect impacts associated with project activities. **No impact would occur**.

4.12 Mineral Resources

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

The Proposed Project is not located within a Mineral Resource Zone (MRZ) (Los Angeles County 2018). **No impact would occur**.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

There are no mineral recovery sites delineated on the project site (Los Angeles County 2015a). **No impact would occur**.

4.13 Noise

Would the project result in:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Exposure of persons to, or generation of, noise levels in excess of standards established in the County General Plan or noise ordinance (Los Angeles County Code, Title 12, Chapter 12.08), or applicable standards of other agencies?	☐	☐	☒	☐

Short-Term Construction Impacts

Temporary increases in ambient noise levels as a result of the Proposed Project would predominately be associated with construction activities. Construction activities would include demolition, site preparation, grading, construction of structures including, buildings, barns, storage areas, fencing, lighting, paving, and architectural coating. Such activities would require scrapers, loaders, and tractors during demolition; tractors and rubber tired dozers during site preparation; drill rigs, cranes, excavators, graders, tractors, trucks, scrapers, and loaders during grading; cranes, forklifts, generator sets, tractors, and welders during construction; excavators, graders, pavers, paving equipment, rollers, surfacing equipment, and tractors during paving; and air compressors during painting. During these activities, exterior noise levels could affect sensitive receptors in the vicinity of the construction site. The nearest sensitive receptors to the project include residences approximately 1,800 feet east of the project site; however, there is an office park located

150 feet to the east of the project site. Though not considered a sensitive noise receptor due to the function of office space and the limited time inhabited, office workers could still experience a temporary inconvenience from construction noise. Construction activities would occur throughout the project site and would not be concentrated at the point closest to the receptors.

High groundborne noise levels and other miscellaneous noise levels can be created by the operation of heavy-duty trucks, tractors, excavators, scrapers, and other heavy-duty construction equipment. Table 13-1 indicates the anticipated noise levels of construction equipment. The average noise levels presented in Table 13-1 are based on the quantity, type, and acoustical use factor for each type of equipment that is anticipated to be used.

Table 13-1. Maximum Noise Levels Generated by Construction Equipment

Type of Equipment	Acoustical Use Factor[1] (percent)	Maximum Noise (L_{max}) at 50 Feet (dBA)
Blasting	1	94
Crane	16	81
Dozer	40	82
Excavator	40	81
Generator	50	81
Grader	40	85
Other Equipment (greater than five horse power)	50	85
Paver	50	77
Roller	20	80
Tractor	40	84
Truck	40	80
Welder	40	73

Source: Federal Highway Administration, Roadway Construction Noise Model (FHWA-HEP-05-054), dated January 2006.
Notes: Acoustical use factor (percent): Estimates the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

Noise standards prohibit the operation of any tools or equipment used in construction that creates a noise disturbance across a residential or commercial real-property line. Since the only nearby land uses are commercial uses, a noise disturbance is identified as 85 dBA generated from mobile construction equipment and 70 dBA generated from stationary construction equipment during the daytime hours of 7:00 AM to 8:00 PM on weekday and Saturdays. During the nighttime hours of 8:00 PM to 7:00 AM on weekdays and during all hours of Sundays and holidays, a noise disturbance is identified as 70 dBA generated from mobile construction equipment and 60 dBA generated from stationary construction equipment. The anticipated short-term construction noise levels generated during demolition, site preparation, grading, construction, paving, and painting activities are presented in Table 13-2.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

Table 13-2. Construction Average (dBA) Noise Levels by Receptor Distance and Construction Phase

Description	Estimated Exterior Construction Noise Level (L_{eq})	Daytime Construction Noise Standard	Nighttime Construction Noise Standard	Exceeds Daytime Standards?	Exceeds Nighttime Standards?
Demolition (mobile equipment)	63.5	85	70	**No**	**No**
Site Preparation (mobile equipment)	67.6	85	70	**No**	**No**
Grading (mobile equipment)	67.2	85	70	**No**	**No**
Grading (stationary equipment)	57.4	70	60	**No**	**No**
Building Construction (mobile equipment)	69.1	85	70	**No**	**No**
Building Construction (stationary equipment)	57.6	70	60	**No**	**No**
Paving (mobile equipment)	68.6	85	70	**No**	**No**
Painting (mobile equipment)	53.7	85	70	**No**	**No**

Source: Federal Highway Administration, Roadway Construction Noise Model (FHWA-HEP-05-054), dated January 2006 (see Appendix B).
Notes: Construction equipment used during each phase derived from Project Applicant.

As shown, noise construction standards would not be exceeded during any construction phase. Therefore, **impacts are less than significant**.

Long-Term Operational Impacts

The County of Los Angeles regulates noise through the County Code, Title 12, Chapter 12.08, Noise Control. Pursuant to the County Code, the County restricts noise levels generated at a property from exceeding certain noise levels for extended periods of time.

The Proposed Project would provide updated equestrian facilities and address flooding and stormwater pollution issues. No additional vehicles, horses, or visitors are anticipated because no increase in the number of horse stalls over existing numbers (200) would occur. On-site activities are expected to be similar to existing activities. Thus, it is not expected that there would be a significant increase in noise levels over existing conditions. **A less than significant impact would occur**.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? ☐ ☐ ☒ ☐

Project construction would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Vibration

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. This impact discussion utilizes Caltrans's (2002) recommended standard of 0.2 inches per second (in/sec) peak particle velocity (PPV) with respect to the prevention of structural damage for normal buildings. Table 13-3 displays vibration levels for typical construction equipment.

Table 13-3. Typical Construction Equipment Vibration Levels

Equipment	Peak Particle Velocity at 25 Feet (inches/second)
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Rock Breaker	0.059
Jackhammer	0.035
Small Bulldozer/Tractors	0.003

Source: FTA 2006; Caltrans 2004

The nearest off-site structure to the project site is 150 feet to the east of the construction site boundary. Based on the vibration levels presented in Table 13-3, ground vibration generated by heavy-duty equipment would not be anticipated to exceed approximately 0.089 in/sec PPV at 25 feet. Therefore, the use of virtually any type of construction equipment would most likely not result in a groundborne vibration velocity level above 0.2 in/sec and predicted vibration levels at the nearest off-site structures would not exceed recommended criteria. Additionally, this would be a temporary impact and would cease completely when construction ends. Once operational, the project would not be a source of groundborne vibration. **Impacts would be less than significant**.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from parking areas?	☐	☐	☒	☐

The Proposed Project would provide updated equestrian facilities and address flooding and stormwater pollution issues. The potential for increased traffic to the Whittier Narrows Equestrian Center would be nominal and on-site activities are expected to be similar to existing activities. Thus, it is not expected that there would be a significant increase in noise levels over existing conditions. **A less than significant impact would occur**.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from amplified sound systems?	☐	☐	☒	☐

Refer to the response to Question 13. a) above. **Impacts would be less than significant**.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

The nearest airport to the project site is El Monte Airport, located approximately 3.5 miles north of the project site. There are several heliports located in the City of Industry to the east; however, these are all located more than 3 miles distant. The project site is not located within an area covered by an airport land use plan or within two miles of a public or public use airport. Thus, **no impact would occur** with implementation of the Proposed Project.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

The Proposed Project is not located adjacent to private airstrip; therefore, **no impact would occur**.

4.14 Population and Housing

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒

The Proposed Project does not include housing; it would involve the rehabilitation of an existing equestrian center. The Proposed Project would generate temporary construction jobs and a small number of permanent jobs that would likely be filled by the local work force. Therefore, the Proposed Project is not expected to induce population growth in the project area. **No impact would occur**.

b) Displace substantial numbers of existing housing, especially affordable housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

The project site is located on an existing equestrian center and no homes are located on the site. The Proposed Project would not displace existing housing. **No impact would occur**.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Please see the response to question 14 b) above. **No impact would occur**.

d) Cumulatively exceed official regional or local population projections?	☐	☐	☐	☒

Please see the response to question 14 a) above. **No impact would occur**.

4.15 Public Services

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Would the project create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒

The Los Angeles County Fire Department provides fire protection services to the unincorporated areas of Los Angeles County including the project site. The Proposed Project would rehabilitate the existing Whittier Narrows Equestrian Center. The Proposed Project would not change the land use of the project site. The Proposed Project would include a new fire service, which would meet all County fire requirements for hydrants and fire flows. **No impact would occur**.

Sheriff protection?	☐	☐	☐	☒

The Los Angeles County Sheriff's Department provides police services to the unincorporated areas of Los Angeles County including the project site. The Proposed Project would rehabilitate the existing Whittier Narrows Equestrian Center. The Proposed Project would not change the land use of the project site; therefore, sheriff protection services required for the project site would remain the same as existing conditions. **No impact would occur**.

Schools?	☐	☐	☐	☒

The Proposed Project is not expected to increase population in the area because it does not propose new housing or create a substantial number of permanent jobs. Therefore, **no impacts to school capacity are anticipated**.

Parks?	☐	☐	☐	☒

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

The Proposed Project would rehabilitate the existing Whittier Narrows Equestrian Center. The improved facilities would result in a beneficial impact to recreational facilities for equestrian users in the region. **No impact would occur**.

Libraries? ☐ ☐ ☐ ☒

The Proposed Project is not expected to increase population in the area because it does not propose new housing or create a substantial number of permanent jobs. Therefore, **no impacts to libraries are anticipated**.

Other public facilities? ☐ ☐ ☐ ☒

The Proposed Project would include refurbishment of an existing, active equestrian center. Therefore, the Proposed Project would not affect other public facilities. **No impact would occur**.

4.16 Recreation

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒

The Proposed Project would include refurbishment of an existing, active equestrian center. This refurbishment would be beneficial to the general public/equestrians in the area. **No impact would occur**.

b) Does the project include neighborhood and regional parks or other recreational facilities or require the construction or expansion of such facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

The Proposed Project would include refurbishment of an existing, active equestrian center. This refurbishment would be beneficial to the general public/equestrians in the area. Environmental impacts associated with the refurbishment and applicable mitigation measures to these impacts are analyzed within this Initial Study. Impacts would be less than significant.

c) Would the project interfere with regional open space connectivity?	☐	☐	☐	☒

The Proposed Project would include refurbishment of an existing, active equestrian center and it would not interfere with regional open space connectivity. **No impact would occur**.

4.17 Transportation/Traffic

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐

The Proposed Project would be limited to the refurbishment of an existing active equestrian center. Traffic generated by the construction of the Proposed Project would be limited to personal vehicles of construction workers and trucks carrying construction equipment and material to the project site. Construction traffic would be temporary and nominal. Following construction, the potential for increased traffic to the Whittier Narrows Equestrian Center would be nominal. The Proposed Project would not conflict with applicable plans, ordinances, or policies related to the performance of the circulation system. Operational traffic is anticipated to be similar to existing conditions because the Proposed Project would not increase the number of horse stalls and would not increase the footprint of the equestrian center. **Impacts would be less than significant**.

b) Conflict with an applicable congestion management program (CMP), including, but not limited to, level of service standards and travel demand measures, or other standards established by the CMP for designated roads or highways?	☐	☐	☒	☐

Refer to the response to Question 17. a). **Impacts would be less than significant**.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒

The Proposed Project is not located adjacent to any airport therefore, no changes to air traffic patterns would occur. **No impact would occur**.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒

The Proposed Project would continue the existing equestrian use of the project site. The Proposed Project would not include the construction of any hazards (e.g., sharp curves or dangerous intersections), and would not result in incompatible uses with the surrounding area. **No impact would occur**.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
e) Result in inadequate emergency access?	☐	☐	☐	☒

The Proposed Project would not result in inadequate emergency access. Emergency access would be maintained on existing streets within the project area. **No impact would occur**.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

The Proposed Project would not interfere with access to the project site by alternative modes of transportation. The Proposed Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. **No impact would occur**.

4.18 Tribal Cultural Resources

Regulatory Setting

Assembly Bill 52

Effective July 1, 2015, Assembly Bill 52 (AB 52) amended CEQA to require that: 1) a lead agency provide notice to those California Native American tribes that requested notice of projects proposed by the lead agency; and 2) for any tribe that responded to the notice within 30 days of receipt with a request for consultation, the lead agency must consult with the tribe. Topics that may be addressed during consultation include Tribal Cultural Resources (TCRs), the potential significance of project impacts, type of environmental document that should be prepared, and possible mitigation measures and project alternatives. Pursuant to AB 52, Section 21073 of the Public Resources Code defines California Native American tribes as "a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of the Statutes of 2004." This includes both federally and non-federally recognized tribes.

Section 21074(a) of the Public Resource Code defines TCRs for the purpose of CEQA as:

1. Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

    a. included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or

    b. included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or

    c. a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1.

> In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Because criteria a and b also meet the definition of a historical resource under CEQA, a TCR may also require additional consideration as a historical resource. TCRs may or may not exhibit archaeological, cultural, or physical indicators.

Recognizing that California tribes are experts in their tribal cultural resources and heritage, AB 52 requires that CEQA lead agencies provide tribes that requested notification an opportunity to consult at the commencement of the CEQA process to identify TCRs. Furthermore, because a significant effect on a TCR is considered a significant impact on the environment under CEQA, consultation is used to develop appropriate avoidance, impact minimization, and mitigation measures.

Summary of AB 52 Consultation

On April 16, 2018, the County sent project notification letters via certified mail to the following California Native American tribes, which had previously submitted general consultation request letters pursuant to 21080.3.1(d) of the Public Resources Code (Appendix D):

- Fernandeno Tataviam Band of Mission Indians
- Gabrieleno Tongva
- Gabrieleno Band of Mission Indians-Kizh Nation
- San Manuel Band of Mission Indians
- Tejon Indian Tribe

Each recipient was provided a brief description of the project and its location, the lead agency contact information, and a notification that the tribe has 30 days to request consultation. The 30-day response period concluded on May 16, 2018.

As a result of the initial notification letters, the County received the following responses:

- San Manuel Band of Mission Indians – responded by email on April 19, 2018 and stated that the Project is not within the Tribe's ancestral territory and the Tribe is not requesting to consult on this Project.
- Fernandeno Tataviam Band of Mission Indians – responded by email on May 9, 2018 and stated that the Project is not within their area of consultation. They further suggested that the County contact the Gabrieleno.
- Gabrieleno Band of Mission Indians–Kizh Nation – responded by email on May 17, 2018 to accept consultation invitation.

On May 17, 2018, the County initiated consultation via email with the Gabrieleno Band of Mission Indians–Kizh Nation. The Kizh Nation requested a site meeting and review of the project site. A formal on-site meeting was scheduled with the Kizh Nation for Jun 7, 2018. Attendees included representatives from the County, Kizh Nation, and ECORP Consulting, Inc. (the IS/MND preparer for the Proposed Project). Topics discussed during this meeting included, but were not limited to: the locations of several nearby Gabrieleño villages; depth of fill at the site and previous cultural studies conducted on the property. The Kizh noted that although no known resources are located on the property, the surrounding area contains known TCRs. The Kizh Nation requested that a Native American monitor be present during construction

for at least the initial phases of the Proposed Project. On June 21, 2018, the Kizh Nation provided the County via email with an official request for Tribal monitoring of ground disturbing activities. The request stated that, should the monitor feel that there is no need to continue monitoring in certain areas, they would inform the County that monitoring was no longer needed. The TCR mitigation measure was updated based on this request. Consultation with the Kizh Nation was concluded on September 11, 2018 via letter (Appendix D).

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☐	☐	☒

A cultural resources records search did not find any CRHR or NHRP-eligible resources within the project site (ECORP 2018c). As such, no impact would occur.

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.	☐	☒	☐	☐

No TCRs were identified within the project area during AB 52 consultation. The Proposed Project would not result in significant impacts to known TCRs. However, as a result of the AB 52 consultation the project area was identified as being sensitive due to the proximity to known TCRs and has the potential to contain unknown TCRs. Furthermore, a search of the Sacred Lands File by the Native American Heritage Commission (NAHC) completed for the Proposed Project in October 2017 revealed that there is a Sacred Land in the project area that may also be a TCR, as defined by state law (ECORP 2018c). Significant impacts may occur from the discovery of unknown TCRs during ground disturbing activities from project construction. Impacts to unknown TCRs would be **less than significant with the implementation of Mitigation Measure TCR-1**.

Mitigation Measure:

TCR-1: Ground-disturbing activities shall be monitored by a Tribal Monitor representing the Kizh Nation. Based on soil conditions, the Tribal Monitor may conclude that there is little likelihood that archaeological materials will be uncovered by construction activities. In this event, the Tribal Monitor may adjust the frequency of monitoring needed. Monitoring may be discontinued or may consist of periodic spot checking, as deemed appropriate by the Tribal Monitor in consultation with the Archaeologist. The Tribal Monitor shall have the authority to temporarily halt construction operations within 60 feet of a tribal cultural resource (TCR) or a potential TCR to determine if significant or potentially significant resources will be adversely affected by continuing construction activities. The tribal monitor shall use flagging around the find. Within the flagged off area construction shall halt until a qualified archaeologist evaluates the find. Construction shall not take place within the delineated find area until the County consults on appropriate treatment with a qualified archaeologist and the Kizh Nation. The Tribal Monitor may suggest options for treatment of finds for consideration. The County shall have ultimate authority over the treatment of new finds while complying with all rules and regulations including, but not limited to, AB 2641, Section 7050.5 pf the California Health and Safety Code, and Public Resources Code Section 5097.94 and 5097.98.

4.19 Utilities and Service Systems

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Exceed wastewater treatment requirements of either the Los Angeles or Lahontan Regional Water Quality Control Boards?	☐	☐	☒	☐

The Proposed Project would be limited to the refurbishment of an existing active equestrian center. Due to the extremely small scale of the Proposed Project, the Proposed Project would generate nominal amounts of wastewater. Therefore, the Proposed Project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. **Impacts would be less than significant**.

b) Create water or wastewater system capacity problems, or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

The project site is located within an area currently served by existing utilities and utility infrastructure. Water and sewer lines are located within and immediately adjacent to the project site. Relatively short segments of water and sewer pipelines would be installed underground to service the refurbished equestrian center; however, such installation of pipes would not impact environmental resources beyond those discussed within this Initial Study. **Impacts would be less than significant**.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
c) Create drainage system capacity problems, or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

As discussed in Section 10. Hydrology and Water Quality, the Proposed Project includes the construction of a stormwater management system. The construction of this system is part of the Proposed Project and is analyzed in this Initial Study. **A less than significant impact would occur**.

d) Have sufficient reliable water supplies available to serve the project demands from existing entitlements and resources, considering existing and projected water demands from other land uses?	☐	☐	☒	☐

The Proposed Project would be limited to the refurbishment of an existing equestrian center, including a new fire service system. Due to the small scale of the Proposed Project, the Proposed Project would require nominal amounts of water during operation and for emergency fire services. No new or expanded water entitlements would be expected. **Impacts would be less than significant impact**.

e) Create energy utility (electricity, natural gas, propane) system capacity problems, or result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

The Proposed Project would be limited to the refurbishment of an existing equestrian center. Due to the extremely small scale of the Proposed Project, the Proposed Project would require nominal amounts of energy. Relatively short segments of utility lines would be installed underground to service the refurbished equestrian center; however, such installation would not impact environmental resources beyond those discussed within this Initial Study. **Impacts would be less than significant**.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐

In an effort to address landfill capacity and solid waste concerns, the California Legislature passed the Integrated Waste Management Act in 1989 (California State Assembly Bill 939), which mandated that all cities reduce waste disposed in landfills from generators within their borders by 50 percent by the year 2000.

Construction waste could include concrete, wood, metals, and plastics. Operational waste could conclude food plastic wrappers from visitors and workers and plastic and aluminum containers. Organic waste, including manure, would be composted on-site as it is currently. Trash generated by the Proposed Project would be collected by a County approved waste collector and taken to the Puente Hills Materials Recovery Facility (MRF). The purpose of the Puente Hills MRF is to provide waste diversion and publicly-owned transfer capacity for Los Angeles County. This facility helps Los Angeles County meet the 50 percent

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

diversion rate required under California law while providing for cost effective transfer of municipal solid waste to landfills using transfer trucks or rail. The Puente Hills MRF is permitted to accept 4,400 tons per day and 24,000 tons per week of municipal solid waste. Trash processed at this facility is transported to various regional landfills, which include the Olinda Alpha Sanitary Landfill and the Frank Bowerman Landfill. The Olinda Alpha Sanitary Landfill has a capacity of 34,200,000 cubic yards (cy) as of 2018 and the Frank Bowerman Landfill has a remaining capacity of 205,000,000 cy as of 2008 (CalRecycle 2018).

The Proposed Project would require demolition of some relatively small structures/amenities. Required demolition would comply with requirements for diversion of construction waste during demolition. The Proposed Project also would be required to comply with requirements for diversion of solid waste during operation. Sufficient landfill capacity exists to serve the project. **Impacts would be less than significant**.

g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

The Proposed Project would comply with applicable federal, state, and local statutes and regulations related to solid waste (refer to response to Question 18.f. above). **No impact would occur**.

4.20 Mandatory Findings of Significance

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

The Proposed Project may potentially result in impacts to biological and cultural resources. Any degradation of the quality of the environment would be **reduced to below a level of significance through implementation of the mitigation measures** identified in Section 4, Biological Resources, and Section 5, Cultural Resources.

b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	☐	☐	☐	☒

The Proposed Project would be limited to the refurbishment of an existing equestrian center. The Proposed

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

Project would not have the potential to achieve short-term environmental goals to the disadvantage of long-term goals. **No impact would occur**.

c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐

Cumulative impacts are defined as two or more individual (and potentially less than significant) project effects that, when considered together or in concert with other projects combine to result in a significant impact within an identified geographic area. Cumulative considerable impacts are defined in Section 15065(c) of the CEQA guidelines as the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

To analyze the cumulative impacts of a project in combination with other expected future growth, the amount and location of growth expected to occur must be predicted. Section 15130(b) of the CEQA Guidelines allows two methods of prediction:

Either:

1. A list of relevant past, present and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the Agency, or

2. A summary of projections contained in adopted general plan or related planning document or in a prior adopted or certified environmental document that described or evaluated regional or area-wide conditions contributing to the cumulative impact.

For the purpose of this Initial Study, the general plan projections approach was used. The Los Angeles County General Plans and EIR (Los Angeles County 2014) was reviewed.

In order for a project to contribute to cumulative impacts, it must result in some level of impact on a project specific level. As described in this Initial Study, many of the Proposed Project effects are identified as "No Impact," including most or all of the topic areas under aesthetics, agriculture and forestry resources, land use and planning, mineral resources, population and housing, and recreation. The following discussion looks only at those effects for which some level of potential impact was identified. This includes topics for which "Less Than Significant Impacts" were identified, as well as those for which the threshold question assumed some level of impact (i.e., those for which consideration of a potential "substantial" or "significant" effect was considered, per CEQA Guidelines Section 15382).

Air Quality

The Los Angeles County General Plan EIR evaluated potential air quality and GHG emission impacts and

determined that construction emissions associated with future development would be significant. The General Plan EIR also determined that operational air quality emissions from implementation of the General Plan would be significant. The General Plan EIR also determined that GHG impacts would be significant and unavoidable.

With regard to determining the significance of the cumulative contribution from the Proposed Project, the SCAQMD recommends that any given project's potential contribution to cumulative impacts be assessed using the same significance criteria as for project-specific impacts. Therefore, individual projects that do not generate operational or construction emissions that exceed the SCAQMD's daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the air basin is in nonattainment and therefore would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable. As previously discussed under the response to question b of Section 4.3 Air Quality, the Proposed Project would not exceed the applicable SCAQMD regional thresholds for construction and operations. Therefore, the Proposed Project would not result in cumulative considerable increase in emissions.

Biological Resources

The Los Angeles County General Plan EIR determined that implementation of the General Plan would result in:

- Impacts to special-status species that would be cumulatively significant;
- Impacts to wetlands that would be less than significant; and
- Policies that do not conflict with local ordinances, LCPs, HCPs, or NCCPs, nor would it conflict on a cumulative level.

Implementation of the Proposed Project would incrementally add to cumulative impacts to sensitive biological resources in the Project vicinity. However, as a result of mitigation described in Section 4.4 Biological resources these impacts would be reduced to a less than significant level. As such, the Proposed Project would not result in a cumulatively considerable impact to biological resources.

Cultural and Paleontological Resources

The Los Angeles County General Plan EIR determined that the implementation of the General Plan, in combination with cumulative projects, would have the potential to result in a significant cumulative impact associated with historical resources.

Potential regional cumulative effects were considered for cultural and paleontological resources for which the Proposed Project was found to result in less than significant impacts with mitigation incorporated. The Proposed Project has the potential to encounter significant cultural resources, TCRs, and paleontological resources during ground-disturbing activities; however, mitigation would preclude loss of such resources, and, thus, no cumulative impacts are anticipated.

	Less Than Significant		
Potentially Significant Impact	*Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

Hazards and Hazardous Materials

With regard to hazards and hazardous materials, no regional problem is identified. In the event that the Proposed Project would result in accidental discharge associated with transport, use, storage, and/or disposal of hazardous materials during construction of the proposed facility, there are prescribed activities to be conducted in accordance with NPDES Construction General Permit that would reduce impacts associated with the discharge of contaminants to less than significant levels. As such, any contribution would be less than cumulatively considerable.

Hydrology and Water Quality

The Los Angeles County General Plan EIR determined that implementation of the General Plan and cumulative projects would be required to comply with regulatory and local requirements to address water-quality, drainage, and flood safety requirements. Therefore, significant cumulative impacts would not occur with the implementation of the General Plan.

Potential regional cumulative effects were considered for the topic of water quality for which the Proposed Project was found to result in less than significant impacts. Potential water quality impacts associated with the Proposed Project would be limited to short-term construction-related erosion/sedimentation; no long-term impacts to water quality would occur. Implementation of BMPs, in accordance with NPDES permit conditions, would effectively eliminate the potential for drainage- and water quality-related impacts; no cumulative impacts are anticipated.

Geology and Soils

The Los Angeles County General Plan EIR determined that implementation of the General Plan in combination with other cumulative projects, would not contribute to a potentially significant cumulative impact in regards to geology and soil impacts.

Geology/soils impacts are inherently restricted to the project area, and would not contribute to cumulative impacts associated with other planned or proposed development. Therefore, it is not necessary to address this issue on a cumulative scale.

Greenhouse Gas Emissions

Climate change is a global phenomenon that is cumulative by nature, as it is the result of combined worldwide contributions of GHGs to the atmosphere over many years. The Los Angeles County General Plan EIR determined that implementation of the General Plan would result in GHG emissions impacts that would be significant and unavoidable. The CCAP would ensure that GHG emissions from buildout of the General Plan would be minimized. However, additional statewide measures would be necessary to reduce GHG emissions under General Plan implementation to meet the long-term GHG reduction goals under Executive Order S-03-05, which identified a goal to reduce GHG emissions to 80 percent of 1990 levels by 2050.

In accordance with the OPR, the County of Los Angeles' CCAP (2015) includes an inventory of GHG emissions and measures for reducing future emissions to achieve a specific reduction target. The Proposed

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

Project is consistent with the GHG inventory and forecast in the CCAP. The Proposed Project is meeting its requirements to comply with GHG reduction goals.

Noise

The Los Angeles County General Plan EIR determined that cumulative projects in the Los Angeles County region would have the potential to result in a cumulative noise impact if they would, in combination with regional growth in the immediate area, create excessive community noise levels.

As shown in Section 4.13 Noise of this Initial Study, all Proposed Project related noise impacts would be less than significant; therefore, excessive community noise levels would not be created. Furthermore, the Proposed Project is continuing an existing land use with no projected growth in vehicles or people visiting the site and no increase in the number of horse stall. As such, operational noise generated at the project site is expected to be similar to existing conditions.

Transportation/Traffic

The Los Angeles County General Plan EIR determined that implementation of the General Plan could result in cumulatively significant traffic impacts if regional traffic programs are not implemented by responsible agencies.

As discussed in Section 4.17, the Proposed Project would result in nominal, short-term traffic impacts during construction. The Proposed Project is continuing an existing land use with no projected growth in vehicles or people visiting the site and no increase in the number of horse stall. As such, operational traffic generated by the Proposed Project is expected to be similar to existing conditions. Therefore, the Proposed Project is not anticipated to contribute to cumulative traffic impacts within Los Angeles County.

Utilities and Service Systems

The Los Angeles County General Plan EIR determined that implementation of the General Plan would not result in significant cumulative impact to wastewater treatment capacity, water supplies, water treatment, landfill capacity, or energy supplies (electricity, natural gas).

The Proposed Project would not induce population growth and thereby would not, directly or indirectly, contribute to cumulative impacts to utilities and public services. Furthermore, the Proposed Project is continuing an existing land use and would not increase the need for wastewater treatment capacity, water supplies, water treatment, landfill capacity, or energy supplies because the refurbished equestrian center would have the same capacity of the existing equestrian center.

For these reasons, impacts associated with cumulative effects would be **less than significant**.

d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*

The Proposed Project would not consist of any use or any activities that would negatively affect any persons in the vicinity. In addition, all resource topics associated with the Proposed Project have been analyzed in accordance with State CEQA Guidelines, and found to pose no impact, less than significant impact, or less than significant impact with mitigation. Consequently, the Proposed Project would not result in any environmental effects that would cause substantial adverse effects on human beings directly or indirectly. **No impact would occur**.

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SECTION 6.0 List of Appendices

Appendix A – Air Quality Model Data Outputs

Appendix B – Roadway Construction Noise Model Outputs

Appendix C – Flood Map

Appendix D – AB 52 Consultation Letters

Appendix E – Geotechnical Investigation

Appendix F – Cultural Resources Survey Report

Appendix A – Air Quality Model Data Outputs

Whittier Narrows Equestrian Center

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.24	1000sqft	0.01	240.00	0
Unrefrigerated Warehouse-No Rail	2.40	1000sqft	0.06	2,400.00	0
Other Non-Asphalt Surfaces	18.72	1000sqft	0.43	18,718.00	0
Other Non-Asphalt Surfaces	11.46	Acre	11.46	499,197.60	0
Arena	25.00	1000sqft	8.04	25,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Whittier Narrows Equestrian Center - Los Angeles-South Coast County, Summer

Project Characteristics -

Land Use -

Construction Phase - Adjusted per Data, Equipment, and Time Estimate document.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Adjusted per Data, Equipment, and Time Estimate document.

Off-road Equipment - Adjusted per Data, Equipment, and Time Estimate document.

Off-road Equipment - Adjusted per Data, Equipment, and Time Estimate document.

Off-road Equipment -

Demolition -

Grading -

Vehicle Trips - Per Project Description, no additional vehicular trips over existing conditions.

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403, reductions per SCAQMD CEQA Handbook.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	300.00	282.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	30.00	21.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	10.00	22.00
tblLandUse	LandUseSquareFeet	18,720.00	18,718.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblVehicleTrips	ST_TR	10.71	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	10.71	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	10.71	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	1.68	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.4249	49.3984	30.9383	0.0781	18.2675	2.3921	20.6596	9.9840	2.2007	12.1848	0.0000	7,850.6924	7,850.6924	2.1820	0.0000	7,872.8364
2020	83.4010	34.0852	29.3556	0.0771	3.1295	1.4971	4.3125	0.8429	1.3862	1.9556	0.0000	7,711.8813	7,711.8813	1.5569	0.0000	7,733.3369
Maximum	**83.4010**	**49.3984**	**30.9383**	**0.0781**	**18.2675**	**2.3921**	**20.6596**	**9.9840**	**2.2007**	**12.1848**	**0.0000**	**7,850.6924**	**7,850.6924**	**2.1820**	**0.0000**	**7,872.8364**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.4249	49.3984	30.9383	0.0781	7.0416	2.3921	9.4337	3.8347	2.2007	6.0354	0.0000	7,850.6924	7,850.6924	2.1820	0.0000	7,872.8364
2020	83.4010	34.0852	29.3556	0.0771	2.0770	1.4971	3.2600	0.5845	1.3862	1.6972	0.0000	7,711.8813	7,711.8813	1.5569	0.0000	7,733.3369
Maximum	**83.4010**	**49.3984**	**30.9383**	**0.0781**	**7.0416**	**2.3921**	**9.4337**	**3.8347**	**2.2007**	**6.0354**	**0.0000**	**7,850.6924**	**7,850.6924**	**2.1820**	**0.0000**	**7,872.8364**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**57.38**	**0.00**	**49.17**	**59.18**	**0.00**	**45.32**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8409	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0135
Energy	0.0135	0.1228	0.1031	7.4000e-004		9.3300e-003	9.3300e-003		9.3300e-003	9.3300e-003		147.3284	147.3284	2.8200e-003	2.7000e-003	148.2039
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.8544**	**0.1228**	**0.1091**	**7.4000e-004**	**0.0000**	**9.3500e-003**	**9.3500e-003**	**0.0000**	**9.3500e-003**	**9.3500e-003**		**147.3411**	**147.3411**	**2.8500e-003**	**2.7000e-003**	**148.2174**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8409	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0135
Energy	0.0135	0.1228	0.1031	7.4000e-004		9.3300e-003	9.3300e-003		9.3300e-003	9.3300e-003		147.3284	147.3284	2.8200e-003	2.7000e-003	148.2039
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.8544**	**0.1228**	**0.1091**	**7.4000e-004**	**0.0000**	**9.3500e-003**	**9.3500e-003**	**0.0000**	**9.3500e-003**	**9.3500e-003**		**147.3411**	**147.3411**	**2.8500e-003**	**2.7000e-003**	**148.2174**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2019	7/31/2019	5	43	
2	Site Preparation	Site Preparation	8/1/2019	8/31/2019	5	22	
3	Grading	Grading	9/1/2019	9/30/2019	5	21	
4	Building Construction	Building Construction	10/1/2019	10/28/2020	5	282	
5	Paving	Paving	11/1/2020	12/25/2020	5	40	
6	Architectural Coating	Architectural Coating	12/1/2020	12/7/2020	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 31.5

Acres of Paving: 11.89

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 41,460; Non-Residential Outdoor: 13,820; Striped Parking Area: 31,075 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Scrapers	1	8.00	367	0.48

Demolition	Skid Steer Loaders	1	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Cranes	1	8.00	231	0.29
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Off-Highway Tractors	1	8.00	124	0.44
Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Excavators	1	8.00	158	0.38
Paving	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Scrapers	1	8.00	367	0.48
Paving	Surfacing Equipment	1	8.00	263	0.30
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	0.00	263.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	229.00	89.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	46.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3260	0.0000	1.3260	0.2008	0.0000	0.2008			0.0000			0.0000
Off-Road	1.3827	16.3778	11.7543	0.0203		0.7137	0.7137		0.6566	0.6566		2,011.9690	2,011.9690	0.6366		2,027.8832
Total	**1.3827**	**16.3778**	**11.7543**	**0.0203**	**1.3260**	**0.7137**	**2.0397**	**0.2008**	**0.6566**	**0.8573**		**2,011.9690**	**2,011.9690**	**0.6366**		**2,027.8832**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0575	1.8733	0.3994	4.8900e-003	0.1069	6.8700e-003	0.1138	0.0293	6.5800e-003	0.0359		528.7595	528.7595	0.0364		529.6699
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196
Total	**0.0974**	**1.9027**	**0.7851**	**5.8600e-003**	**0.1964**	**7.6400e-003**	**0.2040**	**0.0530**	**7.2900e-003**	**0.0603**		**625.7957**	**625.7957**	**0.0398**		**626.7895**

3.2 Demolition - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5072	0.0000	0.5072	0.0768	0.0000	0.0768			0.0000			0.0000
Off-Road	1.3827	16.3778	11.7543	0.0203		0.7137	0.7137		0.6566	0.6566	0.0000	2,011.9690	2,011.9690	0.6366		2,027.8832
Total	**1.3827**	**16.3778**	**11.7543**	**0.0203**	**0.5072**	**0.7137**	**1.2209**	**0.0768**	**0.6566**	**0.7334**	**0.0000**	**2,011.9690**	**2,011.9690**	**0.6366**		**2,027.8832**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0575	1.8733	0.3994	4.8900e-003	0.0746	6.8700e-003	0.0815	0.0214	6.5800e-003	0.0280		528.7595	528.7595	0.0364		529.6699
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0400	0.0294	0.3857	9.7000e-004	0.0583	7.7000e-004	0.0591	0.0161	7.1000e-004	0.0168		97.0362	97.0362	3.3300e-003		97.1196
Total	**0.0974**	**1.9027**	**0.7851**	**5.8600e-003**	**0.1329**	**7.6400e-003**	**0.1406**	**0.0375**	**7.2900e-003**	**0.0447**		**625.7957**	**625.7957**	**0.0398**		**626.7895**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		218.3315	218.3315	7.5000e-003		218.5190
Total	**0.0899**	**0.0661**	**0.8679**	**2.1900e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**218.3315**	**218.3315**	**7.5000e-003**		**218.5190**

3.3 Site Preparation - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.9103	0.0000	6.9103	3.7985	0.0000	3.7985			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**6.9103**	**2.3904**	**9.3007**	**3.7985**	**2.1991**	**5.9976**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0899	0.0661	0.8679	2.1900e-003	0.1312	1.7300e-003	0.1330	0.0362	1.6000e-003	0.0378		218.3315	218.3315	7.5000e-003		218.5190
Total	**0.0899**	**0.0661**	**0.8679**	**2.1900e-003**	**0.1312**	**1.7300e-003**	**0.1330**	**0.0362**	**1.6000e-003**	**0.0378**		**218.3315**	**218.3315**	**7.5000e-003**		**218.5190**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	4.2207	49.3139	28.5984	0.0694		1.9377	1.9377		1.7827	1.7827		6,866.3092	6,866.3092	2.1724		6,920.6199
Total	**4.2207**	**49.3139**	**28.5984**	**0.0694**	**1.5908**	**1.9377**	**3.5285**	**0.1718**	**1.7827**	**1.9545**		**6,866.3092**	**6,866.3092**	**2.1724**		**6,920.6199**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1149	0.0845	1.1090	2.8000e-003	0.2571	2.2200e-003	0.2593	0.0682	2.0400e-003	0.0702		278.9792	278.9792	9.5800e-003		279.2187
Total	**0.1149**	**0.0845**	**1.1090**	**2.8000e-003**	**0.2571**	**2.2200e-003**	**0.2593**	**0.0682**	**2.0400e-003**	**0.0702**		**278.9792**	**278.9792**	**9.5800e-003**		**279.2187**

3.4 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6085	0.0000	0.6085	0.0657	0.0000	0.0657			0.0000			0.0000
Off-Road	4.2207	49.3139	28.5984	0.0694		1.9377	1.9377		1.7827	1.7827	0.0000	6,866.3092	6,866.3092	2.1724		6,920.6199
Total	**4.2207**	**49.3139**	**28.5984**	**0.0694**	**0.6085**	**1.9377**	**2.5462**	**0.0657**	**1.7827**	**1.8484**	**0.0000**	**6,866.3092**	**6,866.3092**	**2.1724**		**6,920.6199**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1149	0.0845	1.1090	2.8000e-003	0.1677	2.2200e-003	0.1699	0.0462	2.0400e-003	0.0483		278.9792	278.9792	9.5800e-003		279.2187
Total	**0.1149**	**0.0845**	**1.1090**	**2.8000e-003**	**0.1677**	**2.2200e-003**	**0.1699**	**0.0462**	**2.0400e-003**	**0.0483**		**278.9792**	**278.9792**	**9.5800e-003**		**279.2187**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3698	10.2999	2.7330	0.0233	0.5698	0.0657	0.6354	0.1640	0.0628	0.2269		2,481.4501	2,481.4501	0.1590		2,485.4256
Worker	1.1440	0.8408	11.0416	0.0279	2.5597	0.0221	2.5818	0.6788	0.0203	0.6992		2,777.6621	2,777.6621	0.0954		2,780.0473
Total	**1.5138**	**11.1407**	**13.7746**	**0.0512**	**3.1295**	**0.0877**	**3.2172**	**0.8429**	**0.0832**	**0.9260**		**5,259.1122**	**5,259.1122**	**0.2544**		**5,265.4729**

3.5 Building Construction - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3698	10.2999	2.7330	0.0233	0.4074	0.0657	0.4731	0.1242	0.0628	0.1870		2,481.4501	2,481.4501	0.1590		2,485.4256
Worker	1.1440	0.8408	11.0416	0.0279	1.6696	0.0221	1.6916	0.4604	0.0203	0.4807		2,777.6621	2,777.6621	0.0954		2,780.0473
Total	**1.5138**	**11.1407**	**13.7746**	**0.0512**	**2.0769**	**0.0877**	**2.1647**	**0.5845**	**0.0832**	**0.6677**		**5,259.1122**	**5,259.1122**	**0.2544**		**5,265.4729**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3165	9.4672	2.4805	0.0231	0.5698	0.0446	0.6143	0.1641	0.0426	0.2067		2,465.5198	2,465.5198	0.1505		2,469.2811
Worker	1.0539	0.7497	10.0266	0.0271	2.5597	0.0214	2.5811	0.6788	0.0197	0.6986		2,693.2985	2,693.2985	0.0849		2,695.4213
Total	**1.3704**	**10.2169**	**12.5071**	**0.0501**	**3.1295**	**0.0660**	**3.1954**	**0.8429**	**0.0623**	**0.9052**		**5,158.8183**	**5,158.8183**	**0.2354**		**5,164.7025**

3.5 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3165	9.4672	2.4805	0.0231	0.4074	0.0446	0.4520	0.1242	0.0426	0.1668		2,465.5198	2,465.5198	0.1505		2,469.2811
Worker	1.0539	0.7497	10.0266	0.0271	1.6696	0.0214	1.6910	0.4604	0.0197	0.4801		2,693.2985	2,693.2985	0.0849		2,695.4213
Total	**1.3704**	**10.2169**	**12.5071**	**0.0501**	**2.0770**	**0.0660**	**2.1429**	**0.5845**	**0.0623**	**0.6469**		**5,158.8183**	**5,158.8183**	**0.2354**		**5,164.7025**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8040	32.1852	23.8429	0.0482		1.3800	1.3800		1.2696	1.2696		4,670.7922	4,670.7922	1.5106		4,708.5579
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.8040**	**32.1852**	**23.8429**	**0.0482**		**1.3800**	**1.3800**		**1.2696**	**1.2696**		**4,670.7922**	**4,670.7922**	**1.5106**		**4,708.5579**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0920	0.0655	0.8757	2.3600e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		235.2226	235.2226	7.4200e-003		235.4080
Total	**0.0920**	**0.0655**	**0.8757**	**2.3600e-003**	**0.2236**	**1.8700e-003**	**0.2254**	**0.0593**	**1.7200e-003**	**0.0610**		**235.2226**	**235.2226**	**7.4200e-003**		**235.4080**

3.6 Paving - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8040	32.1852	23.8429	0.0482		1.3800	1.3800		1.2696	1.2696	0.0000	4,670.7922	4,670.7922	1.5106		4,708.5579
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.8040**	**32.1852**	**23.8429**	**0.0482**		**1.3800**	**1.3800**		**1.2696**	**1.2696**	**0.0000**	**4,670.7922**	**4,670.7922**	**1.5106**		**4,708.5579**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0920	0.0655	0.8757	2.3600e-003	0.1458	1.8700e-003	0.1477	0.0402	1.7200e-003	0.0419		235.2226	235.2226	7.4200e-003		235.4080
Total	**0.0920**	**0.0655**	**0.8757**	**2.3600e-003**	**0.1458**	**1.8700e-003**	**0.1477**	**0.0402**	**1.7200e-003**	**0.0419**		**235.2226**	**235.2226**	**7.4200e-003**		**235.4080**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	80.0511					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**80.2933**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2117	0.1506	2.0141	5.4300e-003	0.5142	4.3000e-003	0.5185	0.1364	3.9600e-003	0.1403		541.0119	541.0119	0.0171		541.4383
Total	**0.2117**	**0.1506**	**2.0141**	**5.4300e-003**	**0.5142**	**4.3000e-003**	**0.5185**	**0.1364**	**3.9600e-003**	**0.1403**		**541.0119**	**541.0119**	**0.0171**		**541.4383**

3.7 Architectural Coating - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	80.0511					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**80.2933**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2117	0.1506	2.0141	5.4300e-003	0.3354	4.3000e-003	0.3397	0.0925	3.9600e-003	0.0964		541.0119	541.0119	0.0171		541.4383
Total	**0.2117**	**0.1506**	**2.0141**	**5.4300e-003**	**0.3354**	**4.3000e-003**	**0.3397**	**0.0925**	**3.9600e-003**	**0.0964**		**541.0119**	**541.0119**	**0.0171**		**541.4383**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Arena	16.60	8.40	6.90	0.00	81.00	19.00	66	28	6
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Arena	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
General Office Building	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Other Non-Asphalt Surfaces	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Unrefrigerated Warehouse-No Rail	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0135	0.1228	0.1031	7.4000e-004		9.3300e-003	9.3300e-003		9.3300e-003	9.3300e-003		147.3284	147.3284	2.8200e-003	2.7000e-003	148.2039
NaturalGas Unmitigated	0.0135	0.1228	0.1031	7.4000e-004		9.3300e-003	9.3300e-003		9.3300e-003	9.3300e-003		147.3284	147.3284	2.8200e-003	2.7000e-003	148.2039

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Arena	1239.73	0.0134	0.1215	0.1021	7.3000e-004		9.2400e-003	9.2400e-003		9.2400e-003	9.2400e-003		145.8501	145.8501	2.8000e-003	2.6700e-003	146.7168
General Office Building	6.84493	7.0000e-005	6.7000e-004	5.6000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.8053	0.8053	2.0000e-005	1.0000e-005	0.8101
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	5.72055	6.0000e-005	5.6000e-004	4.7000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.6730	0.6730	1.0000e-005	1.0000e-005	0.6770
Total		**0.0135**	**0.1228**	**0.1031**	**7.3000e-004**		**9.3300e-003**	**9.3300e-003**		**9.3300e-003**	**9.3300e-003**		**147.3284**	**147.3284**	**2.8300e-003**	**2.6900e-003**	**148.2039**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Arena	1.23973	0.0134	0.1215	0.1021	7.3000e-004		9.2400e-003	9.2400e-003		9.2400e-003	9.2400e-003		145.8501	145.8501	2.8000e-003	2.6700e-003	146.7168
General Office Building	0.00684493	7.0000e-005	6.7000e-004	5.6000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.8053	0.8053	2.0000e-005	1.0000e-005	0.8101
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.00572055	6.0000e-005	5.6000e-004	4.7000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.6730	0.6730	1.0000e-005	1.0000e-005	0.6770
Total		**0.0135**	**0.1228**	**0.1031**	**7.3000e-004**		**9.3300e-003**	**9.3300e-003**		**9.3300e-003**	**9.3300e-003**		**147.3284**	**147.3284**	**2.8300e-003**	**2.6900e-003**	**148.2039**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8409	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0135
Unmitigated	0.8409	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0135

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1097					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.5000e-004	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0135
Total	**0.8409**	**5.0000e-005**	**5.9300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0127**	**0.0127**	**3.0000e-005**		**0.0135**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1097					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.5000e-004	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0135
Total	**0.8409**	**5.0000e-005**	**5.9300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0127**	**0.0127**	**3.0000e-005**		**0.0135**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Whittier Narrows Equestrian Center

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.24	1000sqft	0.01	240.00	0
Unrefrigerated Warehouse-No Rail	2.40	1000sqft	0.06	2,400.00	0
Other Non-Asphalt Surfaces	18.72	1000sqft	0.43	18,718.00	0
Other Non-Asphalt Surfaces	11.46	Acre	11.46	499,197.60	0
Arena	25.00	1000sqft	8.04	25,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Whittier Narrows Equestrian Center - Los Angeles-South Coast County, Winter

Project Characteristics -

Land Use -

Construction Phase - Adjusted per Data, Equipment, and Time Estimate document.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Adjusted per Data, Equipment, and Time Estimate document.

Off-road Equipment - Adjusted per Data, Equipment, and Time Estimate document.

Off-road Equipment - Adjusted per Data, Equipment, and Time Estimate document.

Off-road Equipment -

Demolition -

Grading -

Vehicle Trips - Per Project Description, no additional vehicular trips over existing conditions.

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403, reductions per SCAQMD CEQA Handbook.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	300.00	282.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	30.00	21.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	10.00	22.00
tblLandUse	LandUseSquareFeet	18,720.00	18,718.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblVehicleTrips	ST_TR	10.71	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	10.71	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	10.71	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	1.68	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.4347	49.4075	30.3089	0.0758	18.2675	2.3921	20.6596	9.9840	2.2007	12.1848	0.0000	7,621.4260	7,621.4260	2.1815	0.0000	7,643.6989
2020	83.4346	34.1083	28.7674	0.0748	3.1295	1.4971	4.3132	0.8429	1.3862	1.9562	0.0000	7,487.1524	7,487.1524	1.5555	0.0000	7,508.7311
Maximum	**83.4346**	**49.4075**	**30.3089**	**0.0758**	**18.2675**	**2.3921**	**20.6596**	**9.9840**	**2.2007**	**12.1848**	**0.0000**	**7,621.4260**	**7,621.4260**	**2.1815**	**0.0000**	**7,643.6989**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.4347	49.4075	30.3089	0.0758	7.0416	2.3921	9.4337	3.8347	2.2007	6.0354	0.0000	7,621.4260	7,621.4260	2.1815	0.0000	7,643.6989
2020	83.4346	34.1083	28.7674	0.0748	2.0770	1.4971	3.2607	0.5845	1.3862	1.6979	0.0000	7,487.1524	7,487.1524	1.5555	0.0000	7,508.7311
Maximum	**83.4346**	**49.4075**	**30.3089**	**0.0758**	**7.0416**	**2.3921**	**9.4337**	**3.8347**	**2.2007**	**6.0354**	**0.0000**	**7,621.4260**	**7,621.4260**	**2.1815**	**0.0000**	**7,643.6989**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**57.38**	**0.00**	**49.17**	**59.18**	**0.00**	**45.31**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8409	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0135
Energy	0.0135	0.1228	0.1031	7.4000e-004		9.3300e-003	9.3300e-003		9.3300e-003	9.3300e-003		147.3284	147.3284	2.8200e-003	2.7000e-003	148.2039
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.8544**	**0.1228**	**0.1091**	**7.4000e-004**	**0.0000**	**9.3500e-003**	**9.3500e-003**	**0.0000**	**9.3500e-003**	**9.3500e-003**		**147.3411**	**147.3411**	**2.8500e-003**	**2.7000e-003**	**148.2174**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8409	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0135
Energy	0.0135	0.1228	0.1031	7.4000e-004		9.3300e-003	9.3300e-003		9.3300e-003	9.3300e-003		147.3284	147.3284	2.8200e-003	2.7000e-003	148.2039
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.8544**	**0.1228**	**0.1091**	**7.4000e-004**	**0.0000**	**9.3500e-003**	**9.3500e-003**	**0.0000**	**9.3500e-003**	**9.3500e-003**		**147.3411**	**147.3411**	**2.8500e-003**	**2.7000e-003**	**148.2174**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2019	7/31/2019	5	43	
2	Site Preparation	Site Preparation	8/1/2019	8/31/2019	5	22	
3	Grading	Grading	9/1/2019	9/30/2019	5	21	
4	Building Construction	Building Construction	10/1/2019	10/28/2020	5	282	
5	Paving	Paving	11/1/2020	12/25/2020	5	40	
6	Architectural Coating	Architectural Coating	12/1/2020	12/7/2020	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 31.5

Acres of Paving: 11.89

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 41,460; Non-Residential Outdoor: 13,820; Striped Parking Area: 31,075 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Scrapers	1	8.00	367	0.48

Demolition	Skid Steer Loaders	1	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Cranes	1	8.00	231	0.29
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Off-Highway Tractors	1	8.00	124	0.44
Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Excavators	1	8.00	158	0.38
Paving	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Scrapers	1	8.00	367	0.48
Paving	Surfacing Equipment	1	8.00	263	0.30
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	0.00	263.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	229.00	89.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	46.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3260	0.0000	1.3260	0.2008	0.0000	0.2008			0.0000			0.0000
Off-Road	1.3827	16.3778	11.7543	0.0203		0.7137	0.7137		0.6566	0.6566		2,011.9690	2,011.9690	0.6366		2,027.8832
Total	**1.3827**	**16.3778**	**11.7543**	**0.0203**	**1.3260**	**0.7137**	**2.0397**	**0.2008**	**0.6566**	**0.8573**		**2,011.9690**	**2,011.9690**	**0.6366**		**2,027.8832**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0589	1.8983	0.4264	4.8000e-003	0.1069	7.0000e-003	0.1139	0.0293	6.7000e-003	0.0360		519.7918	519.7918	0.0378		520.7369
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491
Total	**0.1032**	**1.9308**	**0.7804**	**5.7200e-003**	**0.1964**	**7.7700e-003**	**0.2041**	**0.0530**	**7.4100e-003**	**0.0604**		**611.1623**	**611.1623**	**0.0409**		**612.1859**

3.2 Demolition - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5072	0.0000	0.5072	0.0768	0.0000	0.0768			0.0000			0.0000
Off-Road	1.3827	16.3778	11.7543	0.0203		0.7137	0.7137		0.6566	0.6566	0.0000	2,011.9690	2,011.9690	0.6366		2,027.8832
Total	**1.3827**	**16.3778**	**11.7543**	**0.0203**	**0.5072**	**0.7137**	**1.2209**	**0.0768**	**0.6566**	**0.7334**	**0.0000**	**2,011.9690**	**2,011.9690**	**0.6366**		**2,027.8832**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0589	1.8983	0.4264	4.8000e-003	0.0746	7.0000e-003	0.0816	0.0214	6.7000e-003	0.0281		519.7918	519.7918	0.0378		520.7369
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0443	0.0325	0.3540	9.2000e-004	0.0583	7.7000e-004	0.0591	0.0161	7.1000e-004	0.0168		91.3705	91.3705	3.1400e-003		91.4491
Total	**0.1032**	**1.9308**	**0.7804**	**5.7200e-003**	**0.1329**	**7.7700e-003**	**0.1407**	**0.0375**	**7.4100e-003**	**0.0449**		**611.1623**	**611.1623**	**0.0409**		**612.1859**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		205.5836	205.5836	7.0700e-003		205.7604
Total	**0.0997**	**0.0732**	**0.7965**	**2.0700e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**205.5836**	**205.5836**	**7.0700e-003**		**205.7604**

3.3 Site Preparation - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.9103	0.0000	6.9103	3.7985	0.0000	3.7985			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**6.9103**	**2.3904**	**9.3007**	**3.7985**	**2.1991**	**5.9976**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0997	0.0732	0.7965	2.0700e-003	0.1312	1.7300e-003	0.1330	0.0362	1.6000e-003	0.0378		205.5836	205.5836	7.0700e-003		205.7604
Total	**0.0997**	**0.0732**	**0.7965**	**2.0700e-003**	**0.1312**	**1.7300e-003**	**0.1330**	**0.0362**	**1.6000e-003**	**0.0378**		**205.5836**	**205.5836**	**7.0700e-003**		**205.7604**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	4.2207	49.3139	28.5984	0.0694		1.9377	1.9377		1.7827	1.7827		6,866.3092	6,866.3092	2.1724		6,920.6199
Total	**4.2207**	**49.3139**	**28.5984**	**0.0694**	**1.5908**	**1.9377**	**3.5285**	**0.1718**	**1.7827**	**1.9545**		**6,866.3092**	**6,866.3092**	**2.1724**		**6,920.6199**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1274	0.0935	1.0177	2.6400e-003	0.2571	2.2200e-003	0.2593	0.0682	2.0400e-003	0.0702		262.6901	262.6901	9.0400e-003		262.9160
Total	**0.1274**	**0.0935**	**1.0177**	**2.6400e-003**	**0.2571**	**2.2200e-003**	**0.2593**	**0.0682**	**2.0400e-003**	**0.0702**		**262.6901**	**262.6901**	**9.0400e-003**		**262.9160**

3.4 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6085	0.0000	0.6085	0.0657	0.0000	0.0657			0.0000			0.0000
Off-Road	4.2207	49.3139	28.5984	0.0694		1.9377	1.9377		1.7827	1.7827	0.0000	6,866.3092	6,866.3092	2.1724		6,920.6199
Total	**4.2207**	**49.3139**	**28.5984**	**0.0694**	**0.6085**	**1.9377**	**2.5462**	**0.0657**	**1.7827**	**1.8484**	**0.0000**	**6,866.3092**	**6,866.3092**	**2.1724**		**6,920.6199**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1274	0.0935	1.0177	2.6400e-003	0.1677	2.2200e-003	0.1699	0.0462	2.0400e-003	0.0483		262.6901	262.6901	9.0400e-003		262.9160
Total	**0.1274**	**0.0935**	**1.0177**	**2.6400e-003**	**0.1677**	**2.2200e-003**	**0.1699**	**0.0462**	**2.0400e-003**	**0.0483**		**262.6901**	**262.6901**	**9.0400e-003**		**262.9160**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3857	10.3137	3.0125	0.0226	0.5698	0.0667	0.6365	0.1640	0.0639	0.2279		2,414.3663	2,414.3663	0.1696		2,418.6065
Worker	1.2681	0.9311	10.1327	0.0263	2.5597	0.0221	2.5818	0.6788	0.0203	0.6992		2,615.4796	2,615.4796	0.0900		2,617.7290
Total	**1.6539**	**11.2448**	**13.1452**	**0.0489**	**3.1295**	**0.0888**	**3.2183**	**0.8429**	**0.0842**	**0.9271**		**5,029.8459**	**5,029.8459**	**0.2596**		**5,036.3354**

3.5 Building Construction - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3857	10.3137	3.0125	0.0226	0.4074	0.0667	0.4741	0.1242	0.0639	0.1880		2,414.3663	2,414.3663	0.1696		2,418.6065
Worker	1.2681	0.9311	10.1327	0.0263	1.6696	0.0221	1.6916	0.4604	0.0203	0.4807		2,615.4796	2,615.4796	0.0900		2,617.7290
Total	**1.6539**	**11.2448**	**13.1452**	**0.0489**	**2.0769**	**0.0888**	**2.1658**	**0.5845**	**0.0842**	**0.6687**		**5,029.8459**	**5,029.8459**	**0.2596**		**5,036.3354**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3309	9.4652	2.7357	0.0225	0.5698	0.0453	0.6150	0.1641	0.0433	0.2074		2,398.0967	2,398.0967	0.1604		2,402.1056
Worker	1.1702	0.8301	9.1832	0.0255	2.5597	0.0214	2.5811	0.6788	0.0197	0.6986		2,535.9927	2,535.9927	0.0799		2,537.9910
Total	**1.5012**	**10.2953**	**11.9189**	**0.0479**	**3.1295**	**0.0667**	**3.1961**	**0.8429**	**0.0630**	**0.9059**		**4,934.0894**	**4,934.0894**	**0.2403**		**4,940.0966**

3.5 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3309	9.4652	2.7357	0.0225	0.4074	0.0453	0.4527	0.1242	0.0433	0.1675		2,398.0967	2,398.0967	0.1604		2,402.1056
Worker	1.1702	0.8301	9.1832	0.0255	1.6696	0.0214	1.6910	0.4604	0.0197	0.4801		2,535.9927	2,535.9927	0.0799		2,537.9910
Total	**1.5012**	**10.2953**	**11.9189**	**0.0479**	**2.0770**	**0.0667**	**2.1436**	**0.5845**	**0.0630**	**0.6476**		**4,934.0894**	**4,934.0894**	**0.2403**		**4,940.0966**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8040	32.1852	23.8429	0.0482		1.3800	1.3800		1.2696	1.2696		4,670.7922	4,670.7922	1.5106		4,708.5579
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.8040**	**32.1852**	**23.8429**	**0.0482**		**1.3800**	**1.3800**		**1.2696**	**1.2696**		**4,670.7922**	**4,670.7922**	**1.5106**		**4,708.5579**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1022	0.0725	0.8020	2.2200e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		221.4841	221.4841	6.9800e-003		221.6586
Total	**0.1022**	**0.0725**	**0.8020**	**2.2200e-003**	**0.2236**	**1.8700e-003**	**0.2254**	**0.0593**	**1.7200e-003**	**0.0610**		**221.4841**	**221.4841**	**6.9800e-003**		**221.6586**

3.6 Paving - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8040	32.1852	23.8429	0.0482		1.3800	1.3800		1.2696	1.2696	0.0000	4,670.7922	4,670.7922	1.5106		4,708.5579
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.8040**	**32.1852**	**23.8429**	**0.0482**		**1.3800**	**1.3800**		**1.2696**	**1.2696**	**0.0000**	**4,670.7922**	**4,670.7922**	**1.5106**		**4,708.5579**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1022	0.0725	0.8020	2.2200e-003	0.1458	1.8700e-003	0.1477	0.0402	1.7200e-003	0.0419		221.4841	221.4841	6.9800e-003		221.6586
Total	**0.1022**	**0.0725**	**0.8020**	**2.2200e-003**	**0.1458**	**1.8700e-003**	**0.1477**	**0.0402**	**1.7200e-003**	**0.0419**		**221.4841**	**221.4841**	**6.9800e-003**		**221.6586**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	80.0511					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**80.2933**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2351	0.1667	1.8447	5.1100e-003	0.5142	4.3000e-003	0.5185	0.1364	3.9600e-003	0.1403		509.4134	509.4134	0.0161		509.8148
Total	**0.2351**	**0.1667**	**1.8447**	**5.1100e-003**	**0.5142**	**4.3000e-003**	**0.5185**	**0.1364**	**3.9600e-003**	**0.1403**		**509.4134**	**509.4134**	**0.0161**		**509.8148**

3.7 Architectural Coating - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	80.0511					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**80.2933**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2351	0.1667	1.8447	5.1100e-003	0.3354	4.3000e-003	0.3397	0.0925	3.9600e-003	0.0964		509.4134	509.4134	0.0161		509.8148
Total	**0.2351**	**0.1667**	**1.8447**	**5.1100e-003**	**0.3354**	**4.3000e-003**	**0.3397**	**0.0925**	**3.9600e-003**	**0.0964**		**509.4134**	**509.4134**	**0.0161**		**509.8148**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Arena	16.60	8.40	6.90	0.00	81.00	19.00	66	28	6
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Arena	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
General Office Building	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Other Non-Asphalt Surfaces	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Unrefrigerated Warehouse-No Rail	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0135	0.1228	0.1031	7.4000e-004		9.3300e-003	9.3300e-003		9.3300e-003	9.3300e-003		147.3284	147.3284	2.8200e-003	2.7000e-003	148.2039
NaturalGas Unmitigated	0.0135	0.1228	0.1031	7.4000e-004		9.3300e-003	9.3300e-003		9.3300e-003	9.3300e-003		147.3284	147.3284	2.8200e-003	2.7000e-003	148.2039

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Arena	1239.73	0.0134	0.1215	0.1021	7.3000e-004		9.2400e-003	9.2400e-003		9.2400e-003	9.2400e-003		145.8501	145.8501	2.8000e-003	2.6700e-003	146.7168
General Office Building	6.84493	7.0000e-005	6.7000e-004	5.6000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.8053	0.8053	2.0000e-005	1.0000e-005	0.8101
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	5.72055	6.0000e-005	5.6000e-004	4.7000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.6730	0.6730	1.0000e-005	1.0000e-005	0.6770
Total		**0.0135**	**0.1228**	**0.1031**	**7.3000e-004**		**9.3300e-003**	**9.3300e-003**		**9.3300e-003**	**9.3300e-003**		**147.3284**	**147.3284**	**2.8300e-003**	**2.6900e-003**	**148.2039**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Arena	1.23973	0.0134	0.1215	0.1021	7.3000e-004		9.2400e-003	9.2400e-003		9.2400e-003	9.2400e-003		145.8501	145.8501	2.8000e-003	2.6700e-003	146.7168
General Office Building	0.00684493	7.0000e-005	6.7000e-004	5.6000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.8053	0.8053	2.0000e-005	1.0000e-005	0.8101
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.00572055	6.0000e-005	5.6000e-004	4.7000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.6730	0.6730	1.0000e-005	1.0000e-005	0.6770
Total		**0.0135**	**0.1228**	**0.1031**	**7.3000e-004**		**9.3300e-003**	**9.3300e-003**		**9.3300e-003**	**9.3300e-003**		**147.3284**	**147.3284**	**2.8300e-003**	**2.6900e-003**	**148.2039**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8409	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0135
Unmitigated	0.8409	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0135

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1097					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.5000e-004	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0135
Total	**0.8409**	**5.0000e-005**	**5.9300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0127**	**0.0127**	**3.0000e-005**		**0.0135**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1097					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.5000e-004	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0135
Total	**0.8409**	**5.0000e-005**	**5.9300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0127**	**0.0127**	**3.0000e-005**		**0.0135**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Whittier Narrows Equestrian Center

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.24	1000sqft	0.01	240.00	0
Unrefrigerated Warehouse-No Rail	2.40	1000sqft	0.06	2,400.00	0
Other Non-Asphalt Surfaces	18.72	1000sqft	0.43	18,718.00	0
Other Non-Asphalt Surfaces	11.46	Acre	11.46	499,197.60	0
Arena	25.00	1000sqft	8.04	25,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Whittier Narrows Equestrian Center - Los Angeles-South Coast County, Annual

Project Characteristics -

Land Use -

Construction Phase - Adjusted per Data, Equipment, and Time Estimate document.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Adjusted per Data, Equipment, and Time Estimate document.

