County of Los Angeles
CHIEF EXECUTIVE OFFICE
Kenneth Hahn Hall of Administration
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Chief Executive Officer

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Fifth District

April 20, 2010

ADOPTED
BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES
#33 APRIL 20, 2010
SACHI A. HAMAI
EXECUTIVE OFFICER

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

Dear Supervisors:

DEPARTMENT OF PUBLIC WORKS: FIRE DEPARTMENT
NEW FIRE STATION 143
UNINCORPORATED AREA OF SANTA CLARITA
ADOPT MITIGATED NEGATIVE DECLARATION
SPECS. 6908; CAPITAL PROJECT NO. 70932
(FIFTH DISTRICT) (3 VOTES)

SUBJECT

Adopt the Mitigated Negative Declaration to facilitate the property transfer to the Consolidated Fire Protection District of Los Angeles County for the new Fire Station 143 project.

JOINT RECOMMENDATION WITH THE FIRE CHIEF THAT YOUR BOARD, ACTING AS THE GOVERNING BODY OF THE CONSOLIDATED FIRE PROTECTION DISTRICT:

1. Consider the Mitigated Negative Declaration for the new Fire Station 143 project in unincorporated area of Santa Clarita together with any comments received during the public review process; find that the Mitigated Negative Declaration reflects the independent judgment and analysis of your Board; adopt the Mitigation Monitoring and Reporting Program, finding that the Mitigation Monitoring and Reporting Program is adequately designed to ensure compliance with the mitigation measures during project implementation; find on the basis of the whole record before your Board that there is no substantial evidence the project will have a significant effect on the environment; and adopt the Mitigated Negative Declaration.

2. Find that with the implementation of the Mitigation Monitoring Plan, the new Fire Station 143 project will have no effect on fish and wildlife, and authorize the Director of Public Works to complete and file a Notice of Determination for the project with the Registrar-Recorder/County Clerk.

3. Delegate authority to the Chief Executive Officer and Fire Chief or his designee to execute all necessary documents and agreements to acquire the property from Newhall Land and Farm.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

Approval of the recommended actions will adopt the attached Final Initial Study/Mitigated Negative Declaration (MND), including the Mitigation Monitoring Plan, and allow the Consolidated Fire Protection District of Los Angeles County (Fire District) to accept the developer's transfer of the property located at 28580 Hasley Canyon Road, Valencia, California, as the site for construction of the new Fire Station 143.

Fire Station 143 will be a 9,700 square-foot station constructed on 1.1 acres. The new fire station will consist of a two-bay apparatus room, main office, day room, kitchen, an exercise room, and dormitory quarters for seven personnel. The architectural plan will conform to the Fire District's New Station Prototype design/construction specifications adopted in 1999 and will comply with the Americans with Disabilities Act, State Health and Safety requirements, and your Board's Countywide Energy and Environmental Policy. At the completion of the project, Fire Station 143 will provide improved fire protection, emergency medical, and life safety services to the expanding Santa Clarita Valley.

The MND indicated that the project, with the implementation of the proposed mitigation measures, would not have a significant effect on the environment in accordance with the requirements of the California Environmental Quality Act (CEQA) and the Environmental Document Reporting Procedures and Guidelines adopted by your Board on November 17, 1987.

Green Building/Sustainable Design Program

The project supports your Board's Sustainable Design Program by integrating design features that, when successfully installed, will allow for application of a U.S. Green Building Council's (Leadership in Energy and Environmental Design) Silver Certification.

The project will use water-efficient fixtures and will integrate the use of drought tolerant landscaping to reduce the amount of potable water consumed.

Implementation of Strategic Plan Goals

Construction of Fire Station 143, when approved by your Board, will meet the Countywide Strategic Plan goals of Operational Effectiveness (Goal 1), and Children, Family and Adult Well-Being (Goal 2) as it is an investment in public infrastructure that will benefit the Santa Clarita community by improving the Fire District's ability to respond to local emergencies.

FISCAL IMPACT/FINANCING

On May 13, 2008, your Board approved a $10,749,000 project budget for the Fire Station 143 project. The total project cost estimate includes the preparation of plans and specifications, plan check fees, construction, change orders, consultant services, miscellaneous expenditures, Civic Art allocation, and County services. The project is funded with commercial paper proceeds. There is no impact to net County cost.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

Upon your Board's adoption of the MND, the Chief Executive Office will accept the transfer of the property from the developer, Newhall Land and Farm.

ENVIRONMENTAL DOCUMENTATION

In accordance with the provisions of State CEQA Guidelines and the County Environmental Reporting Procedures and Guidelines, an Initial Study was prepared for the project. The Initial Study identified potentially significant effects of the project primarily related to construction noise, but prior to release of the proposed MND and Initial Study for public review, revisions in the project were made or agreed to that would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur. The mitigation measures include site specific foundation design recommendations and noise control, including construction equipment with special noise control devices, minimization of simultaneous equipment operation, and engine idling.

The recommended measures will be incorporated into the construction bid documents. The Initial Study and the project revisions showed that there is no substantial evidence, in light of the whole record before the County, that the project, as revised, would have a

significant effect on the environment. Based on the Initial Study and project revisions, an MND was prepared for the project.

Public notice was published in *The Signal* newspaper on November 2, 2009, pursuant to Public Resources, Code Section 21092, and posted pursuant to Section 21092.3. No comments were received from the public. Public Agency comments were received from the Department of Transportation on November 23, 2009. Responses to the Department of Transportation's comments are included in Appendix E of the Final Initial Study/MND and were sent pursuant to Section 21092.5.

The location of the documents and other materials constituting the record of the proceedings upon which your Board's decision is based in this matter is in the County of Los Angeles Department of Public Works (Public Works), 900 South Fremont Avenue, 5th Floor, Alhambra, California 91803. The custodian of such documents and materials is the Assistant Deputy Director of Project Management Division II.

The State Department of Fish and Game has determined that for purposes of the assessment of CEQA filing fees pursuant to Section 711.4(c) of the California Fish and Game Code, the project has no potential effect on fish, wildlife, and habitat, and the project as described does not require payment of a CEQA filing fee. Upon adoption of the MND by your Board, Public Works will file a Certificate of Fee Exemption with the Registrar-Recorder/County Clerk in accordance with Section 711.4 of the California Fish and Game Code. We will also file a Notice of Determination in compliance with Section 21152(a) of the California Public Resources Code.

CONTRACTING PROCESS

Not applicable.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

There will be no negative impact on current County services or projects during the performance of the recommended services.

CONCLUSION

Please return one adopted copy of this letter to the Chief Executive Office, Capital Projects Division; and to the Department of Public Works, Project Management Division II.

Respectfully submitted,

WILLIAM T FUJIOKA
Chief Executive Officer

P. MICHAEL FREEMAN
Fire Chief

WTF:PMF:GF
SK:DJT:SW:zu

Attachment

c: Executive Office, Board of Supervisors
Auditor-Controller
County Counsel
Department of Public Works
Fire District
Office of Affirmative Action Compliance

Final
Initial Study/Mitigated Negative Declaration

Los Angeles County Fire Department Fire Station 143 Project

Los Angeles County, California

January 2010

PCR

Final
Initial Study/Mitigated Negative Declaration

Los Angeles County Fire Department Fire Station 143 Project

Los Angeles County, California

Submitted to:

County of Los Angeles Department of Public Works
900 South Freemont Avenue
Alhambra, California 91803-1331

Submitted by:

PCR Services Corporation
One Venture, Suite 150
Irvine, California 92618
Tel: 949.753.7001

January 2010

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Environmental Checklist Form

ENVIRONMENTAL CHECKLIST FORM

1. **Project Title** Los Angeles County Fire Department Fire Station 143

2. **Lead agency name and address:** County of Los Angeles Department of Public Works
900 South Fremont Avenue
Alhambra, California 91803-1331

3. **Contact person and phone number:** Ken Schumann, P.E.
Project Management Division II
Phone: (626) 300-3246

4. **Project location:** 28580 Hasley Canyon Road, Valencia, California 91355

5. **Project sponsor's name and address:** Los Angeles County Fire Department

6. **General plan designation:** Industrial

7. **Zoning:** M-1 1/2DP: Restricted Heavy Manufacturing

8. **Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)**

The project includes the construction of Fire Station 143. Fire Station 143 would be located on approximately 1.07 acres (46,609 square feet) and would be 12,000 square feet with a maximum height of 32 feet. Please refer to Attachment A, Project Description, for a detailed discussion of the project.

9. **Surrounding land uses and setting: Briefly describe the project's surroundings:**

The general vicinity of the site is characterized by existing or planned development in an urbanizing environment. The project site is regionally located west of Interstate 5 (I-5) and north of the Santa Paula Freeway (Route 126) within unincorporated Valencia in the Santa Clarita Valley, Los Angeles County. The project site is located within the northwestern portion of Los Angeles County known as the Castaic Junction Area. The project site is bounded by Hasley Canyon Road and residential development to the north/northeast, existing industrial uses to the west and south, and proposed industrial uses to the northwest. The project site is has been rough graded and is currently vacant (unoccupied). The project would require minimal fine grading/earthwork to further balance the site. Direct access to the project site is provided by Hasley Canyon Road to the north and a private driveway and fire lane to the west of the site.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

The Fire Department would obtain all required approvals for construction of the station and site improvements from the following agencies including, but not limited to: Los Angeles County Building and Safety (plan check), Los Angeles County Regional Planning (site plan), Los Angeles County Fire Department Prevention Bureau (VHFHSZ), Regional Water Quality Control Board (NPDES, fueling station), Air Quality Management District (fueling station), Los Angeles County Health Department, and the Los Angeles County Land Development Department.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☒ Geology/Soils
☐ Hazards/Hazardous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☒ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities/Service Systems	☐ Mandatory Findings of Significance	

DETERMINATION: (To be completed by the Lead Agency)

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 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.

Signature

10/28/09
Date

Ie-Ling Chou
Printed Name

LA COUNTY DEPARTMENT OF PUBIC WORKS
For

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 a lead agency 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 agency 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 process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 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) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

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

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐
II. AGRICULTURE RESOURCES – 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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. 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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒
III. 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. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No 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)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
IV. BIOLOGICAL RESOURCES – 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 Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
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 nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
VI. GEOLOGY AND SOILS – Would the project:				
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 fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☒	☐	☐
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?	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐
VIII. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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)?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alternation 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?	☐	☐	☒	☐
e) 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?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) 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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) 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?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒
<u>IX. LAND USE AND PLANNING</u> – Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
X. MINERAL RESOURCES – Would the project:				
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
XI. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
XII. POPULATION AND HOUSING – Would the project:				
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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XIII. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒
XIV. RECREATION				
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?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒
XV. TRANSPORTATION/TRAFFIC – Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☒	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Result in inadequate parking capacity?	☐	☐	☐	☒
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒
XVI. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require 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?	☐	☐	☐	☒
c) Require 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?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. MANDATORY FINDINGS OF SIGNIFICANCE				
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, 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?	☐	☐	☒	☐
b) 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)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Attachment A
Project Description

ATTACHMENT A
PROJECT DESCRIPTION

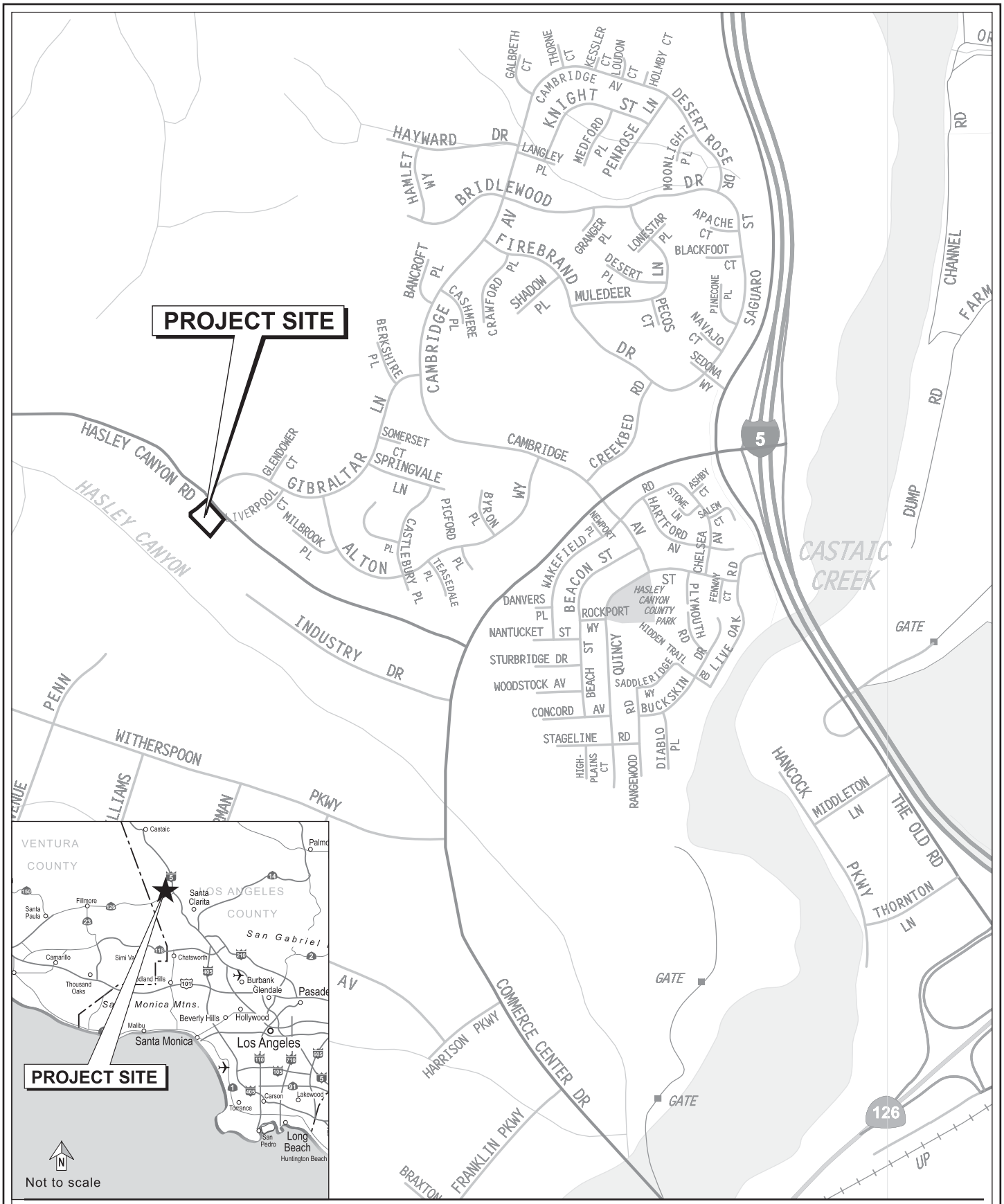
A. INTRODUCTION

The Los Angeles County Fire Department is proposing to construct Fire Station 143 on an approximate 1.07 acres (46,609 square feet) site that would consist of one single-story structure totaling 10,648 square feet with a maximum height of 32 feet.

B. PROJECT LOCATION AND SURROUNDING USES

The project site is regionally located west of Interstate 5 (I-5) and north of California State Route 126 (Santa Paula Freeway) within unincorporated Valencia within the Santa Clarita Valley, Los Angeles County. Regional access to the project site is provided by I-5, located approximately one mile east of the project site and the Santa Paula Freeway, approximately two miles south of the project site. A regional and vicinity map is provided in Figure A-1 on page A-2. The project site is located within the northwestern portion of Los Angeles County known as the Castaic Junction Area.

The approximate 1.07-acre project site address is 28580 Hasley Canyon Road, Valencia, CA 91355. The project site is bounded by Hasley Canyon Road and residential development to the north/northeast, existing industrial uses to the west and south, and proposed industrial uses to the northwest. Direct access to the project site is provided by Hasley Canyon Road to the north and a private driveway and fire lane to the west of the site. Figure A-2 on page A-3 provides an aerial photograph of the site and its surrounding uses. Figure A-3 on page A-4 provides views of the surrounding land uses. Photograph 1 shows the single-family residential uses to the north/northeast of the site across Hasley Canyon Road, which are followed by undeveloped hillsides. Photograph 2 shows a view to the southeast across the site from the private driveway and fire lane. Photograph 3 shows a view to the southwest across the site from the residential uses to the north/northeast of the site. As shown in Photograph 3, the industrial uses beyond the site to the south are visible from this vantage. Photograph 4 shows a southerly view from the site of the adjacent industrial uses.



Source: PCR Services Corporation, 2009.

Figure A-1
Regional and Project Vicinity Map

PCR

0 200 400 Feet

Source: Google Earth and PCR Services Corporation, 2009.

Figure A-2
Aerial Photograph

Photograph 1: View north from the Project Site.

Photograph 2: View southeast from the private driveway and fire lane.

Photograph 3:View southwest from the residential uses north of the Project Site.

Photograph 4: View south from the Project Site.

PCR

Figure A-3
Site Photographs

Source: PCR Services Corporation, 2009.

C. EXISTING SITE CONDITIONS

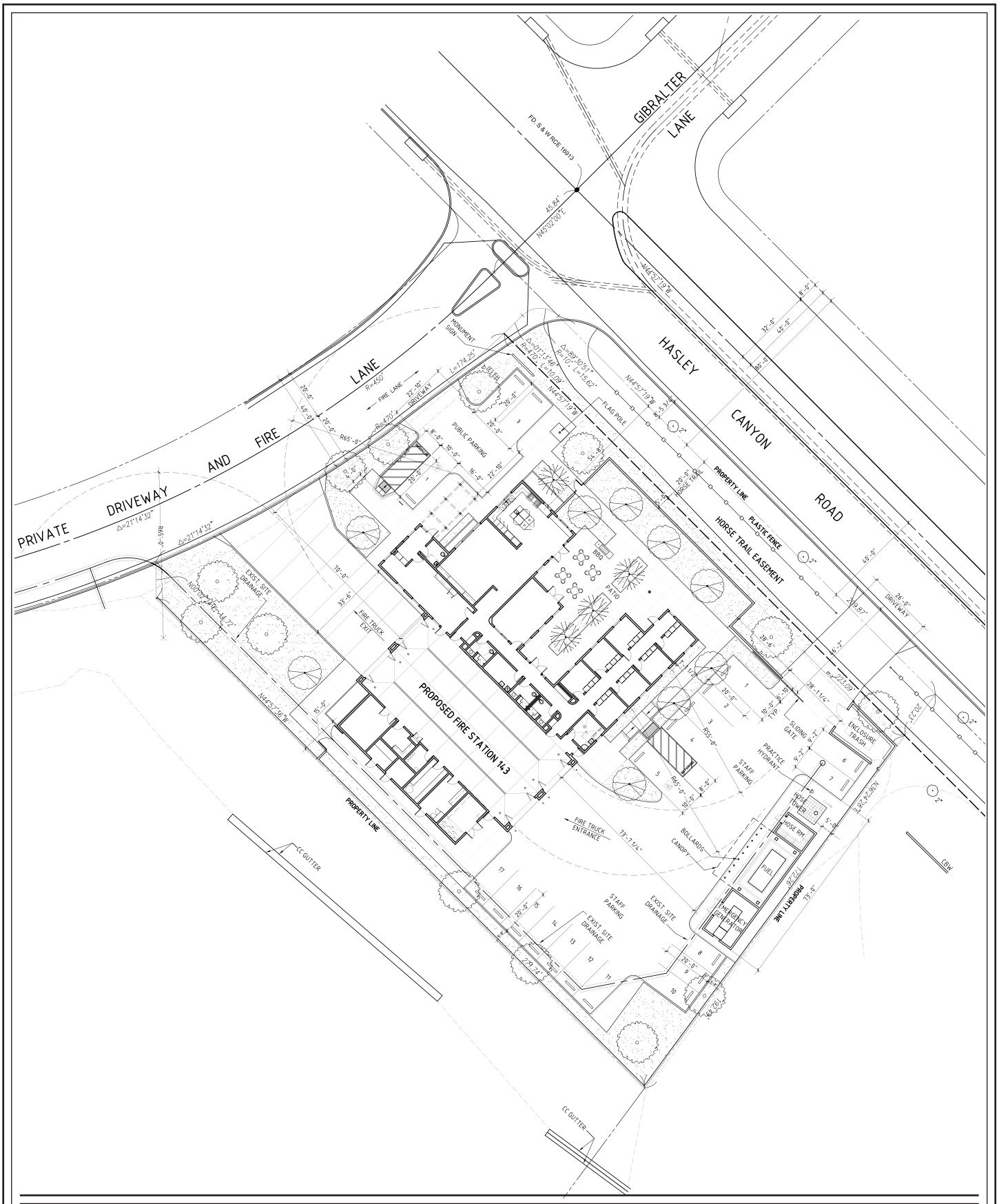
The project site is a vacant, flat site that has been previously rough graded in anticipation of a fire station. The site was initially graded during bulk grading operations for adjacent Parcel Map 18229 and Hasley Canyon Road as Deeded Street 500 (DS 500). The initial grading operations consisted of removing and recompacting naturally-deposited soils and bedrock, as well as the placement of compacted fill soils to form fills suitable for structural and pavement support. The project would require minimal fine grading/earthwork to further balance the site. Fine grading would consist of minimal grading to establish pad grade. This would include excavating current fill soils to a maximum depth of approximately five (5) feet in the central portion of the site where the building pad is to be located. Outside of the building pad, excavation will occur at depths ranging from approximately two to five feet to prepare the site for development. The depth of the compacted fill materials across the site are relatively uniform across the site at a depth of approximately 26 feet.[1] A total of approximately 2,600 cubic yards of existing fill soils would be removed from the site as part of the project fine grading. No undisturbed native soils would be excavated as part of the project excavation/grading and construction activities. The site is designated for industrial land use and zoned for M-1 1/2DP - Restricted Heavy Manufacturing.

D. DESCRIPTION OF PROPOSED PROJECT

The proposed Fire Station 143 would consist of one single-story structure totaling 10,648 square feet with a maximum height of 32 feet. The structure would include an approximately 7,275 square foot firehouse for general house operations including dormitory units and an adjacent enclosure that would include a fuel station, generator room, and hose room; and an approximately 3,373 square foot apparatus bay with two bays for fire engines. The construction of the firehouse would also include a 30-foot tall hose tower equipped with an electric powered hose drying rack. Three, 10-foot high exterior antennas would be located at the firehouse and would extend beyond the high point of the roof. Other equipment on-site would include a 200 kilowatt (KW) emergency generator and above-ground storage facilities (or tanks) containing 600 gallons of diesel fuel for the emergency generator, 2,500 gallons of diesel fuel for the on-site apparatus, 500 gallons of unleaded gasoline, and 10 gallons (two 5-gallon containers) of gasoline for yard maintenance equipment. The firehouse would also maintain an external public address system that would be turned off from 5:00 P.M. to 8:00 A.M. The site plan for the project is illustrated in Figure A-4 on page A-6.

At full staffing, Fire Station 143 would employ a maximum of seven (7), 24-hour firefighters with 14 firefighters on-site during shift change. Initial staffing would consist of four

[1] *Geotechnical Report and Fine Grade Plan Review for Fire Station 143 ("Geotechnical Report"), prepared by RTF&A, dated February 11, 2009.*



PCR

0 50 100 Feet

Figure A-4
Site Plan

Source: Osborn,2008.

firefighters with eight firefighters on-site during shift change. Full staffing would occur as deemed necessary by the fire department. A minimum of 14 employee parking spaces, two handicap stalls and two visitor parking stalls would be provided on-site. Public access to and from the project site would be provided from the private driveway and fire lane located west of the project site. Fire staff and fire truck engine ingress access would be provided from Hasley Canyon Road while an emergency egress driveway onto the private driveway and fire lane that would lead to Hasley Canyon Road would be utilized during emergency responses. A traffic signal would be installed at the fire station emergency egress driveway with station controlled pre-emption during emergency and non-emergency responses. The traffic signal would promote emergency access for emergency vehicles leaving the fire station.

When the fire station is complete, the station would provide for an on-going improved level of fire protection, emergency medical, and other life safety services to the adjacent communities, and it would add to the resources available for other requests for services throughout the Fire Department's jurisdiction. The Fire Department's goal, when areas have transitioned from rural to urbanized areas, is to arrive on the scene of an emergency call within five minutes from the time of dispatch. Fire Station 143 would be a strategic part of this goal.

E. CONSTRUCTION SCHEDULE

The anticipated construction start date for Fire Station 143 would commence in the first half of 2010 and last up to approximately 12 months. Construction activities would occur in one phase.

F. NECESSARY APPROVALS

The Fire Department would obtain all required approvals for construction of the station and site improvements from the following agencies including, but not limited to: Los Angeles County Building and Safety (plan check), Los Angeles County Regional Planning (site plan), Los Angeles County Fire Department Prevention Bureau (VHFHSZ), Regional Water Quality Control Board (NPDES, fueling station), Air Quality Management District (fueling station), Los Angeles County Health Department, and the Los Angeles County Land Development Department.

Attachment B
Explanation of Checklist Determinations

ATTACHMENT B
EXPLANATION OF CHECKLIST DETERMINATIONS

I. AESTHETICS.

Would the project:

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. A scenic vista generally provides focal views of objects, settings, or features of visual interest; or panoramic views of large geographic areas of scenic quality, primarily from a given vantage point. Scenic vistas are generally associated with public vantages. A significant impact may occur if the proposed project introduced incompatible visual elements within a field of view containing a scenic vista or substantially altered a view of a scenic vista.

The site may be visible from areas of higher topography in the surrounding area; however, the site has not been identified within a designated scenic vista. Views from areas of higher topography in the surrounding area of the site and its surrounding vicinity currently include adjacent single-family residential and industrial uses. In addition, the project site has been rough graded and is vacant (unoccupied). Sporadic weedy vegetation exists on the project site that does not positively contribute to the aesthetic character of the site or its surroundings. The initial grading operations in 2002 consisted of removing and recompacting naturally-deposited soils and bedrock, as well as the placement of compacted fill soils to form fills suitable for structural and pavement support. The site was graded in 2004 to establish current rough grades. The project would require minimal fine grading/earthwork to further balance the site. Fine grading would consist of minimal grading to establish pad grade. This would include excavating current fill soils to a maximum depth of approximately five (5) feet in the central portion of the site where the building pad is to be located. Outside of the building pad, excavation will occur at depths ranging from approximately two to five feet to prepare the site for development.

The addition of the fire station would not result in the introduction of an incompatible element in relationship with the surrounding industrial and residential uses. Further, no impacts regarding views of scenic resources beyond the site would occur from long-range views towards the site. Thus, less than significant impacts would occur regarding scenic vistas.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcrops, and historic buildings within a state scenic highway?

No Impact. The project site is currently vacant, undeveloped property. The site has been rough graded in anticipation of a fire station. There are no designated scenic highways in the immediate project vicinity. The nearest scenic highway to the project site is I-5, one mile east of the project site. Views of the project site from I-5 are limited by the intervening residential development and topography. Furthermore, the project site is not located within a scenic corridor or viewshed. Regardless, no scenic resources, including trees, rock, outcroppings, or historic buildings are located on the site. Thus, project implementation would not damage any scenic resources on the project site and no impacts would occur in this regard.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact. The project site is currently vacant, undeveloped property. The site has been rough graded in anticipation of a fire station. The general vicinity of the site is characterized by existing or planned development in an urbanizing environment. There are existing two-story, single-family residences to the north/northeast across Hasley Canyon Road approximately 150 feet from the site along Gibraltar Lane. Existing multi-story (up to approximately 30 feet) industrial buildings are located within approximately 100 feet immediately adjacent to the south and west of the site. To the northwest of the site is a vacant, rough graded building pad designated for industrial use. No unique aesthetic features or scenic resources are located on or surrounding the site.

Building design and landscaping for the proposed project would be compatible with the massing and scale of the surrounding uses since it would be a single-story building not to exceed 32 feet in height. The project would include antennas on the building up to approximately 10– feet above the roof top. Given that the site is a vacant lot surrounded by industrial uses to the south and west and no unique aesthetic features or scenic resources are located on or surrounding the site, the addition of the fire station, including antennas, would not substantially degrade existing visual character or quality of the site and its surroundings. Thus, project implementation would result in less than significant impacts.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. The project site is currently vacant, undeveloped property. As such, no light generating sources are present on the site. The surrounding area that

consists of single-family residential uses and industrial uses currently generates low-level exterior building lighting for nighttime way finding and security purposes. In addition, off-site sources of light that contribute to ambient nighttime light levels in the area include headlights from vehicles traveling along local roadways.

Development of the proposed fire station would entail the construction of one single-story building to house staff and equipment. The single-story building would not exceed 32 feet in height and would be constructed on previously rough graded land. Since no sensitive uses (receptors) exist in the immediate project vicinity, with the exception of the residential development approximately 150 feet northeast/east of the project site, no negative effects associated with shadows would occur.

The project would also introduce low-level lighting on the site for signage, security, and night visibility at similar lighting levels to the existing adjacent industrial lighting to the south and west. The nearest sensitive receptor to the site would be the residences to the north of the site, which are located approximately 170 feet from the site. A photometric analysis was prepared for the project that illustrates the level of lighting in foot-candles off the site.[1,2] The photometric analysis for the project shows a maximum of 0.7 foot candles near the northern boundary of the site at Hasley Canyon Road. Along Hasley Canyon Road, there would be less than 0.1 foot candles of light from the project site. While the lighting on the project site would be visible from adjacent uses, including the residences north/northeast of the site, due to the distance between the site and the residences (approximately 170 feet) there would be no noticeable change in the lighting levels at the adjacent residences. Additionally, the project would not include the use of highly reflective materials which would result in substantial glare impacts. Overall, light and glare impacts would be less than significant.

II. AGRICULTURAL RESOURCES.

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown the maps prepared pursuant to the Farmland Mapping Monitoring Program of the California Resources Agency, to non-agricultural uses?