Off-road Equipment - Adjusted per Data, Equipment, and Time Estimate document.

Off-road Equipment - Adjusted per Data, Equipment, and Time Estimate document.

Off-road Equipment -

Demolition -

Grading -

Vehicle Trips - Per Project Description, no additional vehicular trips over existing conditions.

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403, reductions per SCAQMD CEQA Handbook.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	300.00	282.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	30.00	21.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	10.00	22.00
tblLandUse	LandUseSquareFeet	18,720.00	18,718.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblVehicleTrips	ST_TR	10.71	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	10.71	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	10.71	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	1.68	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2542	2.4895	1.8367	4.2900e-003	0.3542	0.1077	0.4619	0.1451	0.1000	0.2451	0.0000	389.5441	389.5441	0.0725	0.0000	391.3562
2020	0.6372	3.8556	3.6223	9.2000e-003	0.3372	0.1557	0.4929	0.0910	0.1459	0.2369	0.0000	832.1702	832.1702	0.1118	0.0000	834.9647
Maximum	**0.6372**	**3.8556**	**3.6223**	**9.2000e-003**	**0.3542**	**0.1557**	**0.4929**	**0.1451**	**0.1459**	**0.2451**	**0.0000**	**832.1702**	**832.1702**	**0.1118**	**0.0000**	**834.9647**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2542	2.4895	1.8367	4.2900e-003	0.1666	0.1077	0.2743	0.0648	0.1000	0.1648	0.0000	389.5438	389.5438	0.0725	0.0000	391.3559
2020	0.6372	3.8556	3.6223	9.2000e-003	0.2241	0.1557	0.3799	0.0632	0.1459	0.2091	0.0000	832.1698	832.1698	0.1118	0.0000	834.9643
Maximum	**0.6372**	**3.8556**	**3.6223**	**9.2000e-003**	**0.2241**	**0.1557**	**0.3799**	**0.0648**	**0.1459**	**0.2091**	**0.0000**	**832.1698**	**832.1698**	**0.1118**	**0.0000**	**834.9643**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**43.48**	**0.00**	**31.49**	**45.78**	**0.00**	**22.42**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2019	8-31-2019	0.9848	0.9848
2	9-1-2019	11-30-2019	1.3674	1.3674
3	12-1-2019	2-29-2020	1.1117	1.1117
4	3-1-2020	5-31-2020	1.0831	1.0831
5	6-1-2020	8-31-2020	1.0808	1.0808
6	9-1-2020	9-30-2020	0.3524	0.3524
		Highest	1.3674	1.3674

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1534	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4300e-003	1.4300e-003	0.0000	0.0000	1.5300e-003
Energy	2.4600e-003	0.0224	0.0188	1.3000e-004		1.7000e-003	1.7000e-003		1.7000e-003	1.7000e-003	0.0000	116.7850	116.7850	4.2800e-003	1.2400e-003	117.2604
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.6435	0.0000	0.6435	0.0380	0.0000	1.5942
Water						0.0000	0.0000		0.0000	0.0000	3.6062	49.6846	53.2907	0.3724	9.1700e-003	65.3345
Total	**0.1559**	**0.0224**	**0.0196**	**1.3000e-004**	**0.0000**	**1.7000e-003**	**1.7000e-003**	**0.0000**	**1.7000e-003**	**1.7000e-003**	**4.2497**	**166.4709**	**170.7206**	**0.4148**	**0.0104**	**184.1907**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1534	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4300e-003	1.4300e-003	0.0000	0.0000	1.5300e-003
Energy	2.4600e-003	0.0224	0.0188	1.3000e-004		1.7000e-003	1.7000e-003		1.7000e-003	1.7000e-003	0.0000	116.7850	116.7850	4.2800e-003	1.2400e-003	117.2604
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.6435	0.0000	0.6435	0.0380	0.0000	1.5942
Water						0.0000	0.0000		0.0000	0.0000	3.6062	49.6846	53.2907	0.3724	9.1700e-003	65.3345
Total	**0.1559**	**0.0224**	**0.0196**	**1.3000e-004**	**0.0000**	**1.7000e-003**	**1.7000e-003**	**0.0000**	**1.7000e-003**	**1.7000e-003**	**4.2497**	**166.4709**	**170.7206**	**0.4148**	**0.0104**	**184.1907**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2019	7/31/2019	5	43	
2	Site Preparation	Site Preparation	8/1/2019	8/31/2019	5	22	
3	Grading	Grading	9/1/2019	9/30/2019	5	21	
4	Building Construction	Building Construction	10/1/2019	10/28/2020	5	282	
5	Paving	Paving	11/1/2020	12/25/2020	5	40	
6	Architectural Coating	Architectural Coating	12/1/2020	12/7/2020	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 31.5

Acres of Paving: 11.89

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 41,460; Non-Residential Outdoor: 13,820; Striped Parking Area: 31,075 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Scrapers	1	8.00	367	0.48
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Cranes	1	8.00	231	0.29

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Off-Highway Tractors	1	8.00	124	0.44
Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Excavators	1	8.00	158	0.38
Paving	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Scrapers	1	8.00	367	0.48
Paving	Surfacing Equipment	1	8.00	263	0.30
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	0.00	263.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	229.00	89.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	46.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0285	0.0000	0.0285	4.3200e-003	0.0000	4.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0297	0.3521	0.2527	4.4000e-004		0.0153	0.0153		0.0141	0.0141	0.0000	39.2424	39.2424	0.0124	0.0000	39.5528
Total	**0.0297**	**0.3521**	**0.2527**	**4.4000e-004**	**0.0285**	**0.0153**	**0.0439**	**4.3200e-003**	**0.0141**	**0.0184**	**0.0000**	**39.2424**	**39.2424**	**0.0124**	**0.0000**	**39.5528**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2500e-003	0.0416	8.8400e-003	1.0000e-004	2.2600e-003	1.5000e-004	2.4100e-003	6.2000e-004	1.4000e-004	7.6000e-004	0.0000	10.2397	10.2397	7.2000e-004	0.0000	10.2578
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	7.2000e-004	7.8100e-003	2.0000e-005	1.8800e-003	2.0000e-005	1.9000e-003	5.0000e-004	2.0000e-005	5.2000e-004	0.0000	1.8118	1.8118	6.0000e-005	0.0000	1.8133
Total	**2.1100e-003**	**0.0423**	**0.0167**	**1.2000e-004**	**4.1400e-003**	**1.7000e-004**	**4.3100e-003**	**1.1200e-003**	**1.6000e-004**	**1.2800e-003**	**0.0000**	**12.0515**	**12.0515**	**7.8000e-004**	**0.0000**	**12.0711**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0109	0.0000	0.0109	1.6500e-003	0.0000	1.6500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0297	0.3521	0.2527	4.4000e-004		0.0153	0.0153		0.0141	0.0141	0.0000	39.2424	39.2424	0.0124	0.0000	39.5527
Total	**0.0297**	**0.3521**	**0.2527**	**4.4000e-004**	**0.0109**	**0.0153**	**0.0263**	**1.6500e-003**	**0.0141**	**0.0158**	**0.0000**	**39.2424**	**39.2424**	**0.0124**	**0.0000**	**39.5527**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2500e-003	0.0416	8.8400e-003	1.0000e-004	1.5800e-003	1.5000e-004	1.7300e-003	4.5000e-004	1.4000e-004	6.0000e-004	0.0000	10.2397	10.2397	7.2000e-004	0.0000	10.2578
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	7.2000e-004	7.8100e-003	2.0000e-005	1.2300e-003	2.0000e-005	1.2500e-003	3.4000e-004	2.0000e-005	3.6000e-004	0.0000	1.8118	1.8118	6.0000e-005	0.0000	1.8133
Total	**2.1100e-003**	**0.0423**	**0.0167**	**1.2000e-004**	**2.8100e-003**	**1.7000e-004**	**2.9800e-003**	**7.9000e-004**	**1.6000e-004**	**9.6000e-004**	**0.0000**	**12.0515**	**12.0515**	**7.8000e-004**	**0.0000**	**12.0711**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1987	0.0000	0.1987	0.1092	0.0000	0.1092	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0477	0.5013	0.2427	4.2000e-004		0.0263	0.0263		0.0242	0.0242	0.0000	37.5856	37.5856	0.0119	0.0000	37.8829
Total	**0.0477**	**0.5013**	**0.2427**	**4.2000e-004**	**0.1987**	**0.0263**	**0.2250**	**0.1092**	**0.0242**	**0.1334**	**0.0000**	**37.5856**	**37.5856**	**0.0119**	**0.0000**	**37.8829**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	8.3000e-004	8.9900e-003	2.0000e-005	2.1700e-003	2.0000e-005	2.1900e-003	5.8000e-004	2.0000e-005	5.9000e-004	0.0000	2.0857	2.0857	7.0000e-005	0.0000	2.0874
Total	**9.9000e-004**	**8.3000e-004**	**8.9900e-003**	**2.0000e-005**	**2.1700e-003**	**2.0000e-005**	**2.1900e-003**	**5.8000e-004**	**2.0000e-005**	**5.9000e-004**	**0.0000**	**2.0857**	**2.0857**	**7.0000e-005**	**0.0000**	**2.0874**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0760	0.0000	0.0760	0.0418	0.0000	0.0418	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0477	0.5013	0.2427	4.2000e-004		0.0263	0.0263		0.0242	0.0242	0.0000	37.5855	37.5855	0.0119	0.0000	37.8828
Total	**0.0477**	**0.5013**	**0.2427**	**4.2000e-004**	**0.0760**	**0.0263**	**0.1023**	**0.0418**	**0.0242**	**0.0660**	**0.0000**	**37.5855**	**37.5855**	**0.0119**	**0.0000**	**37.8828**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	8.3000e-004	8.9900e-003	2.0000e-005	1.4200e-003	2.0000e-005	1.4400e-003	3.9000e-004	2.0000e-005	4.1000e-004	0.0000	2.0857	2.0857	7.0000e-005	0.0000	2.0874
Total	**9.9000e-004**	**8.3000e-004**	**8.9900e-003**	**2.0000e-005**	**1.4200e-003**	**2.0000e-005**	**1.4400e-003**	**3.9000e-004**	**2.0000e-005**	**4.1000e-004**	**0.0000**	**2.0857**	**2.0857**	**7.0000e-005**	**0.0000**	**2.0874**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0167	0.0000	0.0167	1.8000e-003	0.0000	1.8000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0443	0.5178	0.3003	7.3000e-004		0.0204	0.0204		0.0187	0.0187	0.0000	65.4046	65.4046	0.0207	0.0000	65.9220
Total	**0.0443**	**0.5178**	**0.3003**	**7.3000e-004**	**0.0167**	**0.0204**	**0.0371**	**1.8000e-003**	**0.0187**	**0.0205**	**0.0000**	**65.4046**	**65.4046**	**0.0207**	**0.0000**	**65.9220**

3.4 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	1.0100e-003	0.0110	3.0000e-005	2.6500e-003	2.0000e-005	2.6700e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.5439	2.5439	9.0000e-005	0.0000	2.5460
Total	**1.2100e-003**	**1.0100e-003**	**0.0110**	**3.0000e-005**	**2.6500e-003**	**2.0000e-005**	**2.6700e-003**	**7.0000e-004**	**2.0000e-005**	**7.2000e-004**	**0.0000**	**2.5439**	**2.5439**	**9.0000e-005**	**0.0000**	**2.5460**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.3900e-003	0.0000	6.3900e-003	6.9000e-004	0.0000	6.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0443	0.5178	0.3003	7.3000e-004		0.0204	0.0204		0.0187	0.0187	0.0000	65.4045	65.4045	0.0207	0.0000	65.9219
Total	**0.0443**	**0.5178**	**0.3003**	**7.3000e-004**	**6.3900e-003**	**0.0204**	**0.0267**	**6.9000e-004**	**0.0187**	**0.0194**	**0.0000**	**65.4045**	**65.4045**	**0.0207**	**0.0000**	**65.9219**

3.4 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	1.0100e-003	0.0110	3.0000e-005	1.7300e-003	2.0000e-005	1.7500e-003	4.8000e-004	2.0000e-005	5.0000e-004	0.0000	2.5439	2.5439	9.0000e-005	0.0000	2.5460
Total	**1.2100e-003**	**1.0100e-003**	**0.0110**	**3.0000e-005**	**1.7300e-003**	**2.0000e-005**	**1.7500e-003**	**4.8000e-004**	**2.0000e-005**	**5.0000e-004**	**0.0000**	**2.5439**	**2.5439**	**9.0000e-005**	**0.0000**	**2.5460**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0779	0.6956	0.5664	8.9000e-004		0.0426	0.0426		0.0400	0.0400	0.0000	77.5844	77.5844	0.0189	0.0000	78.0569
Total	**0.0779**	**0.6956**	**0.5664**	**8.9000e-004**		**0.0426**	**0.0426**		**0.0400**	**0.0400**	**0.0000**	**77.5844**	**77.5844**	**0.0189**	**0.0000**	**78.0569**

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0124	0.3469	0.0949	7.6000e-004	0.0185	2.1800e-003	0.0207	5.3400e-003	2.0900e-003	7.4300e-003	0.0000	73.4440	73.4440	4.9000e-003	0.0000	73.5665
Worker	0.0379	0.0316	0.3431	8.8000e-004	0.0828	7.3000e-004	0.0835	0.0220	6.7000e-004	0.0227	0.0000	79.6022	79.6022	2.7400e-003	0.0000	79.6706
Total	**0.0503**	**0.3785**	**0.4380**	**1.6400e-003**	**0.1013**	**2.9100e-003**	**0.1042**	**0.0273**	**2.7600e-003**	**0.0301**	**0.0000**	**153.0462**	**153.0462**	**7.6400e-003**	**0.0000**	**153.2372**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0779	0.6956	0.5664	8.9000e-004		0.0426	0.0426		0.0400	0.0400	0.0000	77.5843	77.5843	0.0189	0.0000	78.0568
Total	**0.0779**	**0.6956**	**0.5664**	**8.9000e-004**		**0.0426**	**0.0426**		**0.0400**	**0.0400**	**0.0000**	**77.5843**	**77.5843**	**0.0189**	**0.0000**	**78.0568**

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0124	0.3469	0.0949	7.6000e-004	0.0133	2.1800e-003	0.0154	4.0500e-003	2.0900e-003	6.1400e-003	0.0000	73.4440	73.4440	4.9000e-003	0.0000	73.5665
Worker	0.0379	0.0316	0.3431	8.8000e-004	0.0541	7.3000e-004	0.0548	0.0150	6.7000e-004	0.0156	0.0000	79.6022	79.6022	2.7400e-003	0.0000	79.6706
Total	**0.0503**	**0.3785**	**0.4380**	**1.6400e-003**	**0.0674**	**2.9100e-003**	**0.0703**	**0.0190**	**2.7600e-003**	**0.0218**	**0.0000**	**153.0462**	**153.0462**	**7.6400e-003**	**0.0000**	**153.2372**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2289	2.0721	1.8196	2.9100e-003		0.1206	0.1206		0.1134	0.1134	0.0000	250.1388	250.1388	0.0610	0.0000	251.6644
Total	**0.2289**	**2.0721**	**1.8196**	**2.9100e-003**		**0.1206**	**0.1206**		**0.1134**	**0.1134**	**0.0000**	**250.1388**	**250.1388**	**0.0610**	**0.0000**	**251.6644**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0349	1.0416	0.2820	2.4700e-003	0.0605	4.8400e-003	0.0654	0.0175	4.6300e-003	0.0221	0.0000	238.7873	238.7873	0.0152	0.0000	239.1666
Worker	0.1142	0.0921	1.0181	2.8000e-003	0.2710	2.3100e-003	0.2733	0.0720	2.1300e-003	0.0741	0.0000	252.6004	252.6004	7.9600e-003	0.0000	252.7994
Total	**0.1490**	**1.1337**	**1.3000**	**5.2700e-003**	**0.3316**	**7.1500e-003**	**0.3387**	**0.0895**	**6.7600e-003**	**0.0962**	**0.0000**	**491.3877**	**491.3877**	**0.0231**	**0.0000**	**491.9660**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2289	2.0721	1.8196	2.9100e-003		0.1206	0.1206		0.1134	0.1134	0.0000	250.1385	250.1385	0.0610	0.0000	251.6641
Total	**0.2289**	**2.0721**	**1.8196**	**2.9100e-003**		**0.1206**	**0.1206**		**0.1134**	**0.1134**	**0.0000**	**250.1385**	**250.1385**	**0.0610**	**0.0000**	**251.6641**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0349	1.0416	0.2820	2.4700e-003	0.0434	4.8400e-003	0.0483	0.0133	4.6300e-003	0.0179	0.0000	238.7873	238.7873	0.0152	0.0000	239.1666
Worker	0.1142	0.0921	1.0181	2.8000e-003	0.1771	2.3100e-003	0.1794	0.0489	2.1300e-003	0.0511	0.0000	252.6004	252.6004	7.9600e-003	0.0000	252.7994
Total	**0.1490**	**1.1337**	**1.3000**	**5.2700e-003**	**0.2205**	**7.1500e-003**	**0.2276**	**0.0622**	**6.7600e-003**	**0.0690**	**0.0000**	**491.3877**	**491.3877**	**0.0231**	**0.0000**	**491.9660**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0561	0.6437	0.4769	9.6000e-004		0.0276	0.0276		0.0254	0.0254	0.0000	84.7454	84.7454	0.0274	0.0000	85.4306
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0561**	**0.6437**	**0.4769**	**9.6000e-004**		**0.0276**	**0.0276**		**0.0254**	**0.0254**	**0.0000**	**84.7454**	**84.7454**	**0.0274**	**0.0000**	**85.4306**

3.6 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8500e-003	1.4900e-003	0.0165	5.0000e-005	4.3800e-003	4.0000e-005	4.4200e-003	1.1600e-003	3.0000e-005	1.2000e-003	0.0000	4.0854	4.0854	1.3000e-004	0.0000	4.0886
Total	**1.8500e-003**	**1.4900e-003**	**0.0165**	**5.0000e-005**	**4.3800e-003**	**4.0000e-005**	**4.4200e-003**	**1.1600e-003**	**3.0000e-005**	**1.2000e-003**	**0.0000**	**4.0854**	**4.0854**	**1.3000e-004**	**0.0000**	**4.0886**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0561	0.6437	0.4769	9.6000e-004		0.0276	0.0276		0.0254	0.0254	0.0000	84.7453	84.7453	0.0274	0.0000	85.4305
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0561**	**0.6437**	**0.4769**	**9.6000e-004**		**0.0276**	**0.0276**		**0.0254**	**0.0254**	**0.0000**	**84.7453**	**84.7453**	**0.0274**	**0.0000**	**85.4305**

3.6 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8500e-003	1.4900e-003	0.0165	5.0000e-005	2.8600e-003	4.0000e-005	2.9000e-003	7.9000e-004	3.0000e-005	8.3000e-004	0.0000	4.0854	4.0854	1.3000e-004	0.0000	4.0886
Total	**1.8500e-003**	**1.4900e-003**	**0.0165**	**5.0000e-005**	**2.8600e-003**	**4.0000e-005**	**2.9000e-003**	**7.9000e-004**	**3.0000e-005**	**8.3000e-004**	**0.0000**	**4.0854**	**4.0854**	**1.3000e-004**	**0.0000**	**4.0886**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2001					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-004	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6396
Total	**0.2007**	**4.2100e-003**	**4.5800e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**5.0000e-005**	**0.0000**	**0.6396**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-004	4.3000e-004	4.7300e-003	1.0000e-005	1.2600e-003	1.0000e-005	1.2700e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1746	1.1746	4.0000e-005	0.0000	1.1755
Total	**5.3000e-004**	**4.3000e-004**	**4.7300e-003**	**1.0000e-005**	**1.2600e-003**	**1.0000e-005**	**1.2700e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.1746**	**1.1746**	**4.0000e-005**	**0.0000**	**1.1755**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2001					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-004	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6396
Total	**0.2007**	**4.2100e-003**	**4.5800e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**5.0000e-005**	**0.0000**	**0.6396**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-004	4.3000e-004	4.7300e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	1.1746	1.1746	4.0000e-005	0.0000	1.1755
Total	**5.3000e-004**	**4.3000e-004**	**4.7300e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.3000e-004**	**1.0000e-005**	**2.4000e-004**	**0.0000**	**1.1746**	**1.1746**	**4.0000e-005**	**0.0000**	**1.1755**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Arena	16.60	8.40	6.90	0.00	81.00	19.00	66	28	6
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Arena	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
General Office Building	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Other Non-Asphalt Surfaces	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Unrefrigerated Warehouse-No Rail	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	92.3931	92.3931	3.8100e-003	7.9000e-004	92.7236
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	92.3931	92.3931	3.8100e-003	7.9000e-004	92.7236
NaturalGas Mitigated	2.4600e-003	0.0224	0.0188	1.3000e-004		1.7000e-003	1.7000e-003		1.7000e-003	1.7000e-003	0.0000	24.3919	24.3919	4.7000e-004	4.5000e-004	24.5368
NaturalGas Unmitigated	2.4600e-003	0.0224	0.0188	1.3000e-004		1.7000e-003	1.7000e-003		1.7000e-003	1.7000e-003	0.0000	24.3919	24.3919	4.7000e-004	4.5000e-004	24.5368

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	452500	2.4400e-003	0.0222	0.0186	1.3000e-004		1.6900e-003	1.6900e-003		1.6900e-003	1.6900e-003	0.0000	24.1471	24.1471	4.6000e-004	4.4000e-004	24.2906
General Office Building	2498.4	1.0000e-005	1.2000e-004	1.0000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1333	0.1333	0.0000	0.0000	0.1341
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2088	1.0000e-005	1.0000e-004	9.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1114	0.1114	0.0000	0.0000	0.1121
Total		**2.4600e-003**	**0.0224**	**0.0188**	**1.3000e-004**		**1.7100e-003**	**1.7100e-003**		**1.7100e-003**	**1.7100e-003**	**0.0000**	**24.3919**	**24.3919**	**4.6000e-004**	**4.4000e-004**	**24.5368**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	452500	2.4400e-003	0.0222	0.0186	1.3000e-004		1.6900e-003	1.6900e-003		1.6900e-003	1.6900e-003	0.0000	24.1471	24.1471	4.6000e-004	4.4000e-004	24.2906
General Office Building	2498.4	1.0000e-005	1.2000e-004	1.0000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1333	0.1333	0.0000	0.0000	0.1341
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2088	1.0000e-005	1.0000e-004	9.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1114	0.1114	0.0000	0.0000	0.1121
Total		**2.4600e-003**	**0.0224**	**0.0188**	**1.3000e-004**		**1.7100e-003**	**1.7100e-003**		**1.7100e-003**	**1.7100e-003**	**0.0000**	**24.3919**	**24.3919**	**4.6000e-004**	**4.4000e-004**	**24.5368**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	277500	88.4175	3.6500e-003	7.6000e-004	88.7338
General Office Building	3117.6	0.9933	4.0000e-005	1.0000e-005	0.9969
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	9360	2.9823	1.2000e-004	3.0000e-005	2.9930
Total		**92.3931**	**3.8100e-003**	**8.0000e-004**	**92.7236**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	277500	88.4175	3.6500e-003	7.6000e-004	88.7338
General Office Building	3117.6	0.9933	4.0000e-005	1.0000e-005	0.9969
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	9360	2.9823	1.2000e-004	3.0000e-005	2.9930
Total		**92.3931**	**3.8100e-003**	**8.0000e-004**	**92.7236**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1534	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4300e-003	1.4300e-003	0.0000	0.0000	1.5300e-003
Unmitigated	0.1534	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4300e-003	1.4300e-003	0.0000	0.0000	1.5300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0200					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1334					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4300e-003	1.4300e-003	0.0000	0.0000	1.5300e-003
Total	**0.1534**	**1.0000e-005**	**7.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4300e-003**	**1.4300e-003**	**0.0000**	**0.0000**	**1.5300e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0200					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1334					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4300e-003	1.4300e-003	0.0000	0.0000	1.5300e-003
Total	**0.1534**	**1.0000e-005**	**7.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4300e-003**	**1.4300e-003**	**0.0000**	**0.0000**	**1.5300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	53.2907	0.3724	9.1700e-003	65.3345
Unmitigated	53.2907	0.3724	9.1700e-003	65.3345

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	10.7693 / 0.687399	50.5291	0.3529	8.6900e-003	61.9397
General Office Building	0.0426561 / 0.0261441	0.2831	1.4000e-003	4.0000e-005	0.3285
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.555 / 0	2.4786	0.0182	4.5000e-004	3.0663
Total		**53.2907**	**0.3724**	**9.1800e-003**	**65.3345**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	10.7693 / 0.687399	50.5291	0.3529	8.6900e-003	61.9397
General Office Building	0.0426561 / 0.0261441	0.2831	1.4000e-003	4.0000e-005	0.3285
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.555 / 0	2.4786	0.0182	4.5000e-004	3.0663
Total		**53.2907**	**0.3724**	**9.1800e-003**	**65.3345**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.6435	0.0380	0.0000	1.5942
Unmitigated	0.6435	0.0380	0.0000	1.5942

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0.69	0.1401	8.2800e-003	0.0000	0.3470
General Office Building	0.22	0.0447	2.6400e-003	0.0000	0.1106
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2.26	0.4588	0.0271	0.0000	1.1366
Total		**0.6435**	**0.0380**	**0.0000**	**1.5942**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0.69	0.1401	8.2800e-003	0.0000	0.3470
General Office Building	0.22	0.0447	2.6400e-003	0.0000	0.1106
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2.26	0.4588	0.0271	0.0000	1.1366
Total		**0.6435**	**0.0380**	**0.0000**	**1.5942**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B – Roadway Construction Noise Model Outputs

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/7/2018
Case Description: Whittier Narrows: Demolition- mobile

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Commercia	Commercia	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Scraper	No	40		83.6	500	0
Front End Loader	No	40		79.1	500	0
Tractor	No	40	84		500	0

	Calculated (dBA)		Results		Noise Limits (dBA)		
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Scraper	63.6	59.6	N/A	N/A	N/A	N/A	N/A
Front End Loader	59.1	55.1	N/A	N/A	N/A	N/A	N/A
Tractor	64	60	N/A	N/A	N/A	N/A	N/A
Total	64	63.5	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		Noise Limit Exceedance (dBA)				
	Day		Evening		Night	
Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/7/2018
Case Description: Whittier Narrows: Site Preparation- mobile

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Commercia	Commercia	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Tractor	No	40	84		500	0
Tractor	No	40	84		500	0
Tractor	No	40	84		500	0
Tractor	No	40	84		500	0
Dozer	No	40		81.7	500	0
Dozer	No	40		81.7	500	0
Dozer	No	40		81.7	500	0

	Calculated (dBA)		Results				
			Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Tractor	64	60	N/A	N/A	N/A	N/A	N/A
Tractor	64	60	N/A	N/A	N/A	N/A	N/A
Tractor	64	60	N/A	N/A	N/A	N/A	N/A
Tractor	64	60	N/A	N/A	N/A	N/A	N/A
Dozer	61.7	57.7	N/A	N/A	N/A	N/A	N/A
Dozer	61.7	57.7	N/A	N/A	N/A	N/A	N/A
Dozer	61.7	57.7	N/A	N/A	N/A	N/A	N/A
Total	64	67.6	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Noise Limit Exceedance (dBA)						
	Day		Evening		Night	
Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/7/2018
Case Description: Whittier Narrows: Grading- mobile

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Commercia	Commercia	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	500	0
Excavator	No	40		80.7	500	0
Grader	No	40	85		500	0
Tractor	No	40	84		500	0
Flat Bed Truck	No	40		74.3	500	0
Scraper	No	40		83.6	500	0
Front End Loader	No	40		79.1	500	0
Tractor	No	40	84		500	0

	Calculated (dBA)		Results Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Crane	60.6	52.6	N/A	N/A	N/A	N/A	N/A
Excavator	60.7	56.7	N/A	N/A	N/A	N/A	N/A
Grader	65	61	N/A	N/A	N/A	N/A	N/A
Tractor	64	60	N/A	N/A	N/A	N/A	N/A
Flat Bed Truck	54.3	50.3	N/A	N/A	N/A	N/A	N/A
Scraper	63.6	59.6	N/A	N/A	N/A	N/A	N/A
Front End Loader	59.1	55.1	N/A	N/A	N/A	N/A	N/A
Tractor	64	60	N/A	N/A	N/A	N/A	N/A
Total	65	67.2	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		Noise Limit Exceedance (dBA)				
	Day		Evening		Night	
Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/7/2018
Case Description: Whittier Narrows: Grading- stationary

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Commercia	Commercia	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Auger Drill Rig	No	20		84.4	500	0

Equipment	Calculated (dBA) *Lmax	Leq	Results Day Lmax	Day Leq	Noise Limits (dBA) Evening Lmax	Evening Leq	Night Lmax
Auger Drill Rig	64.4	57.4	N/A	N/A	N/A	N/A	N/A
Total	64.4	57.4	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		Noise Limit Exceedance (dBA)				
	Day		Evening		Night	
Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/7/2018
Case Description: Whittier Narrows: Construction- mobile

---- Receptor #1 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Commercia	Commercia	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	500	0
All Other Equipment >	No	50	85		500	0
All Other Equipment >	No	50	85		500	0
All Other Equipment >	No	50	85		500	0
Tractor	No	40	84		500	0
Tractor	No	40	84		500	0
Tractor	No	40	84		500	0
Welder / Torch	No	40		74	500	0

	Results						
	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Crane	60.6	52.6	N/A	N/A	N/A	N/A	N/A
All Other Equipment >	65	62	N/A	N/A	N/A	N/A	N/A
All Other Equipment >	65	62	N/A	N/A	N/A	N/A	N/A
All Other Equipment >	65	62	N/A	N/A	N/A	N/A	N/A
Tractor	64	60	N/A	N/A	N/A	N/A	N/A
Tractor	64	60	N/A	N/A	N/A	N/A	N/A
Tractor	64	60	N/A	N/A	N/A	N/A	N/A
Welder / Torch	54	50	N/A	N/A	N/A	N/A	N/A
Total	65	69.1	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		Noise Limit Exceedance (dBA)				
	Day		Evening		Night	
Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/7/2018
Case Description: Whittier Narrows: Construction- stationary

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Commercia	Commercia	1	1	1

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Generator	No	50		80.6	500	0

			Results				
	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Generator	60.6	57.6	N/A	N/A	N/A	N/A	N/A
Total	60.6	57.6	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		Noise Limit Exceedance (dBA)				
	Day		Evening		Night	
Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/7/2018
Case Description: Whittier Narrows: Painting- mobile

		---- Receptor #1 ----		
	Baselines (dBA)			
Description	Land Use	Daytime	Evening	Night
Commercia	Commercia	1	1	1

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40		77.7	500	0

			Results				
	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Compressor (air)	57.7	53.7	N/A	N/A	N/A	N/A	N/A
Total	57.7	53.7	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		Noise Limit Exceedance (dBA)				
	Day		Evening		Night	
Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/7/2018
Case Description: Whittier Narrows: Paving- mobile

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Commercia	Commercia	1	1	1

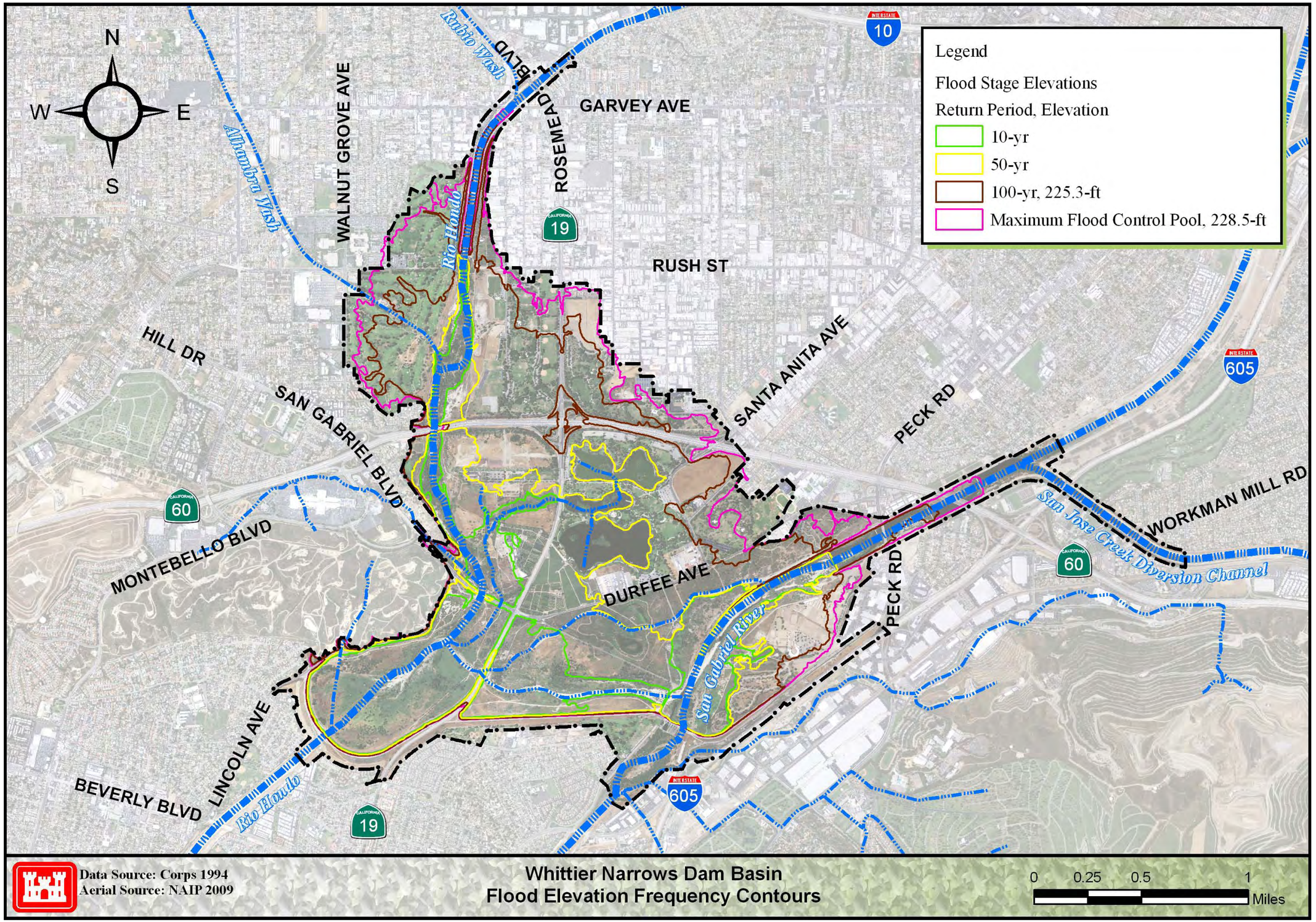
Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	500	0
Grader	No	40	85		500	0
Paver	No	50		77.2	500	0
All Other Equipment >	No	50	85		500	0
Roller	No	20		80	500	0
Scraper	No	40		83.6	500	0
All Other Equipment >	No	50	85		500	0
Tractor	No	40	84		500	0

	Calculated (dBA)		Results Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Excavator	60.7	56.7	N/A	N/A	N/A	N/A	N/A
Grader	65	61	N/A	N/A	N/A	N/A	N/A
Paver	57.2	54.2	N/A	N/A	N/A	N/A	N/A
All Other Equipment >	65	62	N/A	N/A	N/A	N/A	N/A
Roller	60	53	N/A	N/A	N/A	N/A	N/A
Scraper	63.6	59.6	N/A	N/A	N/A	N/A	N/A
All Other Equipment >	65	62	N/A	N/A	N/A	N/A	N/A
Tractor	64	60	N/A	N/A	N/A	N/A	N/A
Total	65	68.6	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		Noise Limit Exceedance (dBA)				
	Day		Evening		Night	
Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Appendix C – Flood Map



Map 7 Flood Elevation Frequency Contours

Appendix D – AB 52 Consultation Letters

COUNTY OF LOS ANGELES
DEPARTMENT OF PARKS AND RECREATION
"Parks Make Life Better!"
John Wicker, Director
Norma E. Garcia, Chief Deputy Director

April 16, 2018

Ms. Lee Clauss
San Manuel Band of Mission Indians
26569 Community Center Drive
Highland, CA 92346

Dear Ms. Clauss:

NOTICE OF OPPORTUNITY TO CONSULT FOR THE WHITTIER NARROWS EQUESTRIAN CENTER REFURBISHMENT PROJECT IN UNINCORPORATED LOS ANGELES COUNTY

The County of Los Angeles Department of Parks and Recreation has initiated environmental review under the California Environmental Quality Act (CEQA) for the Whittier Narrows Equestrian Center Refurbishment Project. The Whittier Narrows Equestrian Center is an existing equestrian center, located in Los Angeles County along the San Gabriel River. The project site is bounded by Rooks Road to the southeast, Peck Road to the east, the San Gabriel River to the northwest, and Pico Rivera Bicentennial Park to the southwest. The equestrian center provides access to riding trails, including part of the Juan Bautista De Anza National Historic Trail. The existing facilities at the equestrian center are outdated and have several flooding and stormwater pollution issues. The Whittier Narrows Equestrian Center Refurbishment Project would provide updated equestrian facilities and address flooding and stormwater pollution issues. A project location map is enclosed for your information.

In accordance with Assembly Bill 52 (AB 52) and Section 21080.3.1(d) of the California Public Resources Code (PRC), we are responding to your request to be notified of projects in our jurisdiction that will be reviewed under CEQA. We are hereby notifying you of an opportunity to consult with us regarding the potential for this project to impact Tribal Cultural Resources, as defined in Section 21074 of the PRC. The purposes of tribal consultation under AB 52 are to determine, as part of the CEQA review process, whether or not Tribal Cultural Resources are present within the project area, and if so, whether or not those resources will be significantly impacted by the project. If Tribal Cultural Resources may be significantly impacted, then consultation will also help to determine the most appropriate way to avoid or mitigate those impacts.

In accordance with Section 21080.3.1(d) of the PRC, you have 30 days from the receipt of this letter to either request or decline consultation in writing for this project. Please send your written response before May 16, 2018 to the County of Los Angeles

Department of Parks and Recreation, Planning and Development Agency at 1000 S. Fremont Avenue, Unit 40, Alhambra, California 91803 or by email to Ansley Davies on my staff at adavies@parks.lacounty.gov. If we do not receive a response within 30 days, we will proceed.

Thank you for your consideration. We look forward to hearing from you.

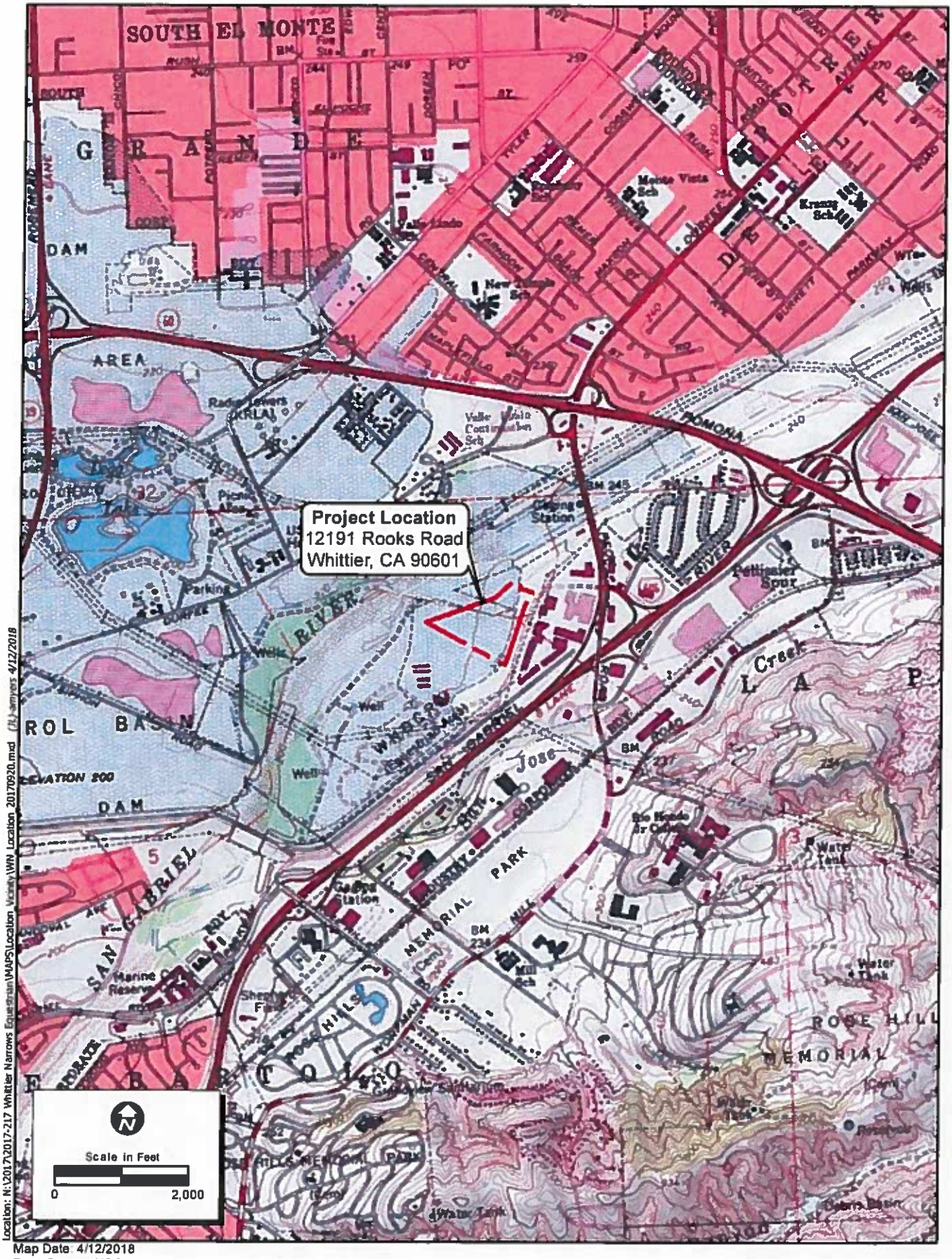
Respectfully,

Kathline King
Chief of Planning

KK:AD:nr

Enclosure

c: Public Works (D. Palma)
Project File
Parks and Recreation (A. Bokde, C. Lau, L. Barocas, C. Kano, D. Abrate, A. Davies)



Location: N:\2017\2017-217 Whittier Narrows Equestrian\MAPS\Location, Vicinity\WN Location 20170920.mxd (JL)-smyers 4/12/2018

Map Date: 4/12/2018
Base Source: USGS 7.5' Topographic Quadrangle Series

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Project Location

Whittier Narrows Equestrian Center

COUNTY OF LOS ANGELES
DEPARTMENT OF PARKS AND RECREATION
"Parks Make Life Better!"
John Wicker, Director
Norma E. Garcia, Chief Deputy Director

April 16, 2018

Mr. Octavio Escobedo
Tejon Indian Tribe
1761 Hasti Acres Drive, Suite 108
Bakersfield, CA 93309

Dear Mr. Escobedo:

NOTICE OF OPPORTUNITY TO CONSULT FOR THE WHITTIER NARROWS EQUESTRIAN CENTER REFURBISHMENT PROJECT IN UNINCORPORATED LOS ANGELES COUNTY

The County of Los Angeles Department of Parks and Recreation has initiated environmental review under the California Environmental Quality Act (CEQA) for the Whittier Narrows Equestrian Center Refurbishment Project. The Whittier Narrows Equestrian Center is an existing equestrian center, located in Los Angeles County along the San Gabriel River. The project site is bounded by Rooks Road to the southeast, Peck Road to the east, the San Gabriel River to the northwest, and Pico Rivera Bicentennial Park to the southwest. The equestrian center provides access to riding trails, including part of the Juan Bautista De Anza National Historic Trail. The existing facilities at the equestrian center are outdated and have several flooding and stormwater pollution issues. The Whittier Narrows Equestrian Center Refurbishment Project would provide updated equestrian facilities and address flooding and stormwater pollution issues. A project location map is enclosed for your information.

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Department of Parks and Recreation, Planning and Development Agency at 1000 S. Fremont Avenue, Unit 40, Alhambra, California 91803 or by email to Ansley Davies on my staff at adavies@parks.lacounty.gov. If we do not receive a response within 30 days, we will proceed.

Thank you for your consideration. We look forward to hearing from you.

Respectfully,

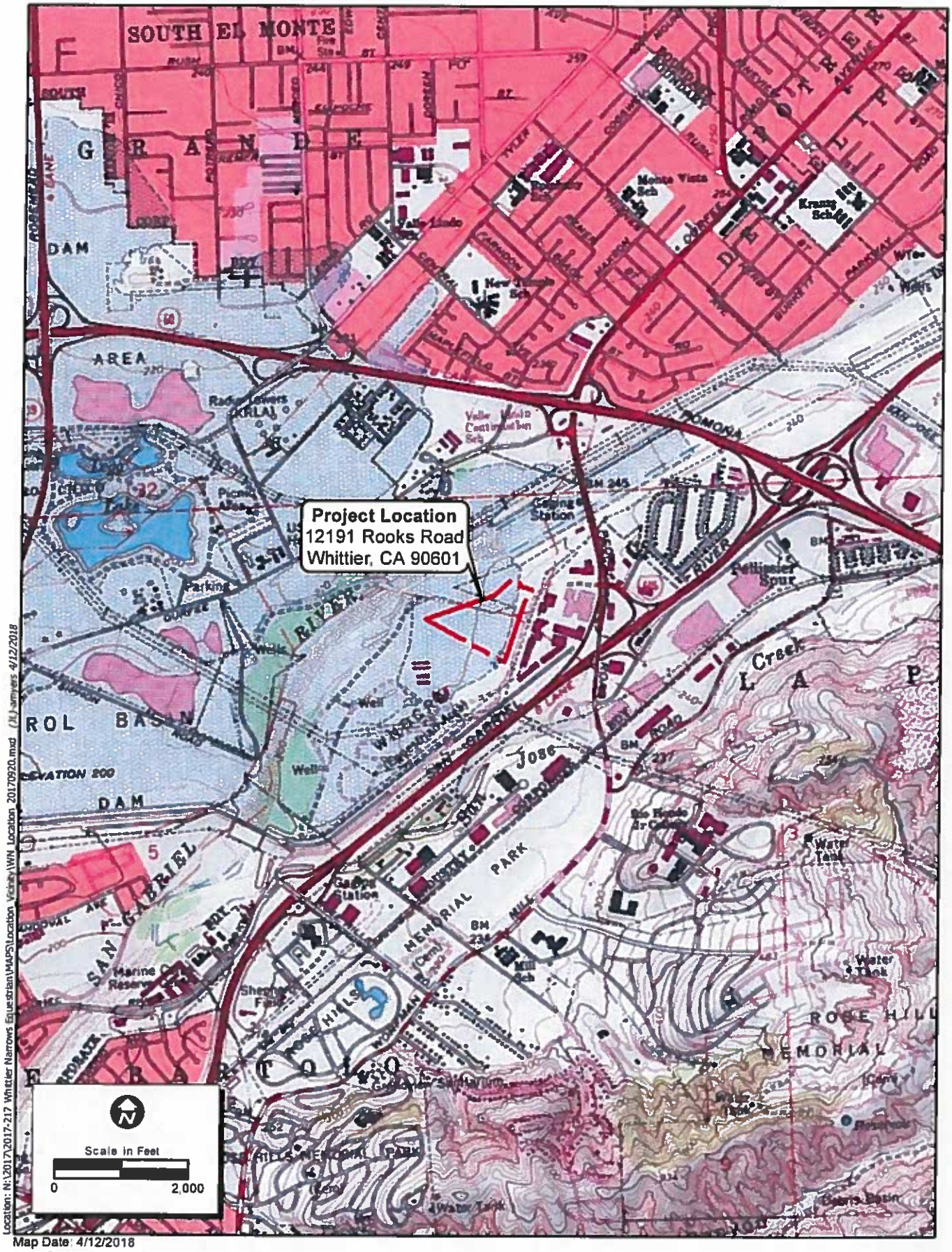
Kathline King

Kathline King
Chief of Planning

KK:AD:nr

Enclosure

c: Public Works (D. Palma)
Project File
Parks and Recreation (A. Bokde, C. Lau, L. Barocas, C. Kano, D. Abrate, A. Davies)



Map Date: 4/12/2018
Base Source: USGS 7.5' Topographic Quadrangle Series

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Project Location

Whittier Narrows Equestrian Center

COUNTY OF LOS ANGELES
DEPARTMENT OF PARKS AND RECREATION
"Parks Make Life Better!"
John Wicker, Director
Norma E. Garcia, Chief Deputy Director

April 16, 2018

Mr. Andrew Salas, Chairman
Gabrieleno Band of Mission Indians – Kizh Nation
P.O. Box 393
Covina, CA 91723

Dear Mr. Salas:

NOTICE OF OPPORTUNITY TO CONSULT FOR THE WHITTIER NARROWS EQUESTRIAN CENTER REFURBISHMENT PROJECT IN UNINCORPORATED LOS ANGELES COUNTY

The County of Los Angeles Department of Parks and Recreation has initiated environmental review under the California Environmental Quality Act (CEQA) for the Whittier Narrows Equestrian Center Refurbishment Project. The Whittier Narrows Equestrian Center is an existing equestrian center located in Los Angeles County along the San Gabriel River. The project site is bounded by Rooks Road to the southeast, Peck Road to the east, the San Gabriel River to the northwest, and Pico Rivera Bicentennial Park to the southwest. The equestrian center provides access to riding trails, including part of the Juan Bautista De Anza National Historic Trail. The existing facilities at the equestrian center are outdated and have several flooding and stormwater pollution issues. The Whittier Narrows Equestrian Center Refurbishment Project would provide updated equestrian facilities and address flooding and stormwater pollution issues. A project location map is enclosed for your information.

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send your written response before May 16, 2018 to the County of Los Angeles Department of Parks and Recreation, Planning and Development Agency at 1000 S. Fremont Avenue, Unit 40, Alhambra, California 91803 or by email to Ansley Davies on my staff at adavies@parks.lacounty.gov. If we do not receive a response within 30 days, we will proceed.

Thank you for your consideration. We look forward to hearing from you.

Respectfully,

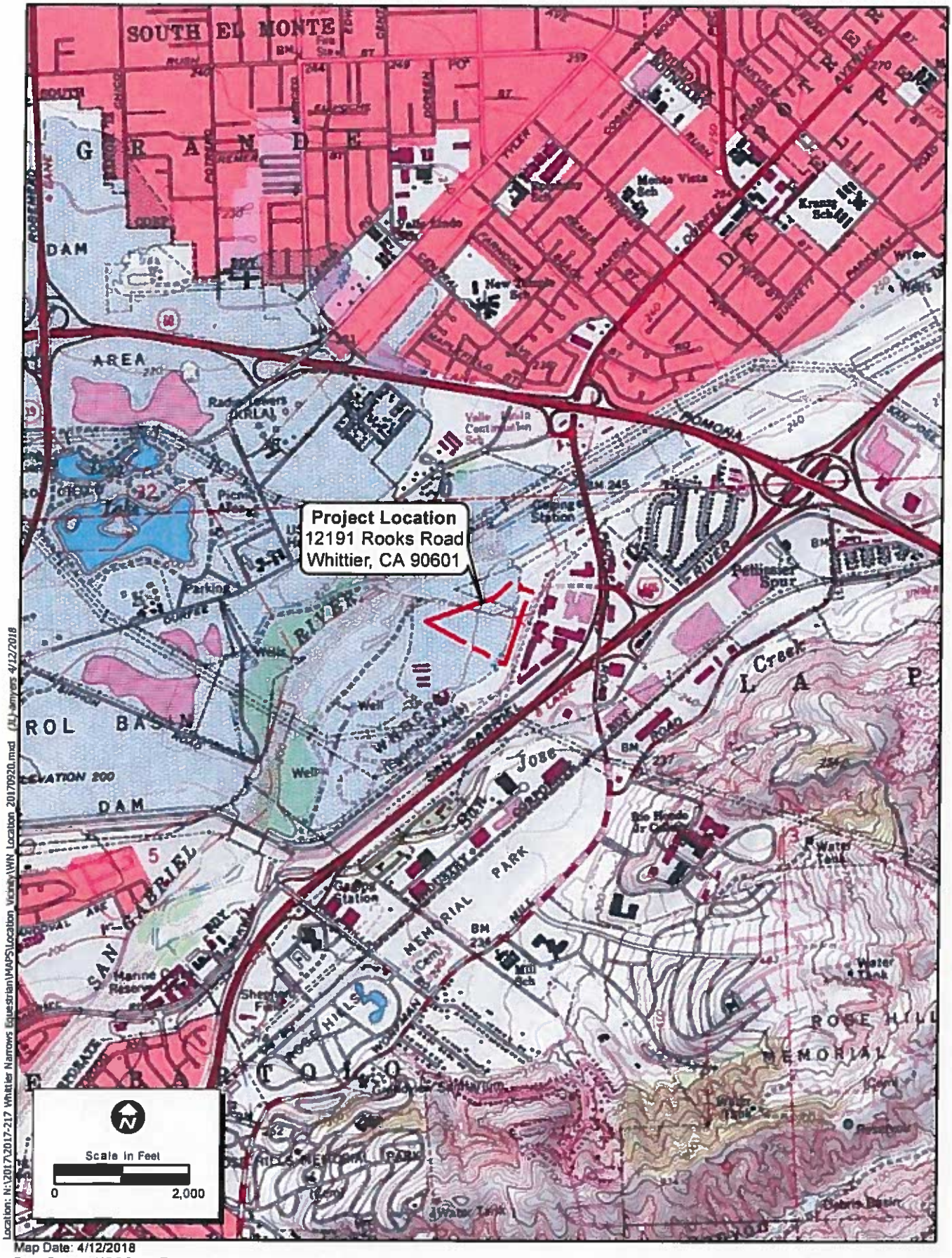
Kathline King

Kathline King
Chief of Planning

KK:AD:nr

Enclosure

c: Public Works (D. Palma)
Project File
Parks and Recreation (A. Bokde, C. Lau, L. Barocas, C. Kano, D. Abrate, A. Davies)



Location: N:\2017\2017-217 Whittier Narrows Equestrian\MAPS\Location Vicinity\WN Location 20170920.mxd (TLamyers 4/12/2018

Map Date: 4/12/2018
Base Source: USGS 7.5' Topographic Quadrangle Series

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Project Location

Whittier Narrows Equestrian Center

COUNTY OF LOS ANGELES
DEPARTMENT OF PARKS AND RECREATION
"Parks Make Life Better!"
John Wicker, Director
Norma E. Garcia, Chief Deputy Director

April 16, 2018

Mr. Anthony Morales, Chief
San Gabriel Band of Mission Indians
P.O. Box 693
San Gabriel, CA 91778

Dear Mr. Morales:

NOTICE OF OPPORTUNITY TO CONSULT FOR THE WHITTIER NARROWS EQUESTRIAN CENTER REFURBISHMENT PROJECT IN UNINCORPORATED LOS ANGELES COUNTY

The County of Los Angeles Department of Parks and Recreation has initiated environmental review under the California Environmental Quality Act (CEQA) for the Whittier Narrows Equestrian Center Refurbishment Project. The Whittier Narrows Equestrian Center is an existing equestrian center, located in Los Angeles County along the San Gabriel River. The project site is bounded by Rooks Road to the southeast, Peck Road to the east, the San Gabriel River to the northwest, and Pico Rivera Bicentennial Park to the southwest. The equestrian center provides access to riding trails, including part of the Juan Bautista De Anza National Historic Trail. The existing facilities at the equestrian center are outdated and have several flooding and stormwater pollution issues. The Whittier Narrows Equestrian Center Refurbishment Project would provide updated equestrian facilities and address flooding and stormwater pollution issues. A project location map is enclosed for your information.

In accordance with Assembly Bill 52 (AB 52) and Section 21080.3.1(d) of the California Public Resources Code (PRC), we are responding to your request to be notified of projects in our jurisdiction that will be reviewed under CEQA. We are hereby notifying you of an opportunity to consult with us regarding the potential for this project to impact Tribal Cultural Resources, as defined in Section 21074 of the PRC. The purposes of tribal consultation under AB 52 are to determine, as part of the CEQA review process, whether or not Tribal Cultural Resources are present within the project area, and if so, whether or not those resources will be significantly impacted by the project. If Tribal Cultural Resources may be significantly impacted, then consultation will also help to determine the most appropriate way to avoid or mitigate those impacts.

In accordance with Section 21080.3.1(d) of the PRC, you have 30 days from the receipt of this letter to either request or decline consultation in writing for this project. Please

send your written response before May 16, 2018 to the County of Los Angeles Department of Parks and Recreation, Planning and Development Agency at 1000 S. Fremont Avenue, Unit 40, Alhambra, California 91803 or by email to Ansley Davies on my staff at adavies@parks.lacounty.gov. If we do not receive a response within 30 days, we will proceed.

Thank you for your consideration. We look forward to hearing from you.