No Impact. No agricultural uses or related operations exist within the project site or surrounding area. In addition, the project site has not been mapped as Prime Farmland, Unique

[1] *Source: Photometric Site Plan, prepared by Osborn, July 2009. Included as Appendix B of this document.*

[2] *Foot-Candle is a unit of illuminance on a surface that is everywhere one foot from a uniform point source of light of one candle and equal to one lumen per square foot.*

Farmland, or Farmland of Statewide importance pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. Therefore, the project would not result in impacts to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The site is zoned M-1 1/2DP for restricted heavy manufacturing uses and designated for industrial uses. No agricultural uses are present on the project site. As no portions of the project site are enrolled in a Williamson Act contract or anticipated to affect agricultural zones, development of the project would not result in a conflict relative to existing zoning for an agricultural use or with Williamson Act contracts.[3] Therefore, no impacts associated with this issue would occur.

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

No Impact. As stated above, the project would be constructed on a site currently vacant site and is not located on any land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Development of the fire station site would not result in the conversion of farmland to non-agricultural use. Thus, no impacts to agricultural resources would occur.

III. AIR QUALITY

The significance criteria established by the South Coast Air Quality Management District (SCAQMD) may be relied upon to make the following determinations. Would the project:

a. Conflict with or obstruct implementation of the AQMP or Congestion Management Plan?

Less Than Significant Impact. The project site is located within the 6,745 square mile South Coast Air Basin (SCAB). The South Coast Air Quality Management District (SCAQMD)

[3] *The California Legislature passed the Williamson Act in 1965 to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. The Act creates an arrangement whereby private landowners contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. The vehicle for these agreements is a rolling term 10-year contract (i.e., unless either party files a "notice of nonrenewal," the contract is automatically renewed for an additional year.). In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather then potential market value.*

is required, pursuant to the Clean Air Act, to reduce emissions of criteria pollutants for which the Basin is in non-attainment (i.e., ozone, PM_{10}, and $PM_{2.5}$). The project would be subject to the SCAQMD's Air Quality Management Plan (AQMP). The AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by the Southern California Association of Governments (SCAG).

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment.[4] With regard to air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide (RCPG), which includes Growth Management and Regional Mobility chapters that form the basis for the land use and transportation control portions of the AQMP and are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. Both the RCPG and AQMP are based on projections originating with County and City General Plans.

A project is consistent with the AQMP if it is consistent with the population, housing and employment assumptions that were used in the development of the AQMP. The project is also consistent with local zoning ordinances. Because the SCAQMD has incorporated these same projections into the AQMP, it can be concluded that the proposed Project would be consistent with the projections in the AQMP. In addition, as discussed below, project implementation would not exceed any ambient air quality standards or thresholds. Therefore, the proposed project would not be anticipated to conflict with or obstruct implementation of the SCAQMD's AQMP.

The Congestion Management Program (CMP) was enacted by the Metropolitan Transportation Authority (Metro) to address traffic congestion issues that could impact quality of life and economic vitality. The intent of the program is to provide an analytical basis for transportation decisions throughout the state. An analysis is required at all CMP monitoring intersections for which a project is projected to add 50 or more trips during any peak hour. In addition, analysis is required for all freeway segments for which a project is projected to add 150 or more hourly trips, in each direction, during the peak hours analyzed.

As described in further detail below in Response III (b), the proposed project is not expected to generate additional emergency Fire Department vehicle trips, as the proposed fire station would be more centrally located to surrounding business and residences and would

[4] *SCAG serves as the federally designated metropolitan planning organization (MPO) for the southern California region.*

reduce response time to within 5 minutes. Non-emergency responses and business trips are estimated to generate a total of four trips per day. The proposed project would generate a conservative maximum of 14 new employee roundtrips per day. This is based on a maximum of seven employees at the fire station during shift changes. A total of 19 trips would not result in an increase of 50 or more trips during any peak hour at the nearest CMP intersection. As a result, the project would not exceed any CMP thresholds, and no impact to the CMP network would occur. Thus, the project would not conflict with or obstruct implementation of the CMP.

Based on the above discussion of applicable air quality plans, implementation of the proposed project would result in less than significant impacts.

b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact. As indicated above, the project site is located within the SCAB, which is characterized by relatively poor air quality. State and federal air quality standards are often exceeded in many parts of the Basin, including those monitoring stations nearest to the project location. The proposed project would contribute to local and regional air pollutant emissions during construction (short-term) and project occupancy (long-term). However, based on the following analysis, construction and operation of the project would result in less than significant impacts relative to the daily significance thresholds for criteria air pollutant emissions established by the SCAQMD for construction and operational phases.

Construction

Construction has the potential to create regional air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers traveling to and from the project site. In addition, fugitive dust emissions would result from demolition, site preparation, and construction activities. Mobile source emissions, primarily particulate matter (PM) and nitrogen oxides (NO_X), would result from the use of construction equipment such as bulldozers, loaders, and haul trucks. During the finishing phase, paving operations and the application of architectural coatings (i.e., paints) and other building materials would release volatile organic compounds (VOCs). Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

Regional Impacts

Regional construction-related emissions associated with heavy construction equipment were calculated using the URBEMIS2007 emissions inventory model originally developed by

the California Air Resources Board (CARB). Model results are provided in Appendix A of this document. The analysis assumed that all construction activities would comply with SCAQMD Rule 403 regarding the control of fugitive dust. A summary of maximum daily regional emissions by construction phase are presented in Table B-1 on page B-8, along with the regional significance thresholds for each air pollutant. As shown therein, maximum regional construction emissions would not exceed the thresholds for VOC, NO_X, carbon monoxide (CO), sulfur dioxide (SO_X), PM_{10}, or $PM_{2.5}$.

Localized Impacts

The localized effects of daily construction emissions generated on-site were evaluated for sensitive receptor locations potentially impacted by the project according to the SCAQMD's localized significance threshold (LST) methodology, which utilizes on-site mass emissions rate look-up tables and project specific modeling, where appropriate. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA) and distance to the nearest sensitive receptor. For PM_{10} and $PM_{2.5,}$ LSTs were derived based on the requirements of SCAQMD Rule 403, Fugitive Dust. The mass rate look-up tables were developed for each SRA and can be used to determine whether or not a project may generate significant adverse localized air quality impacts. The LST mass rate look-up tables only apply to projects that are less than or equal to five acres in size. A conservative estimate of maximum local (on-site) daily emissions for NO_X, PM_{10}, $PM_{2.5}$, and CO for each phase of construction is presented in Table B-1. Localized construction emissions thresholds, based on the construction site acreage and distance to the closest off-site sensitive receptor, were obtained from the LST look-up tables and are also listed in Table B-1. There are existing single-family residential uses located southeast of the project site along Gibraltar Lane at a distance of 60 meters.

As presented in Table B-1, construction-related daily maximum localized emissions would not exceed the SCAQMD daily significance thresholds for NO_X, CO, PM_{10}, and $PM_{2.5}$. Therefore, localized construction emissions resulting from the project would not result in a significant short-term impact and no mitigation measures would be necessary.

Also shown above, emissions from project construction activities with incorporation of the Rule 403-compliant project features described would fall below both localized and regional SCAQMD significance thresholds. Therefore, project construction would not violate an air quality standard or contribute significantly to an existing or projected air quality violation, and impacts would be less than significant and no mitigation measures would be necessary.

Table B-1

Regional and Localized - Unmitigated Construction Emissions [a]
(pounds per day)

	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Regional Emissions						
Mass Site Grading	2	20	9	<1	6	2
Fine Site Grading	1	6	4	<1	<1	<1
Building Erection/Finishing	5	29	15	<1	2	2
Maximum Regional Emissions	**5**	**29**	**15**	**<1**	**6**	**2**
Regional Construction Daily Significance Threshold	75	100	550	150	150	55
Over/(Under)	(70)	(71)	(535)	(150)	(144)	(53)
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Localized Emissions						
Mass Site Grading	2	16	7	<1	6	2
Fine Site Grading	1	5	3	<1	<1	<1
Building Erection/Finishing	5	29	15	<1	2	2
Maximum Localized Emissions	**5**	**29**	**15**	**<1**	**6**	**2**
Localized Significance Thresholds	-	107	879	-	12	4
Over/(Under) Threshold	-	(78)	(864)	-	(6)	(2)
Exceed Threshold?	**-**	**No**	**No**	**-**	**No**	**No**

[a] *Compiled using the URBEMIS 2007emissions inventory model. The equipment mix and use assumption for each phase is provided in Appendix A.*
[b] *PM_{10} emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.*
[c] *The SCAQMD Localized Significance Thresholds (LSTs) are based on Source Receptor Area No. 13 (Santa Clarita Valley) for a one acre site with a 50 meter receptor distance.*

Source: PCR Services Corporation, 2008.

Operational Impacts

The SCAQMD has also established separate significance thresholds to evaluate potential impacts associated with the incremental increase in criteria air pollutants associated with long-term project operations. Operational emissions related to baseline and project conditions were computed using the URBEMIS2007 emissions inventory model.

Regional Impacts

Implementation of the proposed Project would not result in an increase in the number of emergency Fire Department vehicle trips. Operation of the Fire Station may result in a decrease in the vehicle miles traveled, as this station is closer to surrounding residences and businesses than existing stations. However, as a worst-case evaluation, this study considers emissions from

new employee commuter trips as incremental sources of emissions. The 10,648 square feet of space would result in an increase in stationary source emissions, including the consumption of fossil fuels for comfort heating and the generation of electricity for cooling, lighting, and power needs, as compared to existing conditions. Operational impacts include worst-case scenario days for the operation of the above-ground gasoline and diesel storage tanks, and a diesel powered 200 kilowatt (kW) emergency generator. The emissions associate with the storage tanks were calculated using the CARB TANKS 4.0.9d program and the emergency generators were calculated using emission factors container in the USEPA AP42 Tables, and are described as a stationary source during operation. The results of the detailed emissions calculations are provided in Table B-2 on page B-10, and URBEMIS model output files are contained in Appendix A. As indicated therein, the project would result in an increase of criteria pollutant emissions. However, this increase would be below the SCAQMD daily significance thresholds for long-term regional operations. Therefore, the project would have a less than significant impact on air quality resulting from long-term operational emissions, and no mitigation measures would be necessary.

Localized Impacts

The SCAQMD recommends a hot-spot evaluation of potential localized CO impacts when vehicle to capacity (V/C) ratios are increased by two percent or more at intersections with a level of service (LOS) of D or worse. As mentioned previously, the project would not generate any additional emergency and non-emergency Fire Department vehicle trips. As a result, a traffic study was not required to be completed and no additional analysis of this issue is necessary. It is concluded that the proposed project would not cause any new or exacerbate any existing CO hotspots, and, as a result, impacts related to localized mobile-source CO emissions would be less than significant.

c. Result in a cumulatively considerable net increase of any criteria pollutant for which the air basin is non-attainment (ozone, carbon monoxide, & PM_{10}) under an applicable federal or state ambient air quality standard?

Less Than Significant Impact. The SCAQMD's approach for assessing cumulative impacts related to operations is based on attainment of ambient air quality standards in accordance with the requirements of the Federal and State Clean Air Acts. As discussed earlier, the SCAQMD has developed a comprehensive plan, the 2007 AQMP, which addresses the region's cumulative air quality condition.

Table B-2

Maximum Incremental Increase in Project-Related Operational Emissions [a]
(Pounds per Day)

Emission Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Project Emissions						
Mobile (employee commute trips)	<1	<1	1	<1	<1	<1
Fire Trucks	1	4	2	<1	<1	<1
Area [a]	<1	<1	<1	<1	<1	<1
Stationary [b]	<1	48	10	3	3	3
Total	**2**	**52**	**14**	**3**	**4**	**3**
SCAQMD Significance Threshold	55	55	550	150	150	55
Difference	**(54)**	**(3)**	**(536)**	**(147)**	**(146)**	**(52)**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

[a] *Area source emissions are calculated using the URBEMIS 2007 emissions model. Area sources include natural gas consumption, landscape fuel consumption, consumer products and miscellaneous sources (e.g., commercial solvent usage, architectural coatings).*

[b] *Stationary source emissions include emissions due to project-related electricity generation, emissions from the backup diesel generator, and emissions from above ground storage tanks. Electricity generation-related emissions are calculated based on guidance provided in the SCAQMD CEQA Air Quality Handbook. Stationary sources emissions include worst-case day emergency generator usage.*

Worksheets and modeling output files are provided in Appendix A.

Source: PCR Services Corporation, 2008.

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. Because the Basin is currently in nonattainment for ozone, PM_{10} and $PM_{2.5}$, related projects could cause ambient concentrations to exceed an air quality standard or contribute to an existing or projected air quality exceedance. Cumulative impacts to air quality are evaluated under two sets of thresholds for CEQA and the SCAQMD. In particular, CEQA Guidelines Sections 15064(h)(3) provides guidance in determining the significance of cumulative impacts. Specifically, Section 15064(h)(3) states in part that:

> "A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review

process to implement, interpret, or make specific the law enforced or administered by the public agency…"

For purposes of the cumulative air quality analysis with respect to CEQA Guidelines Section 15064(h)(3), the project's incremental contribution to cumulative air quality impacts is determined based on compliance with the SCAQMD adopted 2007 Air Quality Management Plan (AQMP).

A project is deemed inconsistent with air quality plans if it results in population and/or employment growth that exceeds growth estimates in the applicable air quality plan. In turn, the AQMP relies upon growth projections adopted by the SCAG, which in turn, relies upon adopted General Plan growth projections. Consequently, compliance with the County's General Plan typically results in compliance with the AQMP.

As the proposed project is not part of an ongoing regulatory program, the SCAQMD recommends that project specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As discussed above, peak daily emissions of operation-related pollutants would not exceed SCAQMD regional significance thresholds. By applying SCAQMD's cumulative air quality impact methodology, implementation of the proposed project would not result in an addition of criteria pollutants such that cumulative impacts would occur, in conjunction with related projects in the region. Therefore, the emissions of non-attainment pollutants and precursors generated by project operation in excess of the SCAQMD project-level thresholds would be less than significant.

Greenhouse Gas Emissions

Background

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. Historical records indicate that global climate changes have occurred in the past due to natural phenomena; however some data indicate that the current global conditions differ from past climate changes in rate and magnitude; thus, the current changes in global climate have been attributed to anthropogenic activities by the Intergovernmental Panel on Climate Change (IPCC).[5] There continues to be significant scientific uncertainty concerning the extent to which increased concentrations of greenhouse gases (GHGs) have caused or will cause climate change, and over the appropriate actions to limit and/or respond to climate change.

[5] *Intergovernmental Panel on Climate Change (IPCC), Fourth Assessment Report, The Physical Science Basis, Summary for Policy Makers, 2007.*

GHGs are those compounds in the Earth's atmosphere which play a critical role in determining temperature near the Earth's surface. Specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth's atmosphere, but retain some of the low frequency infrared energy which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Increased concentrations of GHGs in the Earth's atmosphere have been linked to global climate change and such conditions as rising surface temperatures, melting icebergs and snowpack, rising sea levels, and the increased frequency and magnitude of severe weather conditions. Existing climate change models also show that climate warming portends a variety of impacts on agriculture, including loss of microclimates that support specific crops, increased pressure from invasive weeds and diseases, and loss of productivity due to changes in water reliability and availability. In addition, rising temperatures and shifts in microclimates associated with global climate change are expected to increase the frequency and intensity of wildfires.

GHGs include carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor (H_2O), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). CO_2 is the most abundant GHG in the atmosphere, and represents 77 percent of total GHG emissions.[6] GHGs are the result of both natural and anthropogenic activities. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions. In the state of California, the transportation sector is the greatest source of GHG emissions, accounting for 38 percent of total GHG emissions in 2004, the latest year for which data are available.[7]

Not all GHGs exhibit the same ability to induce climate change; as a result, GHG contributions are commonly quantified in the equivalent mass of CO_2, denoted as CO_2e. CO_2e allows for comparability among GHGs with regard to the global warming potential (GWP). Mass emissions are calculated by converting pollutant specific emissions to CO_2e emissions by applying the proper global warming potential (GWP) value.[8] These GWP ratios are available from the United States Environmental Protection Agency (USEPA) and published in the California Climate Action Registry (CCAR) Protocol. By applying the GWP ratios, project related CO_2e emissions can be tabulated in metric tons per year. The CO_2e values are calculated for the entire construction period. Construction output values used in this analysis are adjusted to represent a CO_2e value representative of CO_2, CH_4, and N_2O emissions from project

[6] *IPCC, Fourth Assessment Report, Synthesis Report, 2007.*

[7] *California Air Resources Board, Greenhouse Gas Emissions Inventory Data: 2004 GHG emissions by Sector, 2008.*

[8] *CO_2e was developed by the Intergovernmental Panel on Climate Change (IPCC), and published in its Second Assessment Report (SAR) 1996.*

construction activities. HFCs, PFCs, and SF_6 are not byproducts of combustion, the primary source of construction-related GHG emissions, and therefore are not included in the analysis. Construction CH_4 and N_2O values are derived from factors published in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. These values are then converted to metric tons of CO_2e for consistency.

Our understanding of the fundamental processes responsible for global climate change has improved over the past decade, and our predictive capabilities are advancing. However, there remains significant scientific uncertainty, for example, in predictions of local effects of climate change, occurrence of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of the Earth's climate system, the uncertainty surrounding climate change may never be completely eliminated. Because of these uncertainties, there continues to be significant debate as to the extent to which increased concentrations of GHGs have caused or will cause climate change, and with respect to the appropriate actions to limit and/or respond to climate change.

The IPCC, in its Fourth Assessment Report (FAR), stated that "it is likely that there has been significant anthropogenic warming over the past 50 years."[9] However, it is impossible to identify a single development project as the cause of future specific climate change impacts due to the global nature of climate change. Also in the FAR, the IPCC holds that the impacts of future climate change will vary across regions. While "large-scale climate events have the potential to cause very large impacts," the impacts of future climate change will be mixed across regions.

Regulatory Framework

Federal. On May 19, 2009, President Obama announced a new federal policy "aimed at both increasing fuel economy and reducing greenhouse gas pollution for all new cars and trucks sold in the United States." The policy proposes fuel efficiency standards that would apply to model years 2012 through 2016. These standards would be more aggressive than the federal Corporate Average Fuel Economy (CAFE) standards and would result in a reduction of approximately 900 million metric tons of GHG.

State. In response to growing scientific and political concern regarding global climate change, California has recently adopted a series of laws to reduce both the level of GHGs in the atmosphere and to reduce emissions of GHGs from commercial and private activities within the

[9] *Intergovernmental Panel on Climate Change, Fourth Assessment Report, Summary for Policy Makers, 2007.*

State. In September 2002, Governor Gray Davis signed Assembly Bill (AB) 1493, requiring the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. It should be noted that setting emission standards on automobiles is solely the responsibility of the USEPA. The federal Clean Air Act (CAA) allows States to set state-specific emission standards on automobiles if they first obtain a waiver from the USEPA. The USEPA denied California's request for a waiver, thus delaying the CARB's proposed implementation schedule for setting emission standards on automobiles to help reduce GHGs.

In June 2005, Governor Schwarzenegger signed Executive Order S-3-05, which established GHG emissions targets for the state, as well as a process to ensure the targets are met. The order directed the Secretary for California EPA to report every two years on the State's progress toward meeting the Governor's GHG emission reduction targets. As a result of this executive order, the California Climate Action Team (CAT), led by the Secretary of the California EPA, was formed. The CAT is made up of representatives from a number of State agencies and was formed to implement global warming emission reduction programs and reporting on the progress made toward meeting statewide targets established under the Executive Order. State agency members include the Business, Transportation and Housing Agency; Department of Food and Agriculture; Resources Agency; Air Resources Board; California Energy Commission; the Public Utilities Commission; and Department of Water Resources. The CAT published its Climate Action Team Report to Governor Schwarzenegger and the Legislature in March 2006, in which it laid out forty-six specific emission reduction strategies for reducing GHG emissions and reaching the targets established in the executive order.

In September 2006, Governor Arnold Schwarzenegger signed the California Global Warming Solutions Act of 2006, also known as AB 32, into law. AB 32 commits the State to achieving the following:

- A reduction of GHG emissions to 2000 levels by 2010 (which represents an approximately 11 percent reduction from business as usual).
- A reduction of GHG emissions to 1990 levels by 2020 (approximately 30 percent below business as usual).

To achieve these goals, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. The following schedule outlines the CARB actions mandated by AB 32:

- By January 1, 2008, CARB adopts regulations for mandatory (GHG) emissions reporting, defines 1990 emissions baseline for California (including emissions from imported power), and adopts it as the 2020 statewide cap. CARB adopted 427 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) as the total statewide greenhouse gas 1990 emissions level and the 2020 emissions limit in 2007.[10]
- By January 1, 2009, CARB adopts plan to effect GHG reductions from significant sources of GHG via regulations, market mechanisms and other actions.[11] CARB approved the AB32 Scoping Plan in December 2008.
- During 2009, CARB drafts rule language to implement its plan and holds a series of public workshop on each measure (including market mechanisms). CARB has adopted "early action" measures required by the Scoping Plan and has scheduled and is in the process of adopting more than 20 other Scoping Plan measures.
- By January 1, 2010, early action measures will take effect.
- During 2010, CARB, after workshops and public hearings, conducts series of rulemakings to adopt GHG regulations including rules governing market mechanisms.
- By January 1, 2011, CARB completes major rulemakings for reducing GHGs, including market mechanisms. CARB may revise and adopt new rules after January 1, 2011 to achieve the 2020 goal.
- By January 1, 2012, GHG rules and market mechanisms adopted by CARB take effect and become legally enforceable.
- December 31, 2020 is the deadline for achieving 2020 GHG emissions cap.

CARB's list of discrete early action measures that can be adopted and implemented before January 1, 2010 was approved on June 21, 2007, and focuses on major State-wide contributing sources and industries, not on individual development projects or practices. These early action measures are: 1) a low-carbon fuel standard; 2) reduction of refrigerant losses from motor vehicle air conditioning system maintenance; and 3) increased methane capture from landfills. Recently, CARB released emissions inventory estimates for 1990 through 2004.

[10] *CARB Staff Report, California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit, 2007.*

[11] *CARB released the Climate Change Proposed Scoping Plan in October 2008, which details the strategies that the State will use to reduce GHG emissions. The Plan was approved at the Board hearing in December 2008.*

A companion bill to AB 32, Senate Bill (SB) 1368, requires the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) to establish GHG emission performance standards for the generation of electricity. These standards will also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting ARB to meet its mandate under AB 32. On January 25, 2007, the CPUC adopted an interim GHG Emissions Performance Standard (EPS), which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have GHG emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO_2 per megawatt-hour (MW/hr). Further, on May 23, 2007, the CEC adopted regulations that establish and implement an identical EPS of 1,100 pounds of CO_2 per MW/hr (see CEC order No. 07-523-7).

An additional bill related to AB 32, SB 97, requires the California Office of Planning and Research (OPR), by July 1, 2009, to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions, as required by CEQA, including but not limited to, effects associated with transportation or energy consumption. The Resources Agency will then be required to certify and adopt the guidelines by January 1, 2010, and to periodically update the guidelines to incorporate new information or criteria established by the CARB pursuant to AB 32.[12] The OPR released a technical advisory on addressing climate change through CEQA Review on June 19, 2008. This guidance document outlines suggested components to CEQA disclosure: quantification of GHG emissions from a project's construction and operation, determination of significance of the project's impact to climate change, and if the project is found to be significant, the identification of suitable alternatives and mitigation measures.

There has also been California legislative activity acknowledging the relationship between land use planning and transportation sector GHG emissions. California SB 375 (passed Assembly on 8/25/2008; passed Senate on 8/30/2008; signed by the Governor on September 30, 2008) links regional planning for housing and transportation with the greenhouse gas reduction goals outlined in AB 32. Reductions in GHG emissions would be achieved by, for example, locating housing closer to jobs, retail, and transit. Under the bill, each Metropolitan Planning Organization would be required to adopt a sustainable community strategy to encourage compact development so that the region will meet a target, created by CARB, for reducing GHG emissions.

[12] *Senate Bill No. 97, Chapter 185, approved by Governor Schwarzenegger and filed with the Secretary of State, August 24, 2007.*

Local. In January 2007, as part of the County's efforts to help conserve natural resources and protect the environment, the County of Los Angeles Board of Supervisors adopted a comprehensive Countywide Energy and Environmental Policy. The goal of the Policy is to provide guidelines for the development, implementation, and enhancement of energy conservation and environmental programs. The Policy established an Energy and Environmental Team to coordinate the efforts of various County departments, establish a program to integrate sustainable technologies into its Capital Project Program, reduce energy consumption in County facilities by 20 percent by the year 2105, and commit to joining the California Climate Action Registry to assist the County in establishing goals for the reduction of GHG emissions. The County joined the Climate Action Registry in 2007. The Policy consists of the following four program areas designed to promote "green" design and operation of County facilities and to reduce the County's "environmental footprint:"

- energy and water efficiency,
- environmental stewardship,
- public outreach and education, and
- sustainable design.

The energy and water efficiency program area's goal is to reduce energy consumption in County facilities by 2015 through decreasing energy and water waste, implementing energy and water efficiency projects, and educating employees on energy and water conservation. The environmental stewardship program area focuses on measuring and reducing the County's environmental footprint by becoming a member of the California Climate Action Registry and implementing strategies to "green" the County's basic operations. These strategies include looking into environmentally responsible purchasing standards, having recycling bins in County buildings, investigating green cleaning products for custodial operations, and investigating the utilization of existing resources. The public outreach and education program area will augment County communication and outreach to include energy and water conservation practices, utility rates and rate changes, rotating power outage information, emergency power outage information, and energy efficiency incentives. Finally, the sustainable design program area intends to incorporate sustainable and green features into the County's capital improvement and refurbishment projects with the intention of optimizing the performance and extending the useful life of County buildings.

Recognizing the overlap between land use and GHG emissions, the Los Angeles County Board of Supervisors adopted a set of green building program ordinances in November, 2008 that cover low impact development (LID) standards, drought-tolerant landscaping requirements, and green building development standards.

The LID ordinance states: "LID encourages site sustainability and smart growth in a manner that respects and preserves the characteristics of the County's watersheds, drainage paths, water supplies, and natural resources."[13] For developments consisting of four or fewer residential units, at least two LID best management practices (BMPs) must be implemented in the site design. BMPs are "designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint sources of discharges, including stormwater," and include such methods or practices as disconnecting impervious surfaces, using porous pavement, landscaping and irrigation requirements, and a green roof.

The drought-tolerant landscaping ordinance is designed to "help conserve water resources by requiring landscaping that is appropriate to the region's climate and to the nature of a project's use."[14] The ordinance applies to all projects regardless of size, and requires that 75 percent of projects' total landscaped areas contain drought-tolerant plants. The ordinance limits the amount of turf allowed on a project site to 25 percent of the total landscaped area, or 5,000 square feet. All turf within a landscaped area must be water-efficient. In addition, landscaped areas must be organized by "hydrozones in accordance with their respective water, cultural (soil, climate, sun and light), and maintenance requirements."

The green building ordinance is intended to encourage building practices that conserve water, energy and natural resources; divert waste from landfills; minimize impacts to existing infrastructure; and promote a healthier environment.[15] Implementation of this ordinance will reduce energy demand in new buildings, and thus GHG emissions from new projects. For projects having a gross floor area more than 10,000 and less than 25,000 square feet, the ordinance requires that structures be built to new building standards in addition to being designed to meet LEED certification standards. The Green Building Standards are summarized below.

- **Energy Conservation**: Buildings must reduce energy demand by at least 15% below Title 24.
- **Outdoor Water Conservation**: A smart irrigation controller must be installed for any landscaped area of the project.

[13] *Title 12, Chapter 12.84, Low Impact Development Standards, of the Los Angeles County Code. http://planning.lacounty.gov/assets/upl/project/green_20080507-green-building-program-ordinances.pdf*

[14] *Title 21, Chapter 22.52, Part 21, Drought Tolerant Landscaping, of the Los Angeles County Code. http://planning.lacounty.gov/assets/upl/project/green_20080507-green-building-program-ordinances.pdf*

[15] *Title 22, Chapter 22.52, Part 20, Green Building, of the Los Angeles County Code. http://planning.lacounty.gov/assets/upl/project/green_20080507-green-building-program-ordinances.pdf*

- **Resource Conservation**: At least 50 percent of construction waste (by weight) must be recycled.

- **Tree Planting**: A minimum of one 15-gallon trees must be planted and maintained for every 5,000 square feet of developed area. At least 50 percent of the trees must be listed on the drought-tolerant approved plant list.

Since the adoption of the Policy, the County has taken steps to ensure compliance with the goals of the Policy and ultimately, AB 32. In order to meet the 20 percent reduction of energy consumption goal, the County has implemented energy efficient projects in County facilities, specifically retrofitting or replacing building lighting systems and air conditioning equipment. Accordingly, annual electrical consumption in County facilities was reduced by 2.31 percent in 2007 and 3.09 percent in 2008; annual gas consumption was reduced by 1.17 percent in 2007 and 1.83 percent in 2008 (LACDPW 2008). Additionally, the Los Angeles County Recycled Water Task Force accomplished the following milestones towards its goal of recommending and implementing the use of recycled water for non-potable purposes to meet the demands of an additional 1.3 million people:

- Established membership in the Water Reuse Association and the Los Angeles County Recycled Water Advisory Committee.

- Secured Adoption of an ordinance by the Board naming the Director of Public Works or his designee the lead County official on matters related to recycled water.

- Assisted County Waterworks Districts in drafting revised policies and procedures to require its customers to use recycled water for non-potable, outdoor use.

- Participated in efforts to develop recycled water supplies within the Antelope Valley area of Los Angeles County.

- Prepared a draft 5 signature letter from the Board to the Governor requesting that Caltrans be directed to prepare a master plan for converting its irrigation systems to recycled water.

- Established effective working relationships with all recycled water providers within Los Angeles County.

- Assisted the Department of Parks and Recreation in beginning the capital planning process for converting all of their facilities to recycled water for irrigation purposes by the year 2020.

- Facilitated discussions between the Department of Parks and Recreation (DPR) and West Basin Municipal Water District (WBMWD) to enable delivery of recycled water to DPR facilities in WBMWD service area.

- Initiated development of a County-wide strategic plan in cooperation with the Chief Executive Office for converting all County facilities to recycled water for irrigation.

- Facilitated an agreement between the City of Los Angeles Department of Water and Power, the West Basin MWD, the Water Replenishment District, and Public Works to conduct a study of the Department's Modified Fouling Index standard for water delivered to the seawater barriers to potentially increase the amount of recycled water used for barrier injection.