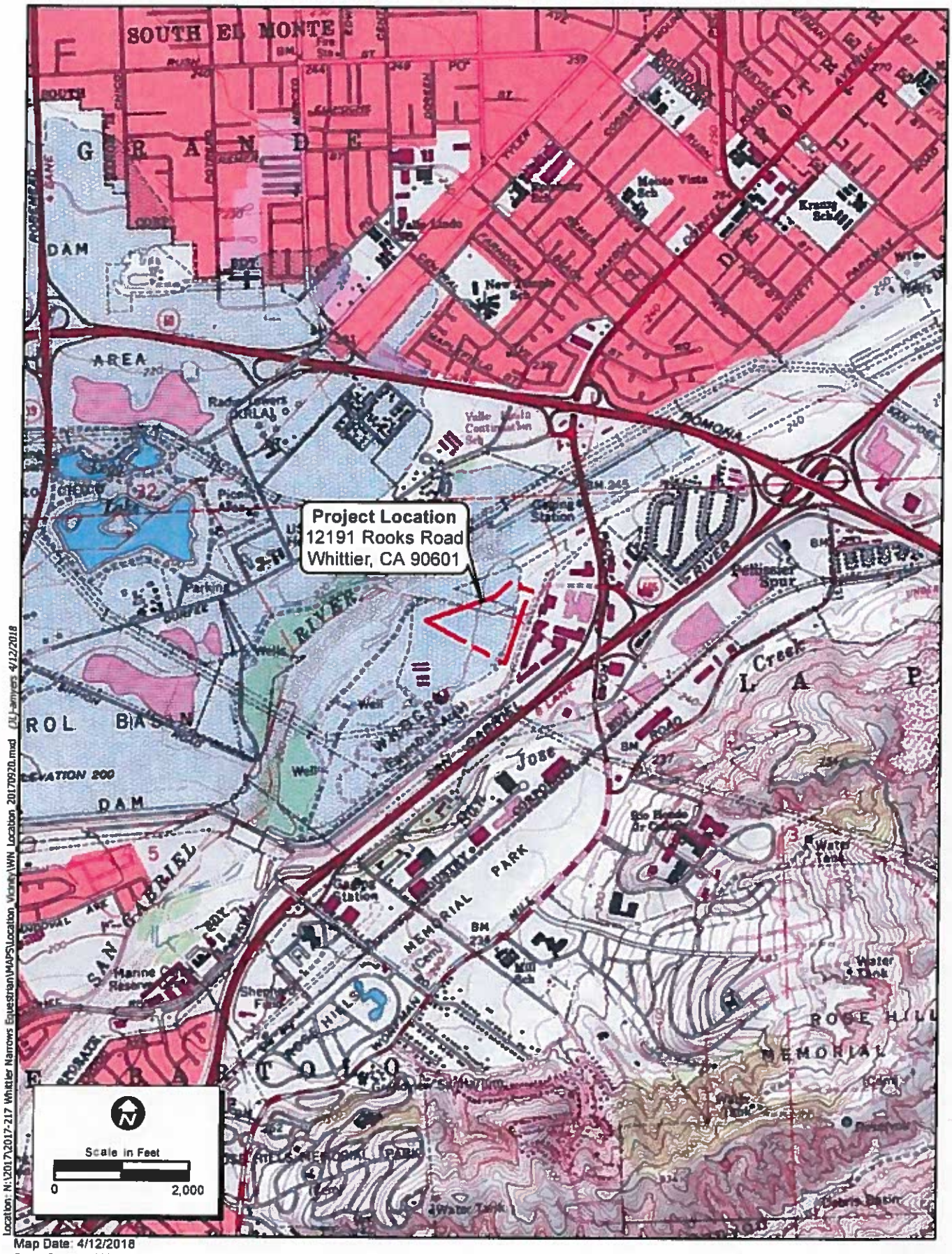
Respectfully,

Kathline King
Chief of Planning

KK:AD:nr

Enclosure

c: Public Works (D. Palma)
Project File
Parks and Recreation (A. Bokde, C. Lau, L. Barocas, C. Kano, D. Abrate, A. Davies)



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Map Date: 4/12/2018
Base Source: USGS 7.5' Topographic Quadrangle Series

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Project Location

Whittier Narrows Equestrian Center

COUNTY OF LOS ANGELES
DEPARTMENT OF PARKS AND RECREATION
"Parks Make Life Better!"
John Wicker, Director
Norma E. Garcia, Chief Deputy Director

April 16, 2018

Mr. Jairo Avila
Tribal Historic and Cultural Preservation Officer
Fernandeño Tataviam Band of Mission Indians
1019 Second Street
San Fernando, CA 91340

Dear Mr. Avila:

NOTICE OF OPPORTUNITY TO CONSULT FOR THE WHITTIER NARROWS EQUESTRIAN CENTER REFURBISHMENT PROJECT IN UNINCORPORATED LOS ANGELES COUNTY

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In accordance with Section 21080.3.1(d) of the PRC, you have 30 days from the receipt of this letter to either request or decline consultation in writing for this project. Please send your written response before May 16, 2018 to the County of Los Angeles

Department of Parks and Recreation, Planning and Development Agency at 1000 S. Fremont Avenue, Unit 40, Alhambra, California 91803 or by email to Ansley Davies on my staff at adavies@parks.lacounty.gov. If we do not receive a response within 30 days, we will proceed.

Thank you for your consideration. We look forward to hearing from you.

Respectfully,

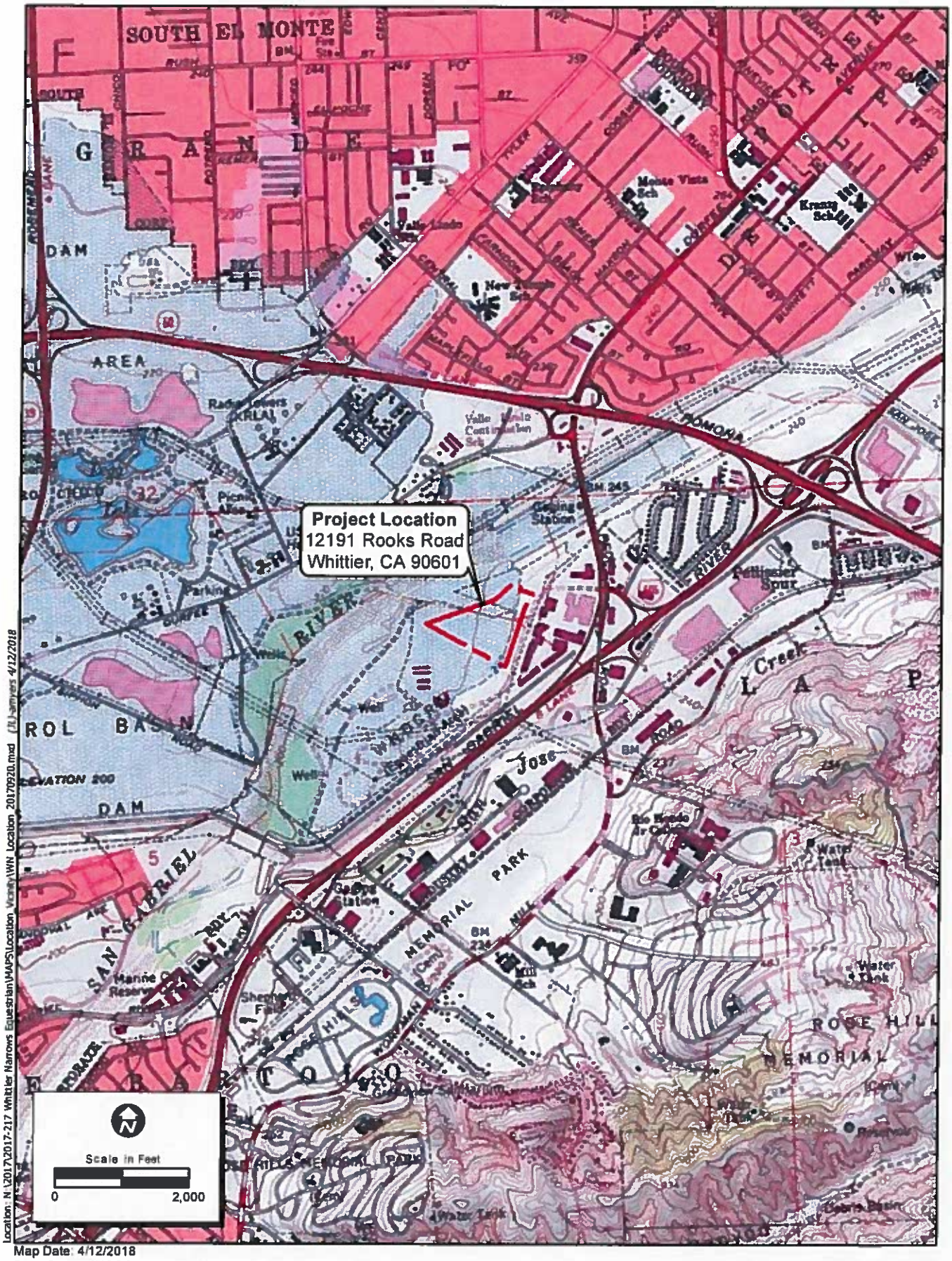
Kathline King

Kathline King
Chief of Planning

KK:AD:nr

Enclosure

c: Public Works (D. Palma)
Project File
Parks and Recreation (A. Bokde, C. Lau, L. Barocas, C. Kano, D. Abrate, A. Davies)



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Map Date: 4/12/2018
Base Source: USGS 7.5' Topographic Quadrangle Series

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Project Location

Whittier Narrows Equestrian Center

COUNTY OF LOS ANGELES
DEPARTMENT OF PARKS AND RECREATION
"Parks Make Life Better!"
John Wicker, Director Norma E. Garcia, Chief Deputy Director

September 11, 2018

Mr. Andrew Salas, Chairman
Gabrieleno Band of Mission Indians – Kizh Nation
P.O. Box 393
Covina, CA 91723

Dear Mr. Salas:

CONCLUSION OF CONSULTATION FOR THE WHITTIER NARROWS EQUESTRIAN CENTER REFURBISHMENT PROJECT IN UNINCORPORATED LOS ANGELES COUNTY

Thank you for the opportunity to consult with you on potential impacts to Tribal Cultural Resources (TCRs) for the Whittier Narrows Equestrian Center Refurbishment Center Project (Project), located at 12191 Rooks Road in unincorporated Los Angeles County along the San Gabriel River near Whittier. I am writing to you to summarize and conclude the consultation under Assembly Bill (AB) 52 and notify you of our intention to adopt a Mitigated Negative Declaration for this project, pursuant to Section 21082.3(d) of the California Public Resources Code (PRC).

On April 16, 2018 we notified you by letter of the opportunity to consult on this project. On May 17, 2018 we received a written request from you to consult. We subsequently initiated consultation with you on May 17, 2018. As part of that consultation, which included an on-site meeting on June 7, 2018, you noted that, although no known resources are located on the property, the surrounding area contains several known village sites and is considered sensitive for the potential presence of TCRs. At that time, you requested that a Native American monitor be present during construction for at least the initial phases of the Proposed Project. On June 21, 2018, you provided the County via email with an official request for Tribal monitoring of ground disturbing activities. Therefore, we have incorporated the following mitigation measure into the CEQA document:

> **TCR-1:** Ground-disturbing activities shall be monitored by a Tribal Monitor representing the Kizh Nation. Based on soil conditions, the Tribal Monitor may conclude that there is little likelihood that archaeological materials will be uncovered by construction activities. In this event, the Tribal Monitor may adjust the frequency of monitoring needed. Monitoring may be discontinued or may consist of periodic spot checking, as deemed appropriate by the Tribal

> Monitor in consultation with the Archaeologist. The Tribal Monitor shall have the authority to temporarily halt construction operations within 60 feet of a tribal cultural resource (TCR) or a potential TCR to determine if significant or potentially significant resources will be adversely affected by continuing construction activities. The tribal monitor shall use flagging around the find. Within the flagged off area construction shall halt until a qualified archaeologist evaluates the find. Construction shall not take place within the delineated find area until the County consults on appropriate treatment with a qualified archaeologist and the Kizh Nation. Tribal Monitors may suggest options for treatment of finds for consideration. The County shall have ultimate authority over the treatment of new finds while complying with all rules and regulations including, but not limited to, AB 2641, Section 7050.5 pf the California Health and Safety Code, and Public Resources Code Section 5097.94 and 5097.98 (see also Mitigation Measure CUL-1).

Therefore, pursuant to Section 21082.3.2(b)(1), we hereby conclude consultation under AB 52 for the Whittier Narrows Equestrian Center Refurbishment Center Project, and appreciate the opportunity to consult with you.

Respectfully,

Kathline King
Chief of Planning

KK:AD:nr

c: Public Works (D. Palma)
Parks and Recreation (A. Bokde, C. Lau, L. Barocas, C. Kano, D. Abratte, A. Davies, Project File)

Appendix E – Geotechnical Investigation

Geotechnical Evaluation

Whittier Narrows Equestrian Center
12191 Rooks Road
Whittier, California

Withers & Sandgren Landscape Architects

P.O. Box 276 | Montrose, California 91021

April 2, 2018 | Project No. 208461002





Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

Geotechnical Evaluation

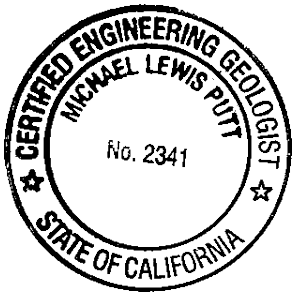
Whittier Narrows Equestrian Center
12191 Rooks Road
Whittier, California

Ms. Lacey Withers
Withers & Sandgren Landscape Architects
P.O. Box 276 | Montrose, California 91021

April 2, 2018 | Project No. 208461002

Franklin M. Ruiz, PE
Project Engineer

Daniel Chu, PhD, PE, GE
Chief Geotechnical Engineer



Michael L. Putt, PG, CEG
Principal Geologist

FR/MLP/DBC/sc

Distribution: (1) Addressee (via e-mail)

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FIGURES

APPENDICES

1 INTRODUCTION

In accordance with your request, we have performed an update to our geotechnical evaluation report for the Whittier Narrows Equestrian Center project located at 12191 Rooks Road in Los Angeles County, California (Figure 1). We understand that the project site includes the existing Whittier Narrows Equestrian Center, and no longer includes the adjacent Horseman's Park facilities. The purpose of the project is to enhance the recreational, environmental, operational, cultural, historic and aesthetic opportunities on site.

We previously performed a preliminary geotechnical evaluation for the site, the results of which were presented in our referenced report dated January 20, 2012. The purpose of that study was to evaluate the soil and geologic conditions at the site in order to provide preliminary geotechnical design recommendations for the proposed future improvements. Therein, we recommended additional site exploration to further evaluate the liquefaction hazard and appropriate mitigation when detailed plans became available. Subsequently, we were provided current plans of the proposed refurbishment project at the site and performed additional site exploration to supplement our previous study. This report presents our findings, conclusions, and recommendations regarding the subject project.

2 SCOPE OF SERVICES

Our scope of services included the following:

- Project planning and coordination with design team members, property representatives, and subcontractors.
- Review of background data, including in-house geotechnical data, State of California Earthquake Fault Zone (EFZ) maps, State of California Seismic Hazards Zones maps, topographic maps, geologic maps and literature, and stereoscopic aerial photographs.
- A site reconnaissance to observe surface conditions and mark the boring and cone penetration test (CPT) locations for utility clearance by Underground Service Alert.
- Acquisition of permits for exploratory borings and CPTs from the County of Los Angeles Environmental Health Division.
- Subsurface exploration consisting of the drilling, logging, and sampling of eight small-diameter hollow-stem auger exploratory borings. The borings were logged by our representative and bulk and relatively undisturbed samples were collected at selected intervals. The borings were backfilled with on-site soil after drilling and the soil samples were returned to our laboratory for testing.
- Percolation testing was performed in three shallow borings to evaluate the infiltration rates of the near surface soils on site.

- Additional subsurface exploration consisting of three CPTs to depths of up to approximately 32 feet, and installation of two groundwater monitoring wells within two of the CPT locations to depths up to approximately 25 feet.
- Laboratory testing of selected samples to evaluate in-place moisture and density, gradation, percentage of particles finer than the No. 200 sieve, Atterberg limits, direct shear, R-value, and sand equivalent.
- Review of laboratory corrosivity testing data provided by Wallace Laboratories.
- Data compilation and geotechnical analysis of field and laboratory data.
- Preparation of this geotechnical report presenting our findings, conclusions, and preliminary recommendations for the design and construction of the proposed project.

3 SITE DESCRIPTION

The Whittier Narrows Equestrian Center project site comprises approximately 20 acres and includes the existing Equestrian Center complex in Los Angeles County, California (Figure 1). The site is roughly triangular shaped and is bounded by Rooks Road and industrial businesses to the east and southeast, Horseman's Park, and the Pico Rivera Bicentennial Park to the southwest. The property is gently sloping from east to west and is situated at an elevation ranging from approximately 233 feet above mean sea level (MSL) at the east end to an elevation of approximately 223 feet above MSL at the west end.

The current equestrian center complex has several long rectangular shaped structures with box stalls or pipe corals for housing horses and equipment, several riding fields and arenas, an office building, a restroom building, and an unpaved parking lot. There were some piles of construction debris and wood observed in the west part of the site. Vegetation on the site generally consists of young to mature trees scattered across the property and some areas of grasses and weeds. Rooks Road is an asphalt-concrete paved two lane roadway.

4 PROJECT DESCRIPTION

The proposed Whittier Narrows Equestrian Center Refurbishment project will include a redesign of the existing facility and construction of new improvements. The project will generally involve demolition of the existing equestrian center facilities, grading and drainage improvements and construction of new equestrian recreational improvements. The new improvements will consist of covered box and pipe stall barns, pre-fabricated facilities office, pre-fabricated restrooms and drinking fountain, new turnouts, landscape berm and picnic areas, arenas, fenced perimeter trails, retention basins and sand filters with outlets to the San Gabriel River, and asphalt paved areas

(Figure 3). We understand that portions of Rooks Road may be re-graded and/or re-paved to accommodate proposed site drainage improvements.

5 SUBSURFACE EVALUATION AND LABORATORY TESTING

Our initial subsurface exploration was conducted at the site on December 20, 2011, and included the drilling, logging, and sampling of eight small-diameter borings with a truck-mounted drill rig utilizing 8-inch-diameter hollow-stem augers. The borings were drilled to depths ranging from approximately 6½ feet to 61½ feet and were logged by a representative of our firm. The purpose of the subsurface exploration was to observe the soil conditions and to collect bulk and relatively undisturbed samples at selected intervals for laboratory testing. Excavated materials were visually classified in the field and samples were transported to our laboratory for testing. The approximate locations of the borings are shown on Figure 2. The boring logs are presented in Appendix A.

Additional subsurface exploration was conducted at the site on March 13, 2018, and included advancing three CPTs and installing two monitoring wells. The CPTs (CPT-1 through CPT-3) were performed using a 25-ton CPT rig to refusal depths at approximately 32, 23, and 28, respectively. The monitoring wells were constructed within CPT-1 and CPT-3 using a truck-mounted drill rig utilizing 5-inch-diameter hollow stem augers to a depth of approximately 25 feet. The wells were drilled after advancing the CPTs and ¾-inch-diameter polyvinyl chloride (PVC) slotted pipes were installed. The purpose of the monitoring wells is to evaluate stabilized groundwater levels for liquefaction mitigation during construction. The approximate location of the CPTs are presented on Figure 2. The CPT data is presented in Appendix B.

Laboratory testing of representative soil samples included tests to evaluate in-situ moisture content and dry density, gradation, percentage of particles finer than the No. 200 sieve, Atterberg limits, direct shear strength, sand equivalent and R-value. Moisture and density test results are presented on the boring logs in Appendix A. The remaining laboratory testing results are presented in Appendix C. Corrosivity testing for the project was performed by Wallace Laboratories and the data were provided to us for review. The data are included in Appendix D.

6 GEOLOGY AND SUBSURFACE CONDITIONS

6.1 Regional Geologic Setting

The project site is situated along the boundary between the Central block and Northeastern block of the Los Angeles Basin in the Transverse Ranges geomorphic province of southern California (Norris and Webb, 1990). Geologically, the Los Angeles Basin and vicinity is a region divided into four blocks that include uplifted portions and synclinal depressions. The Central and Northeastern

blocks in the site vicinity are generally bounded by the Whittier fault zone (Norris and Webb, 1990).

The site is situated upgradient of the Whittier Narrows dam and within the alluvial environment of the San Gabriel River. The Whittier Narrows is an erosional gap between the Puente Hills to the southeast and the Montebello Hills to the northwest. The Rio Hondo and San Gabriel rivers converge at this location as they drain toward the Pacific Ocean. The Puente Hills and the Montebello Hills are comprised of uplifted Tertiary age sedimentary deposits. The Whittier fault zone extends to the northwestern end of the Puente Hills southeast of the subject property. The Workman Hill fault has been projected crossing the Whittier Narrows and passing along the northeasterly side of the Montebello Hills (Dibblee, 1999). A regional geologic map is shown in Figure 4.

6.2 Site Geology

The equestrian center site is located on a gently sloping river terrace on the southeast side of the San Gabriel River. Regional geologic maps of the site vicinity indicate that the property is underlain by Holocene alluvium comprised of gravel and sand deposits (Dibblee, 1999). The southeastern portions of the property (planned development areas) are generally outside the active river channel. The northern portions of the property (not planned for development) encroach upon the active channel of the San Gabriel River. Our subsurface exploration was performed in the southeastern portions of the site (Figure 2). The materials encountered in our exploratory borings included relatively shallow fill overlying alluvial deposits to the depths explored. Fill materials were encountered in borings B-2 through B-8 to depths ranging from approximately 2 to 5½ feet. The fill was generally comprised of loose to medium dense silty sand with trace amounts of gravel and cobbles. The fill was underlain by alluvial deposits to the depths explored. The alluvium was comprised of interbedded lenses of loose to very dense, sandy silt, silty sand, poorly graded sand with silt and poorly graded sand. Scattered gravel and cobbles were also encountered in the alluvial deposits. Below depths of approximately 15 to 20 feet the alluvium generally became dense to very dense. More detailed descriptions of the subsurface materials observed are presented on the boring logs in Appendix A and the CPT logs in Appendix B.

6.3 Groundwater

Groundwater was observed during drilling in borings B-3, B-5 and B-7 at depths ranging from approximately 21 to 26 feet below the ground surface. The depths to groundwater observed during drilling are not considered stabilized groundwater levels. However, groundwater was not encountered during advancement of the CPTs and installation of the monitoring wells on

March 13, 2018. In addition, we did not observe groundwater in our monitoring wells during our site visit on March 27, 2018. Based on our review of the Seismic Hazard evaluation of the El Monte 7.5-Minute Quadrangle, Los Angeles County, California report (California Division of Mines and Geology [CDMG], 1998), the historically shallow groundwater conditions at the site are reportedly less than 5 feet below the existing ground surface.

Fluctuations in the level of groundwater at the site will occur due to variations in ground surface topography, rainfall, water levels in the San Gabriel River, subsurface stratification, irrigation practices, and other factors which may not have been evident at the time of our evaluation.

7 FIELD PERCOLATION TESTING

Percolation testing was performed on December 21, 2011, at the locations of borings B-2, B-4 and B-8 to evaluate the infiltration rate of the on-site soils. The infiltration tests were performed between depths of approximately 2.8 and 5.5 feet. The purpose for infiltration testing was to provide data for evaluation by the design team for possible on-site infiltration of storm water runoff. We understand, however, that infiltration of storm water runoff is no longer considered for the project.

Preparation for percolation testing included installation of a 2-inch-diameter slotted PVC pipe in each boring and backfilling the annular space between the pipe and the boring with No. 3 graded sand. The infiltration zones were pre-soaked with water for approximately 30 minutes prior to performing percolation testing. Percolation testing was conducted by placing water in the PVC pipe to establish a head of water and measuring the drop in water at approximately 10 minute intervals for approximately 30 minutes. The measured rate of infiltration during the last 10 minutes was utilized for the calculation of the percolation rates. The results of our percolation testing are presented in Table 1.

Table 1 – Percolation Test Results

Boring Location	Depth Interval (ft)	Percolation Rate[1] (in/hr)
B-2	2.8 – 3.4	5.2
B-4	4.0 – 4.8	4.8
B-8	4.4 – 5.5	6.4

Notes:
[1] Adjusted Percolation Rate (CLADWP, 2011)
ft – feet
in/hr – inches per hour

8 FAULTING AND SEISMICITY

The site is located in a seismically active area, as is the majority of southern California, and the potential for strong ground motion in the project area is considered significant during the design

life of the proposed structures. Figure 5 shows the approximate site location relative to the principal faults in the region. Table 2 lists selected principal known active faults that may affect the subject site, the maximum moment magnitude (M_{max}), and the calculated approximate fault-to-site distances using the United States Geological Survey (USGS) fault database (USGS, 2008).

In addition to the mapped faults shown on Figure 5, the Upper Elysian Park and the Puente Hills blind thrust faults are located within approximately 4.3 and 6.4 miles of the site. Blind thrust faults are low-angle faults at depths that do not break the surface and are, therefore, not shown on Figure 5. Although blind thrust faults do not have a surface trace, they can be capable of generating damaging earthquakes and are included in Table 2.

The project site is situated along the general trend of the Whittier-Elsinore fault zone. The Whittier-Elsinore fault zone southeast of the site includes the Whittier fault, Workman Hill fault and the Whittier Heights fault (Dibblee, 1999, 2001). These fault traces and other secondary fault splays form a relatively wide zone of faulting and folding across the western Puente Hills. The northwesterly end of the Workman Hill fault is mapped approximately ¾ mile southeast of the site (Figure 3). The Workman Hill fault (extension) has been projected crossing the Whittier Narrows and along the northeastern flank of the Montebello Hills approximately ¾ mile west of the site (Dibblee, 1999). The epicenter of the 1987 Whittier Narrows earthquake is located along the Workman Hill fault (extension) approximately 3½ miles northwest of the site.

The State of California has designated some portions of active faults as EFZ (formerly known as an Alquist-Priolo Special Studies Zone) (Hart and Bryant, 1997). Based on our document review, the subject site is not located within an EFZ. The EFZ “zoned” portion of the Whittier fault is located approximately 4 miles southeast of the site (State of California, 1991a). The EFZ “zoned” portion of the Workman Hill fault is located approximately 2 miles northwest of the site (State of California, 1991b).

Table 2 – Principal Active Faults

Fault	Fault to Site Distance miles (kilometers)	Maximum Moment Magnitude (M_{max})
Whittier-Elsinore	2.4 (3.8)	7.9
Elysian Park (Upper)	4.3 (7.0)	6.7
Puente Hills (Los Angeles)	6.4 (10.3)	7.0
Puente Hills (Santa Fe Springs)	6.9 (11.1)	6.7
Raymond	7.3 (11.8)	6.8
San Jose	9.4 (15.1)	6.7
Puente Hills (Coyote Hills)	9.4 (10.3)	6.9
Verdugo	9.6 (15.4)	6.9
Sierra Madre	9.7 (15.6)	7.3

Table 2 – Principal Active Faults		
Fault	Fault to Site Distance miles (kilometers)	Maximum Moment Magnitude (M_{max})
Clamshell-Sawpit	10.6 (17.0)	6.7
Hollywood	12.5 (20.1)	6.7
Santa Monica	15.0 (24.1)	7.4
Newport-Inglewood (LA Basin)	15.9 (25.6)	7.5
Chino	17.0 (27.3)	6.8
Cucamonga	19.1 (30.8)	6.7

The principal seismic hazards evaluated at the subject site are surface ground rupture, ground shaking, and seismically induced liquefaction. A brief description of these hazards and the potential for their occurrences on site are discussed below.

8.1 Ground Rupture

Based on our review of the referenced literature and our site reconnaissance, there are no known active fault traces crossing the project site and the potential for surface rupture is relatively low. Due to the location of the site relative to the general trend of the Whittier fault zone, surface rupture is, however, possible. Additional evaluation of fault rupture hazard on site was beyond our scope of services.

8.2 Ground Motion

The 2016 California Building Code (CBC) specifies that the Risk-Targeted, Maximum Considered Earthquake (MCE_R) ground motion response accelerations be used to evaluate seismic loads for design of buildings and other structures. The MCE_R ground motion response accelerations are based on the spectral response accelerations for 5 percent damping in the direction of maximum horizontal response and incorporate a target risk for structural collapse equivalent to 1 percent in 50 years with deterministic limits for near-source effects. The horizontal peak ground acceleration (PGA) that corresponds to the MCE_R for the site was calculated as 0.95g using the USGS (USGS, 2018a) seismic design tool (web-based). Spectral response acceleration parameters for the evaluation of seismic loads on buildings and other structures, consistent with the 2016 CBC, are also provided in the recommendations section of this report.

The 2016 CBC specifies that the potential for liquefaction and soil strength loss be evaluated, where applicable, for the Maximum Considered Earthquake Geometric Mean (MCE_G) PGA with adjustment for site class effects (PGA_M) in accordance with the American Society of Civil Engineers 7-10 Standard. The MCE_G PGA is based on the geometric mean PGA with a 2 percent probability of exceedance in 50 years. The PGA_M was calculated as 0.90g using the USGS (USGS, 2018a) seismic design tool.

8.3 Liquefaction, Dynamic Settlement and Lateral Spreading of Saturated Soils

Liquefaction is the phenomenon in which loosely deposited granular soils located below the water table undergo rapid loss of shear strength when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid rise in pore water pressure, and causes the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesionless soils at depths shallower than 50 feet below the ground surface. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking.

As shown on Figure 6, the project site is located in an area mapped as potentially liquefiable on the State of California Seismic Hazards Zone map (CDMG, 1999). The liquefaction potential of the subsurface soils was evaluated using the tip resistance and skin friction from the CPT results in CPT-1 through CPT-3 and sample blow count data from our borings below where the CPTs encountered refusal. The liquefaction analysis was based on the National Center for Earthquake Engineering Research (NCEER) procedure (Youd, et al., 2001) using the computer program CLiq (GeoLogismiki, 2006). A design earthquake moment magnitude of 6.7 was used based on the published data for the site (USGS, 2018b). Two-thirds of the PGA_M of 0.60g and a factor of safety of 1.1 against liquefaction potential were used based on the City of Los Angeles guideline (City of Los Angeles, 2014). A historical shallow groundwater depth of 5 feet was used in our evaluation. The results of the liquefaction analysis are presented in Appendix E.

The site is underlain by loose to very dense sandy alluvium. Based on our analyses, the relatively looser zones of alluvium at the site to depths up to approximately 15 feet below the ground surface are susceptible to liquefaction. The relatively dense alluvium below depths of approximately 15 feet is generally not susceptible to liquefaction.

As a result of liquefaction, proposed new structures may be subject to liquefaction-induced settlement. In order to estimate the amount of liquefaction-induced settlement, the method proposed by Ishihara and Yoshimine (1992) was used in which the seismically induced cyclic stress ratios and corrected N-values are related to the volumetric strain of the soil. The amount of soil settlement during a strong seismic event depends on the thickness of the liquefiable layers and the density and/or consistency of the soils. Based on our revised analysis using soil sampler blow count data and data from our recent CPTs, we estimate total dynamic settlement ranging from approximately 0 to 1.5 inches may occur at the project site as a result of liquefaction. In

addition, due to the close proximity to San Gabriel River, our analysis indicated that a liquefaction-induced lateral spreading up to 15 inches may occur.

9 CONCLUSIONS

Based on the results of our evaluation, it is our opinion that the proposed Whittier Narrows Equestrian Center project is feasible from a geotechnical standpoint, provided the recommendations presented in this report are incorporated into the design and construction of the planned project. In general, the following conclusions were made:

- The site is underlain by shallow fill and alluvial soils consisting of loose to very dense, sandy silt, silty sand, poorly graded sand with silt and poorly graded sand. Gravel and cobbles are also present on site.

- The existing fill and loose alluvial deposits are not considered suitable for building foundation support. Excavation and recompaction of fill and loose alluvial deposits should be performed for reliable support of structure foundations.

- The on-site soils are comprised predominantly of granular sandy materials and are considered to have a low potential for expansion.

- The site soils are generally considered suitable for re-use as fill; however, the historic equestrian site use may have resulted in accumulations of organic materials, manure and other debris within the soils. Organic materials and other debris are not suitable for re-use as fill.

- The alluvial soils on site are generally considered suitable for the reliable support of new hardscape, flatwork and other minor improvements, provided that the recommendations presented herein are incorporated into the design and construction of the improvements.

- Excavations for site grading, foundations, pavements, and underground utilities should be feasible with heavy-duty earthmoving equipment.

- On-site soils should be considered as Type C soils in accordance with Occupational Safety and Health Administration (OSHA) soil classifications. Sandy soil may be prone to caving during earthwork operations. Temporary shoring should be provided in accordance with OSHA regulations.

- Groundwater was observed at a depth of approximately 21 to 26 feet below the existing ground surface during our previous site exploration. However, we did not encounter groundwater during the installation of the monitoring wells nor during our site visit on March 27, 2018. The groundwater observed during drilling is not considered stabilized and the depth to groundwater on site will vary. The historic high groundwater level is reportedly less than 5 feet below the existing ground surface. Fluctuations in the groundwater levels at the site will occur, particularly in response to seasonal rainfall and San Gabriel River water levels. The contractor should evaluate the depth to groundwater with regard to proposed construction and anticipated excavations.

- Field percolation testing indicates that the near-surface soils have percolation rates ranging from 5 to 6 inches per hour.

- We estimated a PGA_{MCE} of 0.95g at the subject site that has a 2 percent probability of exceedance in 50 years.

- The site is located in a State of California Seismic Hazard Zone for liquefaction. Based on our subsurface evaluation, the soils below the historically high groundwater depth are susceptible to liquefaction during the design seismic event. Our analysis indicates the liquefaction-induced dynamic settlement up to approximately 1½ inches may occur at the site.

- The site is not located within a State of California EFZ (Alquist-Priolo Special Studies Zone). Based on our review of published geologic maps and aerial photographs, no known active or potentially active faults underlie the site. The potential for surface fault rupture at the site is considered to be low.

- Limited corrosivity test results indicate that the site soils have a high corrosion potential to ferrous metals and a low corrosion potential to concrete.

Los Angeles County Statement 111

In accordance with Section 111 of the Los Angeles County Building Code, we are providing our professional opinion regarding the geologic hazards of landsliding, settlement and slippage and their impact on the proposed development. It is our professional opinion that the building site for the proposed structures will not be subject to hazards from future landsliding, settlement or slippage, provided the recommendations of this report are incorporated into the design plans and are implemented during construction. Further, it is our opinion that the proposed construction and associated grading will not impact the geologic stability of properties outside the building site, provided the recommendations of this report are incorporated into the design plans and are implemented during construction.

10 RECOMMENDATIONS

The following sections include geotechnical recommendations for the proposed project. These recommendations are based on our evaluation of the site geotechnical conditions, engineering analysis, and our understanding of the planned construction, including anticipated foundation loads. The proposed improvements should be constructed in accordance with the requirements of the applicable governing agencies.

10.1 Earthwork

We anticipate that earthwork at the site may consist of site clearing, relatively shallow grading, and excavations for structure foundations. Earthwork will also include trenching for new utilities, grading for new pavement, hardscape areas and drainage improvements. Earthwork operations should be performed in accordance with the requirements of applicable governing agencies and the recommendations presented in the following sections.

10.1.1 Construction Plan Review and Pre-Construction Conference

We recommend that grading and foundation plans be submitted to Ninyo & Moore for review to check for conformance to the recommendations provided in this report. We further recommend that a pre-construction conference be held in order to discuss the grading recommendations presented in this report. The owner and/or their representative, the governing agencies' representatives, the civil engineer, Ninyo & Moore, and the contractor should be in attendance to discuss the work plan, project schedule, and earthwork requirements.

10.1.2 Site Clearing

Prior to commencing earthwork operations, the site should be cleared of surface obstructions, foundation remnants, abandoned utilities (if present), rubble, debris, vegetation, as well as surface soils containing organic materials. Existing utilities to remain in place should be located and then re-routed or protected from damage by construction activities. Obstructions that extend below the finished grade, if any, should be removed and the resulting holes filled with compacted soil. The materials generated from the clearing operations should be removed from the site and disposed at a legal dump site.

10.1.3 Structure Pad Preparation

In order to provide suitable support for planned structures, we recommend that the existing fill and/or alluvium be over-excavated and re-compacted to approximately 90 percent or more. The depth of overexcavation for support of foundations should extend through the existing fill into competent alluvial deposits, or approximately 3 feet below the proposed bearing level of foundations, whichever is deeper. The limits of overexcavation should extend approximately 5 feet laterally outside the building footprint, such that the zone of recompaction provides a prism of support extending down and out from the bottom of foundations on a 1 to 1 (horizontal to vertical) inclination. The depths and limits of over-excavation should also be based on evaluation of the materials encountered during construction by our representative.

10.1.4 Hardscape and Flatwork Subgrade Preparation

In order to provide suitable support for the sidewalks and other exterior slabs-on-grade, we recommend that the near-surface soil be compacted prior to placing new fill or improvements. The top 12 inches of subgrade soils should be scarified and compacted to approximately 90 percent or more. Potentially expansive fine-grained silts and clays, if present, should be removed to a depth of approximately 12 inches and replaced with on-site low-expansion sandy soil.

10.1.5 Excavation Characteristics

Based on the results of our exploratory borings and our experience with similar soils, it is our opinion that the on-site fill and alluvial soils can be excavated using earthmoving equipment in good working condition. Although oversize material was not encountered in our borings, foundation remnants, concrete debris, cobbles and boulders, or other debris should be anticipated during site grading. The contractor should be prepared to take appropriate measures to address the presence of oversize materials.

10.1.6 Temporary Excavations

Excavations that are deeper than approximately 4 feet should either be sloped at an inclination no steeper than 1½:1 (horizontal to vertical) or shored. Some surficial sloughing may occur. The sandy soils on site have little cohesion and steep excavations will be susceptible to caving. Temporary excavations should be evaluated in the field and constructed in accordance with applicable OSHA guidelines. The on-site soils should be considered as OSHA Soil Type C. On-site safety of personnel is the responsibility of the contractor.

Excavations should be planned in a manner so as not to impair the bearing capacity or cause settlement or undermining of the existing building foundations. As a guideline, excavations adjacent to and subparallel to building foundations should not extend below an imaginary 1:1 (horizontal to vertical) plane extending outward and downward from the bottom outer edge of the foundations.

10.1.7 Fill Material

In general, the on-site sandy soils should be suitable for reuse as fill, trench backfill and structural backfill. Manure, organic materials and other debris that may be present on site associated with historic site equestrian use are not suitable for reuse as fill. On-site and import fill soils should be free of expansive clays, trash, debris, roots, vegetation, or deleterious materials. Fill should generally be free of rocks or hard lumps of material more than approximately 4 inches in diameter. Rocks or hard lumps larger than about 4 inches in diameter should be broken into smaller pieces or should be removed from the site. Imported materials should consist of clean, granular material with a low expansion potential, corresponding to an expansion index of 50 or less as evaluated in accordance with ASTM International (ASTM) D 4829. Import material should be submitted to the project geotechnical consultant for review prior to importing to the site. The corrosion potential of proposed imported soils should also be evaluated if structures will be in contact with the imported soils. The contractor should be responsible for the uniformity of import material brought to the site.

10.1.8 Fill Placement and Compaction

Fill material should be placed and compacted in accordance with project specifications, County of Los Angeles guidelines, and sound construction practices. Fill material should be compacted to a relative compaction of 90 percent as evaluated by ASTM D 1557. Aggregate base materials beneath pavements should be compacted to a relative compaction of 95 percent. Fill materials should be moisture conditioned to slightly above the optimum laboratory moisture content. The lift thickness for fill soils will vary depending on the type of compaction equipment used, but should generally be placed in horizontal lifts not exceeding 8 inches in loose thickness. Fill should be tested for specified compaction level by the geotechnical consultant.

10.2 Underground Utilities

We recommend that utility lines be supported on 6 or more inches of granular bedding material such as sand with a sand equivalent value of 30 or higher. Bedding material should be placed around the pipe and 12 inches or more above the top of the pipe in accordance with specifications of the recent edition of the “Greenbook” (Standard Specifications for Public Works). Special care should be taken not to allow voids beneath the pipe. Bedding material and compaction requirements should be in accordance with the recommendations of this report, the project specifications, and applicable requirements of the appropriate governing agency. The on-site soils should be generally suitable for re-use as trench backfill provided they are free of organic material, debris, and rocks greater than approximately 4 inches in diameter. Fill should be moisture-conditioned to slightly above the laboratory optimum. Wet soils should be allowed to dry to a moisture content near the optimum prior to their placement as trench backfill. Trench backfill should be compacted to a relative compaction of 90 percent. Special care should be exercised to avoid damaging the pipe during compaction of the backfill.

10.3 Seismic Design Considerations

Design of the proposed improvements should be performed in accordance with the requirements of governing jurisdictions and applicable building codes. Table 3 presents the seismic design parameters for the site in accordance with CBC (2016) guidelines and mapped spectral acceleration parameters (USGS, 2018a).

Table 3 – California Building Code Seismic Design Criteria	
Seismic Design Factors	**Value**
Site Class	D
Site Coefficient, F_a	1.0
Site Coefficient, F_v	1.5
Mapped Spectral Acceleration at 0.2-second Period, S_s	2.386g
Mapped Spectral Acceleration at 1.0-second Period, S_1	0.840g
Spectral Acceleration at 0.2-second Period Adjusted for Site Class, S_{MS}	2.386g
Spectral Acceleration at 1.0-second Period Adjusted for Site Class, S_{M1}	1.260g
Design Spectral Response Acceleration at 0.2-second Period, S_{DS}	1.591g
Design Spectral Response Acceleration at 1.0-second Period, S_{D1}	0.840g

10.4 Foundations

As mentioned in Section 8.3 of this report, the site is located in an area mapped as susceptible to soil liquefaction hazard. Our analysis indicated that liquefaction induced dynamic settlement up to 1.5 inches may occur during the design seismic event. The differential dynamic settlement is estimated to be ¾ inch over a 40-foot span. In addition, the static total and differential settlement under a shallow foundation is approximately 1 inch and ½ inch over a 40-foot span, respectively. We recommend that the project structural engineer be consulted to design the foundation based on a combined (static plus dynamic) total and differential settlement of 2.5 inches and 1¼ inches over a 40-foot span, respectively. If the above settlement cannot be tolerated by a shallow foundation such as footings, then a mat foundation should be considered. The following recommendations provide design criteria for shallow foundation systems supported on low-expansion potential compacted soil. Foundations should be designed in accordance with structural considerations and the following recommendations. In addition, requirements of the governing jurisdictions and applicable building codes should be considered in the design of the proposed structures.

10.4.1 Spread Footings

Spread footings for building structures should extend 18 inches or more below the adjacent finished grade and bear on engineered fill soils compacted to 90 percent relative compaction or more. Continuous footings should have a width of 24 inches or more. Isolated pad footings should have a width of 36 inches or more. Spread footings should be reinforced with two No. 4 steel reinforcing bars, one placed near the top and one placed near the bottom of the footings, and further detailed in accordance with the recommendations of the structural engineer.

Footings, as described above and bearing on compacted fill soils with low expansion potential, may be designed using an allowable bearing capacity of 2,500 pounds per square foot (psf). The allowable bearing capacity may be increased by 400 psf for every foot of

increase in width and 800 psf for every foot of increase in depth up to a value of 4,000 psf. The allowable bearing capacity may be increased by one-third when considering loads of short duration such as wind or seismic forces.

Total and differential settlement for footings under static load are estimated to be less than approximately 1 inch and ½ inch over a horizontal span of 40 feet, respectively. Dynamic settlement due to liquefaction up to approximately 1.5 inches may occur at the site.

Footings bearing on compacted fill may be designed using a coefficient of friction of 0.35, where the total frictional resistance equals the coefficient of friction times the dead load. Footings may be designed using a passive resistance of 350 psf per foot of depth for level ground condition up to a value of 3,500 psf. The allowable lateral resistance can be taken as the sum of the frictional resistance and passive resistance provided the passive resistance does not exceed one-half of the total allowable resistance. The passive resistance may be increased by one-third when considering loads of short duration such as wind or seismic forces.

10.4.2 Drilled Piers

Drilled pier foundations for light poles or other improvements should have a diameter of 16 inches or more and may be designed using allowable side friction and end bearing values of 200 psf and 3,000 psf, respectively, under static loading conditions. The lateral capacity of drilled piers may be evaluated using a passive resistance of 350 psf per foot of depth, up to a value of 3,500 psf per foot of depth. The passive resistance may be considered to act on an area equal to the product of the effective width (two times the pier diameter) and the embedded length of the pier. The passive resistance should be ignored to a depth of one pier diameter below the finished grade if the pier is not constrained at the ground surface by a rigid slab or pavement

10.4.3 Building Floor Slabs

Building slabs-on-grade supported on low-expansion potential compacted soil should have a thickness of 5 inches or more. The slab should be reinforced with No. 4 steel reinforcing bars placed 24 inches on-center (each way) in the middle one-third of the slab height. The design of the slabs should also be based on structural engineering considerations. The appropriate placement of the reinforcement in the slab is vital for adequate performance. The slab should be underlain by a polyethylene vapor retarder, 10-mil or thicker, further underlain by a 4-inch-thick layer of sand or gravel with a particle size of approximately ¾-inch or smaller. The vapor retarder is recommended in areas where moisture-sensitive floor coverings are anticipated.

Soils underlying the slabs should be moisture conditioned to slightly above the laboratory optimum and compacted in accordance with the recommendations presented in the Earthwork section of this report. The subgrade soil should be maintained in a moist condition until the slab is placed. Joints should be constructed at intervals designed by the structural engineer to help reduce random cracking of the slab.

10.4.4 Exterior Slabs-On-Grade

Exterior walkways and flatwork supported on low-expansion potential compacted soil should have a thickness of 4 inches or more and should be reinforced with No. 3 steel reinforcing bars placed at 24 inches center to center. Exterior slabs should be underlain by 2 inches of clean sand. The vapor retarder may be omitted where moisture sensitive surfaces are not involved.

Expansive soils encountered at the ground surface during grading should be replaced with on-site low expansion soils in exterior slab-on-grade and flatwork areas.

10.4.5 Retaining Walls

Retaining walls are not anticipated for this project. However, if small retaining walls are constructed, lateral earth pressures recommended for design of yielding retaining walls with on-site soil backfill are provided on Figure 7. On-site soils for wall backfill should consist of free-draining, granular soil with a low-expansion potential (i.e., an expansion index 50 or less).

Retaining walls should be designed to support any adjacent structural surcharge loads imposed by other nearby walls or footings in addition to the active or at-rest earth pressures. Allowable bearing, passive earth pressure and friction coefficient values provided in the Spread Footings section may be used for designing retaining wall footings.

Appropriate measures should be taken to reduce the potential for build-up of moisture behind the retaining walls. Drainage design should conform to the subsurface drainage provisions as shown on Figure 8 and should include free-draining backfill materials and perforated drains.

10.4.6 Mat Foundation

Mat foundations for at-grade equipment bearing on compacted fill as outlined in the preceding sections of this report may be designed using a net allowable bearing capacity of 3,000 psf. The total and differential settlements corresponding to these allowable bearing loads are estimated to be less than approximately 1 inch and ½ inch over a horizontal span of 40 feet,

respectively. The allowable bearing capacity may be increased by one third when considering loads of short duration, such as wind or seismic forces. Mat foundations typically experience some deflection due to loads placed on the mat and the reaction of the soils underlying the mat. A design modulus of subgrade reaction of 150 tons per cubic foot (tcf) may be used for the subgrade soils in evaluating such deflections. This value is based on a unit square foot area and should be adjusted for large mats. Adjusted values of the modulus of subgrade reaction, K, can be obtained from the following equations for mats of various widths:

$$K = 150[(B+1)/2B]^2 \text{ (tcf); where B is the width of mat measured in feet}$$

For frictional resistance to lateral loads on mat foundations, we recommend a coefficient of friction of 0.35 for compacted granular subgrade soil. For a mat with an embedment depth shallower than 2 feet, an allowable passive earth pressure of 350 psf per foot should be ignored while evaluating lateral resistance; only frictional resistance should be considered. For mat foundations with embedment depths more than 2 feet, passive earth pressure may be combined with frictional resistance to evaluate the total lateral resistance. In such cases, the lateral resistance can be taken as the sum of the frictional resistance and passive resistance provided the passive resistance does not exceed one-half of the total resistance. The passive resistance values may be increased by one-third when considering loads of short duration such as wind or seismic forces.

10.5 Preliminary Pavement Design

It is anticipated that new roadways and/or parking areas may be constructed as part of the project. In addition, we understand that portions of Rooks Road may be re-paved. New pavements at the site may consist of asphalt concrete (AC) or Portland cement concrete (PCC) pavements. In general, the subgrade soils encountered at the project site consisted of sands with some interbedded silts. Laboratory testing was performed on a representative subgrade soil sample and indicated an R-value of 46. A design R-value of 46 was assumed in our analysis. For the design of AC pavements, we used the methodology presented in the California Department of Transportation (Caltrans) Highway Design Manual (Caltrans, 2006) and the computer program CalFP (Caltrans, 2008). We evaluated structural pavement sections assuming a traffic index (TI) of 4 and 5 for light-duty pavements, and a TI of 6 for heavy-duty pavements. A TI of 4 is generally associated with light automobile traffic (passenger cars); a TI of 5 is generally associated with frequent automobile traffic; and a TI of 6 is generally associated with periodic heavy truck traffic. Our preliminary pavement sections are provided in Table 4.

Table 4 – Preliminary Flexible Pavement Structural Section		
Traffic Index	Design R-value	AC over CAB or AC over CMB (inches)
4.0	46	3 over 4
5.0	46	3 over 4
6.0	46	3 over 5

Notes:
AC – Asphalt Concrete
CAB – Crushed Aggregate Base
CMB – Crushed Miscellaneous Base

For the design of rigid pavements (PCC), we used the methodology presented in the Navy Pavement Design Manual (1979). We evaluated structural pavement sections assuming TIs of 4, 5, and 6. Based on our analysis, our preliminary PCC pavement sections are provided in Table 5.

Table 5 – Preliminary Rigid Pavement Structural Section		
Traffic Index	Design R-value	PCC (inches)
4.0	46	4½
5.0	46	5½
6.0	46	6

Notes:
PCC – Portland Cement Concrete

Subgrade soils in areas to be paved should be prepared as recommended in the Earthwork section of this report. Pavement distress associated with tree roots was observed on Rooks Road and we recommend that the tree roots be mitigated prior to re-paving. Prior to placement of aggregate base materials, we recommend that the top 12 inches of subgrade soils be scarified and compacted to a relative compaction of 90 percent in accordance with ASTM D 1557. Aggregate base material should conform to the latest specifications in Section 200-2.2 for crushed aggregate base or Section 200-2.4 for crushed miscellaneous base of the Greenbook and should be compacted to a relative compaction of 95 percent in accordance with ASTM D 1557. AC should conform to Section 203-6 of the Greenbook and should be compacted to a relative compaction of 95 percent in accordance with ASTM D 1557.

Pavement sections should be selected based on actual anticipated traffic loading conditions and evaluation of the subgrade materials at the time of construction. We recommend that the paving operations be observed and tested by Ninyo & Moore. We further recommend that mix designs be made for the AC by an engineering company specialized in this type of work.

10.6 Corrosivity

The corrosion potential of the site soils was evaluated based on laboratory testing performed by Wallace Laboratories of representative samples obtained from various hand auger borings

performed by Wallace Laboratories. Laboratory testing was performed to evaluate pH, electrical resistivity, chloride and sulfate content. The Wallace Laboratories' test results are presented in Appendix D.

The pH of the tested samples ranged from approximately 7.04 to 8.93, the electrical resistivity ranged from approximately 105 to 11,111 ohm-centimeters, the chloride content ranged from approximately 1 to 712 parts per million (ppm), and the sulfate content ranged from approximately 4 to 1,206 ppm. Based on the laboratory test results and Caltrans (2012) corrosion criteria, the project site can be classified as a corrosive site, which is defined as having earth materials with more than 500 ppm chlorides, more than 2,000 ppm sulfates, a pH of 5.5 or less, or an electrical resistivity of 1,000 ohm-centimeters or less. For this site, the soils would be considered corrosive due to the electrical resistivity of the tested samples that were measured less than approximately 1,000 ohm-centimeters, and due to the chloride content of the tested sample measured at approximately 712 ppm. If corrosion-susceptible improvements are planned on site, we recommend that a corrosion engineer be consulted for further evaluation and recommendations.

10.7 Concrete Placement

In order to reduce the potential for shrinkage cracks in the concrete during curing, we recommend that the concrete for the proposed structures be placed with a slump of 4 inches based on ASTM C 143. The slump should be checked periodically at the site prior to concrete placement. We also recommend that crack control joints be provided in slabs in accordance with the recommendations of the structural engineer to reduce the potential for distress due to minor soil movement and concrete shrinkage. We further recommend that concrete cover over reinforcing steel for slabs-on-grade and foundations be provided in accordance with CBC (2016). The structural engineer should be consulted for additional concrete specifications.

Concrete in contact with soil or water that contains high concentrations of water-soluble sulfates can be subject to premature chemical and/or physical deterioration. The samples tested during this evaluation indicated water-soluble sulfate contents ranging from approximately 4 to 1,206 ppm. Based on the American Concrete Institute (ACI) 318 criteria (ACI, 2014), the potential for sulfate attack is moderate for water-soluble sulfate contents in soils in the range of 1,000 to 2,000 ppm, indicating that the on-site soils may be considered to have a moderate potential for sulfate attack. Therefore, based on ACI criteria (ACI, 2014), Type II, IP(MS), or IS(MS) cement may be used for concrete construction. The concrete should have a water-cement ratio of 0.50 or less by weight for normal weight aggregate concrete and a 28-day compressive strength of 4,000 pounds per square inch (psi) or more.

10.8 Drainage

Adequate surface drainage is imperative for performance of site improvements. Positive drainage should be provided and maintained to transport surface water off site away from foundations and other site improvements. Positive drainage incorporates a slope of 2 percent or more over a distance of 5 feet or more away from structure foundations and top of slopes. Runoff should then be transported by the use of swales or pipes into a collective drainage system. Surface waters should not be allowed to flow over slope faces or pond adjacent to footings. Area drains for landscaped and paved areas are recommended. Nearby landscaping should consist of drought-tolerant plants, and landscape irrigation should be kept to a level just sufficient to maintain plant vigor. Over-watering should not be permitted.

11 CONSTRUCTION OBSERVATION

The recommendations provided in this report are based on our understanding of the proposed project and on our evaluation of the data collected based on subsurface conditions observed in our exploratory borings and CPTs. It is imperative that the geotechnical consultant checks the subsurface conditions during construction. We recommend that Ninyo & Moore review the project plans and specifications prior to construction. It should be noted that, upon review of these documents, some recommendations presented in this report may be revised or modified.

During construction, we recommend that the duties of the geotechnical consultant include, but not be limited to:

- Observing site clearing and removal grading, including removal of subsurface structures at the site.
- Observing excavation, placement, and compaction of fill soils.
- Evaluating imported materials prior to their use as fill (if used).
- Performing field tests to evaluate fill compaction.
- Observing foundation excavations.
- Performing material testing services including concrete compressive strength and steel tensile strength tests and inspections.

The recommendations provided in this report are based on the assumption that Ninyo & Moore will provide geotechnical observation and testing services during construction. In the event that the services of Ninyo & Moore are not utilized during construction, we request that the selected consultant provide Withers & Sandgren with a letter (with a copy to Ninyo & Moore) indicating that

they fully understand Ninyo & Moore's recommendations and that they are in full agreement with the design parameters and recommendations contained in this report.

12 LIMITATIONS

The field evaluation, laboratory testing, and geotechnical analyses presented in this geotechnical report have been conducted in general accordance with current practice and the standard of care exercised by geotechnical consultants performing similar tasks in the project area. No warranty, expressed or implied, is made regarding the conclusions, recommendations, and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and conditions not observed or described in this report may be encountered during construction. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation will be performed upon request. Please also note that our evaluation was limited to assessment of the geotechnical aspects of the project, and did not include evaluation of structural issues, environmental concerns, or the presence of hazardous materials.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

This report is intended for design purposes only. It does not provide sufficient data to prepare an accurate bid by contractors. It is suggested that the bidders and their geotechnical consultant perform an independent evaluation of the subsurface conditions in the project areas. The independent evaluations may include, but not be limited to, review of other geotechnical reports prepared for the adjacent areas, site reconnaissance, and additional exploration and laboratory testing.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. If geotechnical conditions different from those described in this report are encountered, our office should be notified, and additional recommendations, if warranted, will be provided upon request. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

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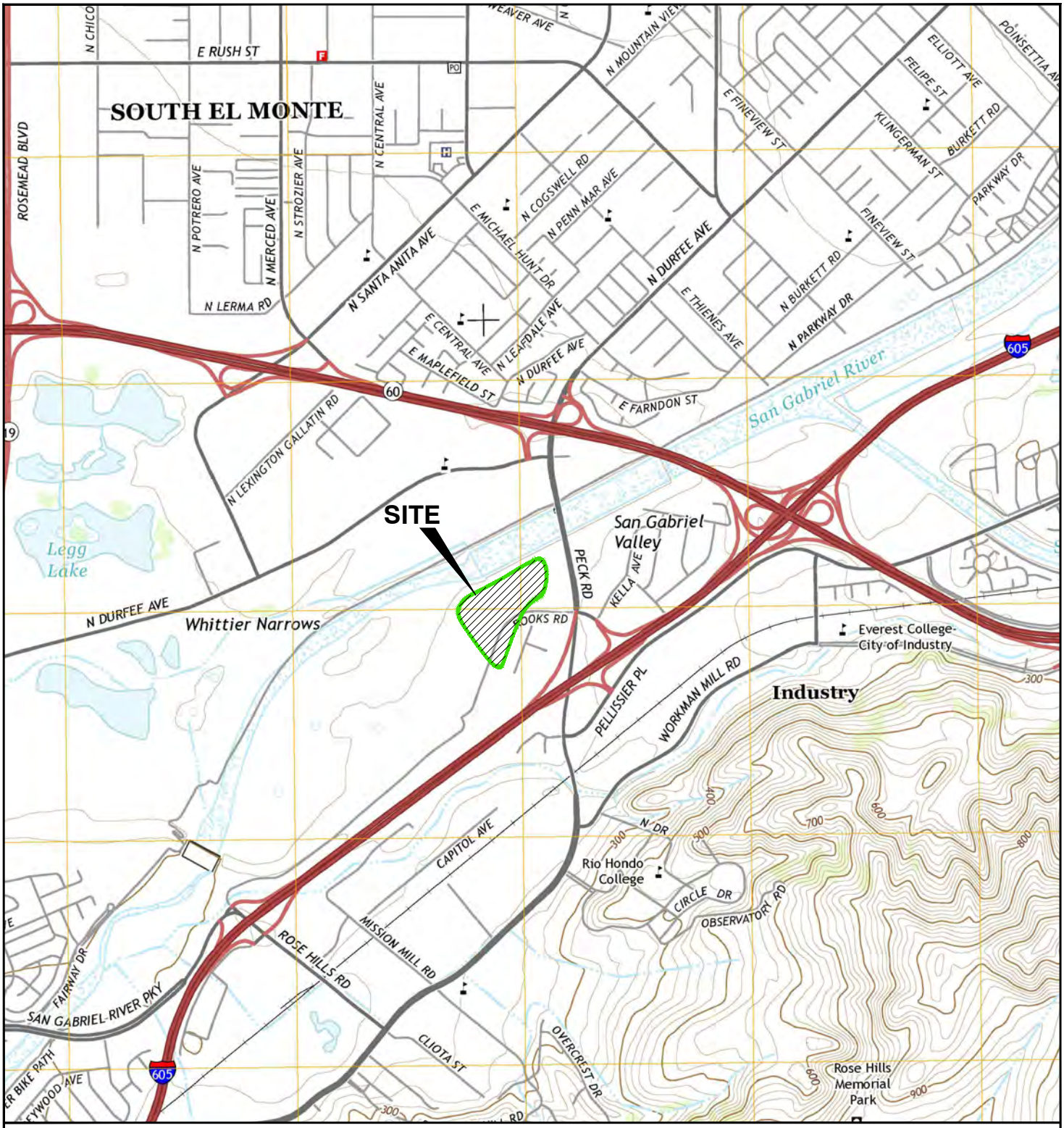
FIGURES



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NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. I REFERENCE: USGS, 2015.