- Developed County positions on bills pending in the California Assembly or Senate, including AB 1481, SB 201, and AB 2270.

The County has also developed, adopted, and implemented tools and policies to support the reduction of GHG emissions, promote “green” development, and provide employees and the public with information and opportunities to reduce their energy consumption. These tools and policies include: the Electronic Products Environmental Assessment Tool, which identifies and certifies environmentally preferable electronic equipment; the green building ordinance, which requires all new private development within the unincorporated areas of the County to incorporate green building elements and will lead to all projects over 10,000 square feet in size to be certified under LEED™ or equivalent standards, and the incorporation of Low Impact Design Standards and drought tolerant landscaping; County-sponsored recycling programs, which have distributed 40,000 paper recycling bins to County employees and require that all County departments purchase paper with a minimum 30 percent recycled content; the Vehicle Purchasing Services Program which provides incentives for County employees, retirees, family members, and contractors/sub-contractors to purchase alternate fuel vehicles; and the Single Use Bag Reduction and Recycling Program which aims to reduce the consumption and disposal of plastic carryout bags in County unincorporated areas and partner cities (LACDPW 2008).

In addition to the achievements discussed above, the County has also committed to achieving several additional goals and standards moving forward. The County has pledged to be a “Cool County” by establishing a GHG footprint, developing a GHG mitigation plan, working with local entities to reduce regional GHG emissions by 80 percent by 2050, and supporting further legislation to raise CAFE standards. The County plans to install energy saving systems on all vending machines on its properties to reduce operating costs and GHG emissions. The County will also develop a program to allow employees to purchase public transportation passes through a "pre-tax" payroll plan and has created a countywide “solar mapping” portal to provide

an internet-based resource for residential and commercial building owners to receive information on the viability of installing rooftop solar projects (LACDPW 2008).

Regional: There is no regional agency responsible for the regulation of GHG emissions related to global climate change. The SCAQMD is the agency principally responsible for comprehensive air pollution control in Basin. Although the SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate factors leading to global climate change or GHG emission issues associated with plans and new development projects throughout the SCAB.

In order to provide GHG emission analysis guidance to the local jurisdictions within the SCAB, the SCAQMD has organized a Working Group to develop GHG emission analysis guidance and thresholds.

SCAQMD released a draft guidance document regarding interim CEQA GHG significance thresholds in October 2008. SCAQMD proposed a tiered approach, whereby the level of detail and refinement needed to determine significance increases with a project's total GHG emissions. SCAQMD also proposed a screening level of 3,000 metric tons per year for commercial or residential projects, under which project impacts are considered "less than significant." The 3,000 metric ton screening level was intended "to achieve the same policy objective of capturing 90 percent of the GHG emissions from new development projects in the residential/commercial sectors."[16] For projects with GHG increases greater than 3,000 metric tons per year, the use of a percent emission reduction target (e.g., 30 percent) was proposed to determine significance. This emission reduction target is a reduction below what is considered "business as usual." SCAQMD also proposes that projects amortize construction emissions over the 30-year lifetime of any given project. Project construction emissions can be amortized by calculating total construction period emissions and dividing by the 30-year lifetime of the project. In December 2008, SCAQMD adopted interim CEQA GHG significance thresholds for use only when SCAQMD is the lead agency on Projects. These thresholds apply to stationary source (industrial) projects only, and include a 10,000 metric ton CO_2e screening level. SCAQMD has not recommended them for use by other lead agencies at this time. As of September 2009, SCAQMD and the Working Group are developing interim CEQA GHG significance thresholds for use in a broader context by other lead agencies.

[16] *SCAQMD, Board Meeting, December 5, 2008, Agenda No. 31, Interim GHG Significance Threshold Proposal – Key Issues/Comments Attachment D.*

Significance Thresholds

Section 15064.7 of the CEQA Guidelines defines a threshold of significance as an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. CEQA gives wide latitude to lead agencies in determining what impacts are significant and does not prescribe thresholds of significance, analytical methodologies, or specific mitigation measures. CEQA leaves the determination of significance to the reasonable discretion of the lead agency and encourages lead agencies to develop and publish thresholds of significance to use in determining the significance of environmental effects. However, neither the County of Los Angeles nor the SCAQMD (for projects where SCAQMD is not the lead agency) have yet established specific quantitative significance thresholds for GHG emissions. The regulations required to meet the State goals under AB 32 are still under development. Furthermore, pursuant to SB 97, guidelines to be prepared by OPR for addressing greenhouse gas emissions under CEQA may not be adopted until January 1, 2010. Additionally, OPR released preliminary draft CEQA guideline amendments for GHG emissions in January 2009. OPR does not identify a threshold of significance for GHG emissions, nor has it prescribed assessment methodologies or specific mitigation measures. The preliminary draft amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations based on substantial evidence. The draft guideline amendments augmented Appendix G of the CEQA Guidelines, the environmental checklist form, to include a section on greenhouse gas emissions. The draft guideline amendments suggested the following questions:

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

The preliminary draft amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. OPR is required to “prepare, develop, and transmit” the guidelines to the Resources Agency on or before July 1, 2009, for certification and adoption. The draft guidelines were transmitted on April 13, 2009 by OPR to the Natural Resources Agency.

While the OPR has not yet adopted formal significance thresholds, OPR issued a guidance document on June 19, 2008 to provide interim advice to lead agencies regarding the analysis of GHG emissions in environmental documents. The technical advisory suggests three components for CEQA disclosure: quantification of GHG emissions from a project's construction and operation, determination of significance of the project's impact to climate change, and if the project is found to be significant, the identification of suitable alternatives and mitigation measures. The analysis contained herein follows this guidance. CAPCOA released a white paper, entitled CEQA and Climate Change, in January, 2008. The white paper examines various threshold approaches available to air districts and lead agencies for determining whether GHG emissions are significant. One of CAPCOA's proposed approaches in the white paper is a "non-zero" threshold of 900 annual metric tons for residential and office projects. Although not directly applicable, the commercial or residential threshold is considered appropriate for this project, because the fire station serves as a residence for fire department employees during their shifts. In addition, "house side" square footage represents a larger portion of the station than the apparatus bays.

CAPCOA and the State of California's Attorney General recognize that potential GHG impacts are exclusively cumulative in nature. Therefore, CAPCOA recommends that lead agencies require some level of mitigation even for projects that result in GHG emissions that are less than a numeric threshold. Because the County's Energy and Environmental Policy serves to reduce GHG emissions from new projects and existing operations, it is supportive of the goals of AB32 and is consistent with the CAPCOA recommendations. Thus, if a project results in emissions less than the numeric thresholds and implements design strategies consistent with the County of Los Angeles Energy and Environmental Policy, it is considered consistent with the goals of AB32, and is considered to have a less than significant impact with respect to its contribution to the cumulative impact of global climate change.

SCAQMD released a draft guidance document regarding interim CEQA GHG significance thresholds in October 2008. SCAQMD proposed a tiered approach, whereby the level of detail and refinement needed to determine significance increases with a project's total GHG emissions. SCAQMD also proposed a screening level of 3,000 metric tons per year for commercial or residential projects, under which project impacts are considered "less than significant." The 3,000 metric ton screening level was intended "to achieve the same policy objective of capturing 90 percent of the GHG emissions from new development projects in the residential/commercial sectors."[17] For projects with GHG emissions increases greater than 3,000 metric tons per year, the use of a percent emission reduction target (e.g., 30 percent) was proposed to determine significance. This emission reduction target is a reduction below what is

[17] *SCAQMD, Board Meeting, December 5, 2008, Agenda No. 31, Interim GHG Significance Threshold Proposal – Key Issues/Comments Attachment D.*

considered "business as usual." SCAQMD also proposes that projects amortize construction emissions over the 30-year lifetime of any given project. Project construction emissions can be amortized by calculating total construction period emissions and dividing by the 30-year lifetime of the project. In December 2008, SCAQMD adopted interim CEQA GHG significance thresholds for use only when SCAQMD is the lead agency on Projects. These draft thresholds apply to stationary source (industrial) projects only, and include a 10,000 metric ton CO_2e screening level. SCAQMD has not recommended them for use by other lead agencies at this time. As of September 2009, SCAQMD and the Working Group are developing interim CEQA GHG significance thresholds for use in a broader context by other lead agencies.

In October 2008, CARB released a draft guidance document regarding interim CEQA GHG significance thresholds, wherein CARB proposed a tiered approach. CARB also proposed separate performance standards for construction, operational energy efficiency, water use, waste, and transportation, as well as a quantitative significance threshold in metric tons of CO_2e per year. The draft guidance included neither specific performance standards nor numeric significance thresholds for residential or commercial projects. On April 27, 2009, CARB revealed that it had abandoned its development of the proposed interim CEQA GHG significance thresholds in a public meeting; however, as of September 2009 no formal announcement has been publicized on CARB's website or elsewhere.

While it is difficult to predict the specific impact of one project's incremental contribution to the global effects of GHG emissions due to a variety of factors, including the complex and long term nature of such effects and the global scale of climate change, it is possible to quantify a project's incremental increase in GHG emissions for comparison with the numeric threshold proposed in the CAPCOA white paper. The threshold of 900 annual metric tons proposed in the CAPCOA white paper will be utilized for determining significance on a project level, in accordance with Appendix G draft amendments discussed above. The residential threshold is considered appropriate for this project, because the fire station serves as a residence for fire department employees during their shifts. In addition, "house side" square footage represents a larger portion of the station than the apparatus bays. Due to the complex physical, chemical and atmospheric mechanisms involved in global climate change, there is no basis for concluding that the project's very small theoretical emissions increase could actually cause a measurable increase in global GHG emissions necessary to force global climate change. It cannot be determined that the GHG emissions of any single project alone can cause a direct physical change in the environment. It is global emissions in their aggregate that contribute to climate change, not any one source of emissions alone. Therefore, due to the incremental amount of GHG emissions estimated for this project, the lack of any evidence for concluding that the project's GHG emissions could cause any measurable increase in global GHG emissions necessary to force global climate change, and the fact that the project incorporates design features to reduce potential GHG emissions that are consistent with the goals of AB32, the

project is not considered to have a significant impact with respect to global climate change on a project-specific basis. Moreover, there is no non-speculative method for assessing how the project's very small theoretical GHG emissions increase could cause a significant project-specific effect on global climate change.

CAPCOA,[18] the State of California's Attorney General,[19] and OPR[20] recognize that potential GHG impacts are exclusively cumulative in nature. Therefore, CAPCOA recommends that lead agencies require some level of mitigation even for projects that result in GHG emissions that are less than a numeric threshold. Because the County's Energy and Environmental Policy serves to reduce GHG emissions from new projects and existing operations, it is supportive of the goals of AB32 and is consistent with the CAPCOA recommendations. Thus, if a project results in emissions less than the applicable numeric thresholds and implements design and operational strategies consistent with the an applicable GHG reduction policy (County of Los Angeles Energy and Environmental Policy), it is considered to have a less than significant impact with respect to its contribution to the cumulative impact of global climate change. These criteria are consistent with Appendix G draft amendments discussed above.

Methodology

Construction. Construction emissions are calculated using the URBEMIS 2007 model, which is based on OFFROAD2007 model outputs. OFFROAD 2007 is an emissions estimation model developed by CARB to calculate emissions from construction activities. The output values used in this analysis were adjusted to be project-specific, based on usage rates of construction equipment, type of fuel, and construction schedule. These values were then applied to the construction phasing assumptions used in the criteria pollutant analysis to generate GHG emissions values for each construction year (refer to Attachment A). The URBEMIS 2007 model outputs CO_2 emissions only. Therefore, CH_4 and N_2O emissions were estimated based on the emissions ratios for construction and industrial equipment from the *2006 IPCC Guidelines for National Greenhouse Gas Inventories.*

Operation. Mobile source emission calculations associated with operation of the proposed project utilize a projection of trip rate and annual vehicle miles traveled (VMT), which

[18] *CAPCOA, CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, 2008.*

[19] *Office of the Attorney General, Global Warming's Unequal Impacts. http://ag.ca.gov/globalwarming/unequal.php. Accessed October 2009.*

[20] *OPR, Technical Advisory. CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review, 2008.*

is derived from URBEMIS2007 defaults. Mobile source emissions are generated from vehicle traffic traveling to and from the project site, specifically fire trucks and commuter trips. Mobile source calculations also utilize EMFAC2007 and the CCAR GRP, Version 3.1 to generate emission factors for CO_2 and CH_4, and N_2O. It should be noted that greenhouse gas reduction factors from *Alternative Compliance Strategies*, contained in AB 1493, were not applied in the EMFAC2007 software. Therefore, such emissions are likely overstated as emission factors for fleet mixes containing post 2009 vehicles would not emulate reductions that would otherwise go into effect as a result of AB 1493 (if the federal waiver is granted). Should the federal waiver be granted, the State of California will be able to tighten emissions standards for those vehicles sold in the State.

The consumption of fossil fuels to generate electricity and to provide heating and hot water creates GHG emissions. Future fuel consumption rates and water demand are estimated based on square footage of the project. Natural gas and electricity usage factors derived from the CEQA Handbook (1993)[21] are used to project fuel consumption rates. Embodied energy rates associated with the proposed project's future water supply needs are calculated using factors derived from the California Energy Commission (CEC). GHG emission factors from the Los Angeles Department of Water and Powers 2007 Annual GHG Emissions Report and the CCAR protocol are then applied to the respective usage rates, to calculate annual greenhouse gas emissions in metric tons. These emission factors do not reflect targeted future reductions in GHG emissions under SB 1368. Thus, these emission factors are considered conservative and representative. Operational impacts also include the operation of a diesel powered 200 Kw emergency generator, which is assumed to operate no more than 200 hours per year.

The CEC estimate for energy intensity of the water use cycle in southern California is used to calculate the energy usage related to water conveyance. Emission factors from the CCAR GRP, Version 3.1 are implemented in calculating the associated GHGs. Because water conveyance associated with the proposed project is regional in nature, the emission factors used in this component of the analysis represent a State-wide average of known power producing facilities, utilizing various technologies and emission control strategies.

GHG Emission Impacts

Project-level

Construction. Construction of the proposed fire station will last up to approximately 12 months and is anticipated to begin in the first half of 2010. Emissions were calculated from fossil fuel powered on-site construction equipment and off-site vehicles used to transport

[21] *South Coast Air Quality Management District, California Environmental Quality Act Handbook, 1993.*

construction workers and supplies. The first phase, mass site grading, is assumed to require one month and utilize the following typical equipment: graders, rollers, water truck, etc. The second phase, building foundation, is estimated to require one month and utilize the following typical equipment: cement and mortar mixers, concrete/industrial saws, and tractors/loaders/backhoes. The third phase, building construction, is estimated to last eight months and require the following typical equipment: crawler tractors, rough terrain forklifts, tractor/loader backhoes, etc. Finally, the paving phase is estimated to last one month and require such typical equipment as rollers, paving equipment, etc.

Construction of the fire station is projected to emit a total of 200 tons of CO_2e. Results of this analysis are presented in Table B-3 on page B-28. These emissions are less than the 900 annual metric ton threshold proposed by CAPCOA.

The project has committed to diverting seventy-five percent of the non-hazardous construction waste from landfills and either recycled or sent to the appropriate sites for reuse. Diversion of this amount of construction waste represents an improvement above business as usual and exceeds the County's proposed requirements. Construction emissions will be amortized across the 30 year lifetime of the proposed project, as recommended by the SCAQMD, and therefore, significance of construction-related GHG emissions will be discussed in conjunction with operational GHG emissions below.

Operation. The proposed fire station would be approximately 10,600 square feet in size. The fire station would house seven firefighters at full staffing and a total of 14 personnel would be onsite during shift changes. The fire station design includes GHG–reduction measures that have been included in the quantitative analysis, such as improved energy efficiency and reduced water demand. As shown in Table 1, annual GHG emissions resulting from vehicle, electrical, and natural gas usage associated with operation of the proposed fire station was estimated to be a maximum of 123 metric tons CO_2e with implementation of the above listed design features. Including construction emissions, which were amortized over 30 years, total anticipated project emissions (213 metric tons/30 years = 7 metric tons +123 metric tons = 130 metric tons) are substantially lower than the 900 annual metric ton threshold proposed by CAPCOA, which has been selected for the project. Therefore, construction and operational emissions are not expected to result in a significant impact at the project level.

Cumulative

The County has proposed delivering Fire Station 143 using a Design-Bid-Build (DBB) approach, which the County traditionally uses for capital projects. Recent legislation now allows the County the option to use a Design-Build (DB) delivery method. In the DB approach, the

Table B-3

Construction and Operational Greenhouse Gas Emissions

Emission Source	CO_2e (Metric Tons)
Construction (total)	213
2004 Statewide Emissions	479,740,000
Percent	0.00004%
Construction (Amortized)	7
Annual Operations	
On-Road Mobile Sources (vehicles)[a]	29
Electricity	1
Water Conveyance	1
Natural Gas	1
Emergency Generator	28
Fire Trucks	63
Total Annual Operations	123
2004 Statewide Emissions	479,740,000
Percent	0.000026%
Total (Amortized Construction + Total Annual Operations)	130
Less than 900 tons CO_2e annually?	**Yes**
2004 Statewide Emissions	479,740,000
Percent	0.000027%

Source: PCR Services Corporation, 2009.

County prepares Scoping Documents based on the County facility objectives, user needs, and program requirements. The scoping documents are used to select a design-build team to carry out both the design and construction of the project. Design-builder selection is on a "Best Value" basis, which means a value determined by objective criteria related to price, features, functions, life-cycle costs and experience.

The County provides general guidance on County-desired LEED credits to the designers and final LEED credit selection occurs during the design process. The selected designer may change the mix of LEED points from those anticipated by the County. This report is based on the County's experience on similar projects and the expected LEED measures which would be included in the project. The fire station would be constructed to achieve a "Silver" rating from the USGBC's LEED green building program. "Silver" is one of LEED's four levels of certification, which also include "certified," "gold", and "platinum." Each level requires that projects pursue a minimum number of LEED credits beyond the LEED prerequisites. Projects have flexibility with regard to which LEED credits to pursue. The expected project features are listed below:

- **Energy Conservation**: The project will install roofing materials with a high Solar Reflectance Index. The project will also consider integrating non-roof strategies, such as providing shade to paved areas and using paving materials with a high Solar Reflectance Index. By mitigating the heat island effect around the project site, the project will lower its air conditioning demand, and thus its peak energy usage. The project would reduce its energy usage by at least 26 percent below its ASHRE/IESNA 90.1-2004 baseline. This level of energy conservation exceeds the County's proposed requirements.

- **Outdoor Water Conservation**: Landscape irrigation for the project will eliminate the use of potable water by incorporating drought resistant or low-water plants and water-efficient irrigation techniques in addition to the use of recycled water for irrigation, and will include a smart irrigation controller.

- **Resource Conservation**: At least 50 percent of construction waste (by weight) will be recycled.

- **Tree Planting**: The proposed project will plant at least four 15-gallon trees on the project site to comply with the Green Building Ordinance.

In addition, the project will reduce its domestic water demand by at least 20 percent through the use of low-water or high-efficiency fixtures.

Furthermore, the California Office of the Attorney General released a Fact Sheet of various GHG mitigation measures that was updated in December 2008. The proposed project is consistent with the following applicable measures:

Energy Efficiency

- *Design buildings to be energy efficient.* The proposed project has committed to achieving LEED™ Silver Certification and is subject to the County of Los Angeles Green Building Ordinance. Accordingly, the project will achieve at least a 15 percent reduction in energy demand below Title 24, California's Energy Efficiency Standards.

- *Install light colored "cool" roofs and cool pavements.* The project will install roofing materials with a high Solar Reflectance Index. The project will also consider integrating non-roof strategies, such as providing shade to paved areas and using paving materials with a high Solar Reflectance Index.

Water Conservation and Efficiency

- *Create water-efficient landscapes.* Landscaping for the proposed project will incorporating drought resistant or low-water plants, water-efficient irrigation techniques, a smart irrigation controller, and use of recycled water for irrigation.

- *Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.* The proposed project will utilize water-efficient irrigation techniques and a smart irrigation controller.

- *Used reclaimed water for landscape irrigation in new developments and on public property. Install the infrastructure to deliver and use reclaimed water.* The proposed project will use recycled water for irrigation, thereby eliminating the need for potable water for irrigation.

- *Design buildings to be water*-efficient. Install water-efficient fixtures and appliances. The proposed project will install water-efficient and low-water fixtures, and reduce potable water demand by 20 percent.

Solid Waste Measures

- *Reduce and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).* The proposed project will divert 75 percent of construction waste from landfills.

Annual GHG emissions resulting from vehicle, electrical, and natural gas usage associated with operation of the proposed fire station was estimated to be a maximum of 123 metric tons CO_2e with implementation of the above listed design features. This represents an approximately 0.000027 percent increase over existing state-wide GHG emissions.

It should be noted that implementation of the proposed project design features would result in lower GHG emissions as compared to a building constructed in accordance with current applicable building standards. The emissions estimated in Table B-1 are conservatively presented as new emissions and do not represent a net increase over current operations.

Due to the complex physical, chemical and atmospheric mechanisms involved in global climate change, there is no basis for concluding that the project's very small theoretical emissions increase could actually cause a measurable increase in global GHG emissions necessary to influence global climate change. The GHG emissions of the project alone will not likely cause a direct physical change in the environment. It is global emissions in their aggregate that

contribute to climate change, not any one source of emissions alone. Therefore, due to the incremental amount of GHG emissions estimated for this project, the lack of any evidence for concluding that the project's GHG emissions could cause any measurable increase in global GHG emissions necessary to force global climate change, and the fact that the project incorporates design features to reduce potential GHG emissions the project is considered not to hinder the goals of AB32. Conventional cumulative air quality analyses consider related projects; this approach is not appropriate because proximity is irrelevant to the transport and accumulation of GHG in the Earth's atmosphere. The County has adopted an Energy Policy, however, which sets the goal of reducing energy consumption in County facilities by 20 percent by the year 2015. The County's suggested measures to facilitate achieving this goal include implementing and monitoring energy and water conservation practices, implementing energy and water efficiency projects, and enhancing employee energy and water conservation awareness through education and promotions. These measures would not hinder AB32 on a cumulative level. As stated above, the project will reduce its baseline energy consumption by 26 percent as part of its LEED certification. Thus, because the project would result in total GHG emissions less than the 900 annual metric ton threshold proposed by CAPCOA and adheres to the County's Energy and Environmental Policy, the project is not considered to have a significant impact on a cumulative level. The GHG emissions associated with the proposed project also fall below the threshold proposed by SCAQMD in October 2008. However, it should be noted that this proposed threshold is applicable to industrial uses and as such, is not directly applicable to the proposed project.

Effects of Global Climate Change on the Project

A substantial change in the global climate is anticipated to result in potential increases, globally, regionally, and/or locally, in the frequency and intensity of forest/wildland fires, rising sea levels and increased flooding, and decreasing water availability. The anticipated impact of each of these on the project is discussed below.

The proposed fire station is to be located within a suburban environment, incorporating fire resistant design and materials, as appropriate. Thus, wildfires are not expected to threaten the fire station directly. There are no heavily forested areas surrounding the project site. However, portions of the fire station's proposed service area abut naturally vegetated landscapes. Even with enforcement of California Public Resources Code 4291, requiring property owners to maintain appropriate firebreaks, structures within the service area of the proposed fire station may become vulnerable to climate change-induced wildfires. However, the location, equipment and staffing of the proposed fire station make it well situated and poised to combat any climate change-induced fires that may occur in its service area. Thus, impacts associated with climate change-induced wildland fires are considered to be minimal.

Climate change-induced flooding may occur from either a permanent rise in sea levels or temporary or seasonal rise in surface water. Valencia is located approximately 30 miles inland from the nearest sea (Pacific Ocean), at an elevation of approximately 1,500 feet above mean sea level (msl). According to the California Climate Change Center's March 2009 draft paper, entitled The Impacts of Sea Level Rise on the California Coast, under medium to medium-high emissions scenarios the "mean sea level along the California coast will rise from 1.0 to 1.4 meters (m) by the year 2100." Thus, it is unlikely that sea rise will directly impact the greater Valencia area. The Hasley Canyon Creek lies approximately 0.25 miles south of the project site and flows southwest, crossing Industry Drive and Commerce Center Drive until it empties into the Castaic Creek. Additional creek tributaries are located approximately 0.5 miles north of the project site. According to Flood Plain Map #06037C0800F, the site is located in a "Zone D," which indicates an area where flood hazards are undetermined, but possible. The site and surrounding area has or will be graded in accordance with County grading regulations and standard engineering practices to ensure that storm water would be directed off-site into the municipal storm drain system and/or natural conveyance features. Therefore, risks to the proposed project from climate change-induced flooding are assumed to be minimal.

Operation of the fire station would create a new nominal water demand for the water provider. Decreased water availability could negatively affect the operation of the proposed fire station. However, potential impacts from climate change-induced water shortages are anticipated to be minimal given the nominal demand for water by the station.

d. Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Certain population groups are especially sensitive to air pollution and should be given special consideration when evaluating potential air quality impacts. These population groups include children, the elderly, persons with pre-existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. As defined in the SCAQMD *CEQA Air Quality Handbook*, a sensitive receptor to air quality is defined as any of the following land use categories: (1) long-term health care facilities; (2) rehabilitation centers; (3) convalescent centers; (4) retirement homes; (5) residences; (6) schools; (7) parks and playgrounds; (8) child care centers; and (9) athletic fields. The nearest sensitive receptors to the project site consist of single-family residential uses approximately 150 feet north/northeast on Gibraltar Road.

As described in Response No. III.b above, construction and operation of the project would not result in any substantial localized or regional air pollution impacts, and therefore would not expose nearby sensitive receptors to substantial pollutant concentrations. In addition, construction activities would comply with SCAQMD Rule 403 regarding the control of fugitive

dust and other specified dust control measures. As such, impacts to off-site sensitive receptors from criteria pollutants would be less than significant and no mitigation measures would be necessary. Due to the relatively short construction duration and low demand for heavy duty diesel construction equipment (e.g., limited earthmoving activities) needed to complete the project, toxic air contaminates (TAC) emissions from construction activities would not result in long-term health risks to existing off-site sensitive populations.

e. Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. Potential sources that may emit odors during construction activities include the use of architectural coatings and solvents. According to the SCAQMD *CEQA Air Quality Handbook*, construction equipment is not a typical source of odors. SCAQMD Rule 1113 limits the amount of volatile organic compounds from architectural coatings and solvents. Via mandatory compliance with SCAQMD Rules, no construction activities or materials are proposed which would create objectionable odors. The nearest sensitive receptors to the site are located at a minimum of 150 feet from the site to the north of Hasley Canyon Road. Given the proximity of the site from the nearest sensitive receptors (150 feet and beyond), construction equipment would not create objectionable odors affecting a substantial number of people.

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The project would not involve elements related to these types of uses. On-site trash receptacles used by the project would be covered and properly maintained to prevent adverse odors. With proper housekeeping practices, trash receptacles would be maintained in a manner that promotes odor control, no adverse odor impacts are anticipated from these types of land uses. In addition, because the amount of fuel stored onsite would be low, no odor impacts are anticipated from the fuel tanks. While there is a potential for odors to occur, compliance with industry standard odor control practices, SCAQMD Rule 402 (Nuisance), and SCAQMD Best Available Control Technology Guidelines would limit potential objectionable odor impacts to a less than significant level.

IV. BIOLOGICAL RESOURCES

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 Game or U.S. Fish and Wildlife Service?

No Impact. The project site is vacant, underdeveloped land that has been previously rough graded in anticipation of a fire station. The project would require minimal fine grading/earthwork to further balance the site. Fine grading would consist of minimal grading to establish pad grade. This would include excavating current fill soils to a maximum depth of approximately five (5) feet in the central portion of the site where the building pad is to be located. Outside of the building pad, excavation will occur at depths ranging from approximately two to five feet to prepare the site for development. Sporadic weedy vegetation exists on the project site. The project site does not include suitable habitat for candidate, sensitive, or special status species. Consequently, project implementation would not have a substantial adverse effect on candidate, sensitive, or special status species. No impact would occur in this regard.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. The project site is vacant, underdeveloped land that has been previously rough graded in anticipation of a fire station. The project site is not located within a significant ecological area (SEA) and no riparian habitat or other sensitive natural communities exist on site. Los Angeles County developed the concept of the SEA in the 1970's in conjunction with adopting the original General Plan for the County, and SEAs are defined and delineated in conjunction with the Land Use and Open Space Elements of the County General Plan. An SEA is a designation in the Los Angeles County General Plan that denotes a particularly important natural area. Therefore, implementation of the project would not result in a substantial adverse effect on riparian habitat or other sensitive natural community.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The project site is vacant, underdeveloped land that has been previously rough graded in anticipation of a fire station. The site does not contain any federally protected wetlands as defined by Section 404 of the Clean Water Act. Therefore, implementation of the project would not result in a substantial adverse effect on federally protected wetlands.

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 nursery sites?

No Impact. The project site is vacant, underdeveloped land that has been previously rough graded in anticipation of a fire station. The project would require minimal fine grading/earthwork to further balance the site. Sporadic weedy vegetation exists on the project site. The site is void of any habitat or vegetation that would support a wildlife corridor or native wildlife nursery site. Surrounding land uses for the project site consist of single-family residential and industrial uses. Due to the urbanized nature of the project area, the potential for native resident or migratory wildlife species movement through the site is very low. Accordingly, the project would not substantially interfere with the movement of native resident or migratory fish or wildlife species or use of wildlife nursery site. Thus, no impacts would occur in this regard.

e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?

No Impact. The project site is vacant, underdeveloped land that has been previously rough graded in anticipation of a fire station and contains no on-site vegetation. Thus, no locally protected biological resources exist on the project site. Therefore, the project would not conflict with local policies or ordinances protecting biological resources and no impacts would occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. As discussed above, the site is not located within a SEA. Additionally, there is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other

approved local, regional, or state habitat conservation plan in place for the project site. Therefore, implementation of the project would not conflict with any habitat conservation plans, and no impacts would occur in this regard.

V. CULTURAL RESOURCES

Would the project:

a) Cause a substantial adverse change in significance of a historical resource as defined in State CEQA §15064.5?