N

FEET

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FIGURE 1

SITE LOCATION

WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

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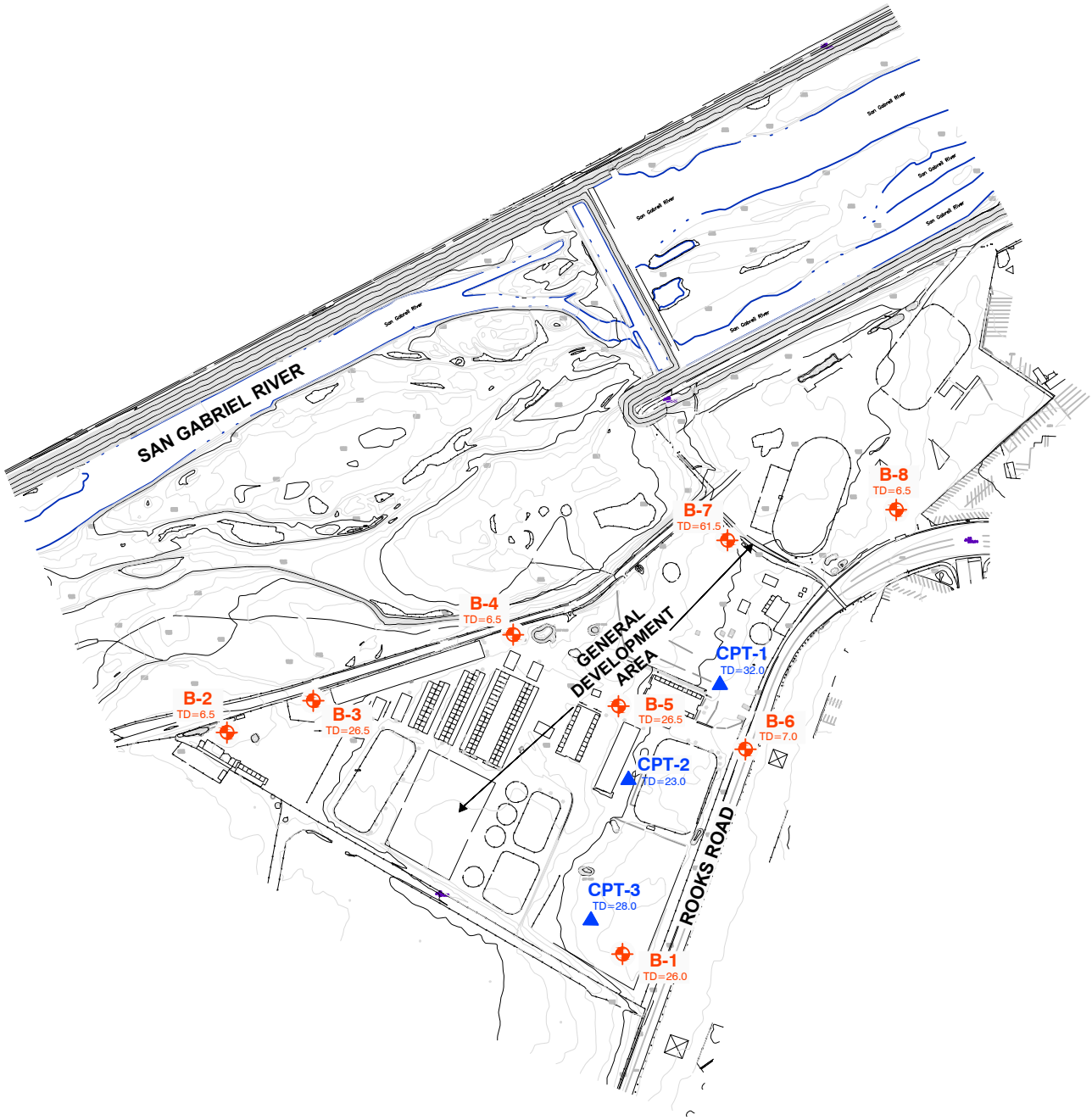
Geotechnical & Environmental Sciences Consultants



LEGEND

B-8 TD=6.5 — BORING; TD=TOTAL DEPTH IN FEET

CPT-3 TD=28.0 — CONE PENETRATION TEST; TD=TOTAL DEPTH IN FEET

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. I REFERENCE:

N

FEET

0 400 800

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FIGURE 2

EXISTING SITE CONDITIONS AND BORING LOCATIONS

WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

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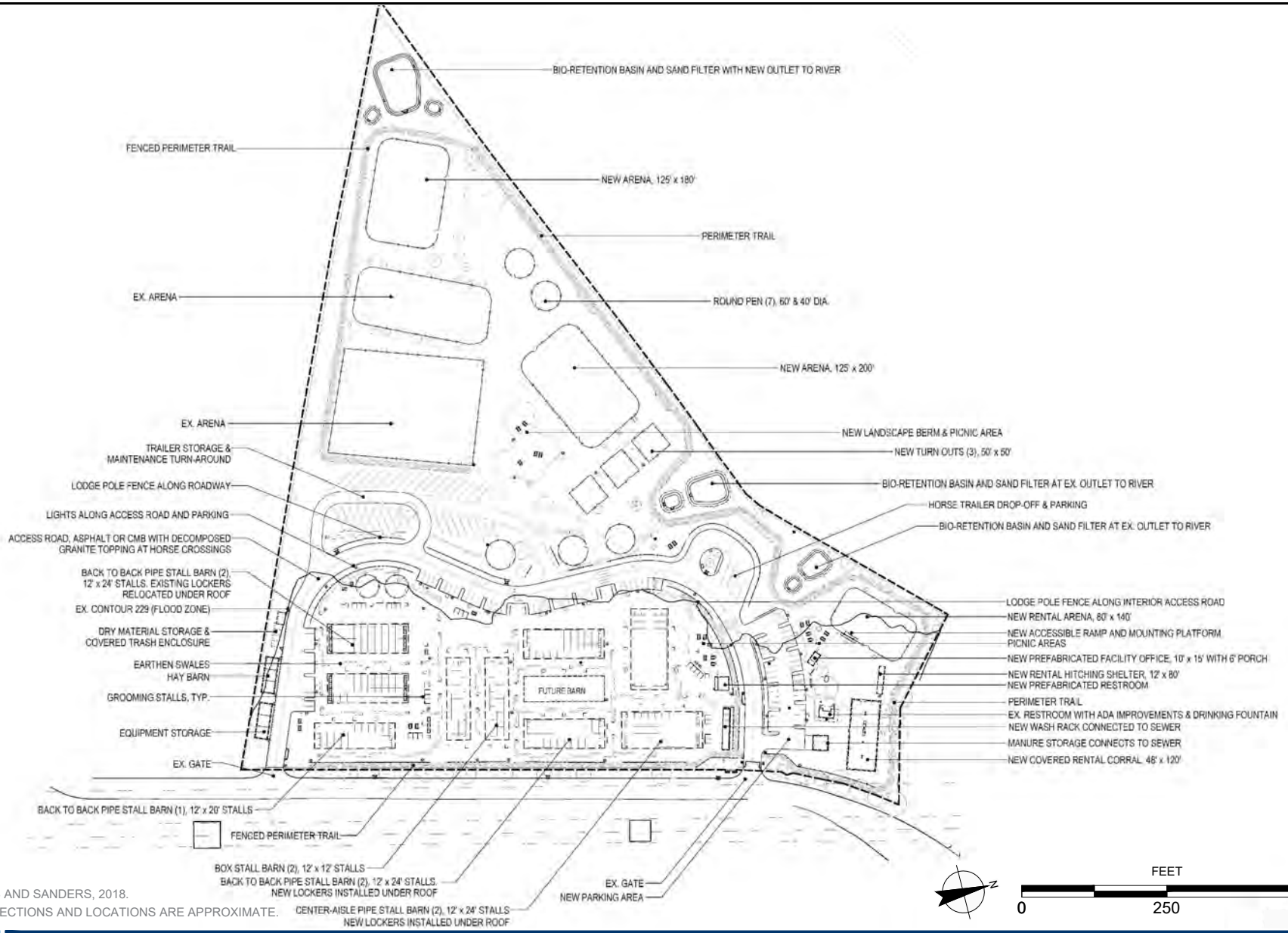

REFERENCE: WHITHERS AND SANDERS, 2018.

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

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FIGURE 3

SITE PLAN

WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

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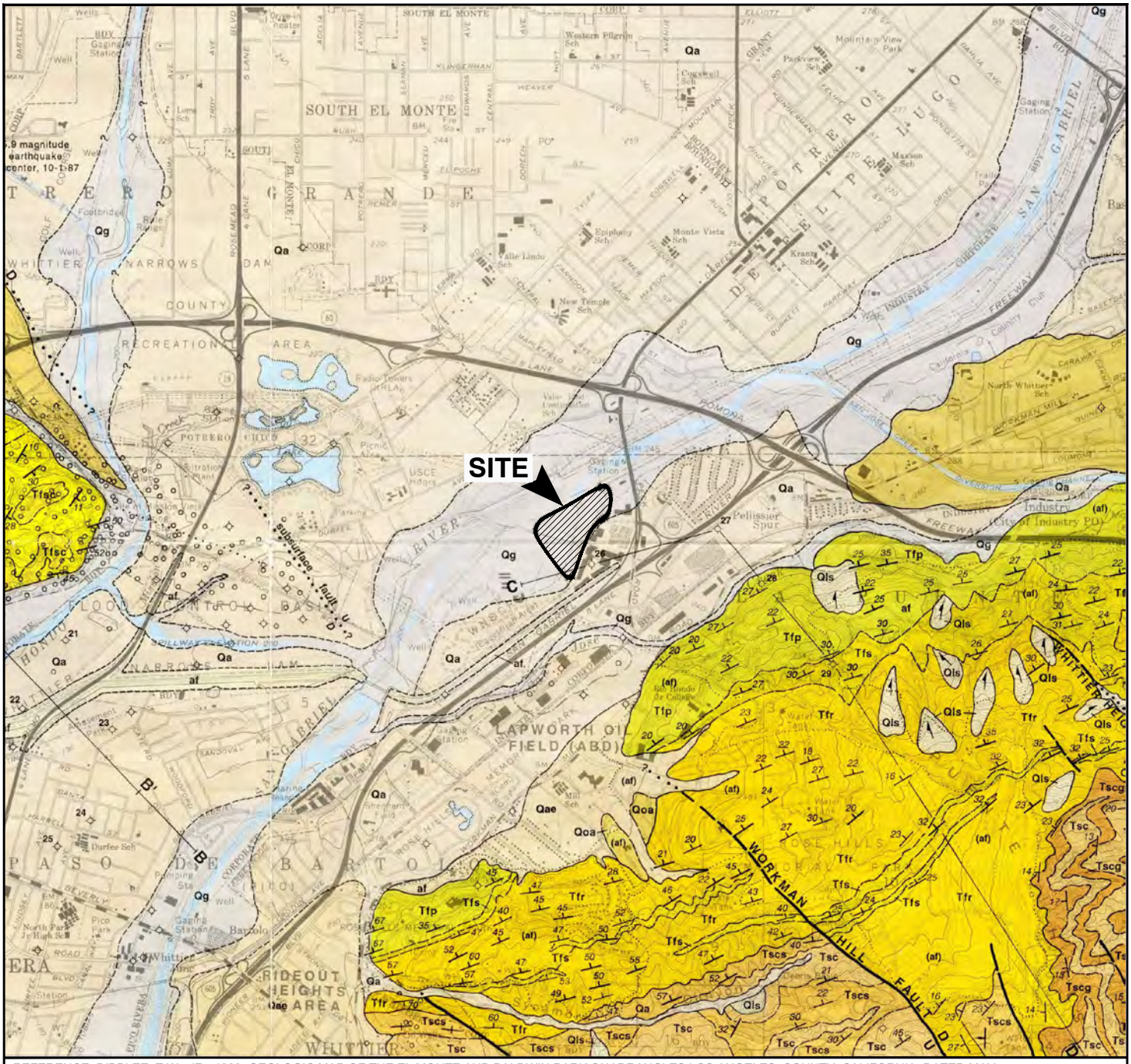

REFERENCE: DIBBLEE, T.W., JR., 1999, GEOLOGIC MAP OF THE EL MONTE AND BALDWIN PARK QUADRANGLES LOS ANGELES, COUNTY, CALIFORNIA, DATED MAY.

LEGEND

- GEOLOGIC CONTACT; DASHED WHERE APPROXIMATED
- af — ARTIFICIAL FILL
- Qg / Qa — ALLUVIUM
- SURFICIAL SEDIMENTS
- Qae — OLDER SURFICIAL SEDIMENTS
- Qoa — ALLUVIAL SAND AND GRAVEL
- Qog — ALLUVIAL GRAVEL
- Tfp — FERNANDO FORMATION
- 60 — STRIKE AND DIP OF BEDDING

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

N

FEET

0 3,000 6,000

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FIGURE 4

REGIONAL GEOLOGY

WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

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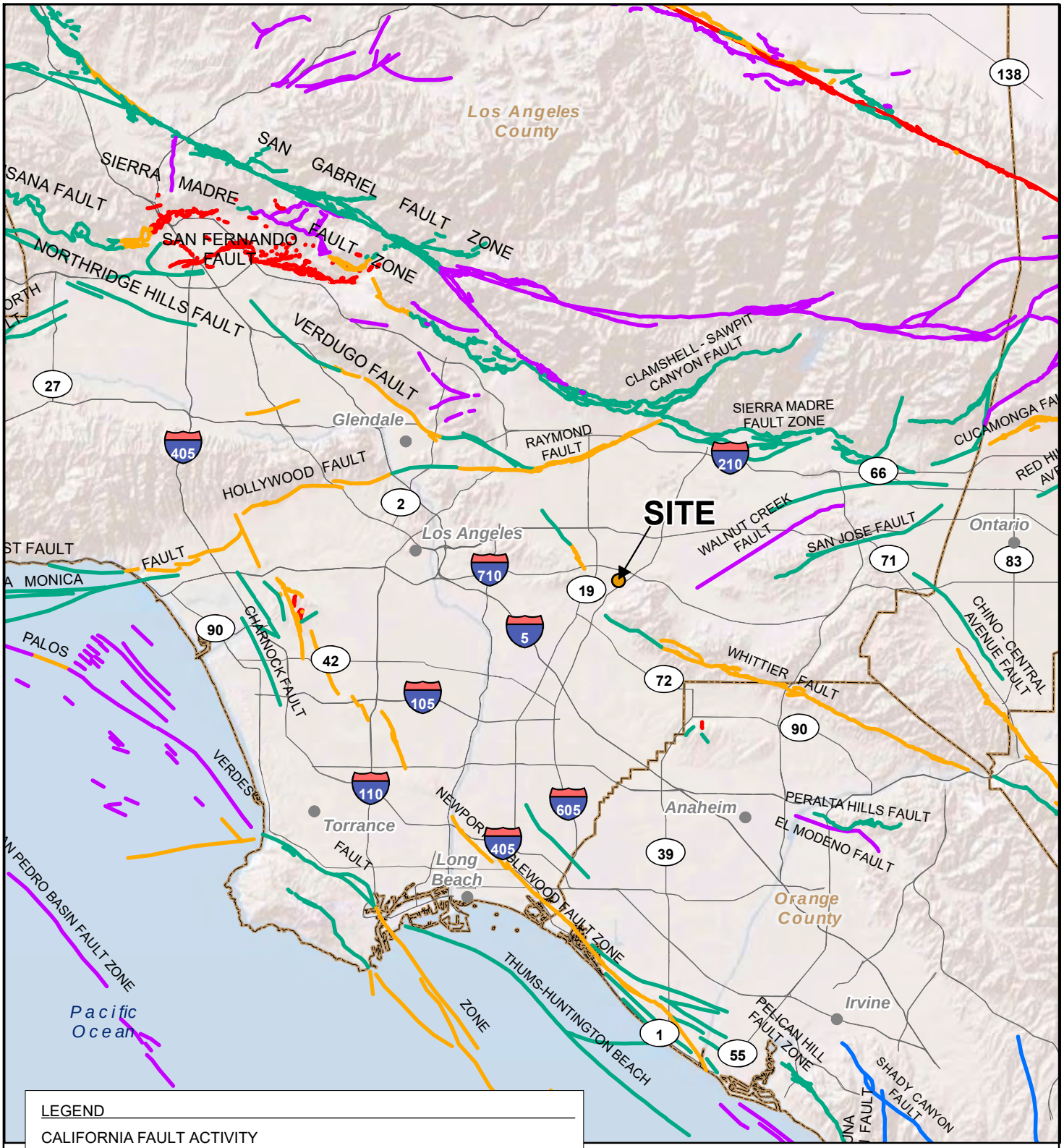

SOURCES: CALIFORNIA DIVISION OF MINES AND GEOLOGY, 1976, ENVIRONMENTAL GEOLOGY OF ORANGE COUNTY, CALIFORNIA, OPEN FILE REPORT 79-8.; JENNINGS, C.W., AND BRYANT, 2010, FAULT ACTIVITY MAP OF CALIFORNIA; ESRI SHADED RELIEF, 2017

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

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FIGURE 5

FAULT LOCATIONS

WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

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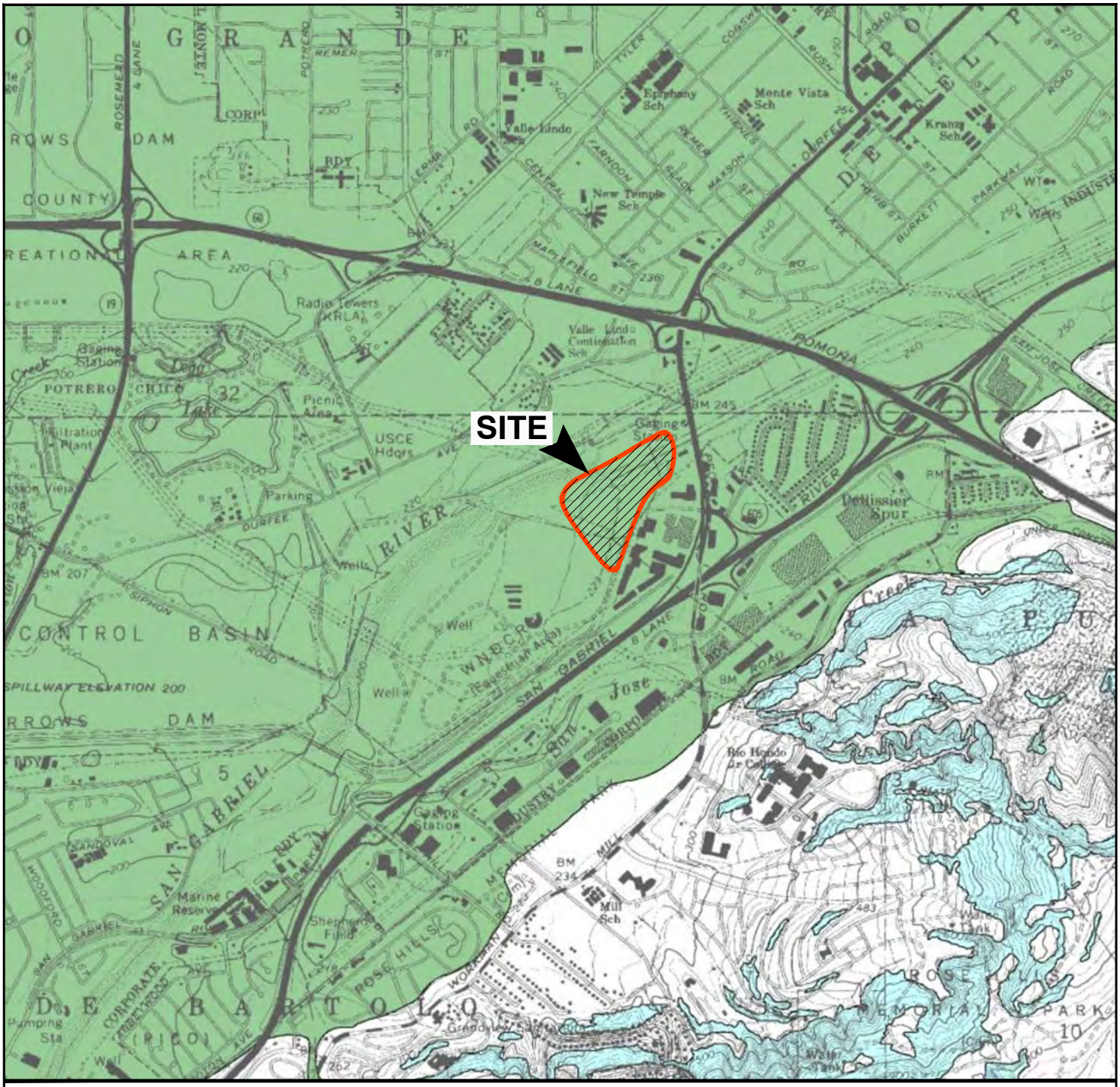

LEGEND

EARTHQUAKE-INDUCED LANDSLIDES

Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

LIQUEFACTION:

Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. I REFERENCE: CDC, 1998.

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FIGURE 6

SEISMIC HAZARD ZONES

WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

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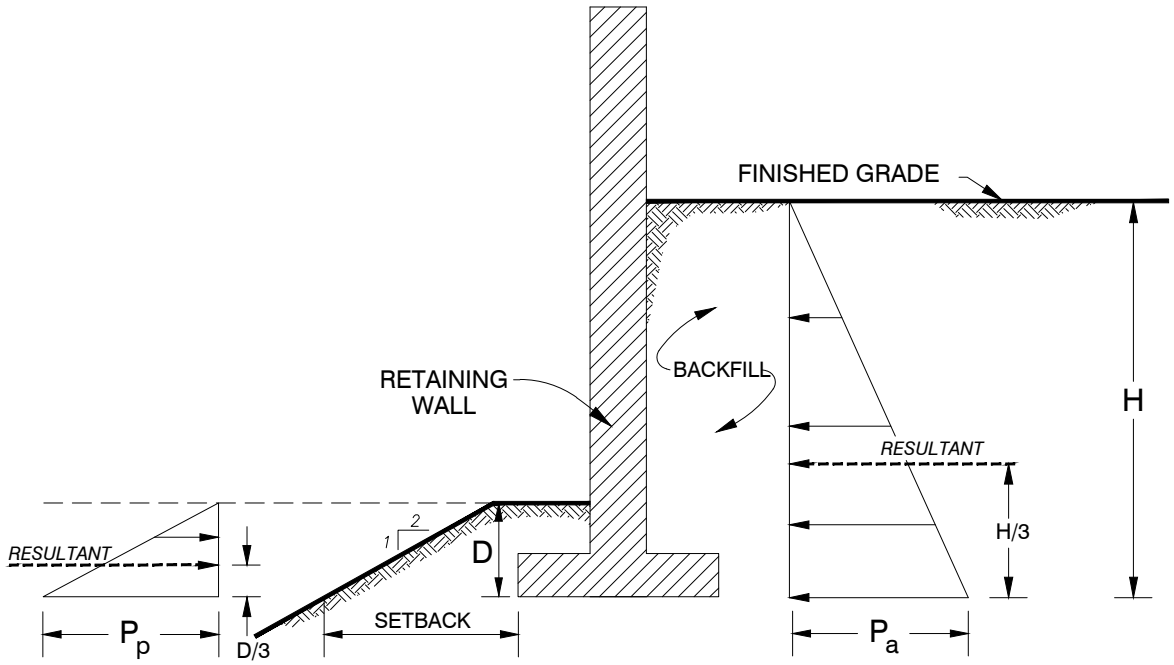
Geotechnical & Environmental Sciences Consultants



NOTES:

1. ASSUMES NO HYDROSTATIC PRESSURE BUILD-UP BEHIND THE RETAINING WALL
2. STRUCTURAL, GRANULAR BACKFILL MATERIALS AS SPECIFIED IN GREENBOOK SHOULD BE USED FOR RETAINING WALL BACKFILL
3. DRAINS AS RECOMMENDED IN THE RETAINING WALL DRAINAGE DETAIL SHOULD BE INSTALLED BEHIND THE RETAINING WALL
4. SURCHARGE PRESSURES CAUSED BY VEHICLES OR NEARBY STRUCTURES ARE NOT INCLUDED
5. H AND D ARE IN FEET (H IS LESS THAN 12 FEET)
6. SETBACK SHOULD BE IN ACCORDANCE WITH FIGURE 1805.3.1 OF THE CBC (2007)

RECOMMENDED GEOTECHNICAL DESIGN PARAMETERS

Lateral Earth Pressure	Equivalent Fluid Pressure ($lb/ft^2/ft$)[1]
P_a	Level Backfill with Granular Soils[2]
	37 H
P_p	Level Ground
	350 D

NOT TO SCALE

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FIGURE 7

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LATERAL EARTH PRESSURES FOR YIELDING RETAINING WALLS

WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

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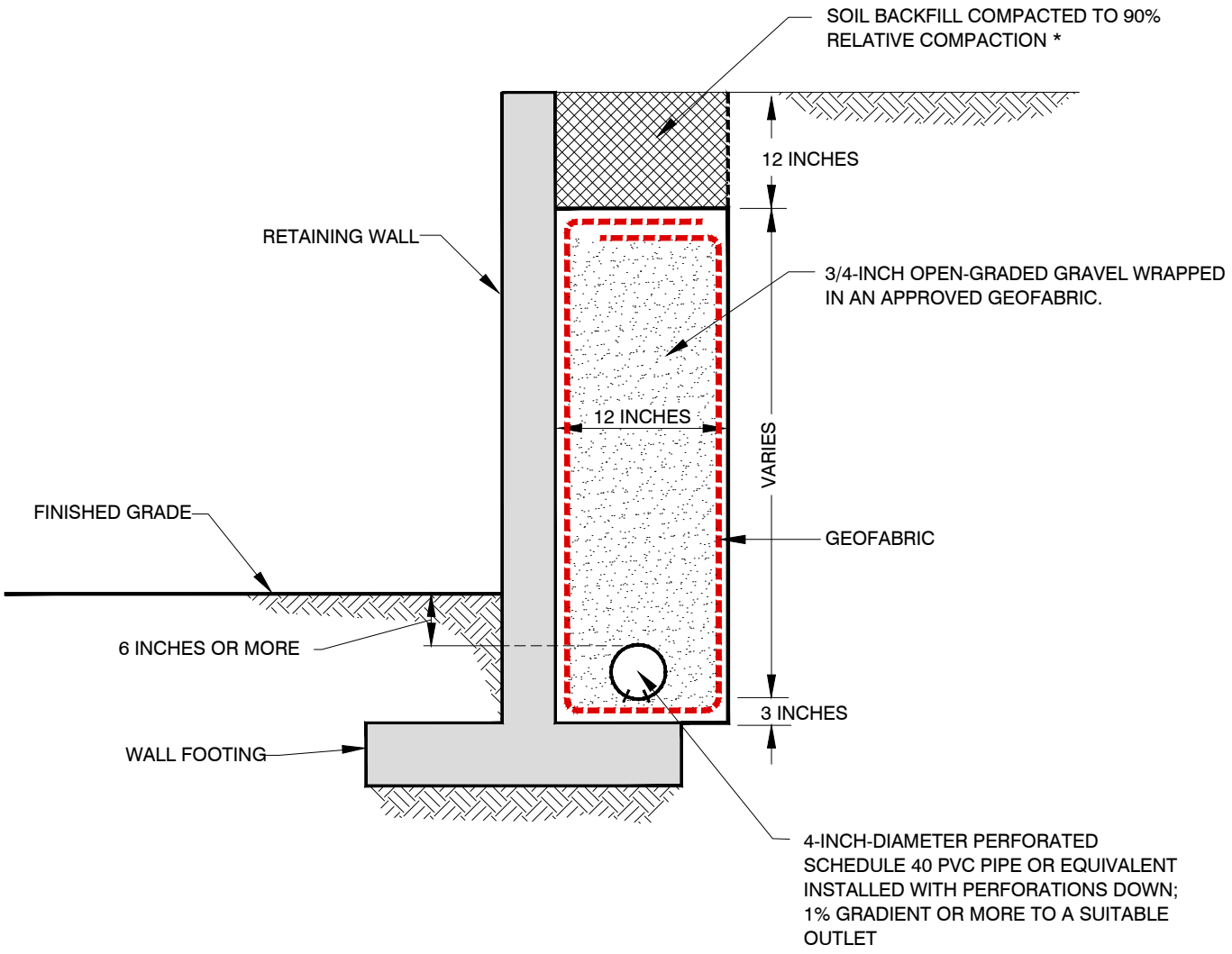

*BASED ON ASTM D1557

NOT TO SCALE

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FIGURE 8

RETAINING WALL DRAINAGE DETAIL

WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

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APPENDIX A

Boring Logs

APPENDIX A

BORING LOGS

Field Procedure for the Collection of Disturbed Samples

Disturbed soil samples were obtained in the field using the following methods.

Bulk Samples

Bulk samples of representative earth materials were obtained from the exploratory borings. The samples were bagged and transported to the laboratory for testing.

The Standard Penetration Test (SPT) Sampler

Disturbed drive samples of earth materials were obtained by means of a Standard Penetration Test spoon sampler. The sampler is composed of a split barrel with an external diameter of 2 inches and an unlined internal diameter of $1^{3}/_{8}$ inches. The sampler was driven into the ground 12 to 18 inches with a 140-pound hammer falling freely from a height of 30 inches in general accordance with ASTM D 1586. The blow counts were recorded for every 6 inches of penetration; the blow counts reported on the logs are those for the last 12 inches of penetration. Soil samples were observed and removed from the spoon, bagged, sealed and transported to the laboratory for testing.

Field Procedure for the Collection of Relatively Undisturbed Samples

Relatively undisturbed soil samples were obtained in the field using the following method.

The Modified Split-Barrel Drive Sampler

The sampler, with an external diameter of 3 inches, was lined with 1-inch-long, thin brass rings with inside diameters of approximately 2.4 inches. The sample barrel was driven into the ground with the weight of a hammer or the kelly bar of the drill rig in general accordance with ASTM D 3550. The driving weight was permitted to fall freely. The approximate length of the fall, the weight of the hammer or bar, and the number of blows per foot of driving are presented on the boring logs as an index to the relative resistance of the materials sampled. The samples were removed from the sample barrel in the brass rings, sealed, and transported to the laboratory for testing.

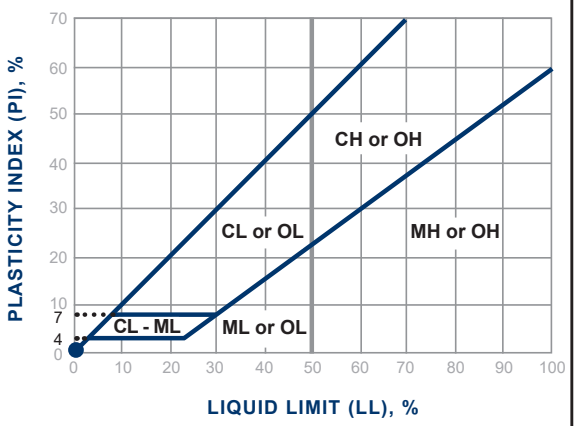
ASTM D 2488

Primary Divisions			Secondary Divisions	
			Group Symbol	Group Name
COARSE-GRAINED SOILS more than 50% retained on No. 200 sieve	**GRAVEL** more than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVEL	GW	well-graded GRAVEL
			GP	poorly graded GRAVEL
		GRAVEL with DUAL CLASSIFICATIONS	GW-GM	well-graded GRAVEL with silt
			GP-GM	poorly graded GRAVEL with silt
			GW-GC	well-graded GRAVEL with clay
			GP-GC	poorly graded GRAVEL with
		GRAVEL with FINES more than	GM	silty GRAVEL
			GC	clayey GRAVEL
			GC-GM	silty, clayey GRAVEL
	SAND 50% or more of coarse fraction passes No. 4 sieve	CLEAN SAND	SW	well-graded SAND
			SP	poorly graded SAND
		SAND with DUAL CLASSIFICATIONS	SW-SM	well-graded SAND with silt
			SP-SM	poorly graded SAND with silt
			SW-SC	well-graded SAND with clay
			SP-SC	poorly graded SAND with clay
		SAND with FINES more than	SM	silty SAND
			SC	clayey SAND
			SC-SM	silty, clayey SAND
FINE-GRAINED SOILS 50% or more passes No. 200 sieve	**SILT and CLAY** liquid limit less than 50%	INORGANIC	CL	lean CLAY
			ML	SILT
			CL-ML	silty CLAY
		ORGANIC	OL (PI > 4)	organic CLAY
			OL (PI < 4)	organic SILT
	SILT and CLAY liquid limit 50% or more	INORGANIC	CH	fat CLAY
			MH	elastic SILT
		ORGANIC	OH (plots on or above "A"-line)	organic CLAY
			OH (plots below "A"-line)	organic SILT
	Highly Organic Soils		PT	Peat

Grain Size

Description		Sieve Size	Grain Size	Approximate Size
Boulders		> 12"	> 12"	Larger than basketball-sized
Cobbles		3 - 12"	3 - 12"	Fist-sized to basketball-sized
Gravel	Coarse	3/4 - 3"	3/4 - 3"	Thumb-sized to
	Fine	#4 - 3/4"	0.19 - 0.75"	Pea-sized to thumb-sized
Sand	Coarse	#10 - #4	0.079 - 0.19"	Rock-salt-sized to pea-sized
	Medium	#40 - #10	0.017 - 0.079"	Sugar-sized to rock-salt-sized
	Fine	#200 - #40	0.0029 - 0.017"	Flour-sized to sugar-sized
Fines		Passing #200	< 0.0029"	Flour-sized and smaller

Plasticity Chart



Apparent Density - Coarse-Grained Soil

Apparent Density	Spooling Cable or Cathead		Automatic Trip Hammer	
	SPT (blows/foot)	Split Barrel (blows/foot)	SPT (blows/foot)	Split Barrel (blows/foot)
Very Loose	≤ 4	≤ 8	≤ 3	≤ 5
Loose	5 - 10	9 - 21	4 - 7	6 - 14
Medium Dense	11 - 30	22 - 63	8 - 20	15 - 42
Dense	31 - 50	64 - 105	21 - 33	43 - 70
Very Dense	> 50	> 105	> 33	> 70

Consistency - Fine-Grained Soil

Consis-tency	Spooling Cable or Cathead		Automatic Trip Hammer	
	SPT (blows/foot)	Split Barrel (blows/foot)	SPT (blows/foot)	Split Barrel (blows/foot)
Very Soft	< 2	< 3	< 1	< 2
Soft	2 - 4	3 - 5	1 - 3	2 - 3
Firm	5 - 8	6 - 10	4 - 5	4 - 6
	9 - 15	11 - 20	6 - 10	7 - 13
V	16 - 30	21 - 39	11 - 20	14 - 26
Hard	> 30	> 39	> 20	> 26

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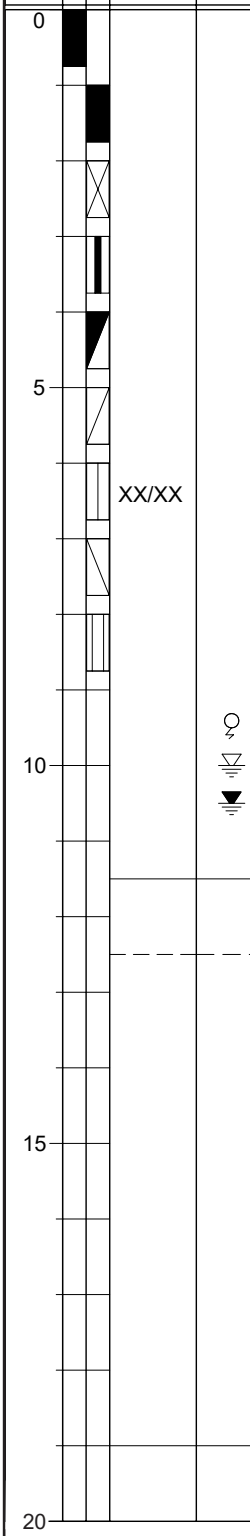
USCS METHOD OF SOIL CLASSIFICATION

BORING LOG EXPLANATION SHEET



Bulk sample.

Modified split-barrel drive sampler.

No recovery with modified split-barrel drive sampler.

Sample retained by others.

Standard Penetration Test (SPT).

No recovery with a SPT.

Shelby tube sample. Distance pushed in inches/length of sample recovered in inches.

No recovery with Shelby tube sampler.

Continuous Push Sample.

Seepage.

Groundwater encountered during drilling.

Groundwater measured after drilling.

SM

MAJOR MATERIAL TYPE (SOIL):

Solid line denotes unit change.

CL

Dashed line denotes material change.

Attitudes: Strike/Dip
b: Bedding
c: Contact
j: Joint
f: Fracture
F: Fault
cs: Clay Seam
s: Shear
bss: Basal Slide Surface
sf: Shear Fracture
sz: Shear Zone
sbs: Shear Bedding Surface

The total depth line is a solid line that is drawn at the bottom of the boring.

DATE DRILLED 12/20/11 BORING NO. B-1

GROUND ELEVATION 232' ± (MSL) SHEET 1 OF 2

METHOD OF DRILLING 8" Hollow-Stem Auger (Martini Drilling)

DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"

SAMPLED BY JRS LOGGED BY JRS REVIEWED BY MER/LTJ

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0							ML	ALLUVIUM: Brown, moist, loose to medium dense, sandy SILT.
5			13	8.9	94.4			Loose.
10			8	4.2			SP-SM	Light brownish gray, damp, medium dense, poorly graded fine SAND with silt.
15			41	1.9				
20								

FIGURE A- 1

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WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

DATE DRILLED 12/20/11 BORING NO. B-1

GROUND ELEVATION 232' ± (MSL) SHEET 2 OF 2

METHOD OF DRILLING 8" Hollow-Stem Auger (Martini Drilling)

DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"

SAMPLED BY JRS LOGGED BY JRS REVIEWED BY MER/LTJ

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
20			40				SP-SM	ALLUVIUM: (Continued) Light brown, damp, very dense, poorly graded SAND with silt; few gravel; trace cobbles.
25			83/10"		26			Total Depth = 26 feet. Groundwater not encountered. Backfilled with on-site soils on 12/20/11. Note: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.
30								
35								
40								

FIGURE A- 2

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WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

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DATE DRILLED 12/20/11 BORING NO. B-2

GROUND ELEVATION 224' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (Martini Drilling)

DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"

SAMPLED BY JRS LOGGED BY JRS REVIEWED BY MER/LTJ

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0							SM	FILL: Brown, moist, medium dense, silty fine SAND; trace cobbles.
5			15	2.4	95.4		SP-SM	ALLUVIUM: Light brownish gray, damp, medium dense, poorly graded SAND with silt.
10								Total Depth = 6.5 feet. Groundwater not encountered. Percolation testing performed on 2/21/11. Backfilled with sand and on-site soils on 2/21/11. Note: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.
15								
20								

FIGURE A- 3

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WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

DATE DRILLED 12/20/11 BORING NO. B-3

GROUND ELEVATION 222' ± (MSL) SHEET 1 OF 2

METHOD OF DRILLING 8" Hollow-Stem Auger (Martini Drilling)

DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"

SAMPLED BY JRS LOGGED BY JRS REVIEWED BY MER/LTJ

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0							SM	FILL: Brown, moist, medium dense, silty SAND; trace gravel; trace cobbles.
							SP	ALLUVIUM: Light brown, damp, loose, poorly graded SAND; medium dense; few gravel; trace cobbles.
5			9	3.0				Medium dense.
10			23	9.2				Moist; trace gravel.
15			47	3.0				Damp; very dense; little gravel.
20								

FIGURE A- 4

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WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

208461002 | 4/18

DATE DRILLED 12/20/11 BORING NO. B-3

GROUND ELEVATION 222' ± (MSL) SHEET 2 OF 2

METHOD OF DRILLING 8" Hollow-Stem Auger (Martini Drilling)

DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"

SAMPLED BY JRS LOGGED BY JRS REVIEWED BY MER/LTJ

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
20			41	▽			SP	ALLUVIUM: (Continued) Light grayish brown, moist, medium dense, poorly graded SAND; trace gravel; trace cobbles. @ 21': Groundwater encountered during drilling. Saturated.
25			29					Dense; few gravel.
								Total Depth = 26.5 feet. Groundwater encountered at 21 feet during drilling. Backfilled with on-site soils on 12/20/11. Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
30								
35								
40								

FIGURE A- 5

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WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

208461002 | 4/18

DATE DRILLED 12/20/11 BORING NO. B-4

GROUND ELEVATION 225' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (Martini Drilling)

DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"

SAMPLED BY JRS LOGGED BY JRS REVIEWED BY MER/LTJ

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0							SM	FILL: Brown, moist, medium dense, silty fine SAND; trace gravel.
5			22				SM	ALLUVIUM: Light gray, damp, medium dense, silty SAND; few gravel.
10								Total Depth = 6.5 feet. Groundwater not encountered. Percolation testing performed on 2/21/11. Backfilled with on-site soils and sand on 2/21/11. Note: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.
15								
20								

FIGURE A- 6

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WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

DATE DRILLED 12/20/11 BORING NO. B-5

GROUND ELEVATION 229' ± (MSL) SHEET 1 OF 2

METHOD OF DRILLING 8" Hollow-Stem Auger (Martini Drilling)

DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"

SAMPLED BY JRS LOGGED BY JRS REVIEWED BY MER/LTJ

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0							SM	FILL: Brown, moist, medium dense, silty SAND.
5			11	2.0			SM	ALLUVIUM: Light brown, damp, medium dense, silty fine SAND; trace gravel.
10			16	3.5			SP-SM	Light brown, damp, medium dense, poorly graded fine SAND with silt.
15			19	2.7				Fine to coarse; trace gravel.
20								

FIGURE A- 7

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WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

208461002 | 4/18

DATE DRILLED 12/20/11 BORING NO. B-5

GROUND ELEVATION 229' ± (MSL) SHEET 2 OF 2

METHOD OF DRILLING 8" Hollow-Stem Auger (Martini Drilling)

DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"

SAMPLED BY JRS LOGGED BY JRS REVIEWED BY MER/LTJ

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
20		■	81				SP-SM	ALLUVIUM: (Continued) Very light brown, damp, very dense, poorly graded SAND with silt; trace gravel.
25		■	77	▽			SM	Light brown, moist, very dense, silty fine to coarse SAND; few to little gravel. Saturated.
30								Total Depth = 26.5 feet. Groundwater encountered at 26 feet during drilling. Backfilled with on-site soils on 12/20/11. Note: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.
35								
40								

DATE DRILLED 12/20/11 BORING NO. B-6

GROUND ELEVATION 232' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (Martini Drilling)

DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"

SAMPLED BY JRS LOGGED BY JRS REVIEWED BY MER/LTJ

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0								ASPHALT CONCRETE: Approximately 5.5 inches thick.
							GP	AGGREGATE BASE: Brown, moist, medium dense, poorly graded GRAVEL with sand; approximately 7 inches thick.
							SM	FILL: Brown, moist, medium dense, silty fine SAND; trace pieces of gravel sized asphalt.
5			21	4.9	99.7		SM	ALLUVIUM: Light brown, damp, medium dense, silty fine SAND; mottled oxidation staining.
10								Total Depth = 7 feet. Groundwater not encountered. Backfilled with on-site soils and capped with quick-set concrete on 12/20/11. Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
15								
20								

FIGURE A- 9

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WHITTIER, CALIFORNIA

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DATE DRILLED 12/20/11 BORING NO. B-7

GROUND ELEVATION 230' ± (MSL) SHEET 1 OF 4

METHOD OF DRILLING 8" Hollow-Stem Auger (Martini Drilling)

DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"

SAMPLED BY JRS LOGGED BY JRS REVIEWED BY MER/LTJ

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0							SM	FILL: Brown, moist, medium dense, silty fine SAND.
							SP	ALLUVIUM: Light brown, damp, loose, poorly graded fine to medium SAND.
5			12	2.0	100.5			Light gray.
10			2	2.4				Very loose.
							SP-SM	Light brown, moist, loose, poorly graded SAND with silt; alternating layers of silty fine SAND.
			6	4.4	89.3			
15			55	1.7				Very dense; little gravel.
20								

FIGURE A- 10

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DATE DRILLED 12/20/11 BORING NO. B-7

GROUND ELEVATION 230' ± (MSL) SHEET 2 OF 4

METHOD OF DRILLING 8" Hollow-Stem Auger (Martini Drilling)

DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"

SAMPLED BY JRS LOGGED BY JRS REVIEWED BY MER/LTJ

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
20		■	82/11"	▽			ML	ALLUVIUM: (Continued) Brown, moist, very dense, fine sandy SILT. @21': Groundwater encountered during drilling.
							SM	Brown, saturated, very dense, silty fine to coarse SAND; some gravel.
							SP	Light brown, saturated, very dense, poorly graded medium to coarse SAND; little to some gravel.
25		■	48					
							SP-SM	Brown, saturated, very dense, poorly graded medium to coarse SAND with silt; little to some gravel.
30		■	61					
35		■	93/11"					
40								

FIGURE A- 11

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WHITTIER, CALIFORNIA

208461002 | 4/18

DATE DRILLED 12/20/11 BORING NO. B-7

GROUND ELEVATION 230' ± (MSL) SHEET 3 OF 4

METHOD OF DRILLING 8" Hollow-Stem Auger (Martini Drilling)

DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"

SAMPLED BY JRS LOGGED BY JRS REVIEWED BY MER/LTJ

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
40			82/11"				SP-SM	ALLUVIUM: (Continued) Light brown, saturated, very dense, poorly graded fine to coarse SAND with silt; little to some gravel.
45			26				ML	Brown, saturated, very dense, fine sandy SILT; mottled oxidation staining.
			34					
50			35				SM	Brown, saturated, very dense, silty fine SAND.
			69					
55			71					
60								

DATE DRILLED 12/20/11 BORING NO. B-7

GROUND ELEVATION 230' ± (MSL) SHEET 4 OF 4

METHOD OF DRILLING 8" Hollow-Stem Auger (Martini Drilling)

DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"

SAMPLED BY JRS LOGGED BY JRS REVIEWED BY MER/LTJ

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
60			64				SM	ALLUVIUM: (Continued) Brown, saturated, very dense, silty SAND.
								Total Depth = 61.5 feet. Groundwater encountered at 21 feet during drilling. Backfilled with on-site soils on 12/20/11. Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
65								
70								
75								
80								

FIGURE A- 13

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WHITTIER, CALIFORNIA

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DATE DRILLED 12/20/11 BORING NO. B-8

GROUND ELEVATION 232' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (Martini Drilling)

DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"

SAMPLED BY JRS LOGGED BY JRS REVIEWED BY MER/LTJ

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0							SM	FILL: Brown, moist, medium dense, silty fine SAND; trace cobbles.
							SP-SM	ALLUVIUM: Light brown, moist, loose, poorly graded fine SAND with silt; trace gravel.
5			9	7.2	93.0			
							SM	Brown, moist, loose, silty fine SAND; mottled oxidation staining.
10								Total Depth = 6.5 feet. Groundwater not encountered. Percolation testing performed on 2/21/11. Backfilled with on-site soils and sand on 2/21/11. Note: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.
15								
20								

FIGURE A- 14

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WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

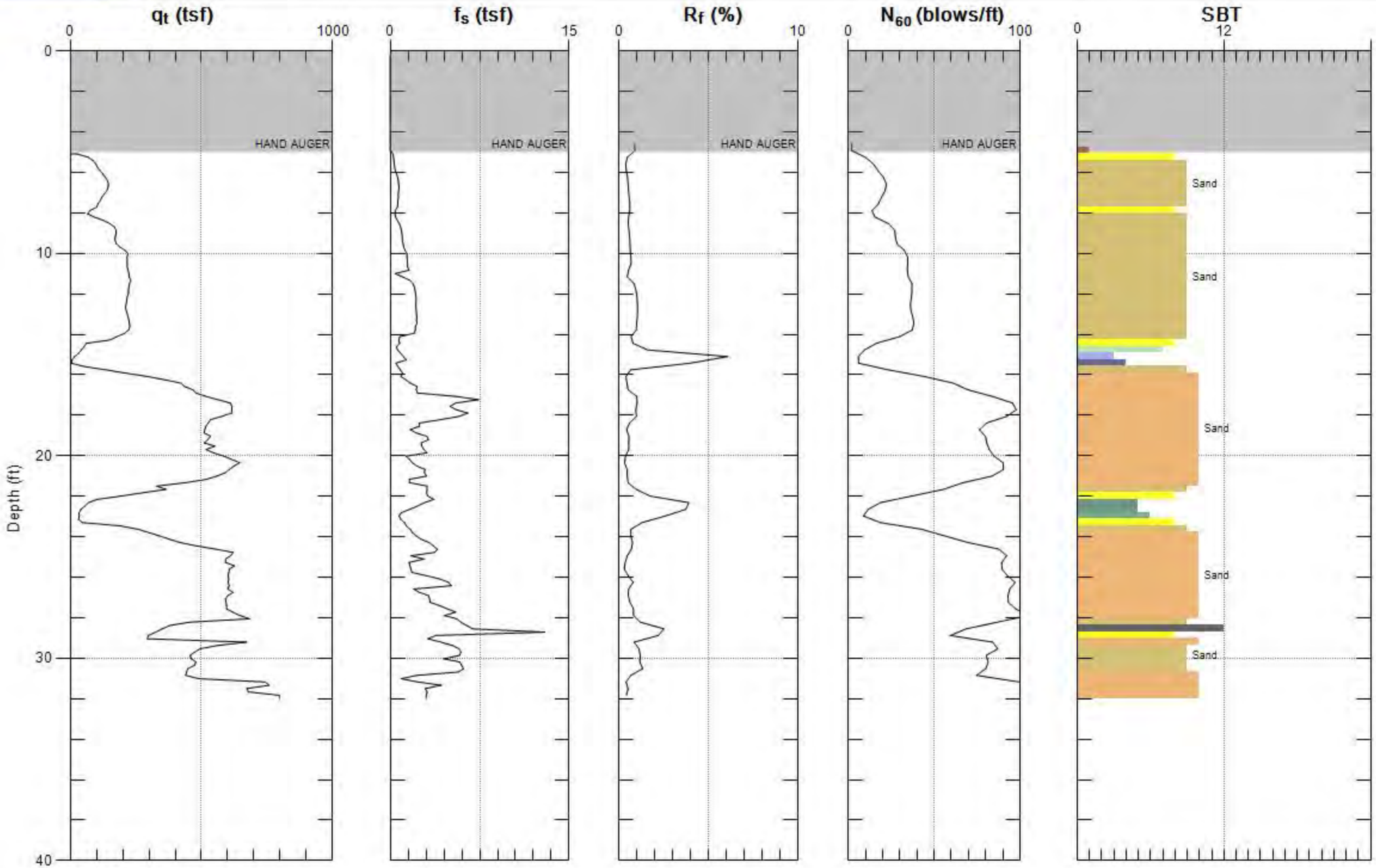
APPENDIX B

CPT Data

NINYO & MOORE

Site: WHITTIER NARROW EQU. Engineer: FRANKLIN

Sounding: cpt-1 Date: 3/13/2018 10:20



Max. Depth: 31.988 (ft)
Avg. Interval: 0.328 (ft)

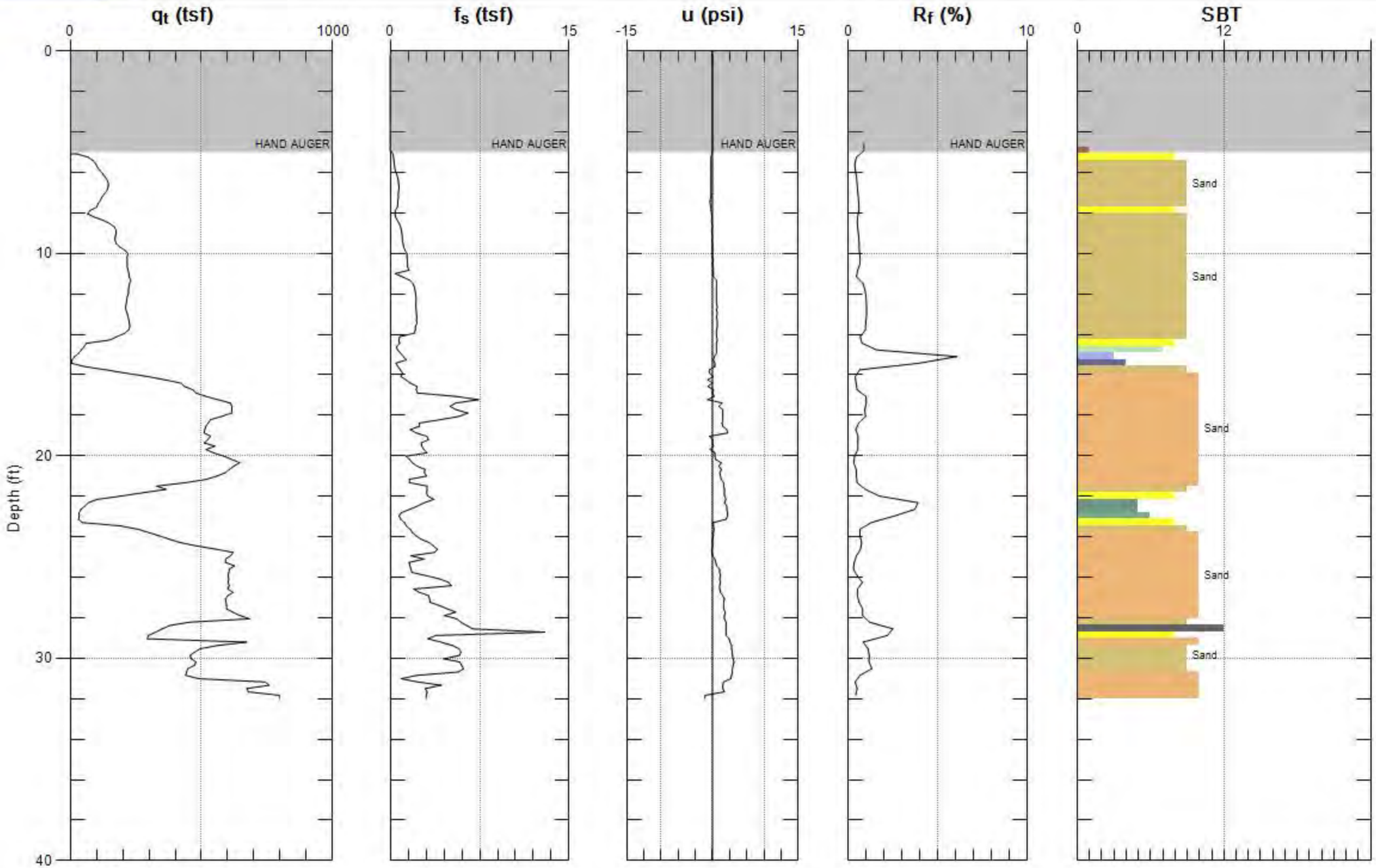
SBT: Soil Behavior Type (Robertson 1990)

GREGG

NINYO & MOORE

Site: WHITTIER NARROW EQU. Engineer: FRANKLIN

Sounding: cpt-1 Date: 3/13/2018 10:20



Max. Depth: 31.988 (ft)
Avg. Interval: 0.328 (ft)

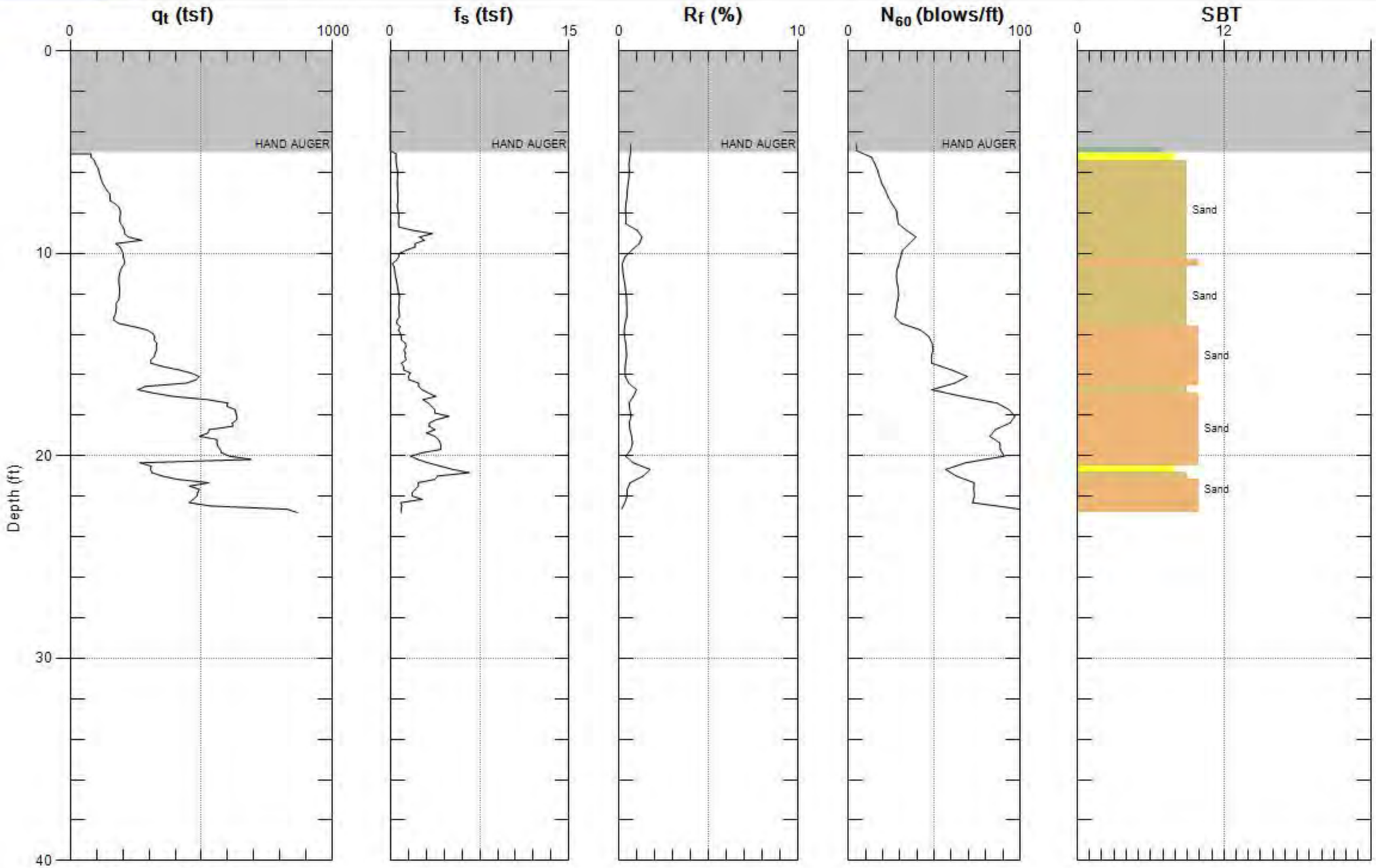
SBT: Soil Behavior Type (Robertson 1990)

GREGG

NINYO & MOORE

Site: WHITTIER NARROW EQU. Engineer: FRANKLIN

Sounding: cpt-2 Date: 3/13/2018 09:13



Max. Depth: 22.802 (ft)
Avg. Interval: 0.328 (ft)

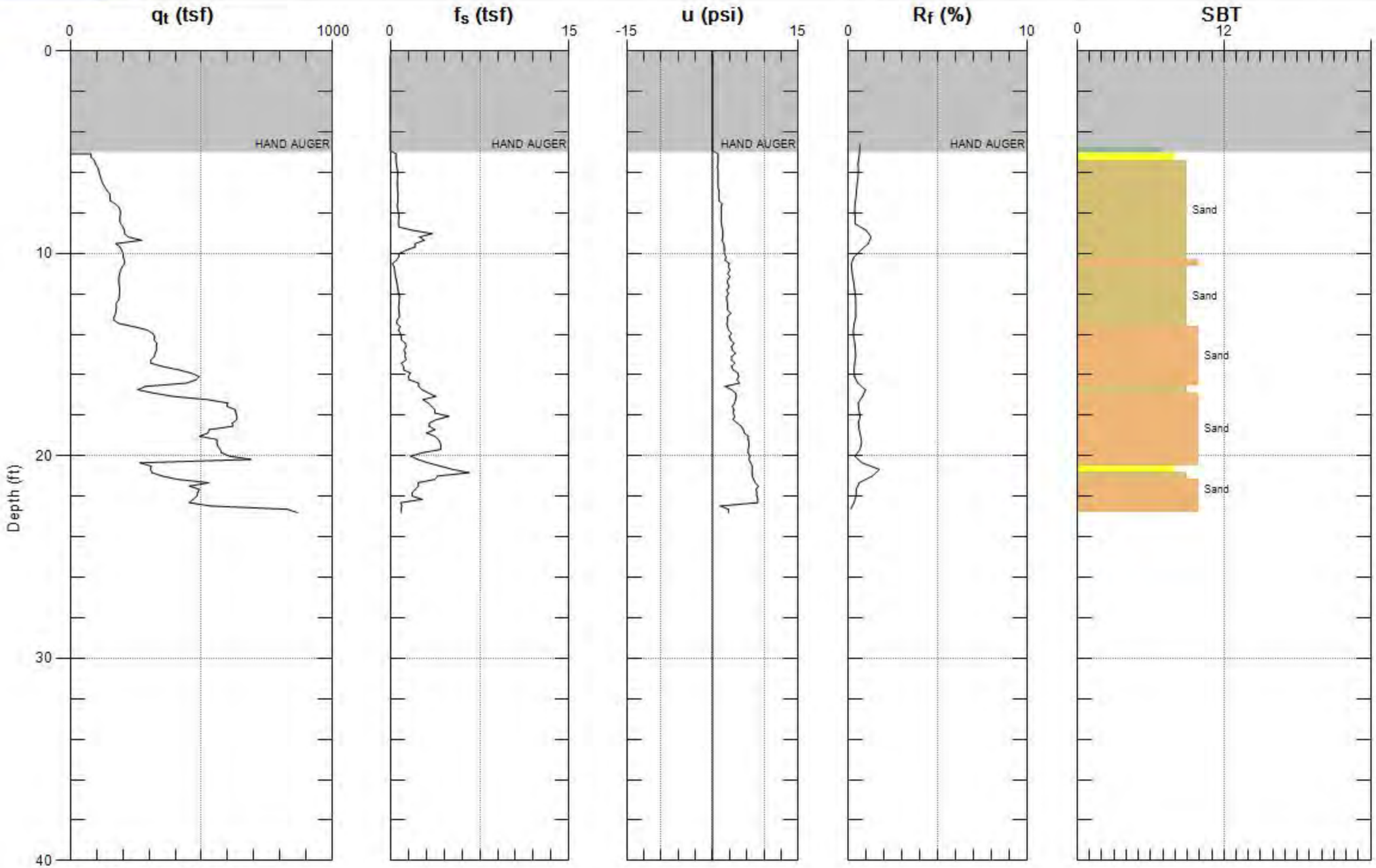
SBT: Soil Behavior Type (Robertson 1990)