No Impact. A historical resource is defined in Section 15064.5(a)(3) of the CEQA Guidelines as any object, building, structure, site, area, place, record, or manuscript determined to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Historical resources are further defined as being associated with significant events, important persons, or distinctive characteristics of a type, period or method of construction; representing the work of an important creative individual; or possessing high artistic values. The site does not contain any historical resources as defined by the CEQA Guidelines. There are no extant buildings, structures, objects, or sites with any historical associations or significance necessary for California Register eligibility.

The project would require minimal fine grading/earthwork to further balance the site. Fine grading would consist of minimal grading to establish pad grade. This would include excavating current fill soils to a maximum depth of approximately five (5) feet in the central portion of the site where the building pad is to be located. Outside of the building pad, excavation will occur at depths ranging from approximately two to five feet to prepare the site for development. The depth of the compacted fill materials is relatively uniform across the site at a depth of approximately 26 feet.[22] Thus, no undisturbed native soils would be excavated as part of the project excavation/grading and construction activities.

Since the project site does not contain any known historic resources and grading to be performed as part of the project would involve excavation of engineered fill soils, no impacts to historic resources would occur with project implementation.

[22] *Geotechnical Report and Fine Grade Plan Review for Fire Station 143 ("Geotechnical Report"), prepared by RTF&A, dated February 11, 2009.*

b) Cause a substantial adverse change in significance of an archaeological resource pursuant to §15064.5?

Less Than Significant Impact. The project site is currently vacant and has been rough graded in accordance with prior permits and approvals. As discussed in Response No. V.a, undisturbed native soils are not anticipated to be encountered during project grading/excavation activities; thus, archaeological resources are not likely to be encountered. Although no archeological resources are likely to be encountered in the unlikely event that an archaeological resource is discovered during grading activities, work in the area would cease and deposits would be treated in accordance with Federal, State, and local guidelines including those set forth in California Public Resources Code Section 21083.2. In addition, if it is determined that an archaeological site is a historical resource, the provisions of Section 21084.1 of the Public Resources Code and CEQA Guidelines Section 15064.5 would be implemented. Thus, impacts to archaeological resources would be less than significant.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact. The project site has recently been rough graded in accordance with previous grading permits. As discussed in Response No. V.a, additional grading of the site would be limited to fine grading activities that would only result in the excavation of existing fill materials. No excavation activities in undisturbed native soils are anticipated to occur that could destroy a unique paleontological resource or site or unique geologic feature. In the unlikely event paleontological resources are discovered during project construction, the resources would be treated in accordance with Federal, State, and local guidelines, as appropriate. As a result, project activities are anticipated to result in less than significant impacts to paleontological resources.

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

Less Than Significant Impact. There are no known burial sites located on the project site or in the immediate surrounding vicinity. Therefore, the potential for encountering human remains is minimal. Nonetheless, should human remains be encountered during project construction activities, the remains would be treated in accordance with Section 5097.98 of the Public Resources Code (PRC) and Section 7050.5 of the Health and Safety Code. These regulations require that if human remains are found, the Los Angeles County Coroner must be notified within 24 hours of the discovery. If the coroner determines that the remains are not recent, the coroner would notify the Native American Heritage Commission (NAHC) in Sacramento to determine the most likely descendent for the area. The designated Native American representative would then determine in consultation with the property owner the

disposition of the human remains. Thus, impacts to human remains would be less than significant.

VI. GEOLOGY AND SOILS.

The following analysis is based on the *Geotechnical Report and Fine Grade Plan Review for Fire Station 143 (*"Geotechnical Report*")*, prepared by RTF&A, dated February 11, 2009. The Geotechnical Report is included as Appendix C of this document.

Would the project:

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 State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact. The project site is not located in an active or potentially active fault zone, Seismic Hazard Zone, or Alquist-Priolo Earthquake Fault Zone as mapped by the California Geological Survey (State of California Seismic Hazards Zones Map). As such no impacts would occur in this regard.

ii) Strong seismic ground shaking?

Less Than Significant Impact With Mitigation Incorporated. Although the project site is not located on an active fault, there are faults in the region capable of seismic activity. Consequently, the project site could be subject to moderate to severe ground shaking in the event of a major earthquake on any of the active faults. This is considered to be a potentially significant impact. The project would be designed and constructed in accordance with applicable seismic design standards in the International Building Code (UBC), California Building Code (CBC), and/or Los Angeles Uniform Building Code, which would ensure that the proposed building would withstand groundshaking associated with the maximum credible earthquake at the project site.[23] In addition, a Geotechnical Report prepared for the project includes site-

[23] *Maximum credible earthquake is the largest earthquake, usually expressed in magnitude, judged to be possible in an area.*

specific design recommendations that address design features such as foundations, floor slab support, soil corrosivity, pavement design, and retaining walls. Implementation of Mitigation Measure GEO-1 would ensure that the site-specific design recommendations included in the Geotechnical Report are incorporated into the project, which would ensure impacts regarding seismic ground shaking are reduced to a less than significant level.

Mitigation Measures

GEO-1 Prior to the issuance of building or grading permits, the County of Los Angeles Department of Public Works shall ensure that the site-specific design recommendations in the Final Geotechnical Report are incorporated into the final project plans/design.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact With Mitigation Incorporated. Liquefaction is a phenomenon where loose, saturated, granular soils lose their inherent shear strength due to excess water pressure that builds up during repeated movement from seismic activity. Factors that contribute to the potential for liquefaction include a low relative density of granular materials, a shallow groundwater table, and a long duration and high acceleration of seismic shaking. Liquefaction usually results in horizontal and vertical movements from lateral spreading of liquefied materials and post-earthquake settlement of liquefied materials. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine-to medium-grained, primarily sandy soil.

Lateral spreading can result in ground cracking and may occur when a site is sloped or is near a free-face and there is a sufficiently continuous liquefiable layer on which the overlying soils can move laterally. Ground settlement may occur during seismic shaking of an area. The settlement can be caused by liquefaction of loose granular soils and by compaction of loose, but not necessarily liquefiable, soils.

The subject site is currently underlain by relatively deep compacted fill soils placed during the 2004 grading operations. The depth of compacted fill is relatively uniform across the subject site and was encountered at a depth of 26 feet within during on-site boring activities in 2006. The on- site fill soils generally consist of sand and silty sand with some clay. The fill soils are dense and moist. The fills soils are underlain by about 13 feet of alluvium that generally consist of silty sand and sand that is medium dense to dense. The alluvium is underlain by sedimentary rock units of the Saugus Formation.

The State of California Seismic Hazard Map for the Val Verde Quadrangle shows the subject site to be in an area where there is a potential for liquefaction to occur. In addition, the Geotechnical Report states that some sandy soil layers beneath the site may liquefy in the event of a major earthquake on a nearby fault. The site is not considered as being subject to lateral spreading. Some settlement of the ground surface may occur as a result of seismic shaking. This seismically induced settlement (liquefaction and dry settlement) is expected to be less than 1.25 inches, which would not adversely impact the fire station structure.

The liquefaction mitigations already performed at the site consisted of removal of some of the alluvial soils subject to liquefaction and replacing them with compacted fill soils not subject to liquefaction and raising the elevation of the subject site. In addition to the mitigations performed during the grading of the subject site, the Geotechnical Report recommends that structural design requirements be incorporated in the project to reduce damage resulting from seismically induced settlements.

As described above, the project could be subject to seismic-related ground failure hazards, including liquefaction. These impacts are considered to be potentially significant. Implementation of Mitigation Measure GEO-1 would ensure that the site-specific design recommendations included in the Geotechnical Report are incorporated into the project, which would reduce impacts regarding seismic-related ground failure to a less than significant level.

Mitigation Measures

Refer to Mitigation Measure GEO-1. No additional mitigation measures are necessary.

iv) Landslides?

Less Than Significant Impact. Landslides tend to occur in loosely consolidated soils, wet soil, and/or rock on sloping terrain. Over-steepened slopes are often prone to collapse when shaken by an earthquake. The project site is characterized by relatively flat topography and as such, is not considered to be subject to hazards associated with landslides. Furthermore, the site is not immediately adjacent to areas susceptible to landslides. As such, less than significant impacts regarding landslides would occur with project implementation.

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

Less Than Significant Impact. Construction activities have the potential to result in minor soil erosion during excavation, grading and soil stockpiling, subsequent siltation, and conveyance of other pollutants into municipal storm drains. However, the site has been rough

graded in accordance with previous grading permits. The project would require minimal fine grading/earthwork to further balance the site. Fine grading would consist of minimal grading to establish pad grade. This would include excavating current fill soils to a maximum depth of approximately five (5) feet in the central portion of the site where the building pad is to be located. Outside of the building pad, excavation will occur at depths ranging from approximately two to five feet to prepare the site for development. The depth of the compacted fill materials is relatively uniform across the site at a depth of approximately 26 feet. A total of approximately 2,600 cubic yards of existing fill soils would be removed from the site as part of the project fine grading.

Project construction would comply with State Water Resources Control Boards' (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Construction Permit, which requires development of and compliance with a Stormwater Pollution Prevention Plan (SWPPP) for projects of one acre or more in size. The SWPPP would include Best Management Practices (BMPs), which are activities, practices, procedures, or devices implemented to avoid, prevent or reduce pollution of the municipal storm drain system and receiving waters. Basic structural construction stormwater BMPs include: construction entrance/exit stabilization, temporary sediment traps/filters, storm drain inlet and outlet protection, and sediment barriers (typically silt fence). Additional BMPs will be designed and installed for the operational phase of the project to comply with the NPDES General Permit and the County of Los Angeles' Standard Urban Stormwater Mitigation Plan (SUSMP) to control runoff from the site. The final selection of BMPs will be completed through coordination with the County of Los Angeles. Thus, impacts regarding topsoil erosion or the loss of topsoil would be less than significant.

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 landslides, lateral spreading, subsidence, liquefaction, or collapse?

Less Than Significant Impact With Mitigation Incorporated. As discussed in Response No. IV.a.iv, less than significant impacts would occur with regards to landslides. In addition, as discussed in Response No. IV.a.ii, potentially significant impacts associated with lateral spreading, subsidence, and liquefaction would be reduced to a less than significant level with implementation of Mitigation Measure GEO-1.

Mitigation Measures

Refer to Mitigation Measure GEO-1. No additional mitigation measures are necessary.

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?

Less Than Significant Impact With Mitigation Incorporated. According to the Geotechnical Report, special considerations for potentially expansive soils are not anticipated to be required for the proposed project. However, fine grading of the site may affect the soil type exposed at final grade upon completion of the fine grading activities. As part of the site-specific design recommendation in the Geotechnical Report, it is recommended that additional testing and classification, relative to potentially expansive soils, be performed at the conclusion of the proposed fine grading operations. Implementation of Mitigation Measure GEO-1 would ensure that the site specific design recommendations in the final Geotechnical Report prepared for the project site are implemented as part of the project. Implementation of Mitigation Measure GEO-1 would ensure that potentially significant impacts regarding expansive soils are reduced to a less than significant level.

Mitigation Measures

Refer to Mitigation Measure GEO-1. No additional mitigation measures are necessary.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The project would not involve the use of septic tanks or alternative wastewater disposal systems. As such, no impact would occur in this regard.

VII. HAZARDS AND HAZARDOUS MATERIALS.

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. Construction of the proposed project would involve the use of potentially hazardous materials such as vehicle fuels, oils, paints, and transmission fluids. Operation of the fire station would involve the use of small quantities of potentially hazardous materials typical of those used at fire stations (i.e., oil and gasoline, cleaning solvents, pesticides for landscaping, etc.) would be used and stored on-site. In addition, the project would include above-ground storage facilities (or tanks) containing 600 gallons of diesel fuel for the emergency

generator, 2,500 gallons of diesel fuel for the on-site apparatus, 500 gallons of unleaded gasoline, and 10 gallons (two 5-gallon containers) of gasoline for yard maintenance equipment. However, all hazardous materials used during construction and operation would be contained, stored, and used in accordance with applicable local, State, and/or Federal regulations and handled in accordance with manufacturer's specifications. In addition, permits to construct and operate the tanks would be obtained from the SCAQMD, as necessary. Therefore, risks associated with the use of these materials would be reduced to 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 into the environment?

Less Than Significant Impact. As discussed in Response to Checklist Question VII.a, above, impacts regarding the project's potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials would be less than significant through compliance with the applicable regulatory requirements. No buildings or structures exist on the project site that could contain hazardous materials. The operation of the fire station would include an above-ground storage facility containing 600 gallons of diesel fuel for the emergency generator, 2,500 gallons of diesel fuel for the on-site apparatus, 500 gallons of unleaded gasoline, and 10 gallons (two 5-gallon containers) of gasoline for yard maintenance equipment. The use and storage of such materials would comply with applicable standards and regulations, and would not pose significant hazards. Furthermore, it is not anticipated that the use of such hazardous materials would create a significant hazard associated with a risk of upset or accident conditions involving the release of hazardous materials during project operations. Thus, less than significant impacts would occur in this regard.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The project site is not within one-quarter mile of an existing or proposed school. Thus, no impacts would occur in this regard.

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

No Impact. The project site is currently a graded lot with no active uses and prior to grading it was vegetated land. No hazardous materials exist on-site, and the site is not included on the Cortese List, which is updated annually by the California Environmental Protection

Agency (Cal-EPA) pursuant to Government Code Section 65962.5. Thus, no impacts would occur in this regard.

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?

No Impact. The project site is not located within an airport land use plan or within two miles of a public airport. The closest airport is Burbank Airport located in the City of Burbank approximately 27 miles southeast of the project site. Thus, no safety hazards to people residing or working in the project area due to a public use airport would occur. No impacts would occur in this regard.

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

No Impact. There are no private airstrips in the vicinity of the project site and the site is not located within a designated airport land use plan. Therefore, the project would not result in airport-related safety hazards for the people residing or working in the area. Thus, no impacts would occur in this regard.

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

No Impact. Development of the fire station would provide for an ongoing improved level of fire protection, emergency medical, and other life safety services to the adjacent communities, and would add to the resources available for other requests for services throughout the department's jurisdiction. The Los Angeles County Fire Department's goal, when areas have transitioned from rural to urbanized areas, is to arrive on the scene of an emergency call within five minutes from the time of dispatch. Fire Station 143 is a strategic part of this goal. As such, Fire Station 143 would be a positive factor to an adopted emergency response plan or emergency evacuation plan. Thus, the project would not physically interfere with an adopted emergency response plan and no impacts would occur in this regard.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less Than Significant Impact. The project site is currently a graded lot and does not contain wildland features. In addition, the site is not located adjacent to any wildland areas. Therefore, development of the project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, and no impacts would occur in this regard.

VIII. HYDROLOGY AND WATER QUALITY

Would the project:

a) Violate any water quality standards or waste discharge requirements?

Less Than Significant Impact. As the project would only require minimal earthwork to balance the site, grading activities for the project would not be expected to affect groundwater. In addition, construction of the project would occur in accordance with the requirements of the NPDES General Construction permit, which requires the preparation and implementation of a SWPPP with BMPs designed to ensure that construction activities do not affect the quality of runoff. In addition, the project will implement County grading permit regulations that include compliance with erosion control measures, including grading and dust control measures. Compliance with the applicable regulatory requirements and County erosion control regulations would ensure that project construction activities result in less than significant short-term construction impacts.