GREGG

NINYO & MOORE

Site: WHITTIER NARROW EQU. Engineer: FRANKLIN

Sounding: cpt-2 Date: 3/13/2018 09:13



Max. Depth: 22.802 (ft)
Avg. Interval: 0.328 (ft)

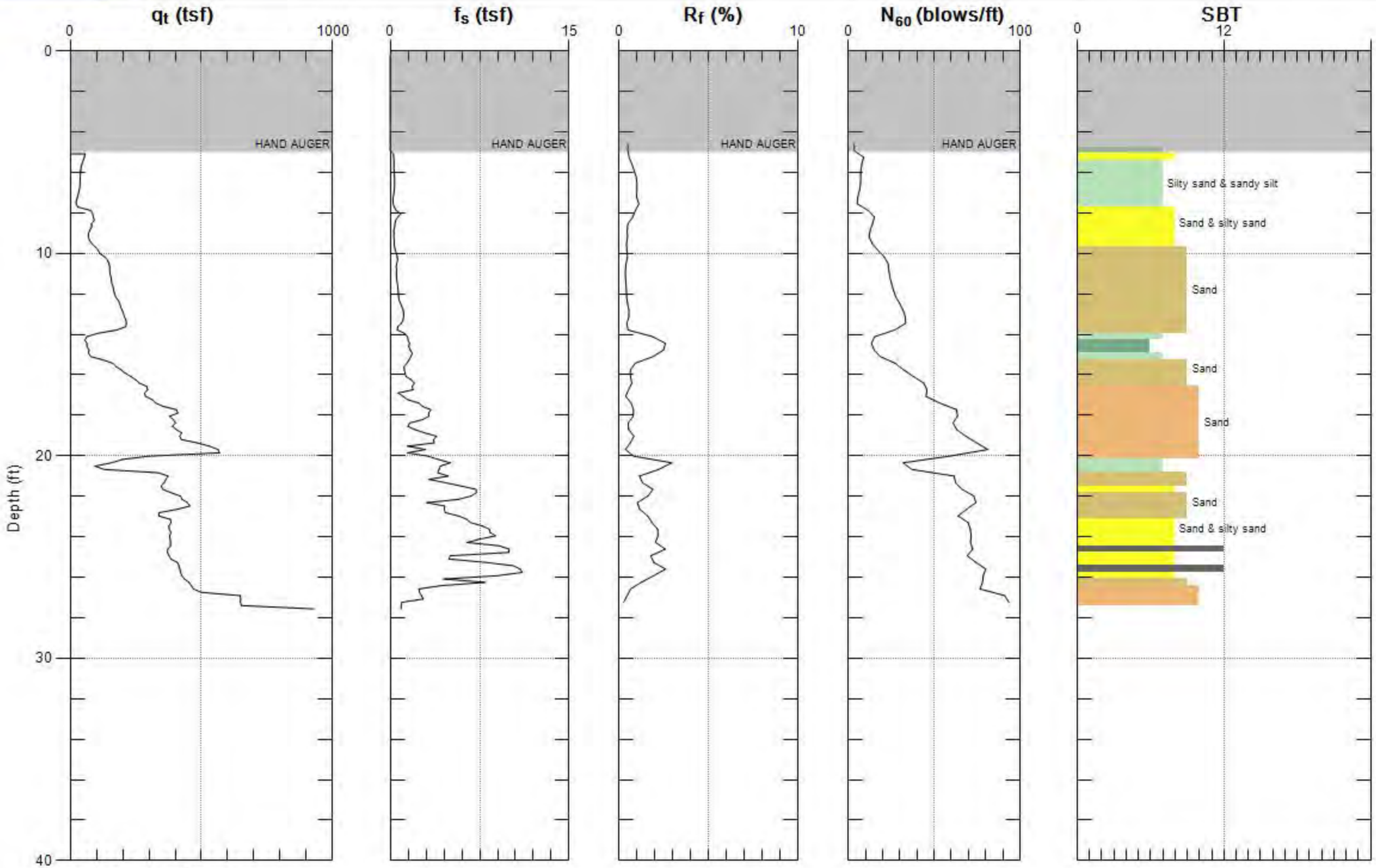
SBT: Soil Behavior Type (Robertson 1990)

GREGG

NINYO & MOORE

Site: WHITTIER NARROW EQU. Engineer: FRANKLIN

Sounding: cpt-3 Date: 3/13/2018 08:17



Max. Depth: 27.559 (ft)
Avg. Interval: 0.328 (ft)

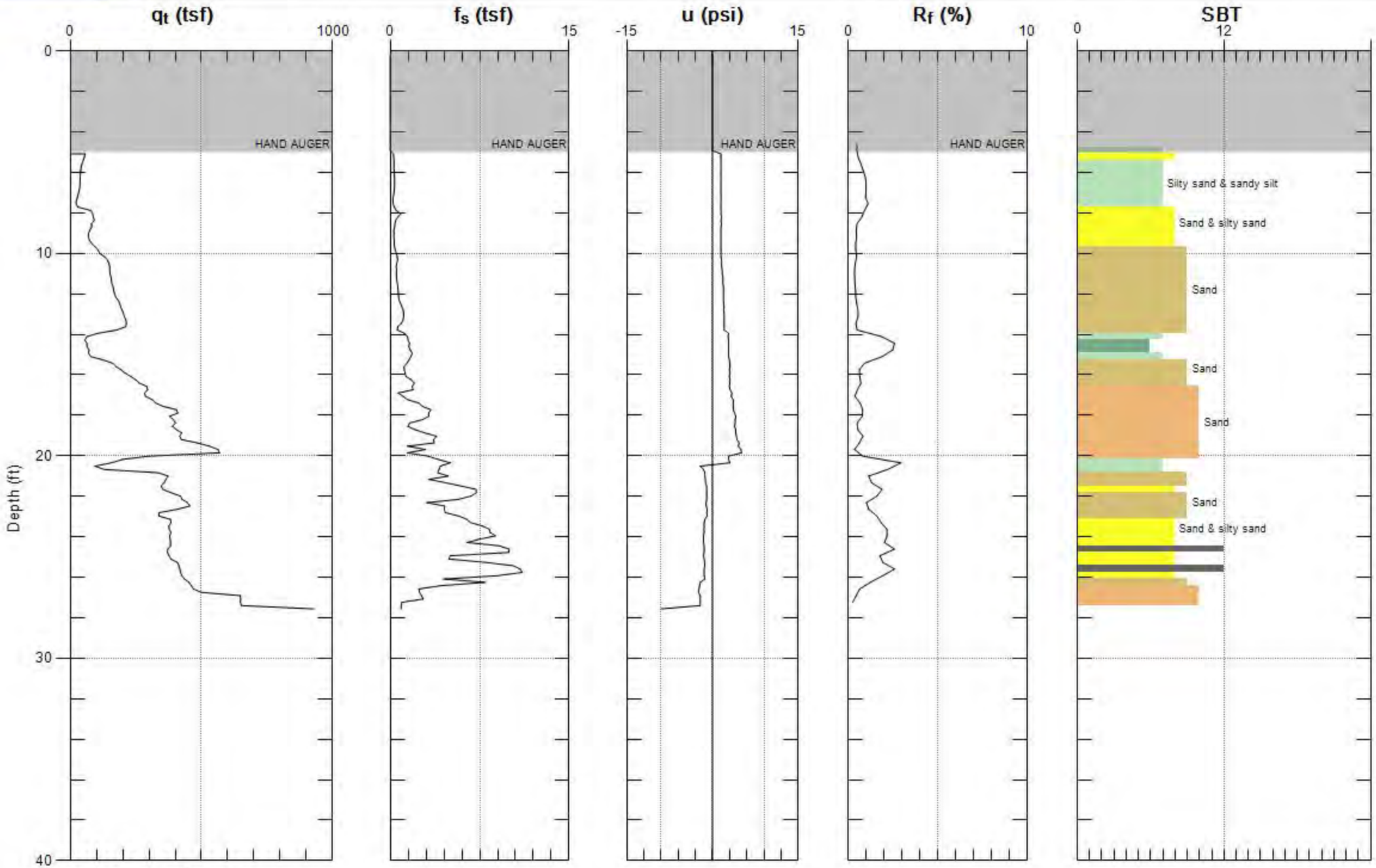
SBT: Soil Behavior Type (Robertson 1990)

GREGG

NINYO & MOORE

Site: WHITTIER NARROW EQU. Engineer: FRANKLIN

Sounding: cpt-3 Date: 3/13/2018 08:17



Max. Depth: 27.559 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

APPENDIX C

Laboratory Testing

APPENDIX C

LABORATORY TESTING

Classification
Soils were visually and texturally classified in accordance with the Unified Soil Classification System (USCS) in general accordance with ASTM D 2488. Soil classifications are indicated on the logs of the exploratory borings in Appendix A.

Moisture Content
The moisture content of samples obtained from the exploratory excavations was evaluated in accordance with ASTM D 2216. The test results are presented on the logs of the exploratory excavations in Appendix A.

In-Place Moisture and Density Tests
The moisture content and dry density of relatively undisturbed samples obtained from the exploratory borings were evaluated in general accordance with ASTM D 2937. The test results are presented on the logs of the exploratory borings in Appendix A.

Gradation Analysis
A gradation analysis test was performed on a selected representative soil sample in general accordance with ASTM D 422. The grain-size distribution curve is shown on Figure C-1. These test results were utilized in evaluating the soil classifications in accordance with the Unified Soil Classification System (USCS).

200 Wash
An evaluation of the percentage of particles finer than the No. 200 sieve in selected soil samples was performed in general accordance with ASTM D 1140. The results of the tests are presented on Figure C-2.

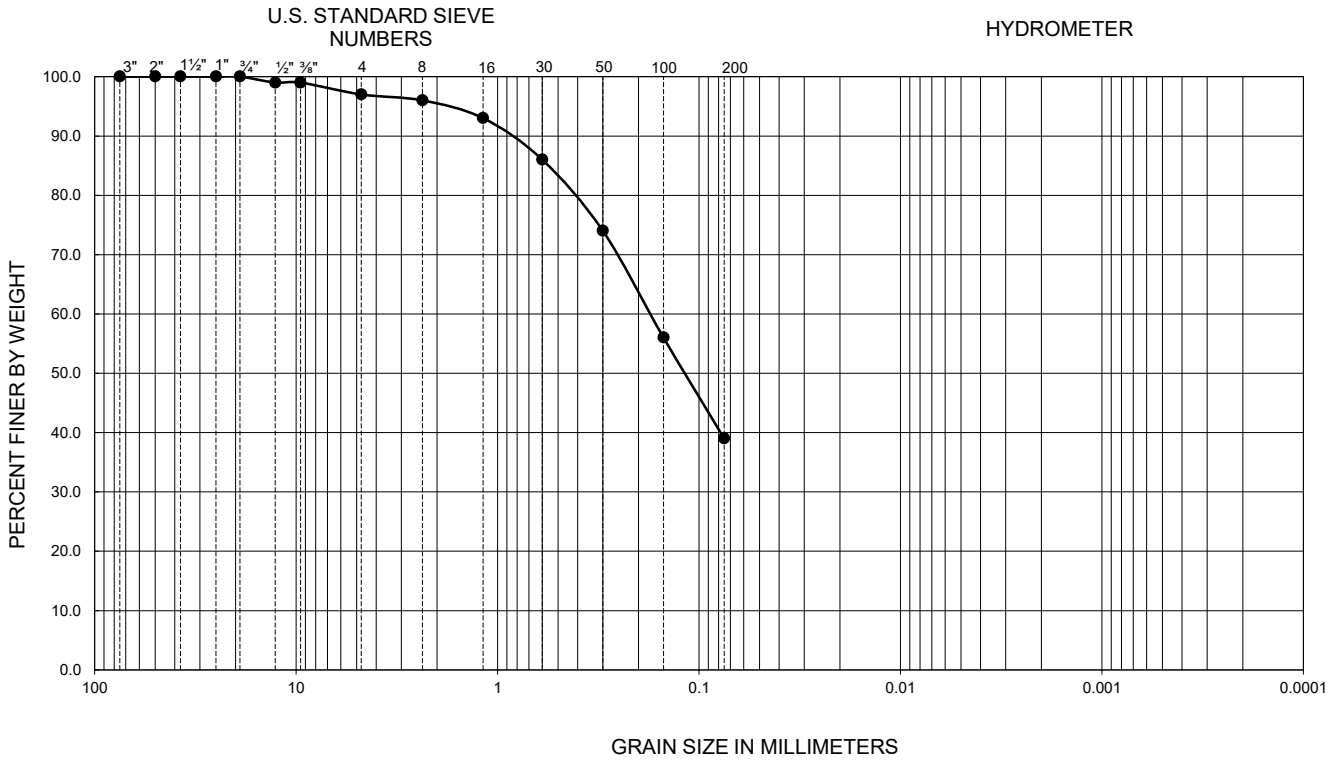
Atterberg Limits
An Atterberg limits test was performed on a selected representative fine-grained soil sample to evaluate the liquid limit, plastic limit, and plasticity index in general accordance with ASTM D 4318. The test results were utilized to evaluate the soil classification in accordance with the USCS. The test results and classifications are shown on Figure C-3.

Direct Shear Test
Direct shear tests were performed on relatively undisturbed samples in general accordance with ASTM D 3080 to evaluate the shear strength characteristics of the selected materials. The samples were inundated during shearing to represent adverse field conditions. The results are shown on Figures B-4 and B-5.

Sand Equivalent
Sand equivalent (SE) tests were performed on selected representative samples in general accordance with California Test (CT) 217/American Association of State Highway and Transportation Officials (AASHTO) T 176. The SE value reported on Figure C-6 is the ratio of the coarse- to fine-grained particles in the selected samples.

R-Value
The resistance value, or R-value, for site soils was evaluated in general accordance with California Test (CT) 301. Samples were prepared and evaluated for exudation pressure and expansion pressure. The equilibrium R-value is reported as the lesser or more conservative of the two calculated results. The test results are shown on Figure C-7.

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D_{10}	D_{30}	D_{60}	C_u	C_c	Passing No. 200 (percent)	USCS
●	B-4	5.0-6.5	--	--	--	--	--	--	--	--	39	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

FIGURE C-1

GRADATION TEST RESULTS

WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

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SAMPLE LOCATION	SAMPLE DEPTH (ft)	DESCRIPTION	PERCENT PASSING NO. 4	PERCENT PASSING NO. 200	USCS (TOTAL SAMPLE)
B-1	5.0-6.5	SANDY SILT	98	62	ML
B-3	10.0-11.5	POORLY GRADED SAND	99	4	SP
B-5	5.0-6.5	SILTY SAND	100	18	SM
B-5	15.0-16.5	POORLY GRADED SAND WITH SILT	85	5	SP-SM
B-7	5.0-6.5	POORLY GRADED SAND	92	3	SP
B-7	10.0-11.5	POORLY GRADED SAND	99	3	SP
B-7	25.0-26.5	POORLY GRADED SAND WITH GRAVEL	59	4	SP
B-7	45.0-46.5	POORLY GRADED SAND WITH SILT	98	6	SP-SM
B-7	47.5-49.0	SILT	100	92	ML

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 1140

FIGURE C-2

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NO. 200 SIEVE ANALYSIS TEST RESULTS

WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

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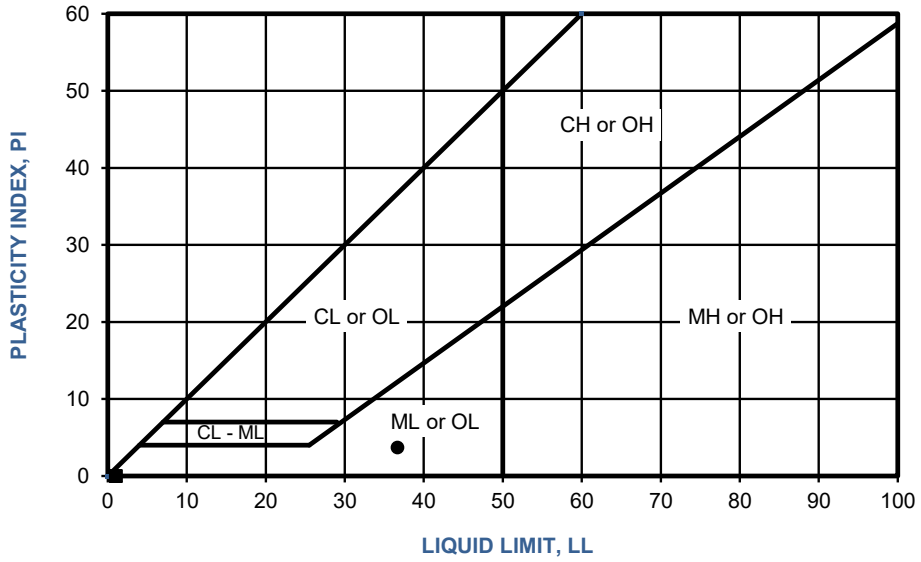
SYMBOL	LOCATION	DEPTH (ft)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	USCS CLASSIFICATION (Fraction Finer Than No. 40 Sieve)	USCS
●	B-7	47.5-49.0	37	33	4	ML	ML

NP - INDICATES NON-PLASTIC



PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 4318

FIGURE C-3

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ATTERBERG LIMITS TEST RESULTS

WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

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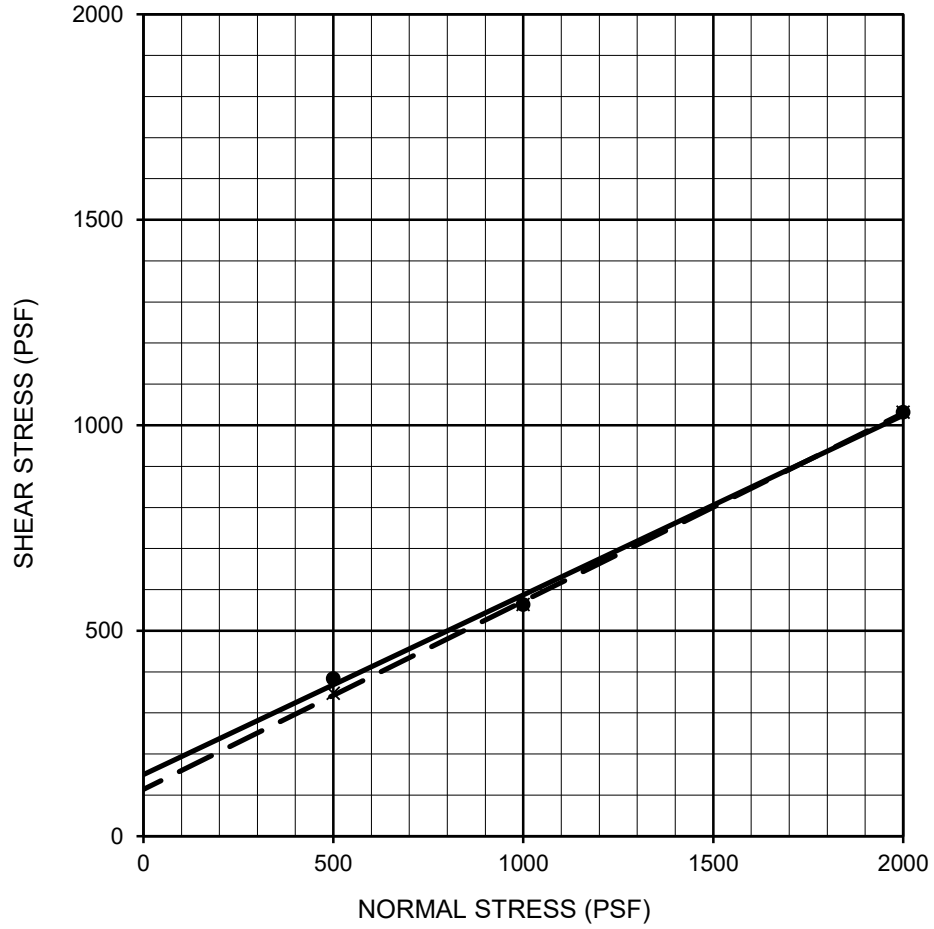

Description	Symbol	Sample Location	Depth (ft)	Shear Strength	Cohesion (psf)	Friction Angle (degrees)	Soil Type
SILT	●——	B-1	5.0-6.5	Peak	150	24	ML
SILT	– – X – –	B-1	5.0-6.5	Ultimate	114	25	ML

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080

FIGURE C-4

DIRECT SHEAR TEST RESULTS

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WHITTIER, CALIFORNIA

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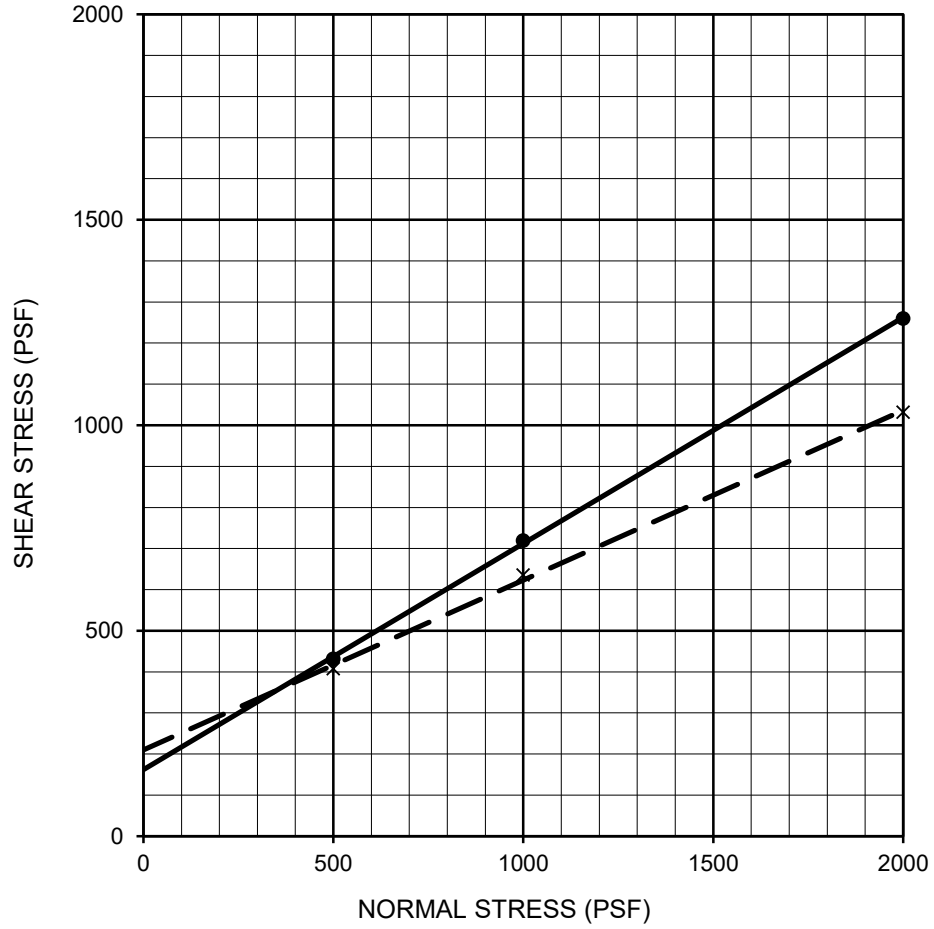

Description	Symbol	Sample Location	Depth (ft)	Shear Strength	Cohesion (psf)	Friction Angle (degrees)	Soil Type
SILTY SAND	●—●	B-7	5.0-6.5	Peak	162	29	SM
SILTY SAND	– – X – –	B-7	5.0-6.5	Ultimate	210	22	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080

FIGURE C-5

DIRECT SHEAR TEST RESULTS

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WHITTIER, CALIFORNIA

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SAMPLE LOCATION	SAMPLE DEPTH (ft)	SOIL TYPE	SAND EQUIVALENT
B-2	3.0-3.5	SM	55

PERFORMED IN GENERAL ACCORDANCE WITH AASHTO T176/CT 217

FIGURE C-6

SAND EQUIVALENT VALUE

WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

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SAMPLE LOCATION	SAMPLE DEPTH (ft)	SOIL TYPE	R-VALUE
B-6	1.0-5.0	SM	46

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 2844/CT 301

FIGURE C-7

R-VALUE TEST RESULTS

WHITTIER NARROWS EQUESTRIAN CENTER
WHITTIER, CALIFORNIA

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APPENDIX D

Wallace Laboratories Corrosivity Data

Jan Sandgren and Lacey Withers, Withers & Sandgren | Whittier Narrows Equestrian Center | corrosion data | November 22, 2011

sample ID	description	pH	resistivity	Soluble chloride	soluble sulfates
11-325-04	#1 0-1'	7.77	105	712	987
11-325-05	#1 1-2'	8.30	1,176	23	40
11-325-06	#1 2-4'	8.58	2,326	7	30
11-325-07	#2 0-1'	8.14	3,125	1	17
11-325-08	#2 1-2'	8.51	5,556	1	10
11-325-09	#2 2-4'	8.93	11,111	1	4
11-325-10	#3 0-1'	7.60	151	143	539
11-325-11	#3 1-2'	7.04	971	11	63
11-325-12	#3 2-4'	8.05	1,887	3	25
11-325-13	#4 0-1'	7.50	202	178	341
11-325-14	#4 1-2'	7.63	581	64	82
11-325-15	#4 2-4'	8.13	1,887	17	20
11-325-16	#5 0-1'	8.03	1,042	11	152
11-325-17	#5 1-2'	7.69	313	134	932
11-325-18	#5 2-4'	7.58	417	89	271
11-325-19	#6 0-1'	7.69	500	147	55
11-325-20	#6 1-2'	7.91	1,042	69	35
11-325-21	#6 2-4'	8.20	943	98	146
11-325-22	#7 0-1'	7.51	389	129	184
11-325-23	#7 1-2'	7.49	467	107	126
11-325-24	#7 2-4'	7.64	372	139	127
11-325-25	#8 0-1'	7.21	202	113	885
11-325-26	#8 1-2'	7.72	199	99	1,206
11-325-27	#8 2-4'	7.65	444	35	239
11-325-28	#9 0-1'	7.55	441	21	135
11-325-29	#9 1-2'	7.86	1,449	4	45
11-325-30	#9 2-4'	7.91	1,235	3	47
11-325-31	#10 0-1'	7.57	1,087	8	108
11-325-32	#10 1-2'	7.74	649	5	205
11-325-33	#10 2-4'	7.93	699	8	218
		measured in saturation	ohms-cm in saturation extract	parts per million on a dry weight basis	parts per million on a dry weight basis

APPENDIX E

Liquefaction Analysis

GeoLogismiki
Geotechnical Engineers
Merarhias 56
http://www.geologismiki.gr

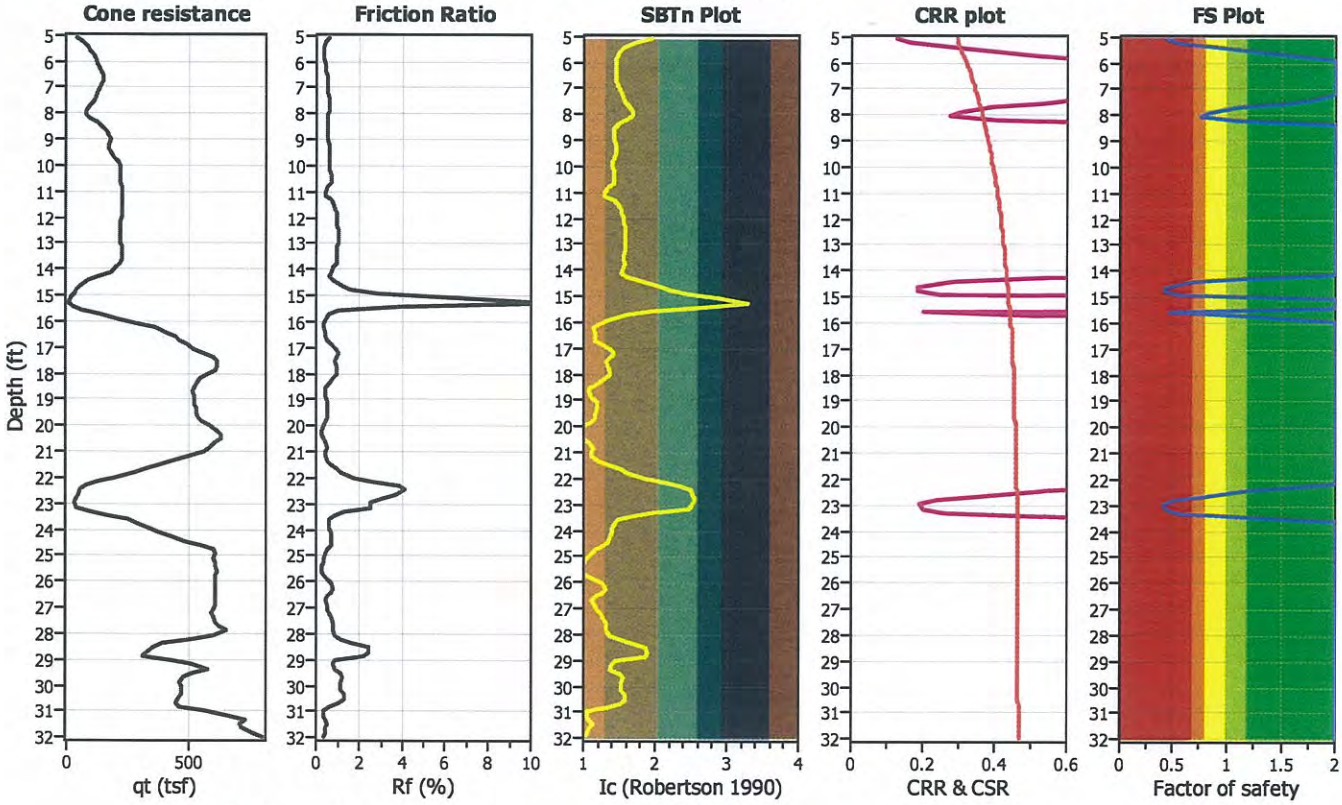
LIQUEFACTION ANALYSIS REPORT

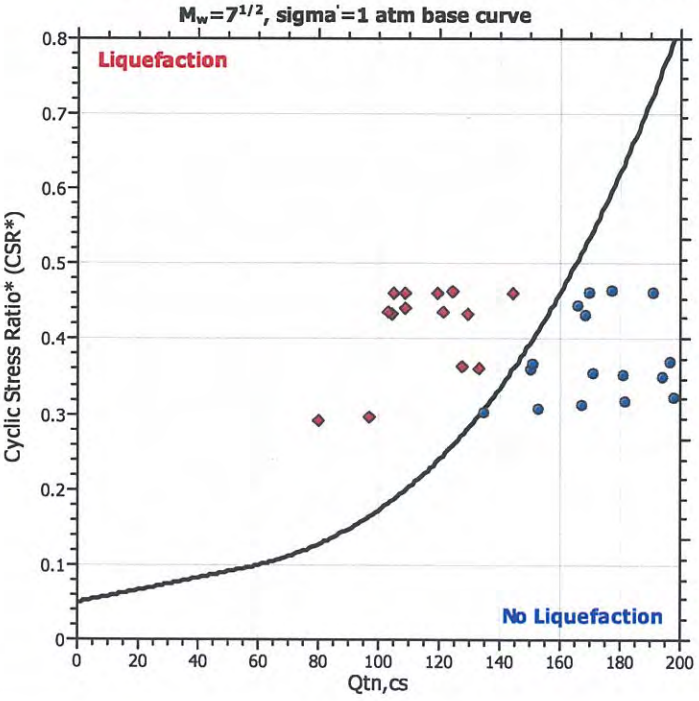
Project title : Whittier Narrows Equestrian Center - CPT-1 **Location : Whittier Narrows, Los Angeles County, CA**

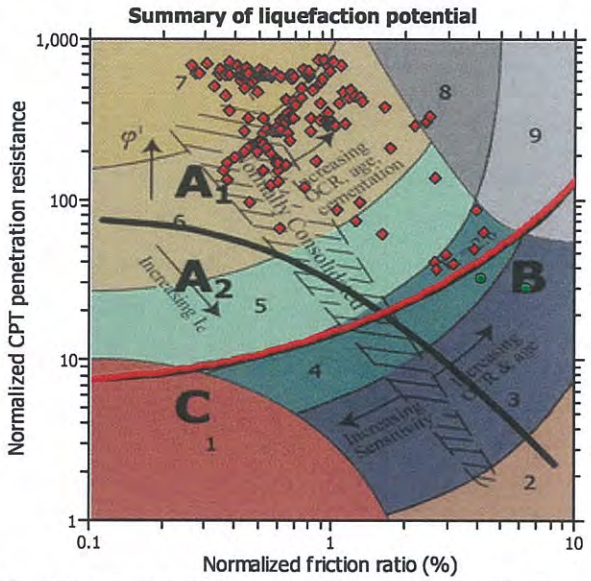
CPT file : DATA

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	5.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.60	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

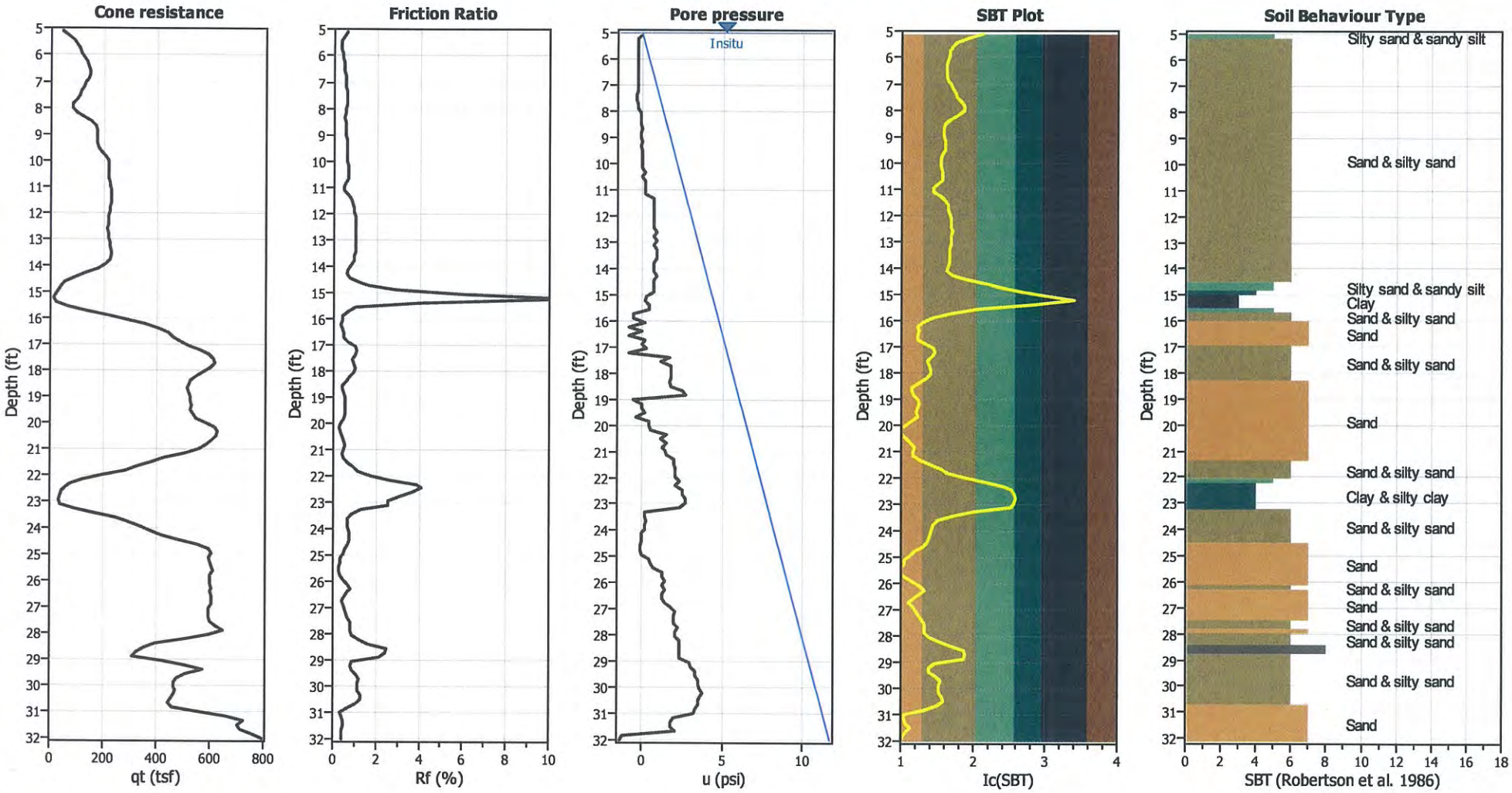






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



Input parameters and analysis data

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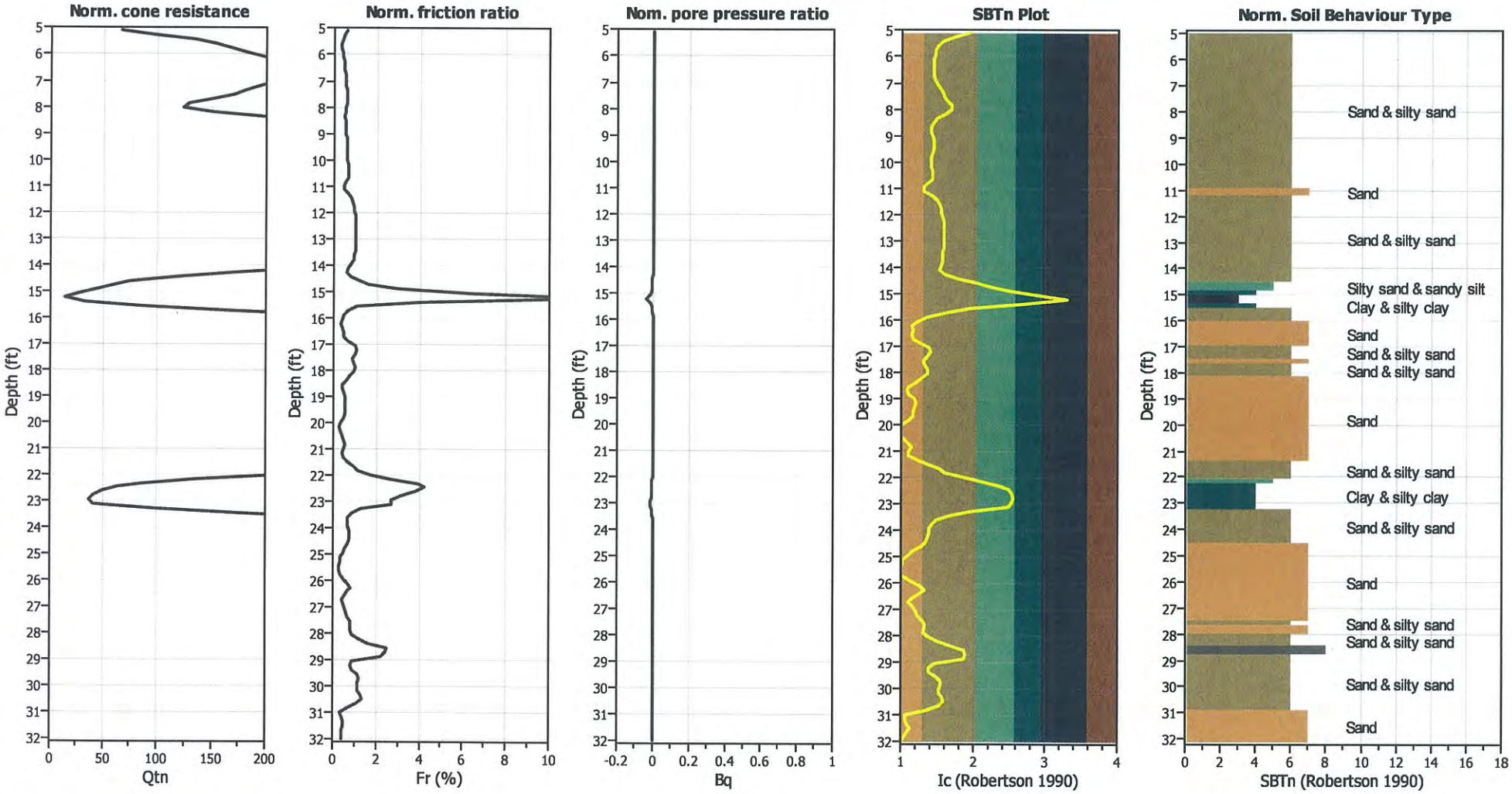
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.70	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.60	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

CPT basic interpretation plots (normalized)



Input parameters and analysis data

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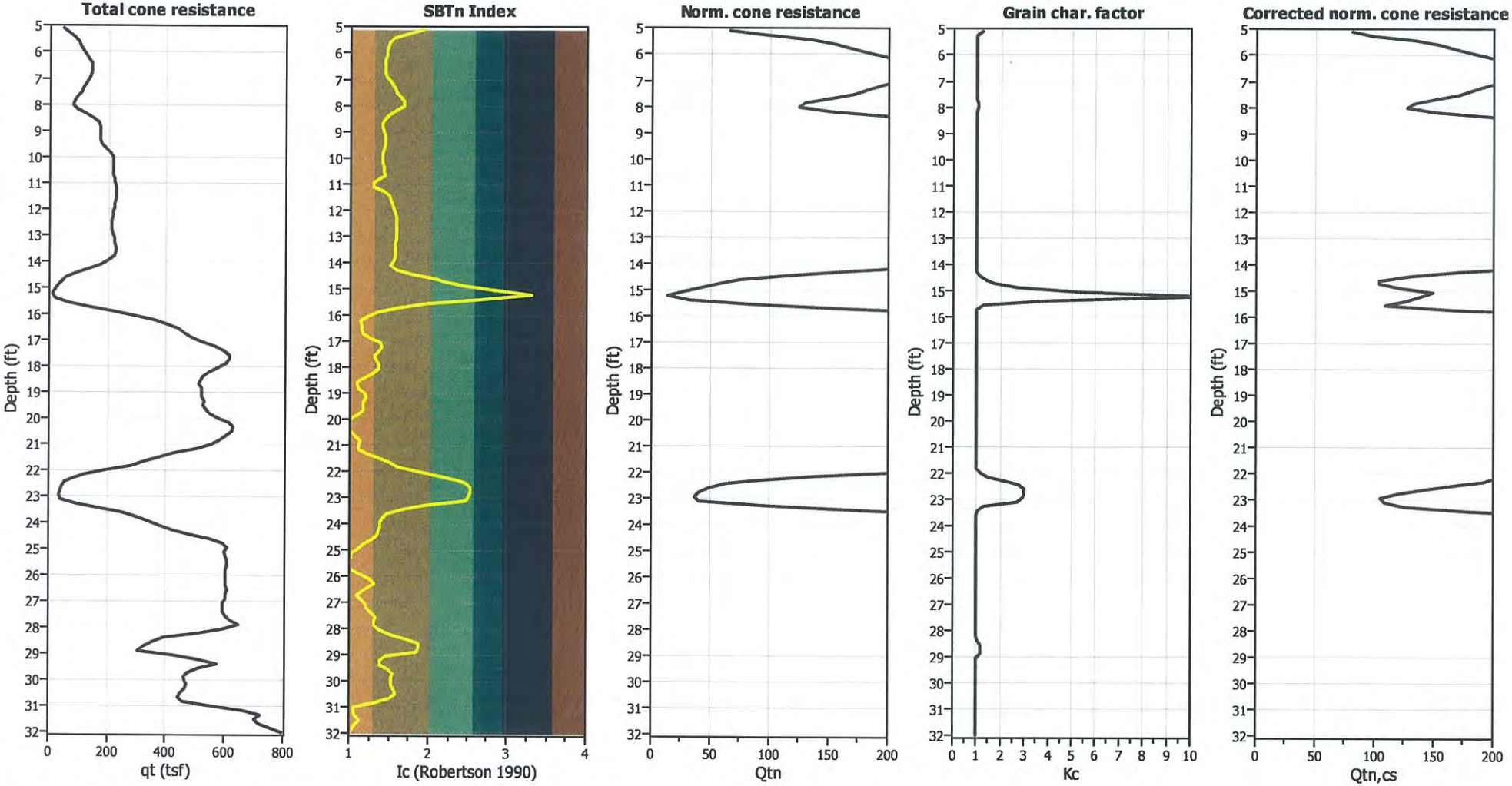
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.70	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.60	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

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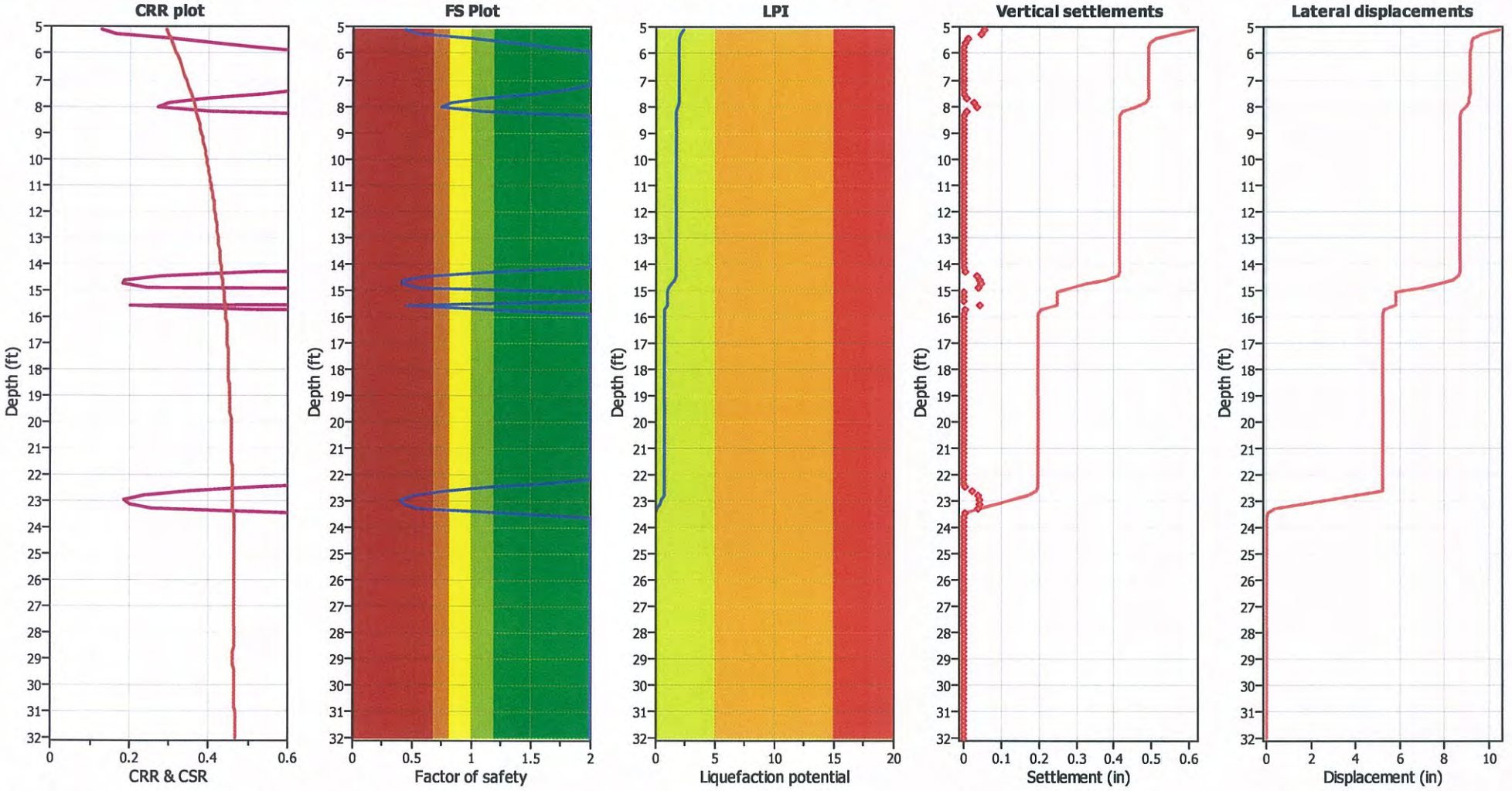
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.70	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.60	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.70	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.60	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

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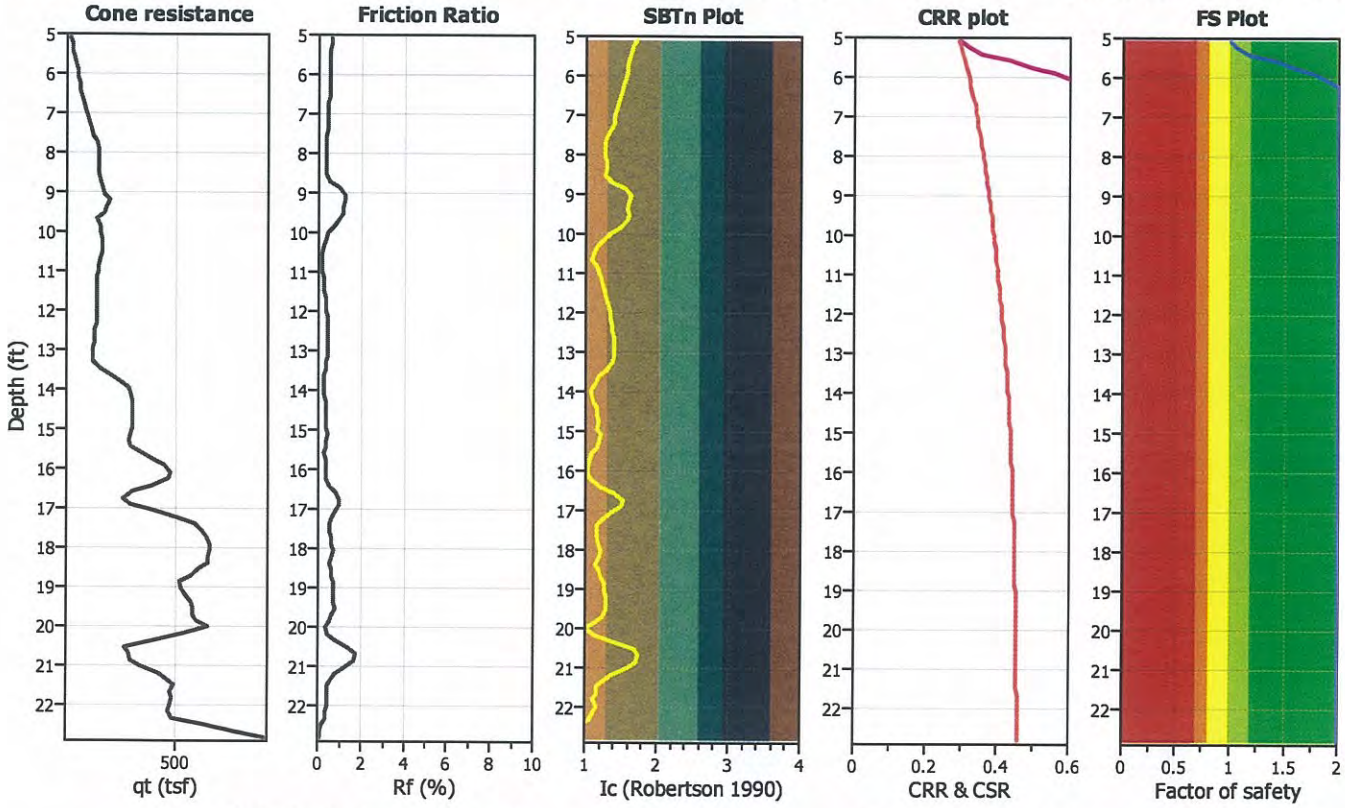
LIQUEFACTION ANALYSIS REPORT

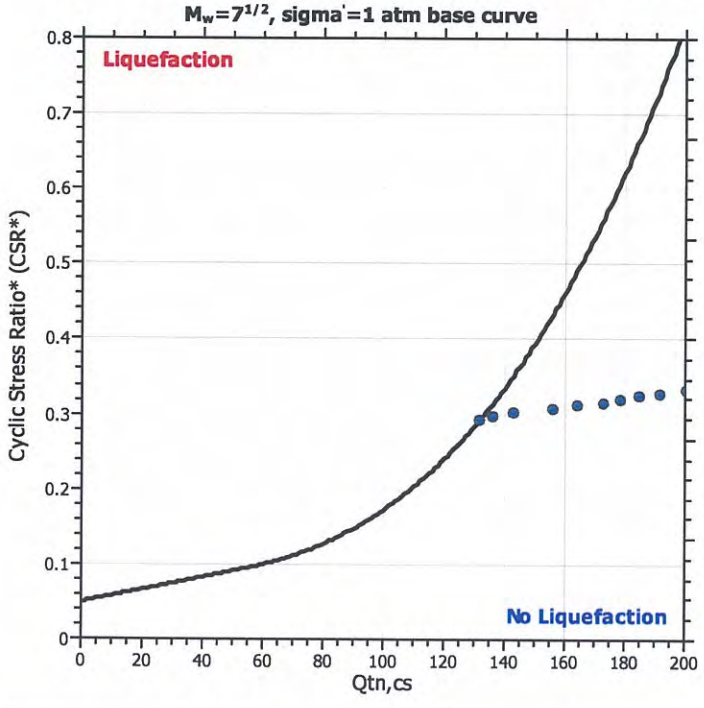
Project title : Whittier Narrows Equestrian Center - CPT-2 **Location : Whittier Narrows, Los Angeles County, CA**

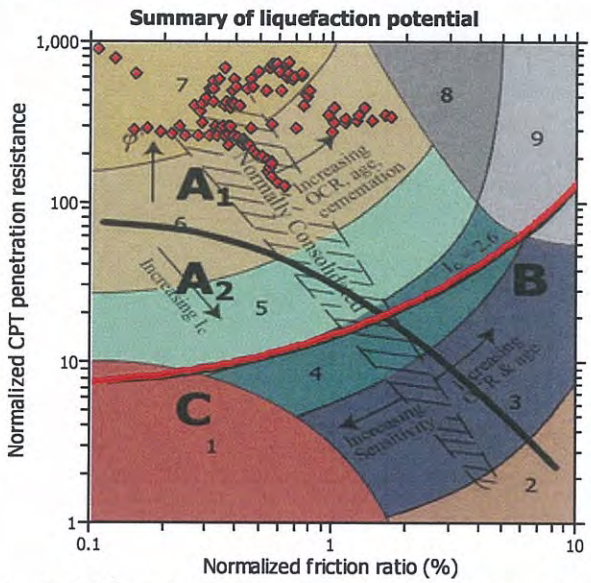
CPT file : DATA

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	5.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.60	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

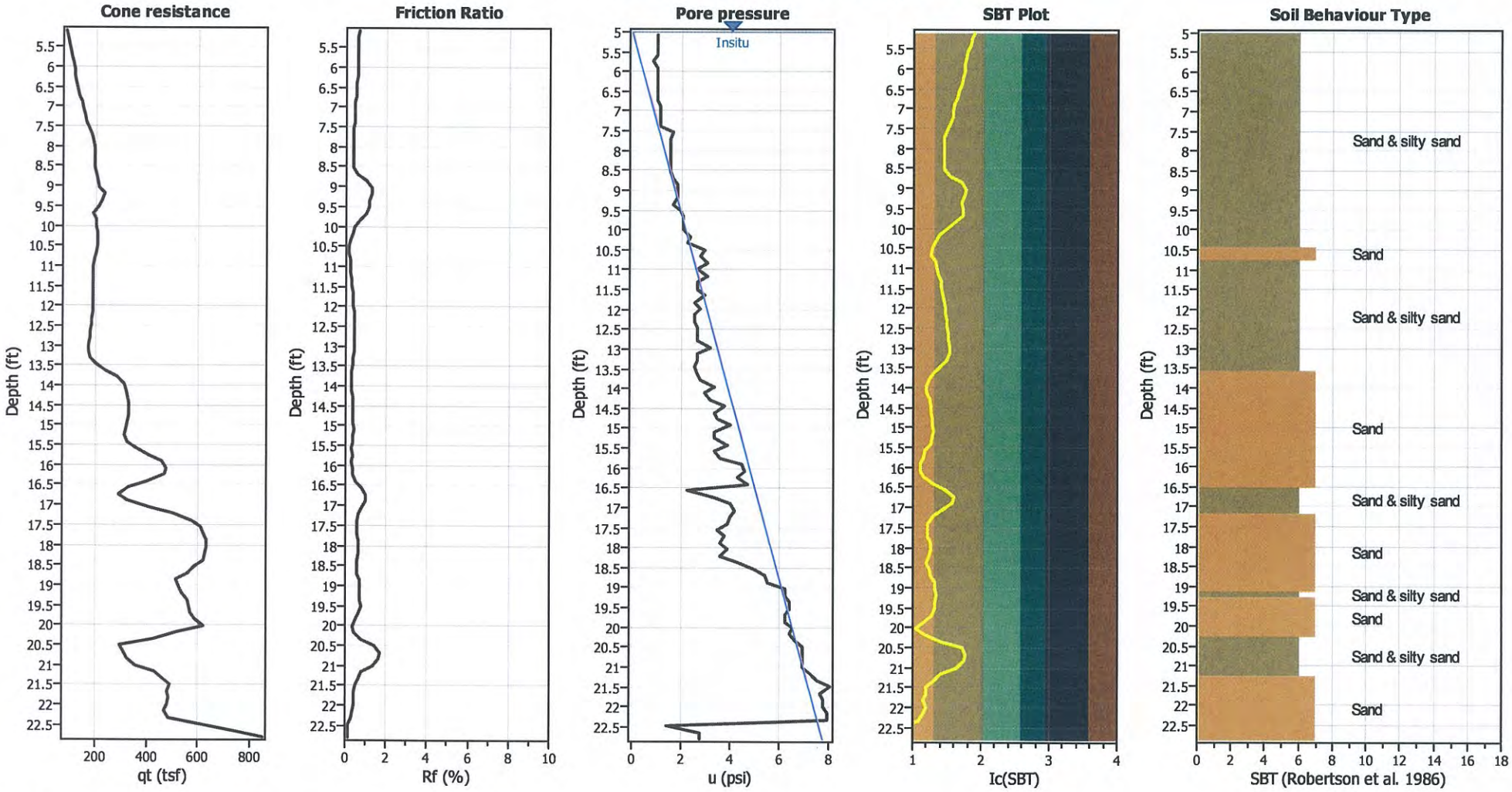






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



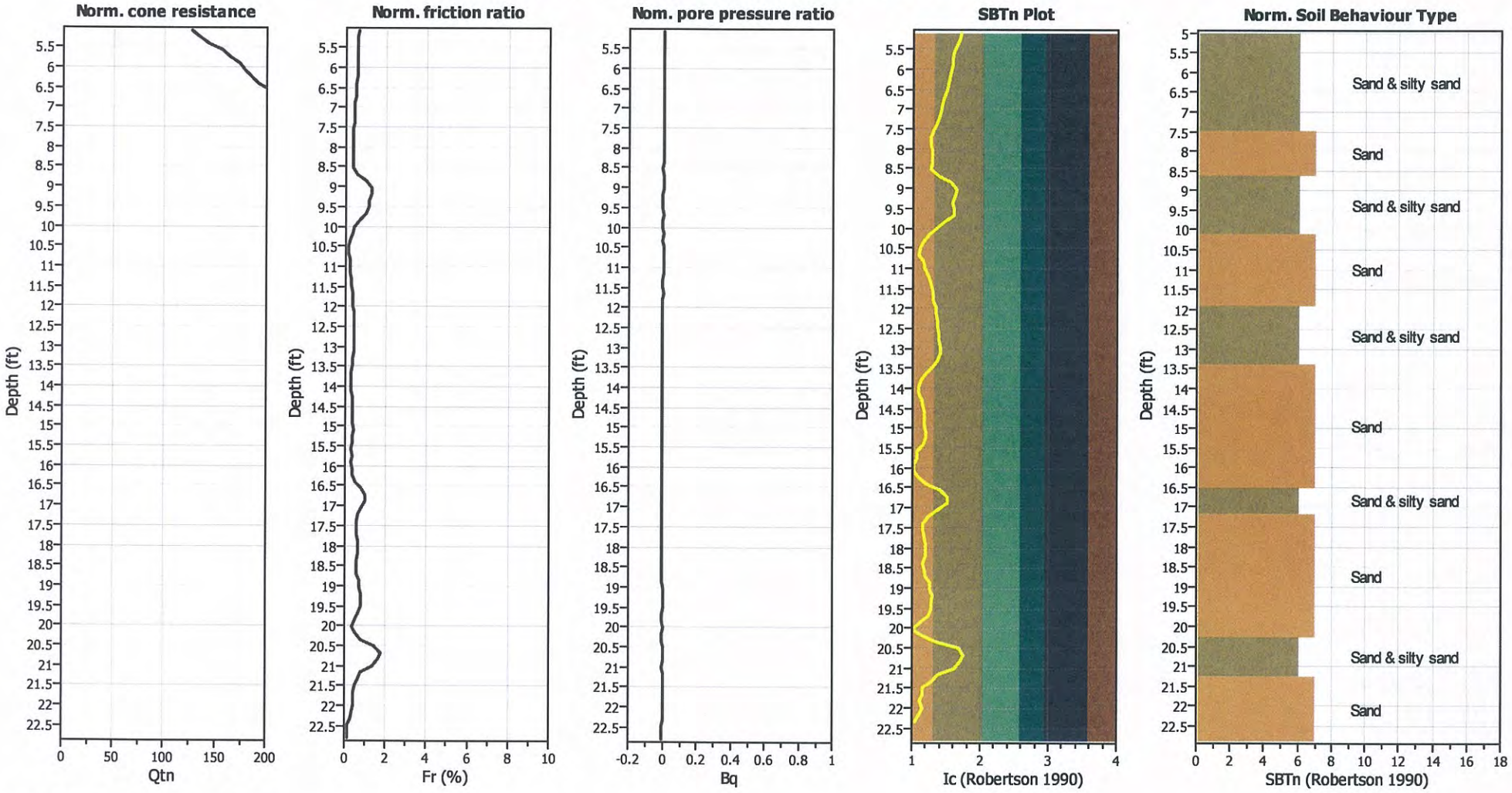
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.70	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.60	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

CPT basic interpretation plots (normalized)



Input parameters and analysis data

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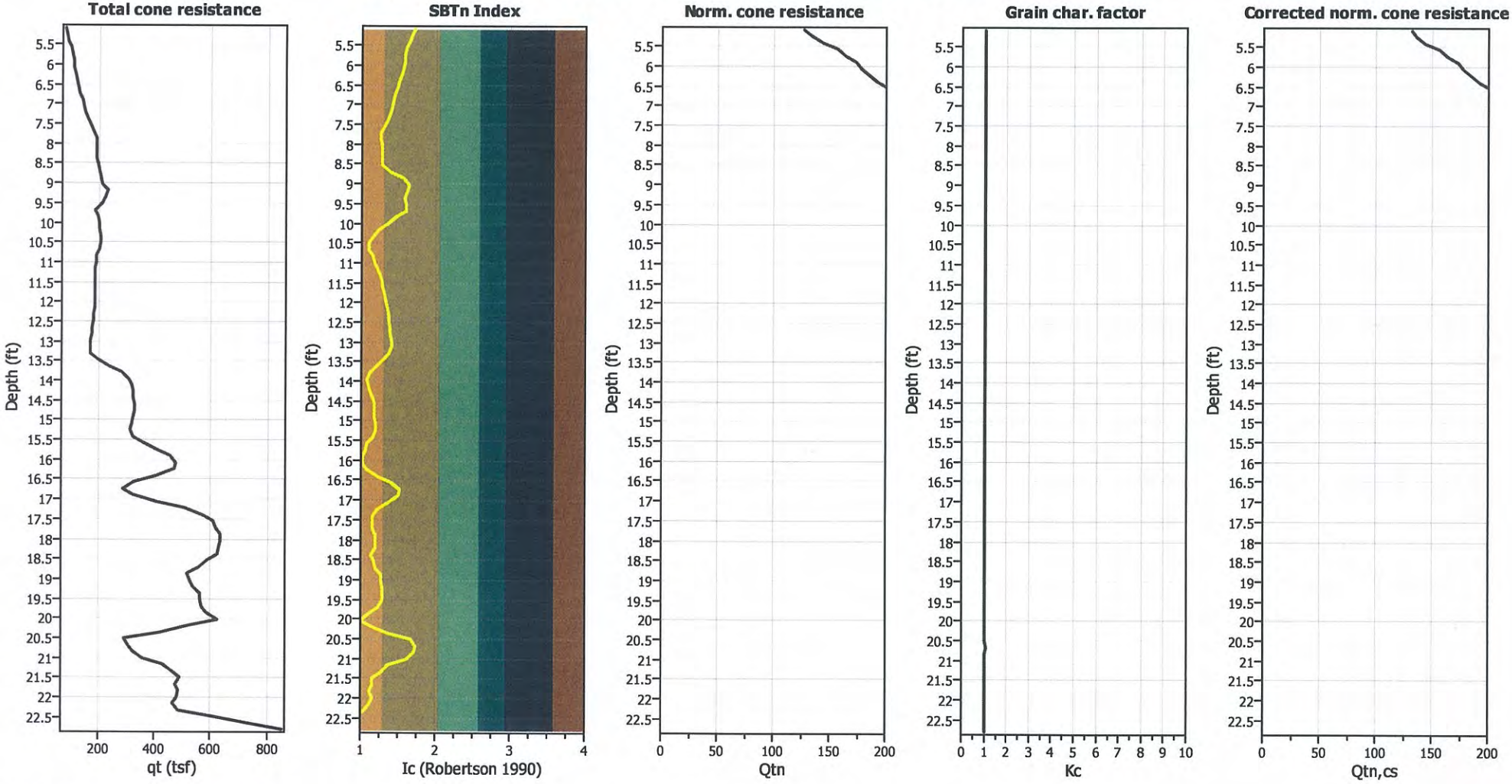
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.70	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.60	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

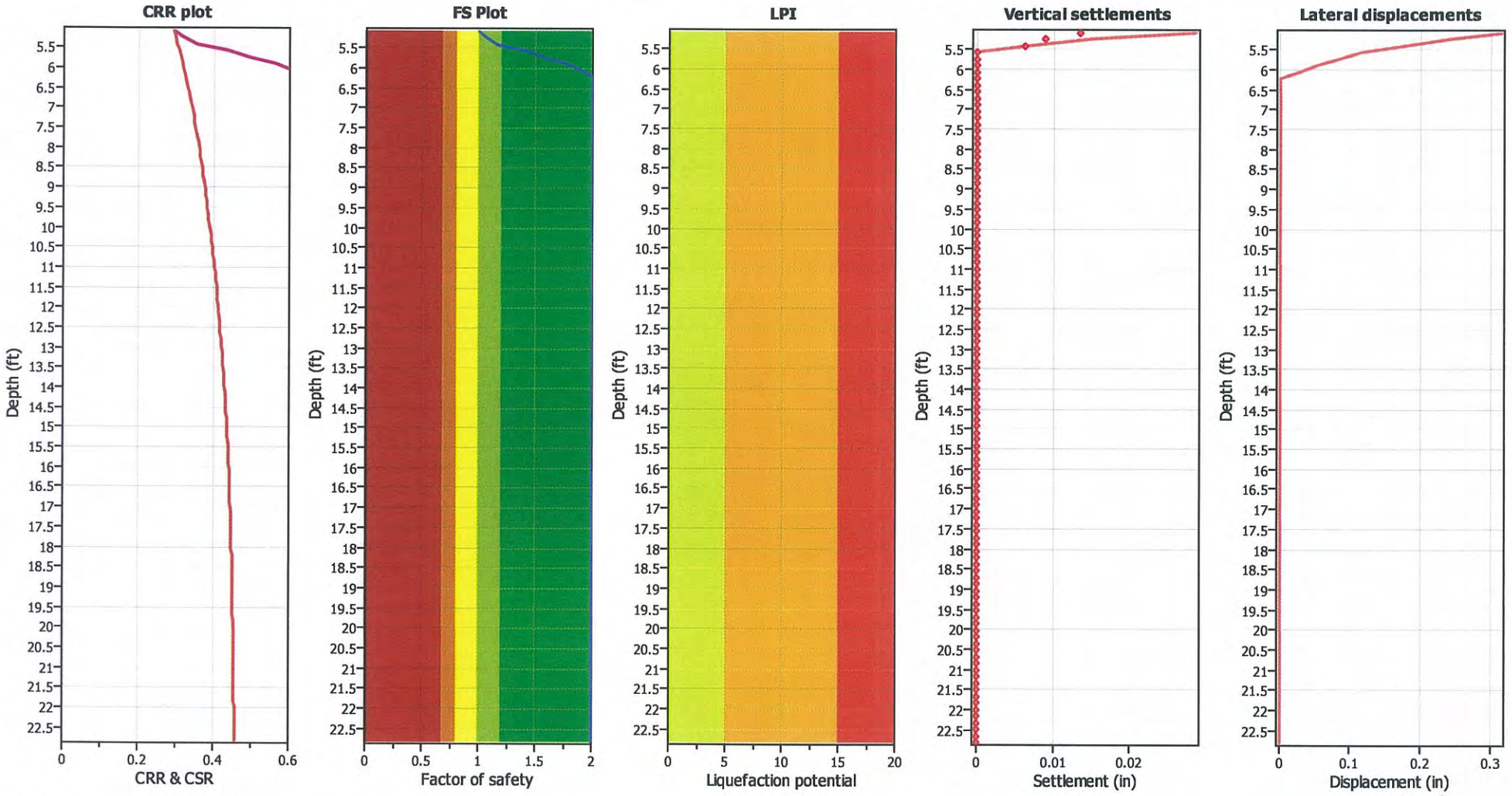
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.70	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.60	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.70	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.60	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

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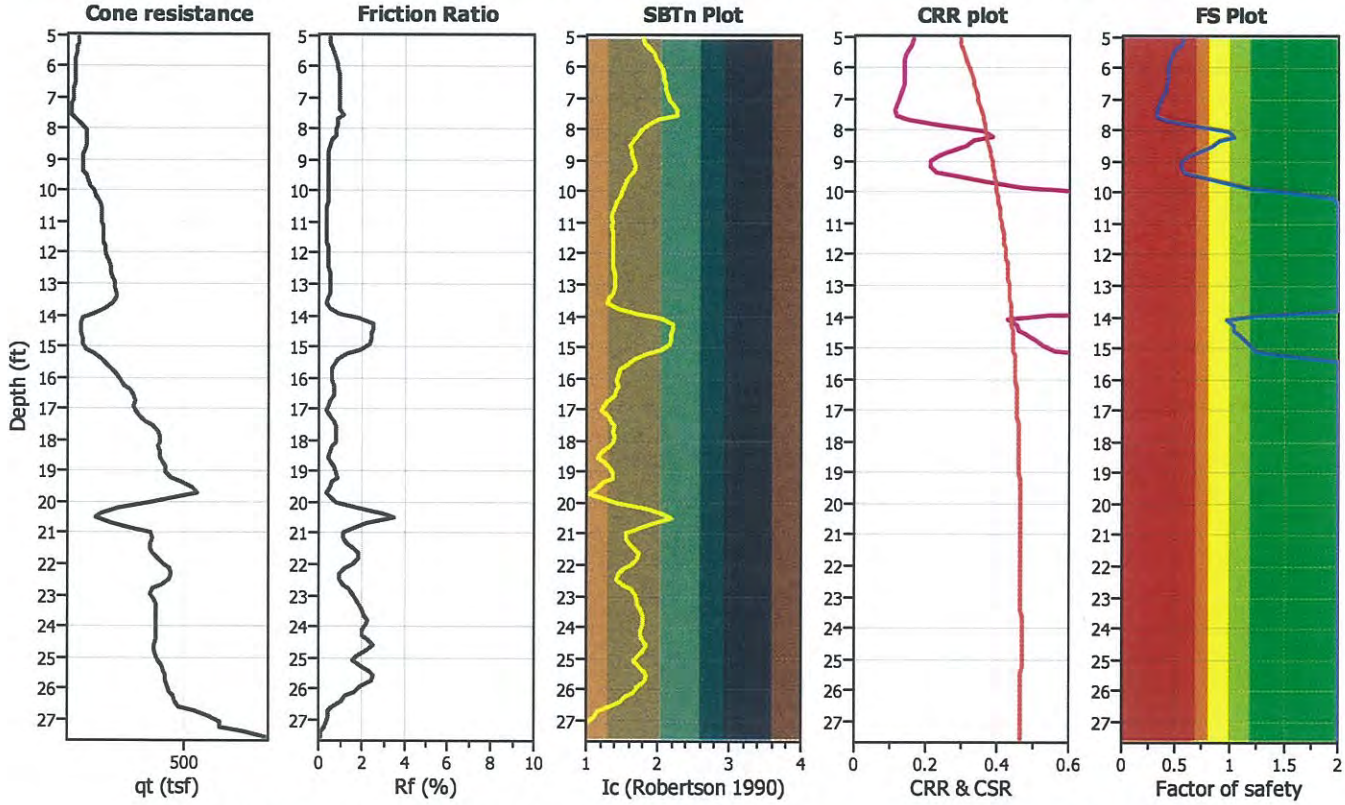
LIQUEFACTION ANALYSIS REPORT

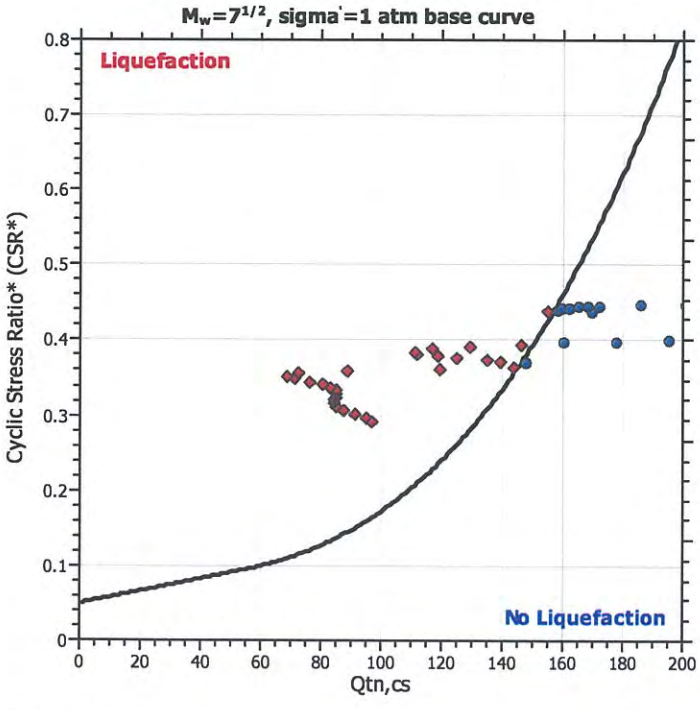
Project title : Whittier Narrows Equestrian Center - CPT-3 **Location : Whittier Narrows, Los Angeles County, CA**

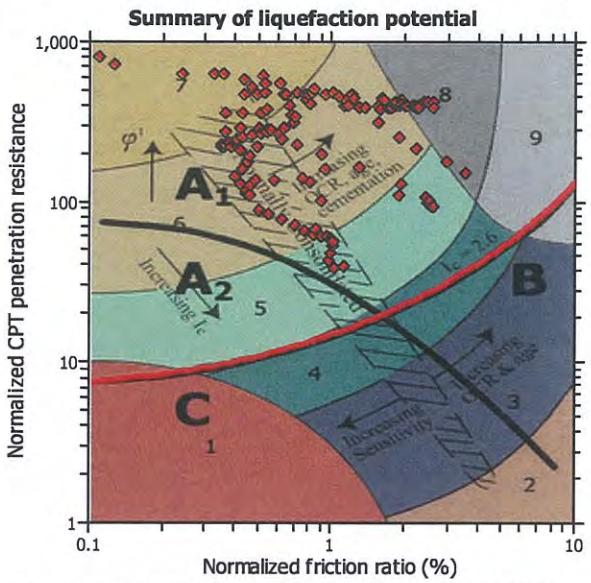
CPT file : DATA

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	5.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.60	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

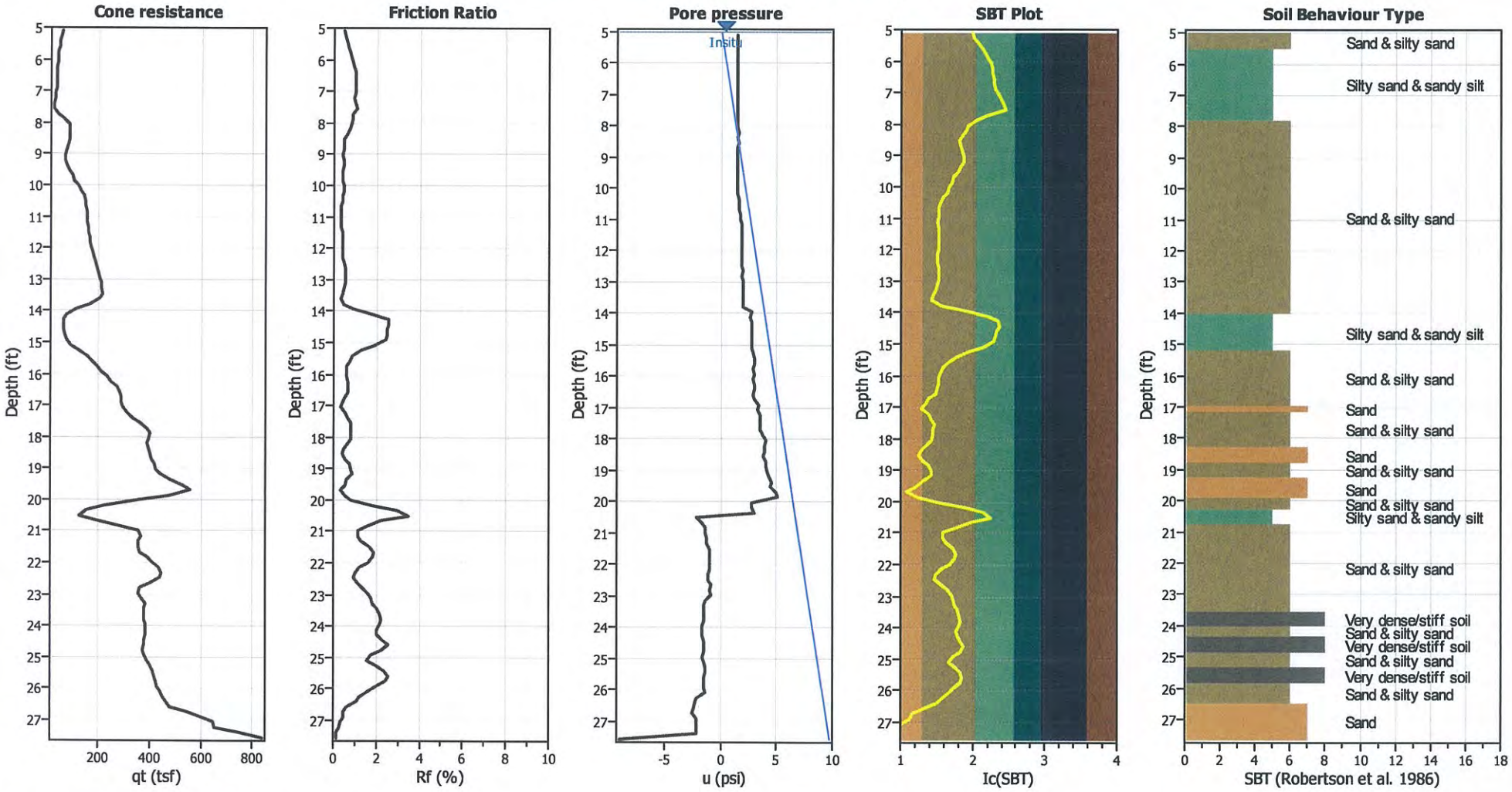






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



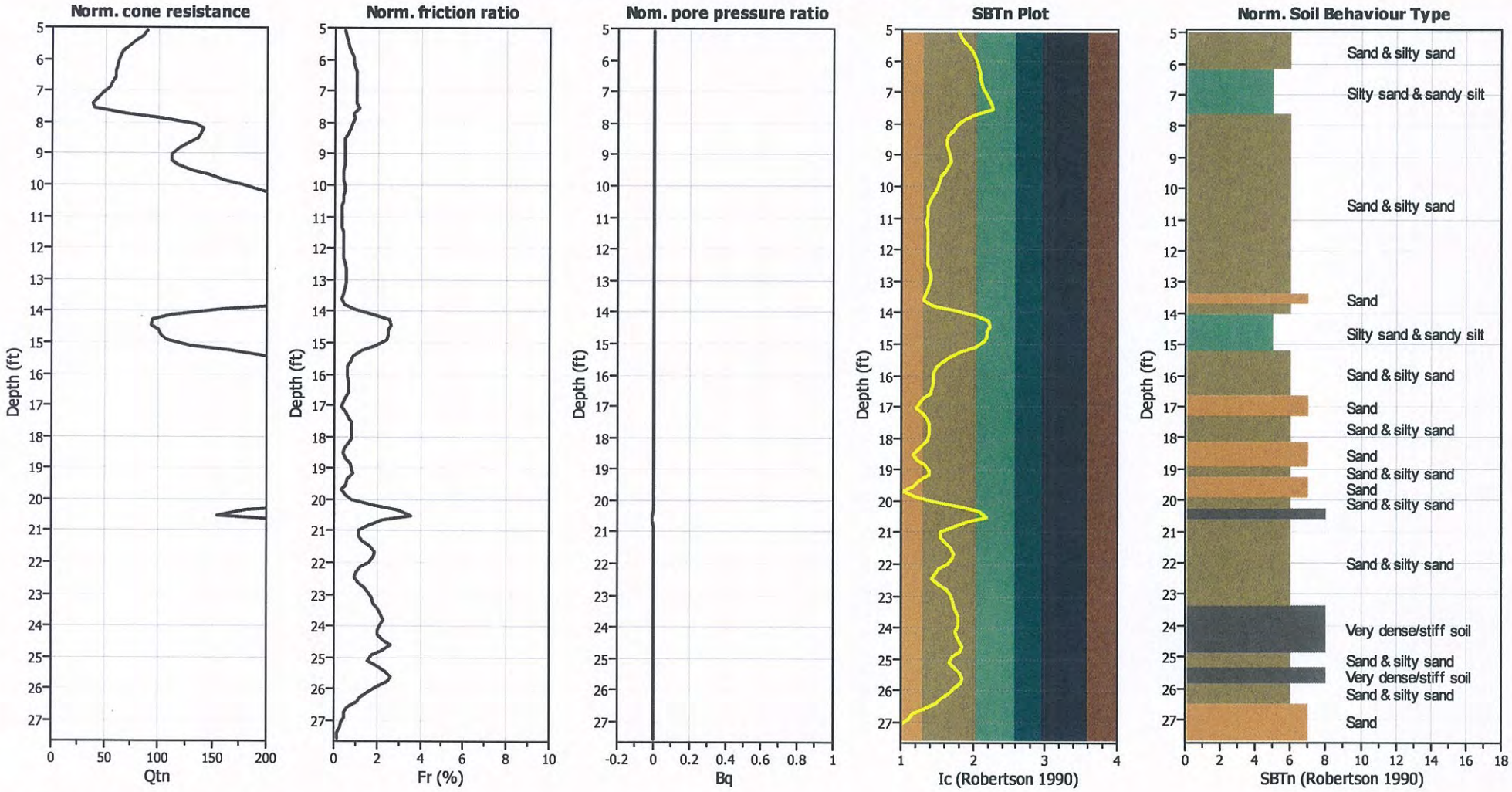
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.70	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.60	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

CPT basic interpretation plots (normalized)



Input parameters and analysis data

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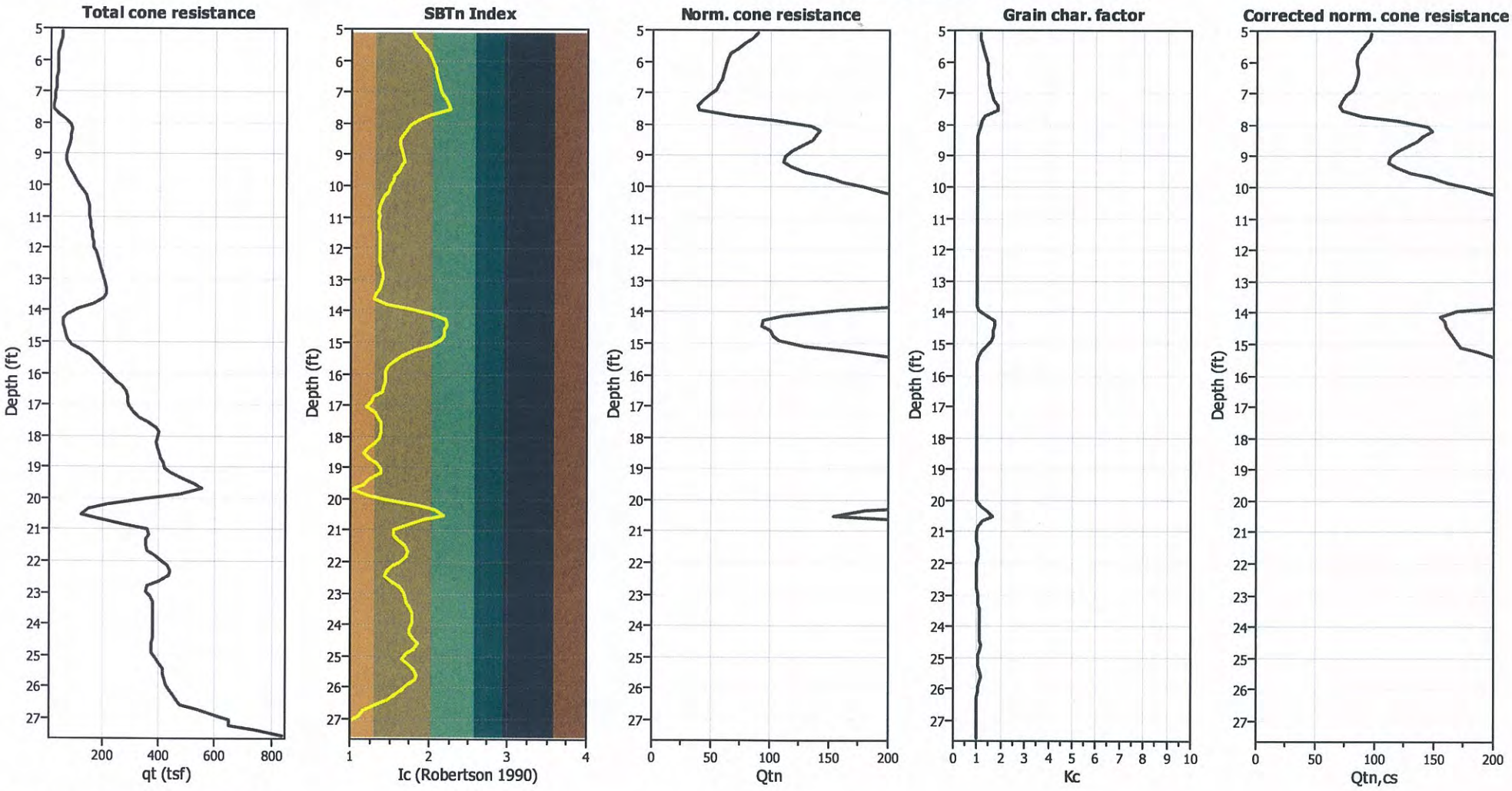
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.70	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.60	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

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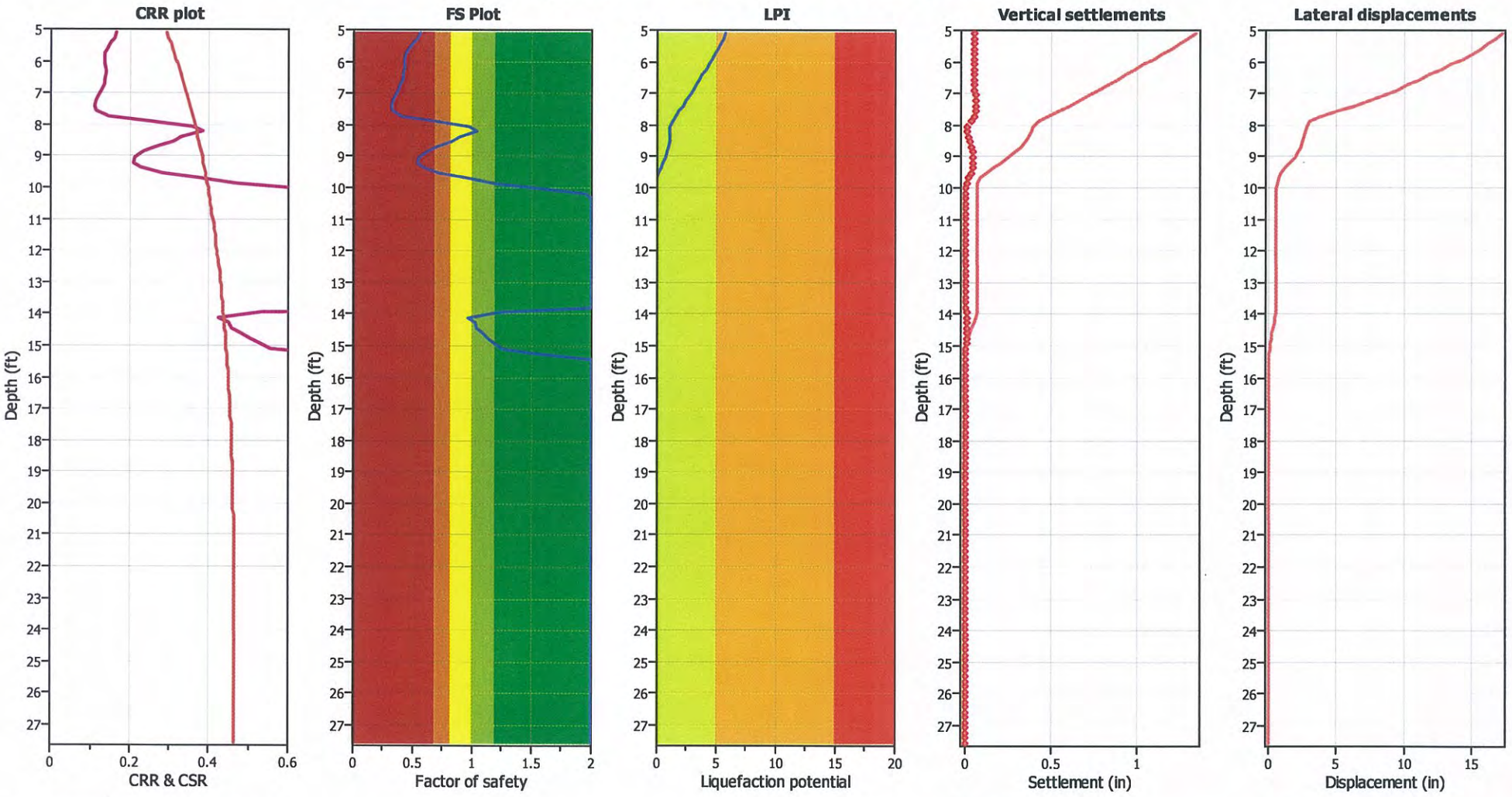
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.70	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.60	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.70	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.60	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

475 Goddard, Suite 200 | Irvine, California 92618 | p. 949.753.7070

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www.ninyoandmoore.com

Appendix F – Cultural Resources Survey Report

Cultural Resources Survey Report
for the
Whittier Narrows Equestrian Center Project
Los Angeles County, California

By:
Roger D. Mason, Ph.D., RPA
Cary Cotterman

Prepared for:
Withers and Sandgren
20948 Tulsa Street
Chatsworth, California 91311

Prepared by:
ECORP Consulting, Inc.
1801 Park Court Place, B-103
Santa Ana, California 92701

March 2018

Keywords: Cultural resources survey, archaeology, CEQA, Whittier Narrows, Los Angeles County, USGS El Monte, CA 7.5-minute quad

MANAGEMENT SUMMARY

In 2011, ECORP Consulting, Inc. conducted a Phase I cultural resources study for proposed renovations to the Whittier Narrows Equestrian Center located at 12191 Rooks Road, Los Angeles County. The 2011 cultural resources investigation included a records search, Sacred Lands File search from the Native American Heritage Commission (NAHC), and field survey. In 2017, revisions to the Project scope reduced the Project area from 41 acres to 20 acres and warranted partial updates of the 2011 study. Updated cultural studies included both an updated records search and Sacred Lands File search. The 2017 update did not include a new field survey of the Project area. The following report includes the combined results from the 2011 study and the 2017 updated records search and Sacred Lands File search for the revised 20-acre Project area.

As a result of the 2011 and 2017 records searches, 43 previous cultural resources investigations have been conducted within one-half mile of the Project area and 15 cultural resources have been previously recorded within one-half mile of the current Project area. Of these, no previously recorded resources were identified within the Project area.

The 2017 updated studies included a search of the Sacred Lands File by the NAHC. The Sacred Lands File Search yielded positive results. Information about Native American sacred lands is considered confidential. The NAHC requested that information pertaining to sacred lands in the Project area not be included in public documents. In deference to this request, the NAHC search results letter has not been included with this report.

The 2011 study included a pedestrian survey of the entire revised 20-acre Project area. As a result, no archaeological sites and no historic buildings or structures were identified within the Project area. Archaeological field surveys are generally considered valid for a period of 10 years. Because the 2011 survey is less than 10 years old, the results are still applicable to the Project area. In the event that any archaeological materials are encountered during ground-disturbing activities, all activities must be suspended in the vicinity of the find until the deposits are recorded and evaluated by a qualified archaeologist.

INTRODUCTION

The Los Angeles County Department of Parks and Recreation proposes to renovate the existing Whittier Narrows Equestrian Center at 12191 Rooks Road in Los Angeles County (Figure 1). The purpose of the Project is to provide a functional and aesthetically pleasing equestrian center for horse boarding, rentals, and recreation. The equestrian center and park provides access to riding trails, including part of the Juan Bautista De Anza National Historic Trail. The equestrian center and park is characterized by large open areas, clusters of buildings, rows of ornamental trees, and scattered individual trees. The existing facilities at the equestrian center are outdated and have several flooding and stormwater pollution issues. The proposed Project will remove the existing facilities (stables and corrals), construct new equestrian facilities, and construct a new service maintenance area.

In 2011, ECORP Consulting, Inc. conducted a Phase I cultural resources study for the Project. The 2011 cultural resources investigation included a records search, Sacred Lands File search

from the NAHC, and a field survey (Mason and Cotterman 2011). Revisions to the Project in 2017 reduced the Project area from 41 acres to 20 acres. The 2011 study included the adjacent Horseman's Park, the Los Angeles Department of Water and Power easement, and a landscape enhancement area (riparian area). These areas are no longer included within the 20-acre project boundary and no work is planned in these areas. As such, the results of the cultural studies for these three areas are not included in this report.

These revisions to the Project area prompted limited updates to the cultural studies. Cultural resources records searches and NAHC Sacred Lands File searches are generally considered valid for a period of one to two years. Field surveys are generally considered valid for a period of 10 years. Thus, ECORP's 2017 updated cultural studies included both an updated records search and Sacred Lands File Search for the revised Project area. Because the 2011 field survey is less than 10 years old and the entirety of the reduced Project area was surveyed as part of the 2011 study, the 2017 update did not include a new field survey of the Project area. The following report includes the combined results from the 2011 study and the 2017 updated records search and Sacred Lands File search for the revised 20-acre Project area.

PROJECT LOCATION

The Whittier Narrows Equestrian Center Project area consists of 20 acres of land owned by the U.S. Army Corps of Engineers on the east side of the San Gabriel River (Project area). The Project area is bound by Rooks Road to the southeast, Peck Road to the east, the San Gabriel River to the northwest, and Pico Rivera Bicentennial Park to the southwest (Figure 2). The property is accessible from Rooks Road which extends southwest from Peck Road between the San Gabriel River and I-605. As shown on the U.S. Geological Survey (USGS) El Monte, California 7.5' topographic quadrangle (1968, photo-revised 1975) (Figure 2), the project area is in two unsectioned Mexican land grants in Township 2 South, Range 11 West, San Bernardino Baseline and Meridian. The northern part of the project area is in the Rancho Potrero de Felipe Lugo land grant and the southern part is in the Rancho Paso de Bartolo land grant. The elevation of the Project area is about 230 feet above mean sea level.

The surrounding area includes a mix of developed land and open space. Modern industrial buildings are located to the east and northeast of Equestrian Center; Pico Rivera Bicentennial Park and the Pico Rivera Sports Arena are located to the southwest of the Equestrian Center; and to the west and northwest, the project area is bounded by the San Gabriel River wash.

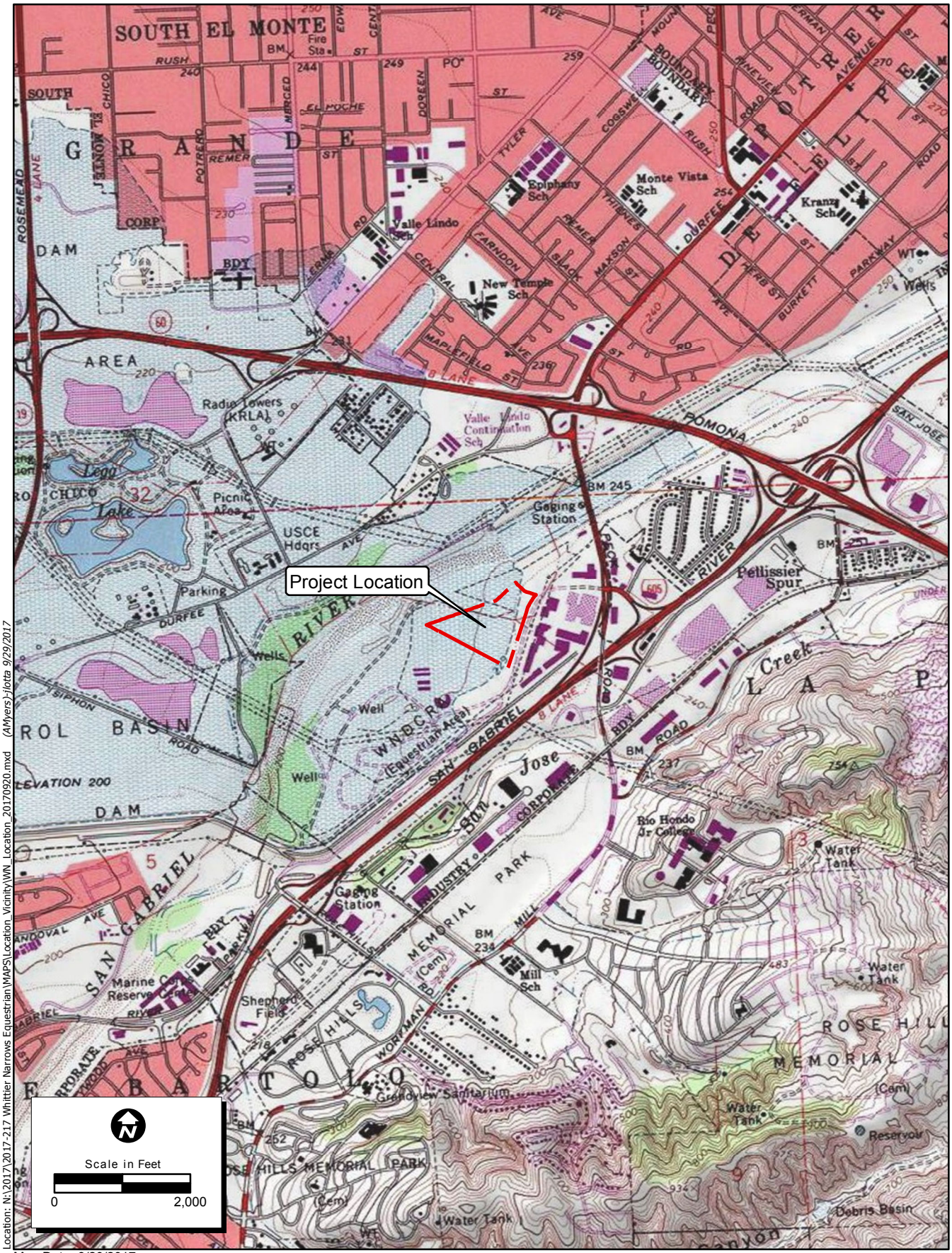
Location: N:\2017\2017-217 Whittier Narrows Equestrian\MAPS\Location_Vicinity\WN_Vicinity_20170920.mxd (AMyers)-jlotta 9/29/2017

Map Date: 9/20/2017
Service Layer Credits: ESRI

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Vicinity

2017-217 Whittier Narrows



Location: N:\2017\2017-217 Whittier Narrows Equestrian\MAPS\Location_Vicinity\WN_Location_20170920.mxd (AMyers)-jlotta 9/29/2017

Map Date: 9/20/2017
Base Source: USGS

Figure 2. Project Location

2017-217 Whittier Narrows

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Most of the Project area consists of the equestrian center facilities which include stables, arenas, barns, and other equestrian-related facilities. Vegetation in the equestrian center and Horsemen's Park area consists of non-native weeds and grass, and ornamental trees including sycamores, pines, oaks, peppers, alders, eucalyptus, and palms. Prior to development, the entire Project area likely was in a riparian plant community along the San Gabriel River. Soil consists of alluvial sand, with gravel and cobbles in the river wash.

CULTURAL BACKGROUND

Prehistory

Paleo-Indian Period/Terminal Pleistocene (12,000 to 10,000 B.P.)

The first inhabitants of southern California were big game hunters and gatherers exploiting extinct species of Pleistocene megafauna (e.g., mammoth and other Rancholabrean fauna). Local "fluted point" assemblages comprised of large spear points or knives are stylistically and technologically similar to the Clovis Paleo-Indian cultural tradition dated to this period elsewhere in North America (Moratto 1984). Archaeological evidence for this period in southern California is limited to a few small temporary camps with fluted points found around late Pleistocene lake margins in the Mojave Desert and around Tulare Lake in the southern San Joaquin Valley. Single points are reported from Ocotillo Wells and Cuyamaca Pass in eastern San Diego County and from the Yuha Desert in Imperial County (Rondeau, Cassidy, and Jones 2007).

Early Archaic Period/Early Holocene (10,000 to 8,000 B.P.)

Approximately 10,000 years ago at the beginning of the Holocene, warming temperatures, and the extinction of the megafauna resulted in changing subsistence strategies with an emphasis hunting smaller game and increasing reliance on plant gathering. Previously, Early Holocene sites were represented by only a few sites and isolates from the Lake Mojave and San Dieguito Complexes found along former lakebeds and grasslands of the Mojave desert and in inland San Diego County. More recently, southern California Early Holocene sites have been found along the Santa Barbara Channel (Erlandson 1994), in western Riverside County (Grenda 1997; Goldberg 2001), and along the San Diego County coast (Gallegos 1991; Koerper, Langenwalter, and Schroth 1991; Warren 1967).

The San Dieguito Complex was defined based on material found at the Harris site (CA-SDI-149) on the San Dieguito River near Lake Hodges in San Diego County. San Dieguito artifacts include large leaf-shaped points; leaf-shaped knives; large ovoid, domed, and rectangular end and side scrapers; engraving tools; and crescentics (Koerper, Langenwalter, and Schroth 1991). The San Dieguito Complex at the Harris site dates to 9,000 to 7,500 B.P. (Gallegos 1991:Figure 3.9). However, sites from this time period in coastal San Diego County have yielded artifacts and subsistence remains characteristic of the succeeding Milling Stone Period, including manos, metates, core-cobble tools, and marine shell (Gallegos 1991; Koerper, Langenwalter, and Schroth 1991).

Archaic or Milling Stone Period/Middle Holocene (8,000 to 3,000 B.P.)

Residential sites along the coast from this period are shell middens with hearths. The most common artifacts are manos and milling stones (metates) and large core-cobble chopping tools. Other artifacts include hammerstones, large flake tools including scraper-planes and scrapers, worked bone, beads, cogged stones, discoidals, doughnut stones, and stone balls. Projectile points (usually large leaf-shaped points and Elko points) are not plentiful, but faunal remains indicate deer and rabbits were hunted. Sites near bays and estuaries contain abundant shell and fish remains (Masters and Gallegos 1997). Burials were inhumations with associated grinding implements. The Millling Stone Period was originally defined based on sites along the Los Angeles and Ventura County coasts (Wallace 1955). The Milling Stone Period was extended to inland areas when sites with similar artifact inventories (but without shell middens) were investigated near Cucamonga (Salls 1983), in the Prado Basin (Goldberg and Arnold 1988), and in Crowder Canyon near Cajon Pass (Kowta 1969; Basgall and True 1985). Population density was relatively low compared to later periods. The settlement system may have consisted of small bands moving in a seasonal round from the coast to inland areas and back again.

Intermediate Period/Late Holocene (3,000 to 1,350 B.P.)

Mortars and pestles were first used during the Intermediate Period, and probably indicate the beginning of acorn exploitation. Use of the acorn, a storable, high-calorie food source, probably allowed greater sedentism. Large projectile points, including Elko points, indicate that hunting was probably accomplished with the *atlatl* or spear thrower. The settlement pattern may have been semi-sedentary with winter residential bases near a permanent water source and use of temporary camps for resource collection during the rest of the year.

In the upper Santa Ana River drainage area, it has been suggested that the Milling Stone Period artifact assemblage (preponderance of manos and metates and core tools and few or no mortars and pestles) continued into the time period designated as Intermediate on the coast (Kowta 1969; Goldberg and Arnold 1988). This may indicate that intensive acorn use began later in inland areas compared to the coast. In western Riverside County the period corresponding to the Intermediate Period on the coast is the Late Archaic. Mortars and pestles were present in small quantities in some Late Archaic sites and entirely absent in others (Goldberg 2001).

Late Prehistoric Period/Late Holocene (1,350 B.P. to Spanish Contact [A.D. 1769])

The complex hunter-gatherer cultures encountered by the Spaniards in southern California developed during the Late Prehistoric Period. People lived in villages of up to 250 people located near permanent water and a variety of food sources. Each village was typically located at the center of a defended territory from which resources for the group were gathered. Small groups left the village for short periods of time to hunt, fish, and gather plant foods. While away from the village, they established temporary camps and created locations where food and other materials were processed. Archaeologically, such locations are evidenced by manos and metates for seed grinding, bedrock mortars for acorn pulverizing, and lithic scatters indicating manufacturing or maintenance of stone tools (usually made of chert) used in hunting or butchering. Overnight stays in field camps are evidenced by fire-affected rock used in hearths.

The more intensive use of resources and settlement in permanent villages near water sources in inland areas may have been a response to a warmer drier period known as the Medieval Climatic Anomaly (MCA) (1,050 to 600 B.P.). Droughts during the MCA were "severe enough to cause problems for residents of poorly watered areas of Native California" (Jones and Klar 2007:302).

The beginning of the Late Prehistoric Period is marked by the introduction of the bow and arrow, which made deer hunting more efficient. The bow and arrow was also used in wars for territorial defense. One of the most important food resources for inland groups was acorns gathered from oak groves in canyons, drainages, and foothills. Acorn processing was labor intensive, requiring grinding in a mortar and leaching with water to remove tannic acid (Basgall 1987). Many of the mortars are bedrock mortars which are indicators of the Late Prehistoric Period. Acorns provided a storable resource which promoted sedentism. Seeds from sage and grasses, goosefoot, and California buckwheat were collected and ground into meal with manos and metates. Protein was supplied through the meat of deer, rabbits, and other animals, hunted with bow and arrow or trapped using snares, nets, and deadfalls.

Trade among local groups and inland and coastal groups was important as a means of obtaining resources from outside the local group's territory. Items traded over long distances included obsidian from the Obsidian Butte source in Imperial County and from the Coso source in Inyo County, steatite bowls and ornaments from Catalina Island, shell beads and ornaments from the Santa Barbara Channel area, rabbit skins and deer hides from the interior, and dried fish and shellfish from the coast. Acorns, seeds, and other food resources were probably exchanged locally.

Ethnography

Ethnographic accounts of Native Americans indicate that the Gabrielino (or Tongva) once occupied the region that encompasses the project area. At the time of contact with Europeans, the Gabrielino were the main occupants of the southern Channel Islands, the Los Angeles basin, much of Orange County, and extended as far east as the western San Bernardino Valley. The term "Gabrielino" came from the group's association with Mission San Gabriel Arcangel, established in 1771, However, today the group prefers to be known by their ancestral name, Gabrielino. The Gabrielino are believed to have been one of the most populous and wealthy Native American tribes in southern California prior to European contact, second only to the Chumash (Bean and Smith 1978a; McCawley 1996; Moratto 1984). The Gabrielino were one of several Takic-speaking groups in southern California at the time of Spanish contact.

The Gabrielino occupied villages located along rivers and at the mouths of canyons. Populations ranged from 50 to 200 inhabitants. Residential structures within the villages were domed, circular, and made from thatched tule or other available wood. Gabrielino society was organized by kinship groups, with each group composed of several related families who together owned hunting and gathering territories. Settlement patterns varied according to the availability of floral and faunal resources (Bean and Smith 1978a; McCawley 1996; Miller 1991)

Vegetal staples consisted of acorns, chia, seeds, piñon nuts, sage, cacti, roots, and bulbs. Animals hunted included deer, antelope, coyote, rabbits, squirrels, rodents, birds, and snakes. The Gabrielino also fished and collected marine shellfish (Bean and Smith 1978a; McCawley

1996; Miller 1991).

By the late 18th century, Gabrielino population had significantly dwindled due to introduced European diseases and dietary deficiencies. Gabrielino communities near the missions disintegrated as individuals succumbed to Spanish control, fled the region, or died. Later, many of the Gabrielino fell into indentured servitude to Anglo-Americans. By the early 1900s, few Gabrielino people had survived and much of their culture had been lost (Bean and Smith 1978a; McCawley 1996; Miller 1991). However, in the 1970s, a revival of the Gabrielino culture began which continues today with growing interest and support.

History

The first European to visit California was Spanish maritime explorer Juan Rodriguez Cabrillo in 1542. Cabrillo was sent north by the Viceroy of New Spain (Mexico) to look for the Northwest Passage. Cabrillo visited San Diego Bay, Catalina Island, San Pedro Bay, and the northern Channel Islands. The English adventurer Francis Drake visited the Miwok Native American group at Drake's Bay or Bodega Bay in 1579. Sebastian Vizcaíno explored the coast as far north as Monterey in 1602. He reported that Monterey was an excellent location for a port (Castillo 1978). Vizcaíno also named San Diego Bay to commemorate Saint Didacus. The name began to appear on European maps of the New World by 1624 (Gudde 1998:332).

Colonization of California began with the Spanish Portolá land expedition. The expedition, led by Captain Gaspar de Portolá of the Spanish army and Father Junipero Serra, a Franciscan missionary, explored the California coast from San Diego to the Monterrey Bay Area in 1769. As a result of this expedition, Spanish missions to convert the native population, *presidios* (forts), and towns were established. The Franciscan missionary friars established 21 missions in Alta California (the area north of Baja California) beginning with Mission San Diego in 1769 and ending with the mission in San Sonoma established in 1823. The purpose of the missions and presidios was to establish Spanish economic, military, political, and religious control over the Alta California territory. Mission San Diego was established to convert the Native Americans that lived in the area, known as the *Kumeyaay* or Diegueño. Mission San Gabriel Archangel was founded in 1771 east of what is now Los Angeles to convert the *Gabrielino* or Tongva. Mision San Fernando, also in Gabrielino/Tongva territory, was established in 1797. Mission San Juan Capistrano was established in 1776 on San Juan Creek (in what is now southern Orange County) to convert the *Agjachemem* or Juaneño. Mission San Luis Rey was established in 1798 on the San Luis Rey River (in what is now northern San Diego County) to convert the Luiseño. Missions San Buenaventura and Santa Barbara were founded in Chumash territory in 1782 and 1786, respectively (Castillo 1978:100).

Some missions later established *asistencias*, or mission outposts, in inland areas. An *asistencia* of the San Gabriel Mission, known as the San Bernardino Rancho Asistencia, was founded in 1819 in the southern part of Serrano territory near present-day Redlands (Bean and Smith 1978b:573). An *asistencia* of the San Luis Rey Mission, known as San Antonio de Pala, was founded in Luiseño territory further up the San Luis Rey River near Mount Palomar in 1810 (Pourade 1961:Ch. 9). The missions sustained themselves through cattle ranching and traded hides and tallow for supplies brought by ship. Large cattle ranches were established by Mission San Gabriel throughout the San Gabriel Valley. The Spanish established *presidios* (forts) at San Diego and Santa Barbara and a *pueblo* (town) at Los Angeles. The Spanish period in California began in 1769 with the Portola expedition and ended in 1821 with Mexican independence.

After Mexico became independent from Spain in 1821, what is now California became the Mexican province of Alta California. The Mexican government closed the missions in the 1830s and former mission lands were granted (beginning in 1833) to retired soldiers and other Mexican citizens for use as cattle ranches. Much of the land along the coast and in the interior valleys became part of Mexican land grants or "ranchos" (Robinson 1948). During the Mexican period there were small towns at San Diego (near the presidio), San Juan Capistrano (around the mission), and Los Angeles. The rancho owners lived in one of the towns or in an adobe house on the rancho. The Mexican Period includes the years 1821 to 1848.

In the Project area, the former San Gabriel Mission cattle ranches were granted to Mexican citizens by the Mexican governors of Alta California. Rancho Paso de Bartolo was granted to Juan Crispin Perez in 1834 who had been grazing his cattle herd there for many years. Rancho Paso de Bartolo extended south along the San Gabriel River from the Project area to what is now Washington Boulevard. Perez lived in an adobe house along the river in the southern part of the Rancho (Kielbasa 1997). Rancho Potrero de Felipe Lugo, one of the former Mission San Gabriel cattle pastures, was granted to Jorge Morrillo and his son-in-law Teodoro Romero in 1845 (Aviña 1976:108). This Rancho extended north from the Project area along the west side of the San Gabriel River and included parts of what are now South El Monte and El Monte.

The American period began when the Treaty of Guadalupe Hidalgo was signed between Mexico and the United States in 1848. As a result of the treaty, the former Mexican province of Alta California became part of the United States as the territory of California. Rapid population increase occasioned by the Gold Rush of 1849 allowed California to become a state in 1850. Most Mexican land grants were confirmed to the grantees by U.S. courts, but usually with more restricted boundaries which were surveyed by the U.S. Surveyor General's office. Land that was not part of a land grant was owned by the U.S. government until it was acquired by individuals through purchase or homesteading. Floods and drought in the 1860s greatly reduced the cattle herds on the ranchos, making it difficult to pay the new American taxes on the thousands of acres they owned. Many Mexican-American cattle ranchers borrowed money at usurious rates from newly arrived Anglo-Americans. The resulting foreclosures and land sales transferred most of the land grants into the hands of Anglo-Americans (Cleland 1941:137-138).

Pio Pico, the last Mexican governor of Alta California, acquired Rancho Paso de Bartolo in 1852. He built an adobe house, now known as the Pio Pico Mansion, and lived there until 1891 when he lost his land and house to a Los Angeles businessman, Bernard Cohn, to whom Pico owed money. A colony of Pennsylvania Quakers purchased the eastern part of Rancho Paso de Bartolo and started the community of Whittier which was incorporated in 1898. The portion of Rancho Paso de Bartolo west of the river was sold by Cohn and subdivided to form the towns of Pico and Rivera. These two towns joined to form the city of Pico Rivera in 1958 (Kielbasa 1997).

Rancho Potrero de Felipe Lugo was acquired sometime in the third quarter of the nineteenth century by F. P. F Temple, the son-in-law of William Workman (Wikipedia 2008). Workman owned half of Rancho La Puente (located on land now occupied by City of Industry, La Puente, and West Covina). F. P. F Temple was given half of Rancho La Merced (in the Montebello Hills) by Workman in 1852. Temple built a house and raised his family on Rancho La Merced. In 1871 Temple went into partnership with his father-in-law and opened the Temple & Workman Bank in Los Angeles. When the bank experienced financial problems in 1875, Temple received a loan

from E. J. “Lucky” Baldwin. When the bank failed in 1876, Baldwin foreclosed on the loan and took all of Temple’s assets (Kielbasa 1997), including Rancho Merced and Rancho Potrero de Felipe Lugo. Baldwin was the owner of Rancho Santa Anita (now in Arcadia) and had made his fortune as an investor in Comstock Lode silver mining ventures in Virginia City, Nevada. He was a major landowner in the San Gabriel Valley, owning several of the Mexican land grants in the area. He began to subdivide and sell his properties beginning in the 1880s (Wilkman 1999). The cities of El Monte and South El Monte developed on some of the land formerly owned by Baldwin, including the Rancho Potrero de Felipe Lugo. El Monte began as a settlement of people who came from Missouri, Arkansas, and Texas in the 1850s and 1860s. Agricultural and commercial growth in the area was stimulated by the arrival of the Southern Pacific Railroad which established a railroad depot at El Monte in 1873. El Monte was incorporated as a city in 1912 (Wikipedia 2011a). South El Monte separated from El Monte and was incorporated as a city in 1958 (Wikipedia 2011b).

The San Gabriel River channel is under the control of the U. S. Army Corps of Engineers. The Corps has constructed flood control facilities along the river, including levees, channels, and dams. The project area is in the flood control basin of the Whittier Narrows Dam, constructed in 1957 (WRD 2011).

METHODS

Records Search Methods

The updated records search for the project was conducted on October 3, 2017 at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton. The purpose of the records search was to determine the coverage of previous surveys within a one-half mile (800-meter) radius of the proposed project location, and what previously recorded prehistoric or historic archaeological sites, or historic buildings exist within this area. Materials reviewed included survey and evaluation reports, archaeological site records, historic maps, and listings of resources on the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Points of Historical Interest, California Historical Landmarks, and National Historic Landmarks.

Sacred Lands File Search

An updated search of the Sacred Lands File by the Native American Heritage Commission (NAHC) in Sacramento, California was requested in October 2017. This search was requested to determine whether there are sensitive or sacred Native American resources in the vicinity of the Project area that could be affected by the proposed project. The NAHC was also asked to provide a list of Native American groups that have historic or traditional ties to the Project area who may have knowledge about the Project area. It should be noted that the Sacred Lands File search does not constitute consultation in compliance with SB-18 or AB-52.

Field Methods

A field survey was included in the initial, 2011 cultural study. This field survey covered a total of 41 acres and included the entirety of the reduced 20-acre revised Project area. Because this

survey is less than 10 years old, a new survey was not conducted as part of the 2017 cultural update. The field survey for the Project was performed on November 29, 2011 by ECORP archaeologist Cary Cotterman and consisted of an intensive systematic pedestrian survey of the project area. Northwest-southeast transects were walked with intervals of 20 meters between each transect in the majority of the project area. Notes were taken on the environmental setting and disturbances within the project area.

RESULTS

Records Search

The results of the SCCIC records search indicate that there have been 43 previous cultural resources studies within one-half mile of the Project area (Table 1). Previous surveys cover about 65 percent of the records search radius around the Project area. Three of these surveys have partially or wholly overlapped the Project area and four surveys were located adjacent to the Project area. Studies that overlap the Project area include two previous surveys for the equestrian center. One conducted in 1976 prior to construction of the existing Equestrian Center (Clewlow 1976); and the 2011 survey conducted by ECORP for the current Project (Mason and Cotterman 2011). The third was a linear survey conducted in 1993 for a pipeline project (McKenna 1993). No archaeological material was identified in the project area as a result of the previous studies.

Table 1. Previous Investigations within One-Half Mile of the Project Area

Report Number	Author(s)	Report Title	Year	Within Project area
LA-00182	Clewfow, William C. Jr.	Evaluation of the Archaeological Resources and Potential Impact of Proposed Development of the Los Angeles County Equestrian Center at Whittier Narrows Recreation Area; an Environmental Impact Report	1976	Yes
LA-00358	Stickel, Gary E.	An Archaeological and Paleontological Resource Survey of the Los Angeles River, Rio Hondo River and the Whittier Narrows Flood Control Basin, Los Angeles, California	1976	No
LA-00828	Love, Bruce	Archaeological Resource Survey of Part of Whittier Narrows, California	1980	No
LA-01643	Costello, Julia G.	Los Angeles Downtown People Mover Program Archaeological Resources Survey Phase 3	1981	No
LA-02667	Lindsey, David and Martin Schiesl	Whittier Narrows Flood Control Basin Historic Resources Survey	1976	Adjacent
LA-02882	McKenna. Jeanette A.	Cultural Resources Investigations, Site Inventory, and Evaluations, the Cajon Pipeline Project Corridor, Los Angeles and San Bernardino Counties, California	1993	Yes

Report Number	Author(s)	Report Title	Year	Within Project area
LA-02970	Chamberlaine, Pat and Jean Rivers-Council	Cajon Pipeline Project Draft Environmental Impact Statement Environmental Impact Report	1992	No
LA-03149	Scott, Barry	Archaeological Survey Report for the Proposed Puente Hills Old Waste Intermodal Facility and Alternative Transportation Corridors, Los Angeles County, California	1995	No
LA-04659	Maxwell, Pamela	Records and Literature Survey for the Whittier Narrows Water Control Manual Project, Los Angeles County, California	1993	Adjacent
LA-04835	Ashkar, Shahira	Cultural Resources Inventory Report for Williams Communications, Inc. Proposed Fiber Optic Cable System Installation Project, Los Angeles to Riverside, Los Angeles and Riverside Counties	1999	No
LA-04880	Smith, Phi lomene and Sriro. Adam	Pavement Rehabilitation Along Route 605 Within the Cities of Long Beach, Lakewood, Cerritos, Downey, Pico Rivera, Santa Fe Springs, Whittier. City of Industry, Baldwin Park and Irwindale.	2000	No
LA-05455	Maxwell. Pamela	Cultural Resource Evaluation for Whittier Narrows Project Master Plan and Environmental Assessment, Los Angeles County, California	1994	Adjacent
LA-05456	Mclean. Roderic	Archival Study and Archaeological Survey for the Whittier Narrows Water Reclamation Project (golf Course Storage Lakes), Los Angeles County, California	1994	Adjacent
LA-05476	Romani, Gwendolyn R.	Archaeological Survey Report: Los Angeles San Diego Fiber Optic Project: Mesa Substation to Chino Hills State Park Segment	2000	No
LA-06299	McKenna, Jeanette A.	Cultural Resource Assessment Evaluation for Nextel Communications Site CA-8028b, South El Monte, Los Angeles County, California	2002	No
LA-06938	Brechbiel, Brant A.	Cultural Resources Records Search and Literature Review for the Rose Hills Property Los Angeles County, California	1999	No
LA-07176	Messick, Peter	Selected Archaeological Investigations for the San Gabriel River Project Master Plan	2003	No
LA-07304	Thal, Sean	Crossroads/CA-8028a	2004	No

Report Number	Author(s)	Report Title	Year	Within Project area
LA-07305	Wetherbee, Matthew and Smallwood, Josh	Identification and Evaluation of Historic Properties Upper San Gabriel Valley Municipal Water District Direct Reuse Project, Phase IIa	2004	No
LA-08210	Bonner, Wayne H.	Cultural Resources Records Search Results and Site Visit for Sprint Nextel Candidate Ca5535b (frys), 1001 North Durfee Avenue, South El Monte, Los Angeles County, California	2005	No
LA-08214	McKenna, Jeanette A.	A Phase I Cultural Resources Investigation for the Proposed Puente Hills Intermodal Facility in the City of Industry, Los Angeles County, California	2006	No
LA-08218	Hogan, Michael	Whittier Narrows Historic Properties Management Plan	1997	No
LA-08232	Bass, Bryon and Hacking, Christine	Cultural Resources Technical Report Famcamp Facility Los Angeles Air Force Base City of Industry, Ca	2003	No
LA-08248	Fulton, Terri and Deborah Mclean	Cultural Resource Assessment for the Puente Hills Landfill Native Habitat Preservation Authority, Los Angeles County, California	2006	No
LA-08704	Bonner, Wayne **H.**	Cultural Resources Records Search and Site Visit Results for T-mobile Candidate le24053c (afp Inc.), 3730 South Capitol Avenue, City of Industry, Los Angeles County, California	2006	No
LA-09282	Strauss, Monica, Angel Tomes, and John Dietler	Cultural Resources Assessment for the Proposed San Gabriel River Discovery Center at Whittier Narrows Los Angeles County, California	2007	No
LA-09705	Anonymous	Cultural Resources Inventory of the Southern California Edison Company Tehachapi Renewable Transmission Project, Kern, Los Angeles and San Bernardino Counties, California. ARR #05-01-01046	2007	No
LA-10175	Unknown	Confidential Cultural Resources Specialist Report for the Tehachapi Transmission Project	2009	No

Report Number	Author(s)	Report Title	Year	Within Project area
LA-10363	Tang, Bai and Michael Hogan	Identification and Evaluation of historic properties - Whittier Narrows Dam Deviations Study	2009	No
LA-11282	Bischoff, Wayne	Historic Property Treatment Plan for Site CA-LAN-3814 Segment 7 Southern California Edison (SCE) Tehachapi Renewable Transmission Project (TRTP)	2010	No
LA-11707	Dibble, Stephen	Horseman's Park Development Proposal, Archeological Survey	2011	No
LA-11839	Jordan , Stacey, Tsunoda, Koji, and Wilson, Stacie	Archaeological Survey Report for Southern California Edison Company Weed Abatement Project, Whittier Narrows Dam Recreation Area, Los Angeles County, CA	2009	No
LA-11843	Schneider, Tsim, Reese, Elena, Welsh, Patricia, Holson, John, and Tinsley Becker, Wendy	Data Recovery Excavations at Archaeological Site CA-LAN-3814H, for the Southern California Edison Company Tehachapi Renewable Transmission Project, Segment 7, Los Angeles County, California	2012	No
LA-11988	Schneider, Tsim	TRTP Cultural Resources Survey Report with Negative Findings, Segment 8 West (Phase 4) Supplemental Survey #6	2010	No
LA-11989	Panich, Lee and Holson, John	Supplemental Archaeological Survey Report, 66KV Transmission Lines Access Roads, Tehachapi Renewable Transmission Project Segments 7 and 8, Los Angeles and San Bernardino Counties, California	2010	No
LA-11990	Wetherbee, Matthew, Jackson, Thomas, and Tinsley-Becker, Wendy	Supplemental Cultural Resources Survey Report for the Southern California Edison Tehachapi Renewable Transmission Project Segment 7 Rio Hondo-Amamdor-Jose-Mesa 66kv Line Relocation, Los Angeles County, California	2010	No
LA-11991	Schneider. Tsim and Holson. John	Supplemental Archaeological Survey Report #2, Tehachapi Renewable Transmission Project Segment 7, Los Angeles County, California	2010	No
LA-12133	Mason, Roger and Cotterman, Cary	Cultural Resources Survey Report for the Whittier Narrows Equestrian Center Project Los Angeles County, California	2011	Yes

Report Number	Author(s)	Report Title	Year	Within Project area
LA-12240	Maniery, Mary and Baker, Cindy	Cultural Resources Inventory and National Register of Historic Places Evaluation, South El Monte Base Yard Facility, 645 North Durfee Avenue, South El Monte, Los Angeles County, California	2013	No
LA-12835	Greenberg, Marc	Cultural Resources Survey for Tehachapi Renewable Transmission Project Request for Final Engineering Concurrence: Segments 7 and 8 Phase IV, Army Corps of Engineers Give Back Areas. Los Angeles County, California	2013	No
LA-12928	Holm, Lisa and John Ho Ison	Supplemental Archaeological Survey Report, Tehachapi Renewable Transmission Project Segment 8 East (Phases 2 and 3) And West (Phase 4), Los Angeles And San Bernardino Counties, California	2011	No
LA-12992	Corbett, Ray and Richard Guttenberg	Cultural Resources Monitoring Report For The Potrero Canyon Advance Mitigation Site, Newhall Ranch, Los Angeles County, California	2015	No
LA-13008	David Brunzel!	Cultural Resources Assessment, Whittier Narrows Temporary Deviation Project, City of Montebello and Unincorporated Los Angeles County, California	2014	No

Fifteen cultural resources have been recorded within one-half mile of the survey area (Table 2). As a result of the records search, no previously-recorded resources are located within the Project area.

Table 2. Previously Recorded Archaeological Sites Within One-Half Mile of the Survey Area.

Primary Number P19-	Recorder and Year	Age/Period	Site Description	Within Project area
002583	S. Owen, J. M. Foster 1989	Historic	La Merced Adobe	No
003814	M. Long and K. Tsunoda 2008; K. Larsen, J. Kuhns, D. Trout, C. Davis, L. Harrington and T. Schneider 2010	Historic	Historic refuse scatter and remains of a foundry/smithy	No
186112	S. Ashkar 1999	Historic	Southern Pacific Railroad	No
186876	J. Schmidt and J Schmidt 2003; K Ahmet and S. Bholat 2006; W Linsley Becker 2010; P. Stanton 2011; W Linsley Becker 2012; D. Leonard 2014	Historic	SCE Eagle Rock-Pardee Transmission Line Corridor/Antelope-Mesa 220 KV Transmission Line	No

Primary Number P19-	Recorder and Year	Age/Period	Site Description	Within Project area
186889	P. Messick 2003	Historic	Whittier Narrows Dam Recreation Center Structures	No
188114	A. Tomes, J. Dietler 2006	Historic	Whittier Narrows Nature Center Park Police Office	No
188115	M. Strauss, J. Dietler 2006	Historic	Whittier Narrows Nature Center Museum	No
188116	M. Strauss, J. Dietler 2006	Historic	Whittier Narrows Nature Center Restroom Building	No
188117	A. Tomes, J. Dietler 2006	Historic	Whittier Narrows Nature Center Police Garage and Shed	No
188118	A. Tomes 2006	Historic	Whittier Narrows Nature Center Picnic Shelter	No
188983	N. Stewart 2008	Historic	Boulder Dam – Los Angeles 287.5 kV Transmission Line	No
190334	PAR Environmental Services 2012;	Historic	United States Army Corps of Engineers Base Yard Facility	No
190504	W. Linsley Becker 2010	Historic	SCE Rio Hondo-Amador-Jose-Mesa-Narrows 66kV Transmission Line	No
190505	W. Linsley Becker 2010	Historic	Mesa-Walnut 220 kV Transmission Line	No
190508	W. Linsley Becker 2010	Historic	Walnut-Hillgen-Industry-Mesa-Reno 66kV Transmission Line	No

No buildings are shown in the Project area on the 1900 USGS Pasadena 15-minute sheet, and on the 1948, 1953, 1966, 1966 (photo-revised 1972), and 1966 (photo-revised 1981) USGS El Monte quads.

Sacred Lands File Search

A search of the Sacred Lands File by the NAHC yielded positive results. Information about Native American sacred lands is considered confidential. The NAHC requested that information pertaining to sacred lands in the Project area not be included in public documents. In deference to this request, the NAHC search results letter has not been included with this report. In addition to the Sacred Lands File search, the NAHC identified five Native American contacts that may have information about the Project area.

Field Survey

Ground surface visibility at the time of the survey ranged from 100 percent to approximately 70 percent. Soil consists of alluvial sand, with gravel and cobbles in the river wash. The land is nearly flat, sloping very slightly towards the southwest, with little topographic relief. Disturbances to the 80 percent of the project area that has been developed include grading; compacting; importation of gravel for parking areas; construction of buildings and structures; numerous piles of soil, sand, and horse manure; disking for weed control; and more than 30 years of trampling by horses. In the undeveloped part of the project area that is in the river

wash, disturbances consist primarily of ongoing erosion and deposition of alluvial sand and cobbles. Well-worn horse trails, and a small amount of modern flood-borne trash were also observed.

During the 2011 survey, the developed portion of the project area was occupied by stables, storage lockers, corrals, fenced exercise enclosures, and parking areas, all of which were constructed in the 1970s or later. Only one corral was present when the Project area was surveyed in 1976 (Clewlow 1976). Almost all of the buildings and structures are prefabricated units made of sheet metal, plywood, and round steel tubing, and a few stand on concrete-slab foundations. One permanent building, containing men's and women's restrooms, is constructed of concrete blocks. Historic aerial photographs show no buildings or structures within the Project area until 1980 when a few small buildings or structures, possibly stables, were present in the northeastern part of the project area (Historic Aerials 1980). Since the 2011 field survey, revisions have been made to the Project area including removing and replacing old stables with new, temporary stables.

No other archaeological resources or historic buildings or structures were identified within the Project area during the field survey.

RECOMMENDATIONS

No archaeological sites, historic buildings, structures, or isolated finds were identified within the project area as a result of the cultural resources records search or the field survey. A search of the Sacred Lands File by the NAHC yielded positive results. Information about Native American sacred lands is considered confidential and the NAHC search results letter has not been included with this report. ECORP assumes that the County will be conducting all AB 52 consultation and Native American outreach for this Project.

In the event that any archaeological materials are encountered during ground-disturbing activities in the Project area, all activities must be suspended in the vicinity of the find until the deposits are recorded and evaluated by a qualified archaeologist.

If human remains of any kind are found, the requirements of CEQA Guidelines Section 15064.5(e) and AB 2641 shall be followed. According to these requirements, all earth-moving activities must cease immediately and the Los Angeles County Coroner and a qualified archaeologist must be notified. The Coroner will examine the remains and determine the next appropriate action based on his or her findings. If the Coroner determines the remains to be of Native American origin, he or she will notify the NAHC. The NAHC will then identify the most likely descendant (MLD) to be consulted regarding treatment and/or reburial of the remains. If an MLD cannot be identified, or the MLD fails to make a recommendation regarding the treatment of the remains within 48 hours after gaining access to the remains, the County shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

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APPENDIX A

Native American Heritage Commission Correspondence

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Whittier Narrows Equestrian Center

County: Los Angeles

USGS Quadrangle Name: El Monte (1978)

Township: 2 South **Range:** 11 West **Section(s):** Unsectioned Rancho Potrero de Felipe Lugo land grant and Rancho Paso de Bartolo land grant

Company/Firm/Agency: ECORP Consulting, Inc.

Street Address: 215 N. Fifth Street

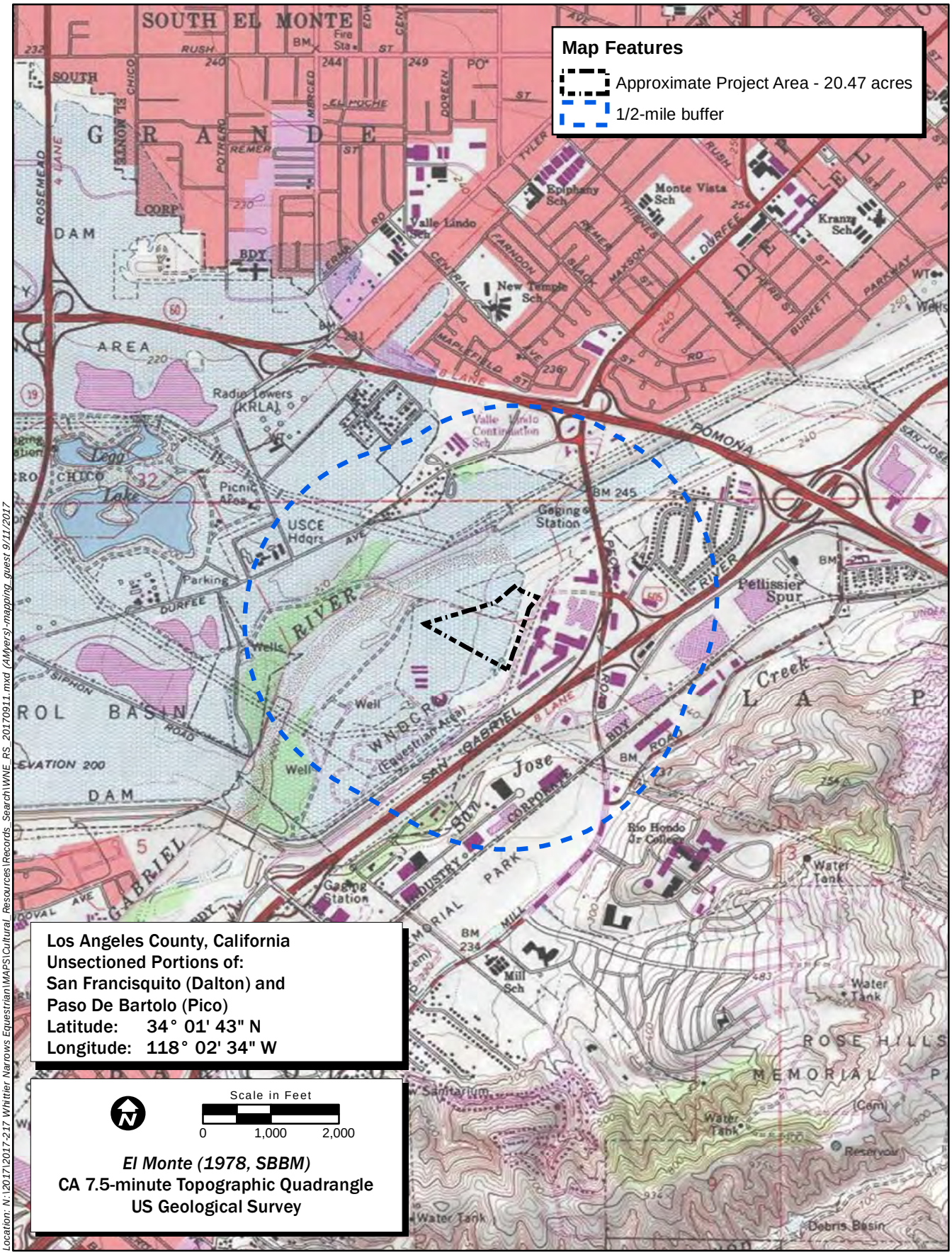
City: Redlands **Zip:** 92374

Phone: (909) 307-0046

Fax: (909) 307-0056

Email: wblumel@ecorpconsulting.com

Project Description: Construction of new equestrian center facilities to replace the existing Whittier Narrows Equestrian Center is proposed by the County of Los Angeles Department of Parks and Recreation. In 2011, ECORP conducted a cultural resources investigation for the project, which included a Sacred Lands File search. Recent revisions to the project design reduced the project footprint from 41.8 acres to approximately 20 acres. ECORP is requesting an updated Sacred Lands File Search for the Project.



Location: N:\2017\2017-217 Whittier Narrows Equestrian\MAPS\Cultural Resources\Records Search\WNE_RS_20170911.mxd (AMyers)-mapping_guest 9/11/2017

Map Date: 9/11/2017

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Records Search

2017-217 Whittier Narrows Equestrian

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APPENDIX B

Biological Technical Report

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Biological Technical Report

Whittier Narrows Equestrian Center Project

Los Angeles County, California

Prepared for:

Los Angeles County
Department of Parks and Recreation

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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Biological Technical Report
Whittier Narrows Equestrian Center Project

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1.0 INTRODUCTION

This report presents the findings of a biological reconnaissance survey by ECORP Consulting, Inc. (ECORP) of an approximately 20-acre project site in unincorporated Los Angeles County near the Cities of Whittier and Pico Rivera, California where improvements to the existing Whittier Narrows Equestrian Center are proposed (project). The purpose of the survey was to document the biological resources present at the site and to determine any potential biological constraints for the proposed project. The assessment included: 1) a review of state and private databases for special-status species 2) a review of previously-conducted surveys in the immediate area, including a biological reconnaissance survey of a previous boundary of the project site prepared by ECORP in 2012, 3) a general characterization of plant communities on the project site, 4) a general inventory of plant and wildlife species, and 5) an assessment of the special-status plant and animal species that have the potential to occur on the project site.

ECORP also completed a jurisdictional delineation for the property, the results of which are presented in a separate report.

1.1 Project Location

The project site is located in unincorporated Los Angeles County near the northwestern corner of the City of Whittier, California (Figure 1). It is bounded by Rooks Road to the southeast, Peck Road to the east, the San Gabriel River to the northwest, and the Pico Rivera Bicentennial Park to the southwest. The project site includes the approximately 20-acre Whittier Narrows Equestrian Center (Equestrian Center). The San Gabriel River abuts the project site along the northwest side. The Bicentennial Park, a venue for rodeos and other equestrian events, is adjacent to the project site along the southwest side. Commercial buildings and parking lots are adjacent to the project site along the east and southeast sides. The project site is within the U.S. Geological Survey (USGS) 7.5-minute El Monte topographic quadrangle, San Bernardino Base Meridian, in an un-sectioned portion of Township 2 South, Range 11 West (Figure 2). Elevations on the project area are approximately 200 feet (ft) above mean sea level (msl).

1.2 Project Description

The Los Angeles County Department of Parks and Recreation proposes to renovate the existing equestrian facility at 12191 Rooks Road in unincorporated Los Angeles County near Whittier, CA to provide a functional and aesthetically pleasing equestrian center for horse boarding, rentals, and recreation. The property is owned by the U.S. Army Corps of Engineers (USACE) and is operated by the Los Angeles County Department of Parks and Recreation under a lease agreement. The purpose of this project is to create a new sustainable facility with reduced environmental impact to adjacent water resources and habitat. Local flooding and stormwater pollution issues will be addressed during design, construction, and operation. The new facility will include modern stables, a new restroom building, parking areas, and management facilities. The new site design will reduce erosion, and existing drainage ditches will be restored to naturalized bioswales that prevent uncontrolled and untreated discharges to the adjacent San

Gabriel River. The project also proposes to upgrade the connection of the San Gabriel River Trail to the existing equestrian trail along the northern boundary of the site.

Previous studies on the project site conducted in 2012 included the adjacent Horseman's Park, the Los Angeles Department of Water and Power easement, and a landscape enhancement area (riparian area) within the project boundary. These areas are no longer included within the project boundary and no work is planned in these areas.

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Map Date: 9/20/2017
Service Layer Credits: ESRI

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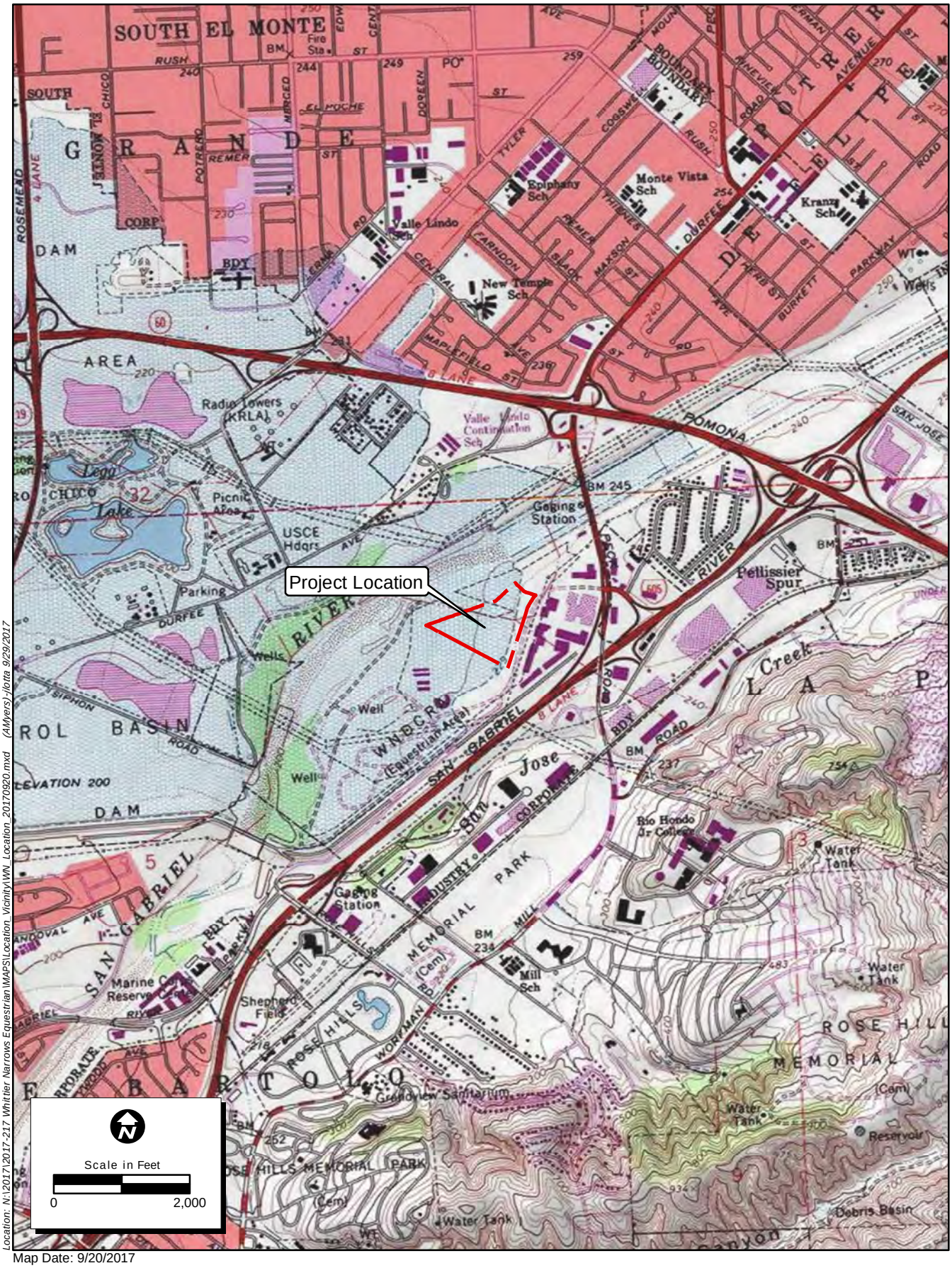
Figure 1. Project Vicinity

2017-217 Whittier Narrows



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Map Date: 9/20/2017
Base Source: USGS

Figure 2. Project Location

2017-217 Whittier Narrows

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2.0 REGULATORY REQUIREMENTS

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects plants and wildlife that are listed as endangered or threatened by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). Section 9 of FESA prohibits the taking of endangered wildlife, where taking is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 USC 1538). Under Section 7 of FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of FESA provides for issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan is developed.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code (FGC).

2.1.3 Federal Clean Water Act

The purpose of the federal Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "Waters of the United States" without a permit from the U.S. Army Corps of Engineers (USACE). The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The U.S.

Environmental Protection Agency (EPA) acts as a cooperating agency to set policy, guidance and criteria for use in evaluation permit applications and also reviews USACE permit applications.

The USACE regulates "fill" or dredging of fill material within its jurisdictional features. "Fill material" means any material used for the primary purpose of replacing an aquatic area with dry land or changing the bottom elevation of a water body. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the State Water Quality Control Board, administered by each of nine California Regional Water Quality Control Boards (RWQCBs). For this project, the San Diego RWQCB has jurisdiction.

2.2 State and Local Regulations

2.2.1 California Endangered Species Act

The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA, but unlike its federal counterpart, CESA applies the take prohibitions to species proposed for listing (called "candidates" by the state). Section 2080 of the California Fish and Game Code (FGC) prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the FGC as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with California Department of Fish and Wildlife (CDFW) to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

2.2.2 Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the CESA and FESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under CESA and/or FESA. The regulations that implement the Fully Protected Species Statute (Fish and Game Code Section 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

2.2.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (Fish and Game Code Sections 1900-1913) was created with the intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA is administered by CDFW. The Fish and Wildlife Commission has the authority

to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The CESA of 1984 (Fish and Game Code Section 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the FGC.

2.2.4 California Fish and Game Code

Streambed Alteration Agreement

Section 1602 of the FGC requires that a Notification of Lake or Streambed Alteration be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits to the Applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the Applicant is the Streambed Alteration Agreement. Often, projects that require a Streambed Alteration Agreement also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Streambed Alteration Agreement may overlap.

Migratory Birds

CDFW enforces the protection of non-game native birds in Sections 3503, 3503.5, and 3800 of the FGC. Section 3513 of the FGC prohibits the possession or take of birds listed under the MBTA. These sections mandate the protection of California non-game native birds' nests and also make it unlawful to take these birds. All raptor species are protected from "take" pursuant to FGC Section 3503.5 and are also protected at the federal level by the Migratory Bird Treaty Act of 1918.

2.2.5 Los Angeles County Significant Ecological Area Program

The County of Los Angeles developed a program within their General Plan that designates biologically unique areas within the County as Significant Ecological Areas (SEAs) in order to protect irreplaceable biological resources. A total of 21 SEAs have been identified within private and public lands that are generally undisturbed or mildly disturbed, support habitat for special-status species, contain corridors that are conducive to species movement, and are large enough to support populations of these species. Projects located within SEA boundaries are subject to additional reporting requirements and may have supplemental protection measures determined during the environmental review process that protect the resources occurring within the SEA. Development must be compatible with the goals of the SEA in order to ensure success of the SEA in the long term. The boundaries of these SEAs were revised in the final General Plan 2035 adoption in November 2015 (County of Los Angeles 2015).

2.2.6 Los Angeles County Oak Tree Ordinance

The County of Los Angeles Oak Tree Ordinance serves to protect native oak tree species from removal, and to preserve and enhance the general health of native oak trees within the County. Pursuant to the Los Angeles County Oak Tree Ordinance, a person shall not cut, destroy,

remove, relocate, inflict damage, or encroach into the protected zone of any tree of the oak tree genus (*Quercus*), which is eight inches or more in diameter at breast height (dbh) without first obtaining a permit (LACDPR 2011). Dbh is defined as diameter of the tree when measured 4.5 feet above mean natural grade, or in the case of oaks with multiple trunks combined diameter of 12 inches or more of the two largest trunks.

2.2.7 CEQA Significance Criteria

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and

- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional or state habitat conservation plan.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that although the impacts would result in an

adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of an important resource on a population-wide or region-wide basis.

3.0 METHODS

3.1 Literature Search

Prior to conducting the field portion of the assessment, a literature search was performed using CDFW's *California Natural Diversity Data Base* (CNDDB; CDFW 2017a) and the California Native Plant Society's (CNPS) Electronic Inventory (CNPSEI; CNPS 2017) to determine the special-status species that have been documented in the Azusa, Baldwin Park, El Monte, La Habra, Los Angeles, Mt. Wilson, Pasadena, South Gate, and Whittier, 7.5-minute topographic quadrangles. Additional information was gathered from the following sources:

- *CDFW CNDDB Special Animals List* (CDFW 2017b);
- *CNDDB Special Vascular Plants, Bryophytes and Lichens List* (CDFW 2017c);
- *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012);
- Various online websites (e.g., CalFlora 2017); and
- *The Manual of California Vegetation*, 2nd Edition (Sawyer, et al. 2009).

Using this information and observations in the field, a list of special-status plant and wildlife species that may have the potential to occur within the project site was generated. For the purposes of this assessment, special-status species are defined as plants or wildlife that:

- Have been designated as either rare, threatened, or endangered by CDFW or the USFWS, and are protected under either the California or Federal Endangered Species Act (ESA);
- Are candidate species being considered or proposed for listing under these same acts;
- Are fully protected by the California Fish and Game Code, Sections 3511, 4700, 5050, or 5515; and/or
- Are of expressed concern to resource and regulatory agencies, or local jurisdictions.

Sensitive species reported for the region in the literature search or for which suitable habitat occurs on the project site were assessed for potential to occur within the area based on the following guidelines:

Present: Species was observed within the project site during a site visit or focused survey.

High: Habitat (including soils and elevation factors) for the species occurs within the project site and a known occurrence has recently been recorded (within the last 20 years) within 5 miles (mi) of the project site.

Moderate: Habitat (including soils and elevation factors) for the species occurs within the project site and a documented observation occurs within the database search,

but not within 5 mi of the area; a historic documented observation (more than 20 years old) was recorded within 5 mi of the project site; or a recently documented observation occurs within 5 mi of the area and marginal or limited amounts of habitat occurs in the project site.

Low: Limited or marginal habitat for the species occurs within the project site and a recently documented observation occurs within the database search, but not within 5 mi of the area; a historic documented observation (more than 20 years old) was recorded within 5 mi of the project site; or suitable habitat strongly associated with the species occurs on site, but no records or only historic records were found within the database search.

Presumed Absent: Species was not observed during a site visit or focused surveys conducted in accordance with protocol guidelines at an appropriate time for identification; habitat (including soils and elevation factors) does not exist on site; or the known geographic range of the species does not include the project site.

(Note: Location information on some sensitive species may be of questionable accuracy or unavailable; therefore, for survey purposes, environmental factors associated with species occurrence requirements may be considered sufficient reason to give a species a positive potential for occurrence.)

Plant nomenclature follows that of The Jepson Manual: Vascular Plants of California (Baldwin et al. 2012). Wildlife nomenclature follows Checklist of North American Birds (AOU 2016), Society for the Study of Reptiles and Amphibians (SSAR 2017), and the Revised Checklist of North American Mammals North of Mexico (Bradley et al. 2014).

3.2 Field Survey

The survey consisted of walking the entire project site so that 100 percent visual coverage of the project site and a 500-ft buffer around the project site was achieved. The field survey included the following:

- Recording plant and wildlife species observed on the project site and in immediately adjacent areas;
- Characterizing plant communities present on the project site;
- Searching for wildlife sign (detections of burrows, scat, tracks, vocalizations, etc.);
- Taking photographs at the project site; and
- Recording weather data including time, temperature, cloud cover, and wind speed at the beginning and end of the survey.

Plant species not recognized were collected and identified using botanical references (Baldwin et al. 2012). Vegetation types were classified according to California Native Plant Society nomenclature (Sawyer et al. 2009).

4.0 RESULTS

4.1 Field Survey

The field survey was conducted on September 21, 2017, by ECORP biologist Lauren Simpson. Summarized below are the results of the literature review and field survey, including site characteristics, plant communities, plants, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors). Weather conditions during the survey are summarized in Table 1.

Table 1. Weather Conditions during the Survey

Type of Survey	Date	Time		Temperature (˚F)		Cloud Cover (%)		Wind Speed (mph)	
		start	end	min	max	min	max	min	max
Biological Reconnaissance	9/21/17	1030	1300	65	72	100	100	1	3

4.1.1 Site Characteristics and Land Use

The project site consists of an equestrian center and open space containing stables, riding areas, and storage areas. The project site is generally classified as disturbed and developed and is characterized by large open areas, clusters of buildings, rows of ornamental trees, and scattered individual trees. The majority of the project site is enclosed with chain-link fencing. Much of the area is bare ground. The vegetated areas are dominated by non-native, ruderal species or by ornamental trees. Several large Fremont's cottonwood trees (*Populus fremontii*), a native tree, were present throughout the project site. These trees appear to have been planted for landscaping purposes rather than naturally occurring on the site. Representative site photographs are included in Appendix A.

A riparian area that is a natural part of the San Gabriel River floodplain is located immediately north of the project site. The riparian area is dominated by hydrophytic habitats, including both mule fat (*Baccharis salicifolia*) thickets and poison hemlock (*Conium maculatum*) patches with sparsely distributed black willows (*Salix goodingii*). There is also an unvegetated streambed and disturbed areas that are unvegetated and/or have frequent equestrian use.

Much of the surrounding area is developed residential and commercial lots. Nearby natural areas consist of the Whittier Narrows Natural Area portion of the San Gabriel River corridor northeast of the project site and the Puente Hills, an open space area a little more than 1 mile southeast of the project site that contains Hellman Wilderness Park, Sycamore Park, and Arroyo Pescadero Park. The Angeles National Forest is approximately 10 miles north of the project site.

The Los Angeles County-designated Puente Hills SEA is located immediately adjacent to the project site to the north and west. This is discussed in more detail in Section 4.6.1.

Lastly, the project site abuts designated critical habitat for coastal California gnatcatcher (*Polioptila californicus californicus*) located north and west of the boundaries. This is addressed in Section 4.3.2.

Conditions within the project boundaries are similar to those that were observed during the biological reconnaissance survey conducted in 2012. However, the scope of the current project has been reduced and no longer extends to the riparian area north of the equestrian center.

4.1.2 Soils

Soils types were determined using data supplied by the Natural Resources Conservation Service (NRCS) Soil Survey Geographic Database for Los Angeles County (USDA 2017). Soils within the project site consisted entirely of Urban land-Sorrento-Arbolado complex soils with 2 to 9 percent slopes. Arbolado series consists of soils formed in human-transported materials that originate from alluvium derived from sedimentary sources. These soils are typically found in high density urban residential and recreational areas.

4.1.3 Plants

Plants observed within the project site during the survey consisted mainly of non-native annual species, including non-native mustards (*Brassica* sp.), brome grasses (*Bromus* sp.), and non-native ornamental trees. A few native species were observed within the project site, such as coyote gourd (*Cucurbita palmate*), telegraphweed (*Heterotheca grandiflora*) and jimsonweed (*Datura wrightii*). Native annual species were not observed during the survey but this is due to the timing of the survey; native annual species would be more detectable during a spring or early summer visit when many of these species are in bloom. However, non-native species still comprise the majority of plants observed on the site. As previously mentioned, a number of native Fremont's cottonwood trees have been planted ornamentally within the equestrian center.

More native species are present outside of the project site within the riparian area to the north of the project site. These include black willow, mule fat, blue elderberry (*Sambucus nigra* ssp. *caerulea*), western sycamore (*Platanus racemosa*), and California buckwheat (*Eriogonum fasciculatum*). Non-native species within this off-site area include poison hemlock (*Conium maculatum*), short-pod mustard (*Hirschfeldia incana*), Bermuda grass (*Cynodon dactylon*), and gum trees (*Eucalyptus sp.*). A complete list of plant species observed on the project site is found in Appendix B.

4.1.4 Wildlife

The project site provides habitat for wildlife species that are adapted to or tolerant of human disturbance. Birds were the most abundant species observed within the area. The trees and buildings on the site provide foraging and shelter habitat and potential nesting sites for a variety of bird species. Additionally, the tall trees and the steel-lattice transmission line tower

within the area provide potential nesting sites for raptors and owls. Other wildlife species occurring within or using the area include Audubon's cottontail (*Sylvilagus audubonii*), California ground squirrel (*Otospermophilus beecheyi*), coyote (*Canis latrans*), feral chicken (*Gallus gallus domesticus*; non-native), western fence lizard (*Sceloporus occidentalis*), and side-blotched lizard (*Uta stansburiana*). The project site does not provide potential habitat for most sensitive wildlife species. A total of two reptile, 24 bird, and three mammal species were observed within the project site and immediate vicinity during the survey.

The riparian area located north of the project site is adjacent to the San Gabriel River corridor and supports a variety of wildlife species, including some that are rare, threatened, or endangered, that have the potential to be affected or incidentally affected by construction and/or operation of the proposed project. A complete list of wildlife species observed or detected during the site visit in and adjacent to the project site is found in Appendix C.

4.2 Vegetation Communities/Habitats

The project site is subjected to repeated and ongoing disturbance from equestrian activities and other uses of the site. There are no native vegetation communities within the project site. The project site consists only of bare ground/structures, disturbed areas with ruderal non-native species, and ornamental trees. An unvegetated streambed and riparian-associated communities containing mule fat thickets (*Baccharis salicifolia* Shrubland Alliance) and other non-native communities, such as poison hemlock or fennel patches (*Conium maculatum–Foeniculum vulgare* Semi-Natural Herbaceous Stands) and eucalyptus groves (*Eucalyptus* [*globulus, camaldulensis*] Woodland Semi-Natural Alliance), were present outside of the project site to the north. There are no habitats listed as sensitive by the CNDDB or CNPS within the project site. Classification of the land cover types within the project site are described in detail below and displayed in Figure 3.

4.2.1 Bare Ground/Structures

Bare ground/structures is not a vegetation classification, but rather a land cover type. Areas mapped as bare ground/structures were entirely devoid of vegetation due to human development and contained paved, bare, and/or gravel ground cover. The bare ground/structures land cover type covered 71 percent of the project site and was primarily characterized by horse stables, storage areas, horseback riding pens, and parking areas (Table 2).

4.2.2 Disturbed

Disturbed is not a vegetation classification, but rather a land cover type. Areas mapped as disturbed were largely devoid of native vegetation due to human disturbance and were dominated by open areas or non-native weedy vegetation. Areas of dirt roads and bare dirt were also mapped as disturbed. The disturbed land cover type covered 24 percent of the project site and was present mostly around the perimeter of the project site and in the southeast corner. Plants present in this land cover type included non-native weedy species such as tocalote, (*Centauria melitensis*), Italian thistle (*Carduus pycnocephala*), Russian thistle (*Salsola tragus*), and castor bean (*Ricinus communis*).

Figure 3.
Vegetation Communities

Map Features

- Approximate Project Boundary - (19.72 ac.)
- 500 ft. Buffer

Vegetation

- Bare Ground/ Structures
- Disturbed Ornamental
- Tree

Surrounding Land Uses

- Bicentennial Park
- Developed
- Undeveloped/Disturbed
- Whittier Narrows Natural Area

San Gabriel River
Rooks Rd
Pacific Park Dr
Coast Dr
Bicentennial Park Access Rd
I- 605 San Gabriel River Fwy
Pellissier Pl

Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), Mapmyindia, NGCC, © OpenStreetMap contributors, and the GIS User Community

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2017-208 Whittier Narrows Equestrian Center

Scale in Feet
0 200 400

Base Source: NAIP 2016

Map Date: 10/5/2017

Location: N:\2017\2017-217 Whittier Narrows Equestrian\MAPS\Vegetation\Vegetation\v1\WN_Vegetation_v1.mxd (JLMAG)-mguidry 1/31/2018

Table 2. Land Covers on Project Site

Land Cover	Acreage
Land Cover	
Bare Ground/Buildings	14.0
Disturbed	4.7
Ornamental Trees	1.1
TOTAL	**19.8**

4.2.3 Ornamental Trees

The ornamental tree classification is not a vegetation classification, but rather a land cover type. Areas mapped as this contained large mature ornamental trees present throughout the project site. The primary ornamental trees on the project site included Aleppo pine (*Pinus halepensis*), carrotwood (*Cupaniopsis anacardioides*), Mexican fan palm (*Washingtonia robusta*), and Peruvian peppertree (*Schinus molle*). One native tree species, Fremont's cottonwood, was also prevalently used in the site's landscaping and was included in this category.

4.3 Special-Status Species

Special-status plant and wildlife species were evaluated for their potential to occur within the project site based on the results of the literature searches and the site visit. Complete lists of special status plant and wildlife species that were evaluated for their potential to occur in the area are included as Appendices D and E, respectively. The project site does not fall into any designated critical habitat for federally listed plant or wildlife species; however, designated critical habitat for coastal California gnatcatcher is located immediately north and west of the project site. This is discussed in more detail in Section 4.3.2.

4.3.1 Special-Status Plants

The literature search documented 52 special-status plant species (five federally and/or state listed) in the project vicinity, all of which were presumed absent from the project site due to a lack of suitable habitat. A complete list of the 52 special-status plant species, with details regarding blooming periods, habitat requirements, and potential for occurrence designations, is included as Appendix D.

During the previous evaluation of the project in 2012, one plant, southern tarplant (*Centromadia parryi* ssp. *australis*) was determined to have a potential to occur in the riparian area north of the project site. This plant was not considered for the revised project because the project boundaries have been refined such that no direct impacts to the riparian area would occur and the plant has no potential to occur within the project boundary.

4.3.2 Special-Status Wildlife

The literature search documented 36 special-status wildlife species (nine federally and/or state listed species) in the project vicinity. A list was generated from the results of the literature search (Appendix E) and the project site was evaluated for suitable habitat to support any of the special-status wildlife species on the list. The potential for each special-status species to occur on the project site and, due to the project site's proximity to the San Gabriel River corridor and the Puente Hills SEA, the potential for special-status species to occur adjacent to the project site was also assessed.

The list of special-status wildlife includes species that are federally and state-listed, and thus protected under ESAs, as well as species that are not formally listed but are considered Species of Special Concern (SSC) by CDFW due to significant habitat loss or population declines. Of the 36 species identified in the literature search, three were identified as having potential to be present on the project site and an additional seven were identified as having potential to be indirectly affected by the project in the areas adjacent to the project site. Species from the list that have the potential to occur within the project site or that have the potential to be indirectly affected by the project are discussed in detail below.

The scope of the project that was evaluated in 2012 extended outside of the current project boundary and contained improvements within the riparian area north of the project. As a result, some species were determined to have a potential to occur during the project evaluation in 2012 and be directly impacted that are now expected to either be indirectly impacted or not impacted at all. Further, the updated and refined literature search conducted during this evaluation considered additional species not considered in 2012 and some species that were considered in 2012 did not appear in the updated literature search. Details of this analysis are described in the 2012 Report (ECORP 2012a). Overall, the refined project boundary has been reduced, and as a result the amount and degree of impacts to sensitive species has also been reduced.

<u>Special-Status Species with Potential to Occur on the Project Site</u>

Burrowing Owl

The burrowing owl is a California SSC. Burrowing owls historically occurred throughout much of California and the western United States; however, many former California populations have been extirpated. The burrowing owl inhabits open habitats, primarily grasslands and deserts. Burrowing owls require burrows for roosting and nesting cover. Although they often nest in abandoned California ground squirrel burrows, they will also use other small mammal burrows, pipes, culverts, and nest boxes, particularly where burrows are scarce (Zeiner et al. 1990b). The CNDDB documents a burrowing owl occurrence documented in 2010 approximately two miles south of the project site (CDFW 2017a). The disturbed areas along the southwestern boundary of the project site and in the southern portion of the project site between the horseback riding pens and the trailer storage area had an abundance of ground squirrel burrows that provide suitable burrowing habitat for the species. Focused burrowing owl surveys conducted by ECORP in 2012 were negative and no owl or owl sign were observed (ECORP 2012b). However, based

on the presence of the suitable habitat and the documented occurrence within five miles of the site, the burrowing owl has a high potential to occur within the project site.

Western Red Bat

The western red bat (*Lasiurus blossevillii*) is a California SSC. The western red bat is a tree-roosting species that is known to roost along riparian habitat edges in cottonwood, willow, and sycamore trees (WBWG 2017). While suitable roost trees occur both on and adjacent to the project site, no recent occurrences of western red bat have been mapped within five miles of the project site (CDFW 2017a). Suitable foraging habitat for western red bat also occurs immediately north of the project site in the riparian area. Therefore, the western red bat has a low potential to occur on the project site.

Western Yellow Bat

The western yellow bat (*Lasiurus xanthinus*) is a California SSC. The western yellow bat is a tree-roosting species that is known to roost in native and non-native palm trees as well as cottonwood trees (WBWG 2017). Palm trees, cottonwood trees, and other broadleaf trees are present within the project site and adjacent areas. While suitable roost trees occur both on and in the vicinity of the project site, no recent occurrences of western yellow bat have been mapped within five miles of the project site (CDFW 2017a). Suitable foraging habitat for western yellow bat also occurs immediately north of the project site in the riparian area. Therefore, the western yellow bat has a low potential to occur on the project site.

Special-Status Species with Potential to Occur Adjacent to the Project Site

Least Bell's Vireo

The least Bell's vireo (*Vireo bellii pusillus*) is a small, insectivorous bird that is both federally and state-listed as endangered. The least Bell's vireo winters in Baja California, Mexico and breeds in dense riparian thickets in the southwestern United States (Kus 2002). The project site does not support any dense riparian thickets and therefore does not contain any suitable habitat for the least Bell's vireo. However, suitable breeding habitat occurs within the riparian area along the San Gabriel River immediately north and west of the project site. Furthermore, this species was documented occupying habitat less than one mile west of the project site in 2010 (CDFW 2017a). The presence of suitable breeding habitat within the riparian area introduces the potential for project activities to adversely indirectly affect the least Bell's vireo through construction noise and human proximity to nest sites. Based on the presence of suitable habitat and the documented occurrence within one mile of the site, least Bell's vireo has a high potential to occur in the riparian area located adjacent to the project site.

Coastal California Gnatcatcher

The coastal California gnatcatcher is listed as threatened under FESA and is a California SSC. This species is an obligate permanent resident of coastal sage scrub habitats below 2,500 feet (762 meters) in elevation in southern California (USFWS 2010). This species is found in low growing coastal sage scrub, particularly those dominated by California sagebrush (*Artemesia californica*). The project site does not support any suitable coastal sage scrub habitat; however, designated critical habitat is located immediately adjacent to the project site within the San Gabriel River

corridor. The critical habitat unit, Unit 9: East Los Angeles County-Matrix NCCP Subregion of Orange County, was designated to provide connectivity between critical habitat Units 6 (Orange County Central-Coastal NCCP), 10 (Western Riverside County MSHCP), and 12 (Bonelli Regional Park) (Figure 4; USFWS 2007). Unit 9 is occupied by this species and contains the two Primary Constituent Elements (PCEs) that were determined by USFWS to be critical for conservation of the coastal California gnatcatcher: dynamic and successional sage scrub habitats for individual and population growth, and non-sage scrub habitats located adjacent to sage scrub habitats that are conducive to dispersal, foraging, and nesting activities (USFWS 2007). The portion of the critical habitat within Unit 9 that is adjacent to the project site is composed mostly of riparian habitat with one small area of disturbed California buckwheat and prickly pear cactus (*Opuntia* sp.). This habitat is not conducive to nesting activities, but could provide foraging and dispersal habitat for coastal California gnatcatchers. A single adult was heard calling in this location in November 2000 (CDFW 2017a), likely either foraging or dispersing due to the timing of the observation during the non-breeding season. Due to the presence of designated critical habitat and the documented occurrence, coastal California gnatcatcher has a high potential to occur adjacent to the project site.

Coastal Whiptail

The coastal whiptail (*Aspidoscelis tigris stejnegeri*) is a California SSC reptile that is found in woodland, riparian, and arid open areas with sparse vegetation (CDFW 2017a). Coastal whiptail is not expected to occur within the project site but suitable habitat is present north of the project site in the riparian and dry streambed area adjacent to the project site. There are three recent recorded occurrences in the vicinity, the closest of which was documented in 2000 approximately 1.5 miles south of the project site (CDFW 2017a). As a result, this species was determined to have a high potential for occurrence in the riparian habitat adjacent to the project site.

Arroyo Toad

The arroyo toad (*Anaxyrus californicus*) is a federally listed endangered amphibian species and California SSC. It is restricted to coastal and desert drainages in central and southern California and northern Baja California, Mexico. Within riparian habitats, this species prefers slow-moving active stream channels with sandy soils (USFWS 2014a). Arroyo toad is not expected to occur within the project site but limited suitable habitat is present in the riparian area adjacent to the project site to the north and west. There are no recorded occurrences within five miles of the project site (CDFW 2017a). As a result, this species has a low potential to occur in the riparian area located adjacent to the project site.

Coast Horned Lizard

Coast horned lizard (*Phrynosoma blainvillii*) is a California SSC reptile. This lizard occurs in open scrub and riparian habitats and other open areas with ample ant prey base (Zeiner et al. 1990a). Coast horned lizard is not expected to occur within the project site but limited suitable habitat is present in the riparian and dry streambed area north and west of the project site. Only historical occurrences (greater than 20 years old) have been recorded in the vicinity (CDFW 2017a). As a result, this species has a low potential to occur in the riparian area located adjacent to the project site.

Figure 4.
Critical Habitat and
Los Angeles County SEA

Map Features

- Approximate Project Boundary - 19.72 ac.
- Puente Hills Significant Ecological Area (SEA)
- Coastal California Gnatcatcher Critical Habitat

Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

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2017-208 Whittier Narrows Equestrian Center

Scale in Feet
0 100 200

Base Source: NAIP 2016

Map Date: 10/17/2017

Location: N:\2017\2017-217 Whittier Narrows Equestrian\MAPS\Aerial_Maps\WN_Critical_Habitat_SEA_v1.mxd (JL) -mguidry 1/31/2018

Yellow-Breasted Chat

The yellow-breasted chat (*Icteria virens*) is a California SSC bird when nesting. This migratory bird breeds in southern California from early May to early August. It prefers riparian thickets and dense shrubs along streams or rivers for its nesting areas (Zeiner et al. 1990b). Yellow-breasted chat is not expected to occur within the project site but the riparian habitat north and west of the project site provide limited habitat for this species. There are no recorded occurrences within five miles of the project site (CDFW 2017a). As a result, this species was determined to have a low potential to occur in the riparian area located adjacent to the project site.

Southern Grasshopper Mouse

The southern grasshopper mouse (*Onychomys torridus ramona*) is a California SSC that occurs within a wide range of flat sandy habitats including riparian scrub (Bolster 1998). Southern grasshopper mouse is not expected to occur within the project site but the riparian habitat north and west of the project site provide limited habitat for this species. There are no recorded occurrences within five miles of the project site (CDFW 2017a). As a result, this species was determined to have a low potential to occur in the riparian area located adjacent to the project site.

4.3.3 Raptors and Migratory Birds

All raptor species are protected from "take" pursuant to California FGC Section 3503.5. Raptors and migratory birds are protected by the MBTA (USFWS 1918). The large ornamental trees on the site provide potential nesting habitat for several raptors including Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), and red-tailed hawk (*Buteo jamaicensis*). Potential nesting sites for migratory birds are also present throughout the site in the trees, vegetation, and structures. The survey was conducted outside of nesting season, but it is likely that birds protected by the MBTA have constructed nests within the project site and adjacent areas in previous seasons. Raptors in the area typically breed between February and August while songbirds protected under the MBTA generally nest between March and August.

4.4 Jurisdictional Waters

A jurisdictional delineation for the property was completed on September 21, 2017. The results of the jurisdictional delineation are presented under a separate cover.

4.5 Wildlife Movement Corridors, Linkages, and Significant Ecological Areas

The concept of habitat corridors addresses the linkage between large blocks of habitat that allow the safe movement of mammals and other wildlife species from one habitat area to another. The definition of a corridor is varied, but corridors may include such areas as greenbelts, refuge systems, underpasses, and biogeographic land bridges, for example. In general, a corridor is described as a linear habitat, embedded in a dissimilar matrix, which connects two or more large blocks of habitat. Wildlife movement corridors are critical for the survivorship of ecological systems for several reasons. Corridors can connect water, food, and cover sources, spatially linking these three resources with wildlife in different areas. In addition, wildlife movement between habitat areas provides for the potential of genetic exchange

between wildlife species populations, thereby maintaining genetic variability and adaptability to maximize the success of wildlife responses to changing environmental conditions. This is especially critical for small populations subject to loss of variability from genetic drift and effects of inbreeding. Naturally, the nature of corridor use and wildlife movement patterns varies greatly among species.

Drainages generally serve as movement corridors because wildlife can move easily through these areas, and fresh water is available. Corridors also offer wildlife unobstructed terrain to forage in and for the dispersal of young individuals. Movement corridors are particularly important to larger terrestrial species, such as mountain lions (*Felis concolor*), coyotes, bobcats (*Lynx rufus*), and mule deer (*Odocoileus hemionus*) due to the protective cover afforded by dense vegetation. Linkages and corridors facilitate regional wildlife movement and generally consist of waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Ridgelines may also serve as movement corridors.

The project site itself does not support any significant drainages or areas that have the potential to serve as wildlife movement corridors, and it is unlikely that wildlife use the project site for regional or local movement because the majority of the project site perimeter is fenced with chain-link fencing. The San Gabriel River, located immediately north and west of the project site, serves as a major wildlife corridor for the region.

The project site is located adjacent to the Puente Hills SEA, an area designated by Los Angeles County as being a key linkage between open spaces in Los Angeles and Orange Counties for wildlife movement (County of Los Angeles 2015). The Puente Hills SEA is discussed in more detail in Section 4.6.1 below.

4.6 Local Policies and Ordinances

4.6.1 County of Los Angeles Significant Ecological Area (SEA) Program

The project site is not located within a County of Los Angeles-designated SEA; however, the San Gabriel River corridor located just north of the project site falls within the Puente Hills SEA (Figure 4). The Puente Hills SEA is located in the southeastern portion of Los Angeles County and was identified as an SEA because this area provides an important linkage connection between the Puente Hills and the Chino Hills in Orange County for wildlife movement to promote regional biodiversity and connectivity for native habitats and species (County of Los Angeles 2015). A two-year study commissioned by the Santa Monica Mountains Conservancy was conducted in this area and found that the Puente Hills SEA is heavily used for east-west movement by carnivores (County of Los Angeles 2015).

This SEA also provides habitat for core populations of special-status plant and wildlife species (County of Los Angeles 2015). For example, a large portion of the SEA coincides with designated critical habitat for the coastal California gnatcatcher (Unit 9). Furthermore, the riparian areas located within this SEA, such as the riparian habitat within the San Gabriel River corridor located just north and west of the project site, provide important habitat for many special-status species

restricted to this habitat type such as the least Bell's vireo. Habitats found within this SEA are generally limited within the region due to development and human disturbances.

4.6.2 County of Los Angeles Oak Tree Ordinance

No oak trees were present within the project site during the survey. The 2012 project evaluation determined that County-protected oak trees would be removed as a result of the project. However, the refined project boundaries no longer include these oak trees and no oak trees are anticipated to be removed as a result of the revised project.

4.7 HCPs and NCCPs

The proposed project is not located in an area subject to a habitat conservation plan or natural community conservation plan.

5.0 IMPACT ANALYSIS

5.1 Special-Status Species

Of the 52 special status plants identified in the literature search, all were presumed to be absent from the project site due to a lack of suitable habitat. No impact to special-status plant species would occur.

Of the 36 special-status wildlife species identified in the literature search, three were identified as having the potential to be present on the project site (burrowing owl, western red bat, western yellow bat), and an additional seven were identified as having the potential to be indirectly affected by the project in the areas adjacent to the project site (least Bell's vireo, coastal California gnatcatcher, coastal whiptail, arroyo toad, coast horned lizard, yellow-breasted chat, and southern grasshopper mouse). The majority of wildlife detected during the reconnaissance survey included birds that are commonly found in disturbed and urban areas. In addition, birds and raptors protected by the MBTA may utilize the area for foraging and nest in the trees and structures within the project site as well as the surrounding trees.

The proposed project would involve the grading of portions of the project site and may involve the removal of existing vegetation. As such, the proposed project would have the potential to have an adverse effect, either directly or through habitat modifications, on special-status species identified by CDFW, and/or USFWS. Impacts to each special-status wildlife species identified as having a potential to occur are described below.

Burrowing owl was determined to have a high potential to occur within the project site due to the presence of suitable habitat in the disturbed areas of the project site with California ground squirrel burrows present. As such, direct impacts to burrowing owl through ground disturbance and indirect impacts from construction noise and vibrations may occur. Impacts to burrowing owl would be less than significant with the implementation of Mitigation Measures BIO-1 and BIO-2.

Western red bat and western yellow bat were determined to have a low potential to occur within the project site due to the presence of suitable roost trees on and adjacent to the project site and available foraging habitat nearby. These bats may use the trees within and adjacent to the project site for roosting at any time throughout the year. While the removal or trimming of suitable roost trees on the project site during project construction may result in direct impacts to western red bat or western yellow bat should they be actively using the trees for roosting, the loss of the trees from project construction would not be expected to substantially contribute to the overall decline of the species. Additionally, no direct or indirect impacts to foraging habitat or roost trees located outside of the project site are anticipated to occur. Therefore, impacts to western red bat and western yellow bat are not expected to be significant.

Although not expected to occur on the project site, least Bell's vireo and coastal California gnatcatcher were determined to have a high potential to occur in the San Gabriel River corridor located immediately north and west of the project site. Suitable riparian habitat is present for least Bell's vireo nesting activities and designated critical habitat for coastal California gnatcatcher are present in this area. Both species have been documented less than one mile from the project site (CDFW 2017a). No direct impacts to the habitat within the San Gabriel River corridor are anticipated during construction and no direct impacts to these species or their habitat would be expected to occur. However, significant indirect impacts to least Bell's vireo and coastal California gnatcatcher may occur from construction noise, vibrations, and increased human activity should these species be present and/or nesting within 500 feet of the project site. Impacts to least Bell's vireo and coastal California gnatcatcher would be less than significant with the implementation of Mitigation Measures BIO-1 and BIO-2.

Arroyo toad, coastal whiptail, coast horned lizard, and southern grasshopper mouse are all ground-dwelling species that were determined to have a low to high potential to occur in the riparian habitat immediately adjacent to the project site. None of these species are expected to occur within the project site itself due to the lack of suitable habitat. No direct impacts to the riparian habitat adjacent to the project site are anticipated during construction. Direct impacts to these species may occur if individuals enter the project site from the adjacent riparian area during construction activities and are accidentally injured or killed. However, loss of these individuals would not be expected to substantially contribute to the overall decline of these species. Impacts would be less than significant.

Yellow-breasted chat was determined to have a low potential to nest within the riparian habitat immediately north of the project site. No direct impacts to the riparian habitat are anticipated during construction and no direct impacts to this species or its habitat would be expected to occur. Indirect impacts to yellow-breasted chat may occur from construction noise and vibrations should the species nest within 500 feet of the project site. Impacts to yellow-breasted chat would be less than significant with the implementation of Mitigation Measure BIO-1.

The project site provides suitable nesting habitat for raptors and songbirds. If construction of the proposed project occurs during the bird breeding season (typically February 1 through August 31), ground-disturbing construction activities could directly affect birds protected by the MBTA and their nests through the removal of habitat on the project site and indirectly through

increased noise, vibrations, and increased human activity. Impacts to nesting birds would be less than significant with the implementation of Mitigation Measure BIO-1.

5.2 Sensitive Natural Communities

The project site consists of land that is developed or highly disturbed and supports non-native weedy plant species and ornamental landscaping. No riparian communities or sensitive vegetation communities were identified on the project site. Therefore, no impacts would occur to sensitive natural communities as a result of the project.

5.3 Federally Protected Wetlands and Waters of the US

A formal jurisdictional delineation of the project site was conducted and results and impact analysis were prepared in a separate jurisdictional delineation report.

5.4 Wildlife Corridors and Nursery Sites

The project site does not support a wildlife movement corridor or any wildlife nursery sites. The San Gabriel River, located immediately north and west of the project site, serves as a wildlife corridor. This area has also been designated as critical habitat to promote dispersal, foraging, and nesting activities for the coastal California gnatcatcher (USFWS 2007). No direct impacts to the wildlife corridor north of the project site would occur. It is also expected that any wildlife using the San Gabriel River as a movement corridor would be adapted to urban environments and associated noise levels and would therefore not be subject to indirect impacts associated with project activities.

5.5 Local Policies and Ordinances

5.5.1 County of Los Angeles SEA Program

The project site is not located within any SEA; however, the Puente Hills SEA is located immediately north and west of the project site. This SEA was designated because this area provides an important linkage connection between the Puente Hills and the Chino Hills in Orange County, and because habitats in this SEA are occupied by core populations of special-status plant and wildlife species (County of Los Angeles 2015). Impacts to the Puente Hills SEA are not expected to occur, and wildlife using the or inhabiting the SEA would be adapted to urban environments and associated noise levels and would therefore not be subject to indirect impacts associated with project activities.

5.5.2 County of Los Angeles Oak Tree Ordinance

There are no protected oak trees as defined by the County of Los Angeles present on the project site. Therefore, no impact would occur.

5.6 HCPs and NCCPs

The project site is not located in an area subject to a HCP or NCCP.

6.0 MITIGATION MEASURES

The following mitigation measures would reduce impacts to sensitive biological resources to a less than significant level.

BIO-1: Preconstruction Surveys for Nesting Birds: Any development activities within the project site shall be conducted during the non-breeding season for birds (approximately September 1 through January 31). This will avoid violations of the MBTA and California FGC Sections 3503, 3503.5 and 3513. If activities with the potential to disrupt nesting birds are scheduled to occur during the bird breeding season (February through August for raptors and March through August for songbirds), a preconstruction nesting bird survey shall be conducted by a qualified biologist no more than three (3) days prior to the start of construction activities. The nest survey shall include the project site and adjacent areas where project activities have the potential to cause nest failure. If no nesting birds are observed during the survey, site preparation and construction activities may begin. If nesting birds (including nesting raptors) are found to be present, then avoidance or minimization measures shall be undertaken in coordination with CDFW. Measures may include establishment of an avoidance buffer until nesting has been completed and periodic monitoring of the nest status by a biological monitor. Width of the buffer will be determined by the project biologist. Typically this is a minimum of 300 feet from the nest site in all directions (500 feet is typically recommended by CDFW for raptors), until the juveniles have fledged and there has been no evidence of a second attempt at nesting. The monitoring biologist will monitor the nest(s) during construction and document any findings.

BIO-2: Preconstruction Sensitive Wildlife Survey: A preconstruction survey shall be conducted for sensitive biological resources within all areas of potential permanent and temporary disturbance, including a 500-foot buffer. The preconstruction survey shall take place no more than 14 days prior to the start of ground-disturbing activities. The preconstruction survey shall take place regardless of nesting bird season timing and shall focus on identifying the presence of least Bell's vireo, coastal California gnatcatcher, burrowing owl, and yellow-breasted chat within the project site and 500-foot buffer. Should special-status species be identified during preconstruction survey, then coordination with the appropriate agency (USFWS, CDFW) shall be undertaken to develop suitable avoidance and minimization measures.

If burrowing owls are observed during the preconstruction survey, a specific mitigation methodology for the owl shall be determined in consultation between the County of Los Angeles and CDFW. Mitigation measures for any owls present could include avoidance of the owl burrows during their nesting season and/or passive relocation of burrowing owls.

If least Bell's vireo or coastal California gnatcatcher are detected during the preconstruction survey, a specific mitigation methodology shall be determined in consultation between the

County of Los Angeles and the appropriate agency (CDFW, USFWS). Mitigation measures for any foraging coastal California gnatcatchers present may be included to ensure that individual gnatcatchers are not present during vegetation removal. Mitigation measures for coastal California gnatcatcher and least Bell's vireo may include biological monitoring during vegetation clearing and construction activities, the establishment of a minimum 500-foot non-disturbance buffer around active nest locations, or noise monitoring.

7.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or the applicant's representative and that I have no financial interest in the project.

DATE: _____ SIGNED: February 1, 2018

Lauren Simpson
Staff Biologist

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Appendix A

Representative Site Photographs

Appendix A
Representative Site Photographs

Photo 1. Project Site Overview, Northeast Corner– Bare Ground/Buildings Land Cover.

Photo 2. Project Site Overview, Approximate Center - Bare Ground/Buildings Land Cover.

Photo 3. Bare Ground/Buildings and Ornamental Trees within the Project Site.

Photo 4. Trailer Storage in Disturbed Area in Southeast Corner of Project Site.

Photo 5. Disturbed Land Cover in Southern Corner of Project Site.

Photo 6. California Ground Squirrel Burrow, Potential Burrowing Owl Habitat along Project Site Perimeter.

Photo 7. Freemont Cottonwood Trees on the Project Site.

Photo 8. Developed and Undeveloped/Disturbed Area Northeast of Project Site.

Photo 9. Developed Area Southeast of the Project Site.

Photo 9. Bicentennial Park Southwest of the Project Site.

Photo 9. Riparian Habitat in Whittier Narrows Natural Area North of the Project Site.

Photo 9. Riparian Habitat and Unvegetated Streambed in Whittier Narrows Natural Area North of the Project Site.

Appendix B

Plant Compendium

Appendix B
Plant Compendium

Scientific Name	Common Name
VASCULAR PLANTS	
GYMNOSPERMS	
*Pinus halepensis**	Aleppo pine
ANGIOSPERMS (DICOTYLEDONS)	
ADOXACEAE	**MUSKROOT FAMILY**
Sambucus nigra ssp. *caerulea*[+]	blue elderberry
APIACEAE	**CARROT FAMILY**
*Conium maculatum**[+]	poison hemlock
AMARANTHACEAE	**AMARANTH FAMILY**
*Amaranthus albus**	tumbling pigweed
ANACARDIACEAE	**SUMAC OR CASHEW FAMILY**
*Schinus molle**	Peruvian peppertree
Toxicodendron diversilobum[+]	poison oak
ASTERACEAE	**SUNFLOWER FAMILY**
Artemisia douglasiana[+]	mugwort
Baccharis salicifolia[+]	mulefat
*Carduus pycnocephala**	Italian thistle
*Centauria melitensis**	tocalote
*Conyza bonariensis**	flax-leaved horseweed
Conyza Canadensis	Canadian horseweed
Helianthus annuus[+]	annual sunflower
Heterotheca grandiflora	telegraphweed
Lepidospartum squamatum[+]	scalebroom
Lessingia grandulifera	valley lessingia
*Sonchus asper**	prickly sow thistle
BRASSICACEAE	**MUSTARD FAMILY**
*Hirschfeldia incana**	short-pod mustard
*Lepidium didymium**	lesser swinecress
*Sisymbrium irio**	London rocket
BIGNONIACEAE	**TRUMPET CREEPER FAMILY**
*Jacaranda mimosifolia**	black poui
CACTACEAE	**CACTUS FAMILY**
Opuntia ficus-indica[+]	western prickly pear
CHENOPODIACEAE	**GOOSEFOOT FAMILY**
*Atriplex semibaccata**	Australian saltbush

Scientific Name	Common Name
VASCULAR PLANTS	
*Chenopodium murale** [+]	nettle leaf goosefoot
*Salsola tragus**	Russian thistle
CUCURBITACEAE	**GOURD FAMILY**
Cucurbita palmate	coyote gourd
CYPERACEAE	**SEDGE FAMLY**
*Cyperus involucratus**	umbrella plant
EUPHORBIACEAE	**SPURGE FAMILY**
Chamaesyce albomarginata	rattlesnake spurge
*Ricinus communis**	castor bean
FABACEAE	**LEGUME FAMILY**
*Melilotus alba**	sweet clover
*Parkinsonia aculeate**	Mexican palo verde
GERANIACEAE	**GERANIUM FAMILY**
*Erodium cicutarium**	redstem filaree
JUGLANDACEA	**WALNUT FAMILY**
*Juglans regia**	English walnut
LAMIACEAE	**MINT FAMILY**
*Marubium vulgare** [+]	horehound
MALVACEAE	**MALLOW FAMILY**
*Malva parviflora**	cheeseweed
MELIACEAE	**MAHOGANY FAMILY**
*Melia azedarach**	Chinaberrytree
MORACEAE	**MULBERRY OR FIG FAMLY**
Ficus sp.*	fig
MYRTACEAE	**MYRTLE FAMILY**
Eucalyptus sp.*	gum tree
OLEACEAE	**OLIVE FAMILY**
*Olea europaea**	olive tree
PLATANACEAE	**SYCAMORE FAMILY**
Platanus racemosa[+]	western sycamore
POLYGONACEAE	**KNOTWEED FAMILY**
Eriogonum fasciculatum[+]	California buckwheat
SALICACEAE	**WILLOW FAMILY**
Populus fremontii	Fremont's cottonwood
Salix gooddingii[+]	black willow
SAPINDACEAE	**SOAPBERRY FAMILY**

Scientific Name	Common Name
VASCULAR PLANTS	
*Cupaniopsis anacardioides**	carrotwood
SOLANACEAE	**NIGHTSHADE FAMILY**
Datura wrightii	jimsonweed
*Nicotiana glauca**	tree tobacco
STRELITZIACEAE	**CRANE FLOWER FAMILY**
*Strelitzia reginae**	bird-of-paradise
VITACEAE	**GRAPE FAMILY**
Vitis californica	California wild grape
ANGIOSPERMS (MONOCOTYLEDONS)	
AGAVACEAE	**AGAVE FAMILY**
*Agave americana**	American century plant
ARECACEAE	**PALM FAMILY**
*Washingtonia robusta**	Mexican fan palm
POACEAE	**GRASS FAMILY**
Bromus spp*	non-native grasses
*Cynodon dactylon**	bermuda grass
*Pennisetum setaceum**	crimson fountaingrass

Key: *non-native, [+]observed only in riparian area within 500-foot buffer.

Appendix C

Wildlife Compendium

Appendix C
Wildlife Compendium

Common Name	Scientific Name
REPTILES	
Sceloporus	
western fence lizard	*Sceloporus occidentalis*
Uta	
common side-blotched lizard	*Uta stansburiana*
BIRDS	
Galliformes (Grouse, Quail, and Allies)	
domestic chicken*	*Gallus gallus domesticus*
Ardeidae (Bitterns, Herons, and Allies)	
great egret	*Ardea alba*
Cathartidae (Vultures)	
turkey vulture	*Cathartes aura*
Accipitridae (Hawks, Kites, Eagles, and Allies)	
Cooper's hawk	*Accipiter cooperii*
red-tailed hawk	*Buteo jamaicensis*
Charadriidae (Plovers and Lapwings)	
killdeer	*Charadrius vociferous*
Columbidae (Pigeons and Doves)	
rock pigeon*	*Columba livia*
mourning dove	*Zenaida macroura*
Trochilidae (Hummingbirds)	
Anna's hummingbird	*Calypte anna*
Picidae (Woodpeckers and Allies)	
downy woodpecker	*Picoides pubescens*
Tyrannidae (Tyrant Flycatchers)	
black phoebe	*Sayornis nigricans*
Say's phobe	*Sayornis saya*
Cassin's kingbird	*Tyrannus vociferans*
Corvidae (Crows and Allies)	
American crow	*Corvus brachyrhynchos*
Hirudinidae (Swallows)	
barn swallow	*Hirundo rustica*
Aegithalidae (Bushtits)	
Bushtit	*Psaltriparus minimus*
Sturnidae (Starlings and Allies)	
European starling*	*Sturnus vulgaris*

Common Name	Scientific Name
Emberizidae (New World Sparrows and Allies)	
song sparrow	*Melospiza melodia*
California towhee	*Melozone crissalis*
spotted towhee	*Pipilo maculatus*
white-crowned sparrow	*Zonotricha leucophrys*
Icteridae (Blackbirds and Allies)	
Brewer's blackbird	*Euphagus cyanocephalus*
Fringillidae (Finches and Allies)	
house finch	*Carpodacus mexicanus*
Parulidae (Wood Warblers)	
common yellowthroat	*Geothlypis trichas*
MAMMALS	
Leporidae (Hares and Rabbits)	
Audubon's cottontail	*Sylvilagus audubonii*
Sciuridae (Squirrels, Chipmunks, Etc.)	
California ground squirrel	*Spermophilus beecheyi*
Canidae (Dogs, Wolves, Foxes, Jackals)	
coyote (scat)	*Canis latrans*

Key: *non-native

Appendix D

Potential for Occurrence of Sensitive Plant Species

Appendix D
Potential for Occurrence of Special-Status Plant Species

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Potential for Occurrence; Habitat**
Acanthoscyphus parishii var. parishii Parish's oxytheca	USFWS: CDFW: CNPS:	None None 4.2	June-September 1220-2600	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in chaparral, lower montane coniferous forest.
Arctostaphylos glandulosa ssp. gabrielensis San Gabriel manzanita	USFWS: CDFW: CNPS:	None None 1B.2	March 180-1000	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in chaparral habitats in rocky soils.
Asplenium vespertinum Western spleenwort	USFWS: CDFW: CNPS:	None None 4.2	February-June 180-1000	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in chaparral, cismontane woodland, coastal scrub.
Astragalus brauntonii Braunton's milk-vetch	USFWS: CDFW: CNPS:	**END** None 1B.1	January-August 4-640	**Presumed absent** due to a lack of suitable habitat. Occurs in closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland/recent burns or disturbed areas, usually carbonate. No carbonate soils are present on the project site.
Atriplex parishii Parish's brittlescale	USFWS: CDFW: CNPS:	None None 1B.1	June-October 25-1900	**Presumed absent** due to a lack of suitable habitat. Occurs in alkali meadows, vernal pools, chenopod scrub, playas.
Atriplex serenana var. davidsonii Davidson's saltscale	USFWS: CDFW: CNPS:	None None 1B.2	April-October 10-200	**Presumed absent** due to a lack of suitable habitat. Occurs in coastal bluff scrub, coastal scrub.
Berberis nevinii Nevin's barberry	USFWS: CDFW: CNPS:	**END** **END** 1B.1	(Feb) March-June 70-825	**Presumed absent** due to a lack of suitable habitat. Occurs in chaparral, cismontane woodland, coastal scrub, and riparian scrub habitats on steep, n-facing slopes or in low grade sandy washes.
California macrophylla Round-leaved filaree	USFWS: CDFW: CNPS:	None None 1B.1	March-May 15-1200	**Presumed absent** due to a lack of suitable habitat. Occurs in cismontane woodland, valley and foothill grassland. Clay soils.
Calochortus catalinae Catalina mariposa lily	USFWS: CDFW: CNPS:	None None 4.2	February-June 15-700	**Presumed absent** due to a lack of suitable habitat. Occurs in chaparral, cismontane woodland, coastal scrub,

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Potential for Occurrence; Habitat**
				and valley and foothill grassland habitats.
Calochortus clavatus* var. *gracilis Slender mariposa lily	USFWS: CDFW: CNPS:	None None 1B.2	March-June (Nov) 320-1000	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in chaparral, coastal scrub, valley and foothill grassland.
Calochortus plummerae Plummer's mariposa lily	USFWS: CDFW: CNPS:	None None 4.2	May-July 100-1700	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in occurs on rocky and sandy sites, usually of granitic or alluvial material.
Calochortus weedii var. intermedius Intermediate mariposa lily	USFWS: CDFW: CNPS:	None None 1B.2	May-July 105-855	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in coastal scrub, chaparral, valley and foothill grassland.
Calystegia felix lucky morning-glory	USFWS: CDFW: CNPS:	None None 3.1	March-September 30-215	**Presumed absent** due to a lack of suitable habitat. Occurs in wetland and marshy habitats, alkaline meadows and seeps, and alluvial riparian scrub.
Centromadia parryi* ssp. *australis Southern tarplant	USFWS: CDFW: CNPS:	None None 1B.1	May-November 0-480	**Presumed absent** due to a lack of suitable habitat. Occurs in marshes and swamps (margins), valley and foothill grassland.
Centromadia pungens ssp. laevis smooth tarplant	USFWS: CDFW: CNPS:	None None 1B.1	April-September 0-640	**Presumed absent** due to a lack of suitable habitat. Occurs in alkaline habitats in chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland.
Chorizanthe parryi* var. *fernandina San Fernando Valley spineflower	USFWS: CDFW: CNPS:	**CAN END** 1B.1	April-July 150-1220	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in coastal scrub and chaparral habitats in sandy soils.
Chorizanthe parryi var. parryi Parry's spineflower	USFWS: CDFW: CNPS:	None None 1B.1	April-June 275-1220	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in coastal scrub, chaparral.
Cladium californicum California saw-grass	USFWS: CDFW: CNPS:	None None 2B.2	June-September 60-600	**Presumed absent** due to a lack of suitable habitat. Occurs in freshwater and alkali marshes, seeps.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Potential for Occurrence; Habitat**
Clinopodium mimuloides Monkey-flower savory	USFWS: CDFW: CNPS:	None None 4.2	June-October 305-1800	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in north coast coniferous forest, riparian forest.
Convolvulus simulans small-flowered morning-glory	USFWS: CDFW: CNPS:	None None 4.2	March-July 30-740	**Presumed absent** due to a lack of suitable habitat. Occurs in clay soils in serpentinite seeps in openings in chaparral habitat, coastal scrub, and valley and foothill grassland habitats.
Cuscuta obtusiflora var. glandulosa Peruvian dodder	USFWS: CDFW: CNPS:	None None 2B.2	July-October 15-280	**Presumed absent** due to a lack of suitable habitat. Occurs in marshes and swamps (freshwater).
Dodecahema leptoceras Slender-horned spineflower	USFWS: CDFW: CNPS:	**END** **END** 1B.1	April-June 200-760	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in chaparral, coastal scrub alluvial fan sage scrub, flood deposited terraces and washes.
Dudleya cymosa* ssp. *crebrifolia San Gabriel River dudleya	USFWS: CDFW: CNPS:	None None 1B.2	April-July 275-457	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in chaparral, coastal scrub.
Dudleya densiflora San Gabriel Mountains dudleya	USFWS: CDFW: CNPS:	None None 1B.1	March-June 244-610	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in chaparral, coastal scrub, lower montane coniferous forest.
Dudleya multicaulis Many-stemmed dudleya	USFWS: CDFW: CNPS:	None None 1B.2	April-July 15-790	**Presumed absent** due to a lack of suitable habitat. Occurs in chaparral, coastal scrub, valley and foothill grassland.
Galium grande San Gabriel Bedstraw	USFWS: CDFW: CNPS:	None None 1B.2	January-July 425-1500	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest.
Helianthus nuttallii* ssp. *parishii Los Angeles sunflower	USFWS: CDFW: CNPS:	None None 1A	August-October 10-1525	**Presumed absent** due to a lack of suitable habitat. Occurs in marshes and swamps coastal salt and freshwater. no marsh or swamp habitat is present on the site.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Potential for Occurrence; Habitat**
Hordeum intercedens Vernal barley	USFWS: CDFW: CNPS:	None None 3.2	March-June 5-1000	**Presumed absent** due to a lack of suitable habitat. Occurs in valley and foothill grassland, vernal pools.
Horkelia cuneata* ssp. *puberula Mesa horkelia	USFWS: CDFW: CNPS:	None None 1B.1	February-July (September) 70-810	**Presumed absent** due to a lack of suitable habitat. Occurs in chaparral, cismontane woodland, coastal scrub. sandy or gravelly sites.
Imperata brevifolia California satintail	USFWS: CDFW: CNPS:	None None 2B.1	September-May 0-1215	**Presumed absent** due to a lack of suitable habitat. Occurs in coastal scrub, chaparral, riparian scrub, Mojavean scrub, meadows and seeps (alkali).
Juglans californica* var. *californica Southern California black walnut	USFWS: CDFW: CNPS:	None None 4.2	March-August 50-900	**Presumed absent** due to a lack of suitable habitat. Occurs in alluvial soils in chaparral, cismontane woodland, coastal scrub, and riparian woodland habitats.
Lasthenia glabrata* ssp. *Coulteri Coulter's goldfields	USFWS: CDFW: CNPS:	None None 1B.1	February-June 1-1220	**Presumed absent** due to a lack of suitable habitat. Occurs in coastal salt marshes, playas, valley and foothill grassland, vernal pools.
Lepechinia fragrans fragrant pitcher sage	USFWS: CDFW: CNPS:	None None 4.2	March-October 20-1310	**Presumed absent** due to a lack of suitable habitat. Occurs in chaparral habitats.
Lilium humboldtii ssp. ocellatum ocellated Humboldt lily	USFWS: CDFW: CNPS:	None None 4.2	March-July(August) 30-1800	**Presumed absent** due to a lack of suitable habitat. Occurs in openings in chaparral, cismontane woodland, coastal scrub, coniferous forest, and riparian woodland habitats.
Linanthus concinnus San Gabriel linanthus	USFWS: CDFW: CNPS:	None None 1B.2	April-July 1520-2800	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in lower montane coniferous forest, upper montane coniferous forest.
Linanthus orcuttii Orcutt's linanthus	USFWS: CDFW: CNPS:	None None 1B.3	May-June 915-2145	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in chaparral, lower montane coniferous forest.
Navarretia prostrate Prostrate vernal pool navarretia	USFWS: CDFW: CNPS:	None None 1B.1	April-July 3-1210	**Presumed absent** due to a lack of suitable habitat. Occurs in coastal scrub, valley and foothill grassland, vernal pools.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Potential for Occurrence; Habitat**
Orcuttia californica California Orcutt grass	USFWS: CDFW: CNPS:	**END** **END** 1B.1	April-August 15-660	**Presumed absent** due to a lack of suitable habitat. Occurs in vernal pools, seeps.
Orobanche valida* ssp. *Valida Rock Creek broomrape	USFWS: CDFW: CNPS:	None None 1B.2	May-September 1250-2000	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in chaparral, pinyon-juniper woodland.
Phacelia hubbyi Hubby's phacelia	USFWS: CDFW: CNPS:	None None 4.2	April-July 0-1000	**Presumed absent** due to a lack of suitable habitat. Occurs in gravelly soils, rocky soils, and talus soils in chaparral, coastal scrub, and valley and foothill grassland habitats.
Phacelia ramosissima* var. *austrolitoralis South coast branching phacelia	USFWS: CDFW: CNPS:	None None 3.2	March-August 5-300	**Presumed absent** due to a lack of suitable habitat. Occurs in chaparral, coastal scrub, coastal dunes, coastal salt marsh.
Phacelia stellaris Brand's star phacelia	USFWS: CDFW: CNPS:	None None 1B.1	March-June 1-400	**Presumed absent** due to a lack of suitable habitat. Occurs in coastal scrub, coastal dunes.
Pseudognaphalium leucocephalum White rabbit-tobacco	USFWS: CDFW: CNPS:	None None 2B.2	July-December 0-2100	**Presumed absent** due to a lack of suitable habitat. Occurs in sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian woodland.
Quercus durata var. gabrielensis San Gabriel oak	USFWS: CDFW: CNPS:	None None 4.2	April-May 450-1000	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in chaparral and cismontane woodland habitats.
Quercus engelmannii Engelmann oak	USFWS: CDFW: CNPS:	None None 4.2	March-June 50-1300	**Presumed absent** due to a lack of suitable habitat. Occurs in cismontane woodland, chaparral, riparian woodland, valley and foothill grassland.
Ribes divaricatum var. parishii Parish's gooseberry	USFWS: CDFW: CNPS:	None None 1A	February-April 65-300	**Presumed absent** due to a lack of suitable habitat. Occurs in riparian woodland.
Romneya coulteri Coulter's matilija poppy	USFWS: CDFW: CNPS:	None None 4.2	March-July 20-1200	**Presumed absent** due to a lack of suitable habitat. Often occurs in burns in chaparral and coastal scrub habits.
Scutellaria bolanderi* ssp. *Austromontana Southern mountains skullcap	USFWS: CDFW: CNPS:	None None 1B.2	June-August 425-2000	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in chaparral, cismontane woodland, lower montane coniferous forest.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Potential for Occurrence; Habitat**
Sidalcea neomexicana salt spring checkerbloom	USFWS: CDFW: CNPS:	None None 2B.2	March-June 15-1530	**Presumed absent** due to a lack of suitable habitat. Occurs in alkaline, mesic soils in Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas.
Symphyotrichum defoliatum San Bernardino aster	USFWS: CDFW: CNPS:	None None 1B.2	July-November 2-2040	**Presumed absent** due to a lack of suitable habitat. Occurs in meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, lower montane coniferous forest, grassland.
Symphyotrichum greatae Greata's aster	USFWS: CDFW: CNPS:	None None 1B.3	June-October 300-2010	**Presumed absent** due to a lack of suitable habitat. Project site is outside the typical elevation range. Occurs in mesic soils in broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and riparian woodland.
Thelypteris puberula var. sonorensis Sonoran maiden fern	USFWS: CDFW: CNPS:	None None 2B.2	January-September 50-610	**Presumed absent** due to a lack of suitable habitat. Occurs in meadows and seeps.

Federal Designations
(Federal Endangered Species Act, United State Fish and Wildlife Service [USFWS])
END: Federally listed, endangered
THR: Federally listed, threatened

State Designations:
(California Endangered Species Act, California Department of Fish and Wildlife [CDFW], California Native Plant Society [CNPS])
END: State-listed, endangered
THR: State-listed, threatened
FP: State-fully protected
SSC: Species of Special Concern

CNPS Ranking
1A: Presumed extinct
1B: Rare, threatened, or endangered in California and elsewhere
2B: Rare, threatened, or endangered in California, but more common elsewhere
3: Review list of plants requiring more study
4: Plants of limited distribution watch list

CNPS Threat Code
0.1: Seriously threatened in California
0.2: Fairly threatened in California
0.3: Not very threatened in California

Scientific Name Common Name	**Status**	**Flowering Period Elevation (meters)**	**Potential for Occurrence; Habitat**
Sources: California Natural Diversity Data Base (CDFW 2017b) and California Native Plant Society Electronic Inventory (CNPS 2017), El Monte, Azusa, Baldwin Park, La Habra, Whittier, South Gate, Los Angeles, Pasadena, and Mt. Wilson 7.5 minute USGS quads; Appendix A.			

Appendix E

Potential for Occurrence of Sensitive Wildlife Species

Appendix E
Potential for Occurrence of Sensitive Wildlife Species

Scientific Name Common Name	**Status**		**Potential to Occur**		**Habitat**
			Project Site	**Within 500-ft Buffer**	
FISH					
Catostomus santaanae Santa Ana Sucker	USFWS: CDFW:	**THR** None	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Pools and runs of creeks and small to medium rivers with cool, shallow, clear, and unpolluted water.
Gila orcutti arroyo chub	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Creeks, streams, and rivers with areas of slow moving water with sand or mud bottoms. Ranges from San Diego to San Luis Obispo county.
Rhinichthys osculus* ssp. *3 Santa Ana speckled dace	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Permanent flowing creeks and streams with shallow gravel and cobble riffles.
AMPHIBIANS					
Anaxyrus californicus arroyo toad	USFWS: CDFW:	**END** SSC	**Presumed Absent** due to lack of suitable habitat.	**Low**; limited suitable habitat is present but no occurrences are mapped within the vicinity.	Sandy banks of rivers, arroyos, and streams with shallow sandy pools. Also found in riparian woodlands or uplands adjacent to arroyos.
Rana muscosa southern mountain yellow-legged frog	USFWS: CDFW:	**END** **END**	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Ponds, streams, lakes, and isolated pools in southern Sierra Nevada Mountains and rocky streams within narrow canyons and the chaparral belt in Southern California mountains.
Spea hammondii Western spadefoot	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Open areas with sandy soils in a primarily grasslands but sometimes found in mixed woodlands.
Taricha torosa torosa coast range newt	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Upland areas including grasslands, forests, and woodlands. Burrows in soil or wood debris.
REPTILES					
Anniella stebbinsi southern California legless lizard	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Burrows in loose moist soil and under fallen logs and debris. Occurs in woodland and chaparral habitats and along stream edges.

Scientific Name Common Name	**Status**		**Potential to Occur**		**Habitat**
			Project Site	**Within 500-ft Buffer**	
Arizona elegans occidentalis California glossy snake	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Typically occurs in deserts but may also be found in arid habitats including chaparral, grasslands, and scrub areas.
Aspidoscelis tigris stejnegeri coastal whiptail	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**High**; Suitable habitat is present on the site and three recent occurrences are mapped in the vicinity.	Arid habitats including chaparral, woodlands, and dry riparian areas.
Emys marmorata Western pond turtle	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Ponds, lakes, rivers, streams, marshes, and other water sources with rocky or muddy substrate. Basks on logs, rocks, and exposed banks.
Phrynosoma coronatum blainvillei Coast (San Diego) horned lizard	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Low**; limited suitable habitat and only historic records occur in the vicinity.	Open areas of valleys, foothills, and semiarid mountains with sandy soil and low vegetation including chaparral, woodlands, and grasslands.
Thamnophis hammondi two-striped garter snake	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Occurs along aquatic habitats such as creeks and pools with rocky areas in chaparral, brushland, oak woodlands, and conifer forests. Hunts in water.
BIRDS					
Ammodramus savannarum grasshopper sparrow	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Grasslands and prairies of moderate height with clusters of scattered shrubs among patches of bare ground.
Athene cunicularia burrowing owl (burrow sites)	USFWS: CDFW:	None SSC	**High**; Suitable habitat is present on the site and a recent occurrence is mapped in the vicinity.	**High**; Suitable habitat is present on the site and a recent occurrence is mapped in the vicinity.	Open grasslands including prairies, plains, and savannah, or vacant lots and airports. Nests in abandoned dirt burrows.
Buteo swainsoni Swainson's hawk	USFWS: CDFW:	None **THR**	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Open pine-oak woodland, savannah, and agricultural fields with scattered trees. Nests in solitary bush or tree, or in small groves.
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** Project site is outside of known range and	Coastal sage scrub with tall opuntia cacti. Nests in opuntia cactus. Range extends from San Diego north to Orange County.

Scientific Name Common Name	**Status**		**Potential to Occur**		**Habitat**
			Project Site	**Within 500-ft Buffer**	
				no occurrences mapped within the vicinity.	
Coccyzus americanus occidentalis western yellow-billed cuckoo	USFWS: CDFW:	**THR** **END**	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat. Riparian habitat within 500-foot buffer lacks the size and vegetative density to support this species. No records of this species occur in the vicinity.	Open riparian woodland habitat, near water, especially with dense willow and cottonwood understory. Typically requires a large contiguous patch of complex riparian habitat for nesting
Cypseloides niger Black swift	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Open sky over mountains, forests, or coastal cliffs. Nests in crevices or ledges of steep cliffs near streams or mountainous waterfalls or along the coast.
Empidonax traillii extimus southwestern willow flycatcher	USFWS: CDFW:	**END** **END**	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat. Riparian habitat within 500-foot buffer lacks the size and vegetative density to support this species. No records of this species occur in the vicinity.	Riparian woodlands particularly with willow thickets. Nests in densest areas of shrubs and trees with low-density canopies. Requires extensive thickets of low, dense willows
Falco peregrinus anatum American peregrine falcon	USFWS: CDFW:	D FP	**Presumed Absent** due to lack of suitable nesting habitat.	**Presumed Absent** due to lack of suitable habitat.	Open habitat such as mountain chains, mudflats, coastlines, and lake edges. Nests on a cliff ledge and sometimes man-made strucutres or abandoned stick nests.
Icteria virens yellow-breasted chat (nesting)	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Low**; suitable habitat present, but no occurrences mapped within the vicinity.	Riparian and upland thickets, and dry overgrown pastures. Prefers to nest in dense scrub along streams or at the edges of ponds or swamps.

Scientific Name Common Name	**Status**		**Potential to Occur**		**Habitat**
			Project Site	**Within 500-ft Buffer**	
Polioptila californica californica coastal California gnatcatcher	USFWS: CDFW:	**THR** SSC	**Presumed Absent** due to lack of suitable habitat.	**High**; designated critical habitat present and documented occurrences nearby.	Dry coastal slopes, washes, and mesas with areas of low vegetation and coastal sage scrub.
Riparia riparia bank swallow	USFWS: CDFW:	None **THR**	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Open and semi-open habitats, such as fields or marshes, often near flowing water. Nests in colonies in vertical banks of sand or dirt along a water body
Vireo bellii pusillus least Bell's vireo	USFWS: CDFW:	**END** **END**	**Presumed Absent** due to lack of suitable habitat.	**High**; suitable habitat present and documented occurrences nearby.	Riparian woodlands and willow-cottonwood forests particularly with streamside thickets and dense brush.
MAMMALS					
Antrozous pallidus Pallid bat	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Roosts in rock crevices, caves, mines, buildings, bridges, and in trees. Generally in mountainous areas, lowland desert scrub, arid grasslands near water and rocky outcrops, and open woodlands.
Corynorhinus townsendii Townsend's big-eared bat	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Roosts in mines, caves, buildings, or other crevices. Most common in moist areas or those with access to water.
Eumops perotis californicus Western mastiff bat	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Roosts high above ground in rock and cliff crevices, shallow caves, and rarely in buildings. Occurs in arid and semiarid regions including rocky canyon habitats.
Lasiurus blossevillii western red bat	USFWS: CDFW:	None SSC	**Low**; Potential roost trees present, but no recent occurrences mapped within the vicinity.	**Low**; Potential roost trees present, but no recent occurrences mapped within the vicinity.	Roosts in trees or large leafy shrubs and tend to avoid caves and buildings. Occurs in lowlands to mountains, in woodlands and forests and, especially along riparian habitats.
Lasiurus xanthinus Western yellow bat	USFWS: CDFW:	None SSC	**Low**; Potential roost trees present, but no recent occurrences mapped within the vicinity.	**Low**; Potential roost trees present, but no recent occurrences mapped within the vicinity.	Roosts in trees, especially in fan palms with dead fronds. Found in riparian woodlands in arid regions, oak or pinyon-juniper woodlands, and human developed areas.

Scientific Name Common Name	**Status**		**Potential to Occur**		**Habitat**
			Project Site	**Within 500-ft Buffer**	
Lepus californicus bennettii San Diego black-tailed jackrabbit	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Variety of open or semi-open country including grasslands, croplands, and sparse coastal scrub.
Nyctinomops femorosaccus Pocketed free-tailed bat	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Roosts in crevices of outcrops and cliffs, shallow caves, and buildings. Found along rugged canyons, high cliffs, and semiarid rock outcroppings.
Nyctinomops macrotis Big free-tailed bat	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Roosts in cliff crevices, and less often in buildings, caves, and tree cavities. Occurs in rocky areas of rugged and hilly country including woodlands, evergreen forests, river floodplain-arroyo habitats, and desert scrub.
Onychomys torridus ramona Southern grasshopper mouse	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Low**; limited suitable habitat, but no occurrences mapped within the vicinity.	Low, semi-open, and open scrub habitats with flat, sandy valley floors. Habitats include coastal and mixed chaparral, coastal sage scrub, riparian scrub, low sagebrush, and grasslands with interspaced shrubs.
Ovis canadensis nelsoni Nelsons Bighorn sheep	USFWS: CDFW:	None FP	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Open, steep, and rocky terrain in arid desert mountains particularly in southeastern California.
Taxidea taxus American Badger	USFWS: CDFW:	None SSC	**Presumed Absent** due to lack of suitable habitat.	**Presumed Absent** due to lack of suitable habitat.	Open habitats with friable soil such as grasslands, brushlands with sparse ground cover, open chaparral and scrub habitats.

Federal Designations
(Federal Endangered Species Act, United State Fish and Wildlife Service [USFWS])

END: Federally listed, endangered
THR: Federally listed, threatened
CAN: Candidate for federal listing
D: Delisted

State Designations:
(California Endangered Species Act, California Department of Fish and Wildlife [CDFW])

END: State-listed, endangered
THR: State-listed, threatened
FP: State-fully protected
SSC: Species of Special Concern

Sources: California Natural Diversity Data Base (CDFW 2017b), El Monte, Azusa, Baldwin Park, La Habra, Whittier, South Gate, Los Angeles, Pasadena, and Mt. Wilson 7.5 minute USGS quads; Appendix B.

APPENDIX C

Staff Resumes

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Jesus "Freddie" Olmos

Senior Environmental Scientist/Project Manager

Mr. Olmos' professional experience involves California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) analysis and document preparation for government agencies and private clients. He has prepared and managed a variety of environmental documents, including Initial Studies/Mitigated Negative Declarations (IS/MNDs), Environmental Impact Reports (EIRs), Environmental Impact Statements (EISs), Environmental Assessments (EAs), and Findings of No Significant Impact (FONSIs), including Addendum CEQA/NEPA documentation. While his experience focuses on environmental report writing and permit preparation, he also has experience with biological resources monitoring and surveying for public facilities construction and research projects.

Proficient in oral and written Spanish. Mr. Olmos is experienced in the bilingual English-Spanish translation of notices, documents, and handouts for CEQA and biological/cultural resources projects.

Education

B.A., Environmental Analysis & Design, with a minor in Urban & Regional Planning, University of California, Irvine

Registrations, Certifications, Permits and Affiliations

- Association of Environmental Professionals, Vice President of Membership, Inland Empire Chapter, 2001 to 2011
- Caltrans Environmental Compliance Training Course for Local Agency Partners and Consultants – Categorical Exemptions and Categorical Exclusions, Caltrans, 2013
- American Planning Association, Member

Professional Experience

CEQA/NEPA and Caltrans Environmental Documentation for the Santa Ana River Trail Phase IV, Reaches B&C, Redlands – San Bernardino County Department of Public Works and Regional Parks Department (2018). Project Manager for environmental documentation for a 3.3-mile segment of the regional Santa Ana River Trail (SART) on the southern bank of the Santa Ana River along local streets in the City of Redlands. ECORP prepared the following technical documents as required by Caltrans in support of its NEPA Categorical Exclusion (CE) which were also used to support of the CEQA Initial Study/Mitigated Negative Declaration (IS/MND): Natural Environment Study (NES), Jurisdictional Delineation (JD), Biological Assessment (BA – covering San Bernardino kangaroo rat), Air Quality Assessment/Greenhouse Gas Inventory, Phase I Environmental Site Assessment (IO Environmental), Hydrology and Floodplain Studies, Cultural Resources Documents (HPSR, ASR, HRER, Finding of Effect Memo), and Paleontology. The County of San Bernardino served as the CEQA lead agency and Caltrans as the NEPA lead agency. All

documentations was prepared per Caltrans' Local Asssistance Procedures Manual in an expedited timeframe to meet funding requirements set by Caltrans and for USFWS consultation.

As Needed Environmental Consultant Services Contract, Los Angeles County – Los Angeles County Department of Parks and Recreation (2016-2019). Program Manager. ECORP provided environmental consulting services to the Los Angeles County Department of Parks and Recreation on an on-call basis. CEQA/NEPA, biological resources, cultural resources, air quality, greenhouse gases, noise, and regulatory permitting services were provided for parks, trails, and other community recreation facilities. Task orders completed under this contract included:

- **Investigation of Lead in Surface Soil and Dust Results Summary: Bodger Park, Lennox Park, and Jesse Owens Community Regional Park**
- **Investigation of Algal Bloom at Apollo Community Regional Park**

As-Needed Planning and Environmental Services Contract, Los Angeles County – Los Angeles County Department of Parks and Recreation, Planning and Development Agency as a Subconsultant to Withers and Sandgren (2012–Ongoing). ECORP provided environmental consulting services to the Los Angeles County Department of Parks and Recreation, Planning and Development Agency on an on call basis as a subcontractor to Withers and Sandgren. CEQA/NEPA, biological resources, cultural resources, and regulatory permitting services were provided for parks, trails, and other community recreation facilities. Task orders completed under this contract included:

- **IS/MND for the Bonelli Equestrian Center Refurbishment Project, Los Angeles County – Los Angeles County Department of Parks and Recreation as a subcontractor to Withers and Sandgren (2015-2016)**. Project Manager for the preparation of an IS/MND for the refurbishment of the existing, active, 5.5-acre Bonelli Equestrian Center within Frank G. Bonelli Regional Park in the City of San Dimas. Refurbishment would include the demolition of some existing structures, as well as construction of new facilities such as stables, corrals, restrooms, parking areas, retaining walls, and fencing. The project would include installation of water and sewer lines and a new detention basin to collect surface runoff from the equestrian center.

Puente Hills Landfill Park Master Plan Program EIR, Los Angeles County – Los Angeles County Department of Parks and Recreation as a subcontractor to Withers and Sandgren (2015-2016). Project Manager. The County of Los Angeles Department of Parks and Recreation (DPR) proposed to develop a Master Plan for the Puente Hills Landfill "fill" areas and other suitable non-fill areas within the Los Angeles County Sanitation Districts' Puente Hills landfill property. The project would convert the former landfill to a recreational facility area consisting of park use, including but not limited to: multi-use trails, open space areas, interpretive features, and other amenities that would provide benefits to local and regional communities. The project area boundary included 1,365 acres, with project physical design occurring on approximately 142 acres. ECORP was involved in the public outreach meetings and offered Spanish-English bilingual services. The following supporting studies were also prepared: biological, cultural, agronomy, and regulatory permitting.

Alfredo Aguirre, AICP

Senior Environmental Planner

Mr. Aguirre's professional experience involves California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) analysis and document preparation for government agencies and private clients. He has prepared a variety of environmental documents, including Initial Studies (IS), Negative Declarations, Mitigated Negative Declarations (MNDs), Environmental Impact Reports (EIRs), Environmental Assessments (EAs), and Environmental Impact Statements (EIS). His mix of skills in urban planning, environmental analysis, and GIS allow him to assist public agency and private clients with entitlement, environmental documentation, and permitting for development, infrastructure, recreation, and alternative energy projects throughout southern California. Mr. Aguirre has experience in the use of Geographic Information Systems (GIS) as an analysis tool for environmental studies. He has experience in the use of ESRIs ArcGIS software. Mr. Aguirre also has experience in the collection of field data with survey grade global positioning system (GPS) units including Trimble GeoXTs, Junos, and Yumas.

Education

B.S., Urban and Regional Planning, with a minor in Geographic Information Systems, California State Polytechnic University, Pomona

Registrations, Certifications, Permits and Affiliations

- American Institute of Certified Planners (AICP), June 2016, Certified Planner Number: 028966

Professional Experience

Devil's Gate Final CEQA Document and Public Outreach, Los Angeles County – Los Angeles County Department of Public Works as a sub to Ericsson Grant, Inc. (2017-2018). As the result of a judgment from the Superior Court of the County of Los Angeles, the Los Angeles County Flood Control District (LACFCD), as lead agency under the CEQA, recirculated limited portions of the Devil's Gate Sediment Removal and Management Project's Final EIR. Served as Staff Environmental Scientist for the preparation of the Recirculated Portions of the Final EIR (RFEIR) for the Devil's Gate Reservoir Sediment Removal and Management Project (Project). Assisted with the organization and preparation of the RFEIR, including addressing deficiencies found by the Superior Court and responding to comments received from the public.

Puente Hills Landfill Park Master Plan Program EIR, Los Angeles County – Los Angeles County Department of Parks and Recreation as a subcontractor to Withers and Sandgren (2015-2016). Deputy Project Manager. The County of Los Angeles Department of Parks and Recreation (DPR) proposed to develop a Master Plan for the Puente Hills Landfill "fill" areas and other suitable non-fill areas within the Los Angeles County Sanitation Districts' Puente Hills landfill property. The project would convert the former landfill to a recreational facility area consisting of park use, including but not limited to: multi-use trails, open space areas, interpretive features, and other amenities that would provide benefits to local and regional communities. The project area boundary included 1,365 acres, with project physical design

occurring on approximately 142 acres. ECORP was involved in the public outreach meetings and offered Spanish-English bilingual services. The following supporting studies were also prepared: biological, cultural, agronomy, and regulatory permitting. The Program EIR included extensive discussion on aesthetic impacts to the project site and surrounding properties.

Emerald Necklace Programmatic EIR/EIS, Los Angeles County – Watershed Conservation Authority as a Sub to Withers and Sandgren (2013–2017). The Watershed Conservation Authority (WCA), which is a joint powers authority of the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC) and the Los Angeles County Flood Control District (LACFCD), proposed improvements to a 17-mile interconnected network of bikeways, multi-use trails, parks, greenways, and bridges along the Rio Hondo and San Gabriel River known as the Emerald Necklace. The regional recreational system of parks and trails includes the cities of Irwindale, Arcadia, Baldwin Park, El Monte, South El Monte, Whittier, Montebello, Monrovia, Rosemead, and the surrounding communities. The goal of the WCA was to construct 16 projects within the Emerald Necklace under its jurisdiction as identified in the 2005 Emerald Necklace Vision Plan. When complete, the Emerald Necklace would offer improved regional connectivity between the north and south communities and provide educational opportunities for the community through interpretative signage containing information about the rivers, their habitats, and cultural heritage. ECORP prepared a programmatic EIR/EIS with the WCA as the CEQA lead agency and the Army Corps of Engineers as the NEPA lead agency. Technical reports for biological and cultural resources were prepared in additional to air, greenhouse gases, noise, and traffic studies. Services also included public outreach efforts during scoping and stakeholder meetings. Notices were provided in bilingual Spanish-English and Spanish speaking staff was available during the public meetings. Regulatory permitting requirements were identified as part of the feasibility study phase of the project. Environmental analyst for the preparation of the programmatic EIR/EIS and for the translation of notices.

Vermont Corridor Development Plan, Los Angeles County – Los Angeles County Department of Public Works. (2015). Environmental Scientist for the preparation of a constraints analysis for the Vermont Corridor Development Plan. The Vermont Corridor Development Plan would be located on three sites in the Vermont Corridor area of the City of Los Angeles, between 4th Street and 6th Street. The three sites are currently developed with County owned buildings that house the headquarters for the County Departments of Mental Health (DMH), Parks and Recreation (DPR), Community and Senior Services (DCSS) and Children and Family Services (DCFS). The County-owned facilities have experience a high level of deterioration creating blight for the surrounding community and providing less than standard working conditions for the occupants. The project would redevelop the three sites and be implemented in two phases. Phase I would build a new DMH headquarters building on one site and Phase II would redevelop the two remaining sites with residential and retail space. The project would provide a new quality, cost-effective DMH headquarters facility and provide for sale or ground lease sites for new market rate and affordable housing. The project also has the potential to provide opportunities for economic revitalization in the project area. The constraints analysis identifies and assesses the anticipated environmental impacts and constraints of the project.

Wendy Blumel, RPA

Assistant Manager Inland Empire Cultural Resources Group

Ms. Blumel has 11 years of experience in cultural resource management with an area of specialization in human osteology. She meets the Secretary of the Interior's Professional Qualifications Standards for prehistoric and historical archaeologist and she meets the qualifications for a Co-Principal Investigator as detailed in Attachment 1 of the Caltrans Section 106 programmatic Agreement. She has supervised and participated in all aspects of the archaeological field and laboratory process. Although she has worked throughout western Arizona and California, the majority of her experience is in Riverside, San Bernardino, Kern, and Los Angeles counties of southern California. Her experience has involved working as a project manager, field director, staff archaeologist, crew chief, osteologist, assistant faunal analyst, and archaeological technician. She is experienced in the organization and execution of field projects in compliance with Section 106 of the National Historic Preservation Act and the California Environmental Quality Act. She serves as a Project Manager, Cultural Task Manager, and Field Director for ECORP's southern California projects. She also serves as Laboratory Manager for ECORP's Inland Empire Office and is experienced in a variety of laboratory tasks including artifact analysis, cataloging, preparation and curation of cultural artifacts, database management, and the analysis of human remains.

Education

M.A., Anthropology, Louisiana State University, Baton Rouge, Louisiana

B.A., Anthropology, Beloit College, Beloit, Wisconsin

Registrations, Certifications, Permits and Affiliations

- Registered Professional Archaeologist (ID # 989457)
- Riverside County Qualified Archaeologist
- Orange County Certified Archaeologist
- Field Director under ECORP's BLM Cultural Permit for California

Professional Experience

AB 52 Consultation Assistance for the Industrial Spec Tilt-Up Project (at 13131 Los Angeles Street), Irwindale, Los Angeles County – City of Irwindale (2019). Senior Archaeologist responsible for assisting the City of Irwindale with their AB 52 consultation. The proposed project involved the demolition of the existing on-site buildings and structures for the construction of a stand-alone concrete tilt-up building. AB 52 consultation assistance tasks included attending meetings and providing the city with technical guidance during the AB 52 consultation process.

Santa Ana River Trail (SART) Phase IV, Reaches B and C, Redlands, San Bernardino County – San Bernardino Department of Public Works (2018). Cultural Task Manager for SART Phase IV Reaches B and C project. The County of San Bernardino Regional Parks Department in coordination with the County of San

Bernardino Department of Public Works proposed to construct an approximately 3.2 mile long section of the SART on the southern bank of the Santa Ana River and along local streets in the City of Redlands. This is a Caltrans Local Assistance Project. The cultural resources services for this project consisted Area of Potential Effects (APE) Map, Archaeological Survey Report (ASR), and an Historic Property Survey Report (HPSR).

Santa Monica Unified School District Malibu Schools Alignment Project Point Dume Elementary School, City of Malibu, Los Angeles County – Placeworks, Inc. (2018). Project Manager for biological and cultural resources studies for the proposed development of a portion of Dume Point Elementary School in the City of Malibu, Los Angeles County. The biological study included a biological liturature review, reconnaissance survey of the two-acre project site, and documenting wildlife and plant species observed. A letter report summarizing the site visit results was prepared. The cultural resources study consisted of a records search, NAHC Sacred Lands File search, field survey, and preparation of a technical report describing the methods, results of the study, and management recommendations.

Archaeological Research Design for the Antelope Valley, Los Angeles County and Kern County – Caltrans District 7 (2018). Assistant Task Manager and contributing author for preparation of an archaeological research design for the Antelope Valley. The research design included overviews of the natural and cultural setting of the Antelope Valley, discussion of the theoretical orientation and research themes including settlement systems, subsistence systems, exchange, lithic technology and sources, population movements, and social differentiation. Research questions and data needs were provided for each research theme. The research design will be used to structure evaluation and data recovery programs for prehistoric archaeological sites that may be affected by future Caltrans projects in the Antelope Valley. The research design was reviewed by Caltrans, Native Americans, and SHPO.

AB 52 Consultation Assistance for the Whittier Narrows Equestrian Center Refurbishment Project, Los Angeles County – Withers & Sandgren (2018). Archaeologist responsible for providing AB 52 consultation assistance to Los Angeles County. The project included the refurbishment of the equestrian center including a new restroom building, existing restroom building upgrades, pipe and box stall barns, dry materials and manure storage, a hay barn, and a concessionaire's office. AB 52 assistance consisted of drafting consultation letters for the City and providing technical expertise.

AB-52 Services for the Puente Hills Regional Park EIR Project, Los Angeles County – Withers & Sandgren (2016). Archaeologist responsible for providing AB-52 consultation assistance for the Puente Hills Regional Park Project. The County of Los Angeles Department of Parks and Recreation (DPR) proposed to develop a Master Plan for the Puente Hills Landfill "fill" areas and other suitable non-fill areas within the Los Angeles County Sanitation District's Puente Hills Property. The project would convert the former landfill to a recreational facility area consisting of park use, including but not limited to: multi-use trails, open space areas, interpretive features, and other amenities that would provide benefits to local and regional communities. Duties included drafting consultation letters for the County DPR, attending an onsite tour for consulting tribes, and writing the Tribal Cultural Resources section of the project Environmental Impact Report.

Lauren (Dorough) Simpson

Staff Biologist

Ms. Simpson has over six years of professional experience as a wildlife biologist working in terrestrial habitats throughout southern California. Ms. Simpson has over eight years of experience conducting habitat and roost assessments and night-time acoustic surveys for bats in southern California. She has conducted focused nighttime ocular emergence and re-entry surveys, and active and passive bat detector monitoring for various projects in Los Angeles and San Bernardino counties. Ms. Simpson has surveyed over 100 bridges and 60 culverts in support of projects in Los Angeles, San Bernardino, and Riverside Counties. Ms. Simpson is proficient at bat call analysis using Analook and Sonobat Software. She is able to identify bats based on their unique acoustic recordings obtained by Anabat SD2 and Pettersson bat detectors. Ms. Simpson has also conducted focused surveys for special status species including desert tortoise, burrowing owl, and least bell's vireo. Ms. Simpson has experience in conducting nesting bird surveys, rare plant surveys, construction monitoring, mature tree surveys, conducting general wildlife surveys and habitat assessments, conducting focused protocol surveys, and post-construction habitat restoration monitoring. Ms. Simpson has experience evaluating biological resources and project impacts under the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and the Coachella Valley MSHCP and authoring associated MSHCP consistency documents. Ms. Simpson has authored and co-authored numerous technical documents including Natural Environment Studies (NES and NES[MI]), and documents supporting the California Environmental Quality Act (CEQA) such as Initial Studies, Mitigated Negative Declarations, Biological Resources Technical Reports, and Biological Resources Sections of Environmental Impact Reports.

Education

B.S., Biological Science, Concentration: Biodiversity, Ecology, and Conservation Biology, California State University, Fullerton

A.A., Natural Science and Mathematics, Mount San Antonio College, Walnut, California

Registrations, Certifications, Permits and Affiliations

- Scientific Collecting Permit #12796 Expires 4/24/2020
- Western Bat Working Group Member

Professional Experience

Devil's Gate Reservoir Restoration Project – Los Angeles County Department of Public Works (2016-Present). The Devil's Gate Reservoir Restoration Project is a four-year effort to increase flood protection for communities downstream of Devil's Gate Dam and restore habitat within the Arroyo Seco Watershed. Los Angeles County Public Works will remove 1.7 million cubic yards of sediment from the reservoir immediately behind the dam. Ms. Simpson served as lead biological monitor as well as conducted pre-construction surveys for sensitive wildlife species. Ms. Simpson's roles and responsibilities included:

- Served as Lead Designated Biologist for all biological monitoring during initial vegetation removal, construction, and restoration phases. Duties included monitoring vegetation removal and moving wildlife out of harm's way, providing worker environmental awareness program (WEAP) trainings to construction and restoration workers, and coordination with County staff and biological monitors to establish a daily monitoring schedule.
- Lead preconstruction bat surveys. All potential bat roost trees within the reservoir were surveyed to identify potential roost sites. Anabat™ and Echometer Touch 2 Pro detectors were used to collect acoustic data.
- Served as Least Bell's Vireo Designated Biologist. Conducted regular site visits outside of the breeding season and focused surveys during the 2019 breeding season. Conducted five of the pre-project protocol surveys (approximately 25 survey hours) for least Bell's vireo during the 2018 breeding season.
- Assisted with Oak tree inventory and Pasadena City protected tree survey
- Preparation of WEAP training materials
- Preparation of Streambed Alteration Agreement Plans including the Nesting Bird Management Plan
- Attended public outreach meetings on behalf of the County
- Contributing author to the Long Term Management Plan (LTMP) and Habitat Mitigation and Management Plan (HMMP)

Whittier Narrows Equestrian Center Refurbishment Project, City of Whittier, Los Angeles County – Los Angeles County Department of Parks and Recreation (2017). Biologist responsible for conducting a biological reconnaissance survey to assess the biological resources within the project area and identify any possible biological constraints to the project. The project would renovate the existing equestrian facility to create a new sustainable facility with reduced environmental impact to adjacent water resources and habitat. Authored the biological technical report in support of the CEQA Constraints Analysis for the project.

Implementation of the Master Mitigation Plan – Big Tujunga Wash Mitigation Area, Los Angeles County-Los Angeles County Department of Public Works (2016-Present). Wildlife Biologist responsible for conducting pre-removal nesting bird/general wildlife surveys, biological monitoring during invasive plant removal activities, trails maintenance and monitoring visits, and exotic wildlife removal within the Big Tujunga Mitigation Area. Conducted special assessment of wildfire damage adjacent to the Big Tujunga Mitigation Area. Conducted evaluation of change in mitigation area habitat credits over time at the Mitigation Area. Contributing author to annual report.

Least Bell's Vireo Surveys, Quarry Clasp/Peck Park Bike Trail Project, Los Angeles County – Los Angeles County Department of Public Works (2015). Participated in protocol least Bell's vireo surveys at Peck Road Water Conservation Park in support of the Peck Park Bike Trail Project. Breeding behavior was observed by two pairs in two separate locations in the park. Approximately 25 hours were spent conducting least Bell's vireo surveys. Results were compiled into a Least Bell's Vireo Survey Report which was included as an Appendix to the NES for the proposed project.

Scott Taylor

Senior Biological Program Manager

Mr. Taylor has over 28 years of professional experience in the field of biological sciences in California, with a specialty in jurisdictional delineation, regulatory permitting, endangered species biology and conservation biology in southern California. His experience includes conducting focused survey work, preparation of Habitat Conservation Plans (HCPs), implementation of Natural Communities Conservation Plans (NCCPs) such as the San Diego Multiple Species Conservation Plan (MSCP) and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), Section 7 Consultations, conducting general biological assessments, conducting jurisdictional delineations, Geographic Information Systems (GIS) mapping, implementing restoration plans, implementing Biological Opinions (BOs) and other agency permits, and monitoring construction projects. He has prepared various technical documents including biological technical reports for the California Environmental Quality Act (CEQA), restoration plans, jurisdictional delineation reports, permitting packages for the US Army Corps of Engineers (ACOE), California Department of Fish and Wildlife (CDFW) and Regional Water Quality Control Board (RWQCB), mitigation and monitoring plans, Environmental Assessments (EAs), and Biological Assessments (BAs).

Education

B.A., Biology, Point Loma Nazarene University, San Diego, California

Registrations, Certifications, Permits and Affiliations

- Recovery Permit Holder: Authorized Individual for Coastal California Gnatcatcher presence/absence surveys and nest monitoring, Least Bell's Vireo nest monitoring, and presence/absence surveys for the quino checkerspot butterfly (Former)

Professional Experience

Programmatic EIR for the Emerald Necklace Project, Arcadia, Irwindale, El Monte, South El Monte, and Whittier. Project Biologist. The Watershed Conservation Authority (WCA) which is a joint powers authority of the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC) and the Los Angeles County Flood Control District (LACFCD) proposed improvements to a 17-mile interconnected network of bikeways, multi-use trails, parks, greenways, and bridges along the Rio Hondo and San Gabriel River known as the Emerald Necklace. The regional recreational system of parks and trails includes the cities of Irwindale, Arcadia, Baldwin Park, El Monte, South El Monte, Whittier, Montebello, Monrovia, Rosemead, and the surrounding communities. The goal of the WCA was to construct 16 projects within the Emerald Necklace under its jurisdiction as identified in the

2005 Emerald Necklace Vision Plan. When complete, the Emerald Necklace would offer improved regional connectivity between the north and the south communities and provide education opportunities for the community through interpretative signage containing information about the rivers, their habitats and cultural heritage. A Programmatic EIR/EIS was prepared with the WCA as the CEQA lead agency and the Army Corps of Engineers as the NEPA lead agency. Mr. Taylor prepared the technical report for biological resources.

Devil's Gate Reservoir Sediment Removal and Management Project, City of Pasadena, Los Angeles County, California – Los Angeles County Department of Public Works. This project entailed preparing a mitigation plan and associated regulatory permitting for the long-term maintenance and removal of sediment at Devil's Gate Reservoir near the city of Pasadena, California. ECORP worked closely with the Los Angeles Department of Public Works on the project, in consultation with the City of Pasadena and regulatory agencies. Mr. Taylor was the CRAM specialist and wetland delineator for the project, and participated in a variety of tasks including agency consultation and writing the mitigation plan document. As a project biologist he conducted pre-construction bat surveys at trees located near the access roads and areas directly and indirectly affected by the actual construction of the access roads into and out of the reservoir. All trees along the access roads were surveyed to identify potential maternity roost sites. Anabat™ detectors were used to collect acoustic data. Assistant surveyor for tree surveys conducted with a certified arborist for trees that may be impacted by the construction of access roads.

As-Needed Planning and Environmental Services Contract, Los Angeles County -- Los Angeles County Department of Parks and Recreation, Planning and Development Agency as a subconsultant to Withers and Sandgren. Biologist. ECORP provided environmental consulting services to the Los Angeles County Department of Parks and Recreation, Planning and Development Agency on an on call basis as a subcontractor to Withers and Sandgren. CEQA/NEPA, biological resources, cultural resources, and regulatory permitting services were provided for parks, trails, and other community recreation facilities. Task orders completed under this contract included:

- **Whittier Narrows Equestrian Center and Horseman's Park Master Plan, Whittier, California**: Environmental support services were provided for the master plan for an existing equestrian center on approximately 70 acres of property leased by Los Angeles County from the US Army Corps of Engineers. The project included planning and design for future enhancement and/or refurbishment of the existing facilities to provide a "state-of-the-art" equestrian facility and associated support infrastructure. Biological resources, cultural resources, and jurisdictional waters constraints analyses were provided to support the initial development of three master plan concepts. After the preferred master plan was selected by the County, ECORP prepared CEQA documentation for the project.