In accordance with NPDES General Permit and County requirements, a SUSMP with BMPs would be prepared for approval by the County and would be implemented throughout the operational life of the project to ensure that project operation would not adversely affect the quality of storm water runoff. Proposed project post-development water quality BMPs would include the installation of fossil filter systems to treat on-site surface water (i.e., from the rear driveway and employee parking areas) prior to entering the storm drain. Likewise, the apparatus bay floor drains would enter a clarifier (i.e. CDS unit) prior to entering the storm drain system. Therefore, the proposed project would not contribute substantial pollutants to the storm water conveyance system and/or downstream receiving water bodies during operation. Thus, less than significant water quality impacts during project operation 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 land uses for which permits have been granted)?

Less Than Significant Impact. The project would develop an existing undeveloped site, but given the size of the site, only 1.07 acres, it would not substantially interfere with groundwater recharge. The project site is located within the water service area of the Santa Clarita Water Division (SCWD) of the Castaic Lake Water Agency (CLWA). While there would be an incremental increase in the amount of water utilized and provided by the water purveyor, the increase in water usage would not substantially deplete groundwater supplies. Furthermore, no on-site water well installation or usage would occur with project implementation. As such, impacts to groundwater 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?

and

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?

Less Than Significant Impact. The project site was previously graded and no natural streamcourses occur on-site. Surface water runoff on-site sheetflows to the south and southeast towards existing drainage facilities located at the southern and southeastern boundary of the project site. The runoff then flows in a westerly direction towards the storm drainage located along the private driveway and fire lane. This drainage pattern would be retained with development of the project and appropriate drainage improvements would be made on-site to contain and direct stormwater flows to the local storm drain system. Since the site would be entirely developed, paved, or landscaped, the potential for erosion or siltation would be minimal. Additionally, project construction would comply with applicable NPDES and County requirements, as discussed above including those regarding preparation of a SWPPP and SUSMP. Therefore, less than significant impacts associated with alterations to existing drainage patterns would occur with project implementation.

e) 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?

Less Than Significant Impact. As discussed under Response VIII.c-d, the drainage pattern of the site would be retained with development of the project and appropriate drainage improvements would be made on-site to contain and direct stormwater flows to the local storm drain system. Given the size of the site, the amount of impervious surfaces under the proposed conditions would not substantially increase the volume of runoff under the proposed conditions. Nonetheless, the local storm drain system has been designed in anticipation of the site being developed and as such would accommodate the increase in stormwater runoff from the site. Therefore, the project would not create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems. Furthermore, project implementation would comply with all applicable water regulations including implementation of SWPPP and a SUSMP to reduce water quality impacts, including minimizing the potential for erosion or siltation on- or off-site, during construction and operation of the project. The SUSMP would include BMPs that are not currently in place for the site and as such, it can be expected that water quality of runoff from the site would improve under the proposed conditions. In conclusion, less than significant impacts would occur in this regard.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. As previously indicated in Responses VI.a and VIII.b, the project would comply with applicable NPDES and County requirements, which include the implementation of BMPs during construction and operation of the project as stipulated within a SWPPP and SUSMP, respectively. Compliance with these regulatory requirements would ensure that the project would not otherwise substantially degrade water quality. Thus, impacts would be less than significant in this regard.

g) Place housing within a 100-year flood plain as mapped on federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. The project does not propose the development of housing within a 100-year flood plain as mapped on a Federal Emergency Management Agency (FEMA).[24] Therefore, no impacts associated with a 100-year flood plain would occur.

[24] *FEMA website. http://msc.fema.gov, flood plain map panel ID #*06037C0800F*, website accessed January 20, 2009.*

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. As indicated above, the project site is not located within a 100-year flood plain. Thus, the project would not place structures within a 100-year flood plain which would impede or redirect flood flows.

i) 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?

No Impact. The site is not located within a dam inundation area as mapped by the California Department of Water Resources. Therefore, no potential for dam inundation exists on-site. Therefore, no impacts would occur in this regard.

j) Inundation by seiche, tsunami, or mudflow?

No Impact. A tsunami is a great sea wave produced by a significant undersea disturbance. Given that the project site is located approximately 40 miles east of the Pacific Ocean, the project site is not susceptible to inundation by a tsunami. Mudflows result from the downslope movement of soil and/or rock under the influence of gravity. While some areas in the project vicinity could be susceptible to mudflows, the relatively flat terrain in the immediate project vicinity is not conducive to sustaining mudflows. A seiche is an oscillation of an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. No water bodies are present in the immediate site vicinity that could result in the project site being affected by a seiche. Therefore, no impacts would occur in these regards

IX. LAND USE AND PLANNING.

Would the project:

a) Physically divide an established community?

No Impact. The project would include the development of a new fire station on a site that has been previously graded. As the surrounding land uses include residential use to the north and northeast, industrial uses to the south and west, and proposed industrial uses to the northwest, development of the site with a fire station would not divide an established community. As such, no impact would occur in this regard.

b) Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The project site is located on a lot designated for industrial use and zoned M-1 1/2DP for heavy manufacturing. The project's proposed fire station would be consistent with the land use designations of the site with approval of a Conditional Use Permit, in compliance with Section 22.40.700 and 22.56 of the County's Code. Overall, the project would be consistent with the applicable land use plans and policies for the site and less than significant impacts would occur in this regard.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. There is no adopted Habitat Conservation Plan or Natural Community Conservation Plan in place for the project site. Therefore, implementation of the project would not conflict with any habitat conservation plans, and no impacts would occur in this regard.

X. MINERAL RESOURCES.

Would the project:

a) Result in the loss or availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. No mineral resources (i.e., oil, sand, gravel, rock) are known to exist on the project site and no mineral extraction activities occur on the site. The project site is not located within a designated mineral extraction area. In addition, the project does not have the capability to result in the loss of availability of a mineral resource. Thus, no impacts to mineral resources 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?

No Impact. Refer to Response X.a.

XI. NOISE

Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact with Mitigation Incorporated. The following analysis evaluates the potential noise impacts at noise-sensitive land uses resulting from construction and operation of the proposed project.

1. Applicable Noise Standards

(a) County of Los Angeles Noise Ordinance

(1) Operational Noise

Chapter 12.08 of the County of Los Angeles Municipal Code (LACMC) provides exterior noise standards and specific noise restrictions and exemptions for noise sources within the unincorporated areas within the county. Section 12.08.390 of the LACMC specifies exterior noise standards of 45 dBA and 50 dBA in a residential zone, for nighttime and daytime hours, respectively. These noise limits are applied to noise sources which last a minimum of 30 minutes in an hour (L_{50}). In the event that the actual measured ambient noise level exceeds the County's standard, the measured ambient noise level becomes the noise standard (LACMC Section 12.08.390.B). In addition, noise from fire engine sirens and the public address systems (used for emergency announcement) is exempt from the County's Exterior Noise Standard as it is necessary for the protection of public safety, per LACMC Section 12.08.570.

(2) Construction Noise

LACMC Chapter 12.08.440 specifies maximum noise level for construction activities at residential structures as follows:

a) Mobile Equipment – Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment:

Period	Maximum Noise Level due to Construction Activities at Single-Family Residential
Daily, except Sundays and legal holidays, 7:00 A.M. to 8:00 P.M.	75 dBA
Daily, 8:00 P.M. to 7:00 A.M. and all day Sunday and legal holidays	60 dBA

b) Stationary Equipment - Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment:

Period	Maximum Noise Level due to Construction Activities at Single-family Residential
Daily, except Sundays and legal holidays, 7:00 A.M. to 8:00 P.M.	60 dBA
Daily, 8:00 P.M. to 7:00 A.M. and all day Sunday and legal holidays	50 dBA

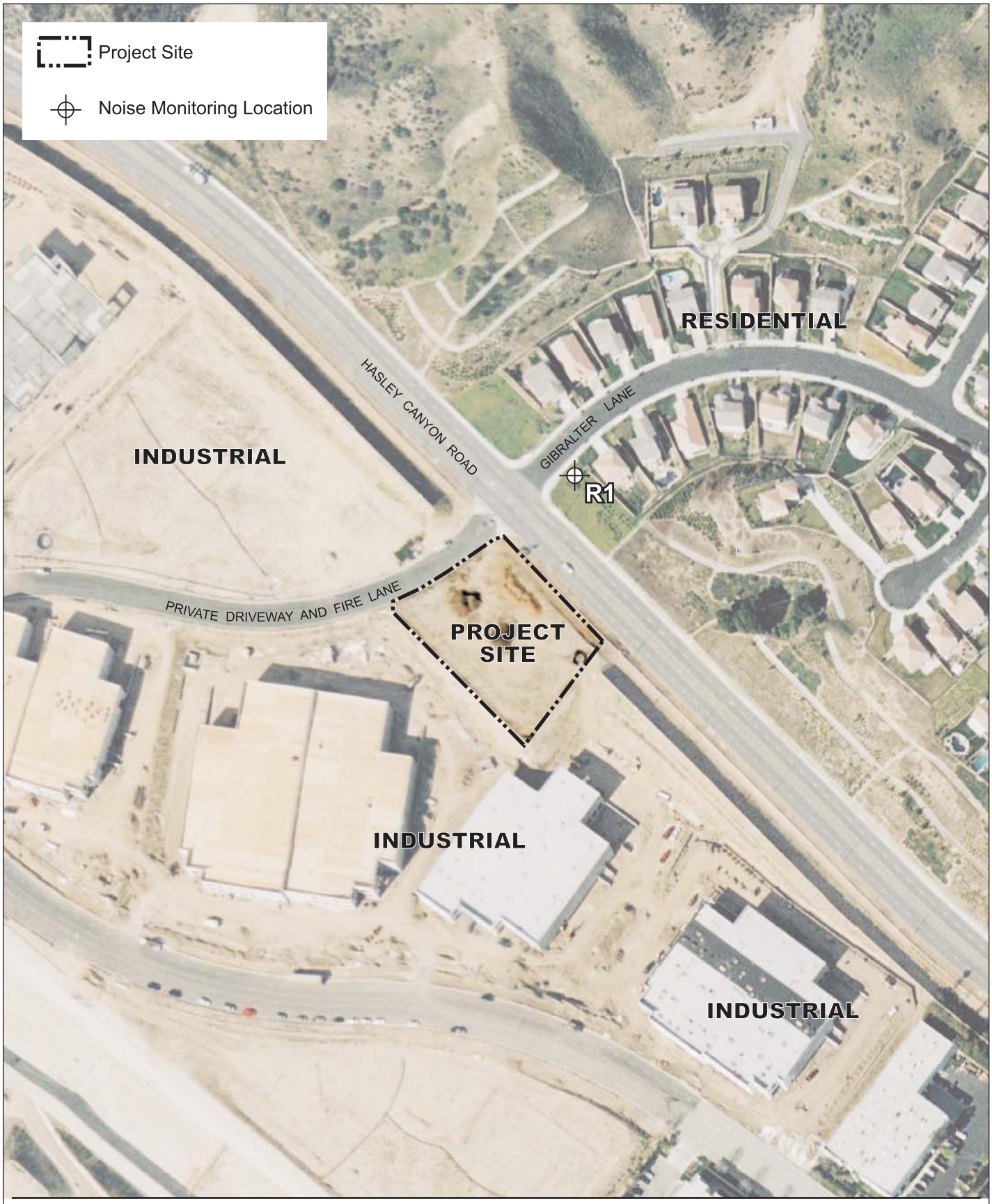
2. Noise Sensitive Receptor Locations

Some land uses are considered more sensitive to intrusive noise than others due to the types of activities typically involved at the receptor location. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, nursing homes, and parks are generally more sensitive to noise than commercial and industrial land uses. Based on site visit by PCR and the distances to the noise sensitive receptors measured, using Google Earth, the closest residential use (identified in this report as R1) to the project site is located approximately 170 feet north/northeast on Gibraltar Road.[25] This is the closest of the single-family residences located north and east of the site across Hasley Canyon Road. Figure B-1 on page B-52 illustrates the RI location. The nearest school location is a Kindercare Learning Center (daycare, pre-school and kindergarten) located approximately 2,700 feet to the southeast along Commerce Center Drive, which, due to its proximity to the site, would not be exposed to project related noise during construction activities or from mechanical equipment operating at the project site.

3. Existing Noise levels

The existing ambient sound levels at the nearest residence on Gibraltar Lane, northeast of the proposed Fire Station were measured on October 27, 2008, between 3 P.M. and 4 P.M to determine if the daytime ambient noise level was higher than 50 dBA, which is the County's daytime exterior noise standard. Existing ambient sound levels in the vicinity of the project site are mostly controlled by the auto traffic on Hasley Canyon Road. The noise measurement was conducted using a Larson Davis Model 820, a Type 1 sound level meter. The sound level meter was mounted on a tripod at a height of 5 feet above the local grade elevation and was set up to record sound level for a fifteen minute interval. The measured sound level at the nearest

[25] *Google Earth, updated as of June 2009. http://earth.google.com/*



PCR

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0 1 2 Miles

Source: Google Earth and PCR Services Corporation, 2009.

Figure B-1
Noise Measurement and Sensitive Receptor Locations

residence was 58 dBA (L_{50}). The existing ambient sound level at the residential community exceeds the County's exterior noise standard of 50 dBA for daytime hours. As such, per LACMC Section 12.08.390.B, since the measured ambient noise level (58 dBA) exceeds the County's 50 dBA noise standard, the measured ambient noise level becomes the daytime noise standard for operation noise. A nighttime noise measurement was not taken since construction and operational noise, other than emergency siren noise, would primarily be limited to daytime hours. Furthermore, it is anticipated that the noise level from the project operation would not exceed the existing nighttime ambient noise level or the nighttime exterior noise standard of 45dBA.

4. Significance Thresholds

The following thresholds of significance were developed to determine project noise impacts during construction and operation periods.

(a) Construction

Utilizing the construction noise thresholds established in LACMC Chapter 12.08.440, noise during construction would have a significant impact if:

- Mobile Equipment - Project on-site mobile equipment exceeds 75 dBA at single-family residential uses daily between the hours of 7:00 A.M. and 8:00 P.M., except Sundays and legal holidays; or exceeds 60 dBA daily between the hours of 8:00 P.M. and 7:00 A.M. and all day Sunday and legal holidays.

- Stationary Equipment - Project on-site stationary equipment exceeds 60 dBA at single-family residential uses daily between the hours of 7:00 A.M. and 8:00 P.M., except Sundays and legal holidays; or exceeds 50 dBA daily between the hours of 8:00 P.M. and 7:00 A.M. and all day Sunday and legal holidays.

(b) Operation

Project related noise would have a significant impact if:

- Project on-site stationary sources exceed 45 dBA during nighttime and 58 dBA during the daytime at any residential use, pursuant to the noise standards set forth in LACMC Section 12.08.390.

5. Construction Impacts

Construction of the proposed fire station is anticipated to commence in the first half of 2010 and last up to approximately 12 months. The first phase, site fine grading, is assumed to require one month and utilize the following typical equipment: graders, rollers, water truck, etc. The second phase, building foundation, was estimated to require one month and utilize the following typical equipment: cement and mortar mixers, concrete/industrial saws, and tractors/loaders/backhoes. The third phase, building construction, was estimated to last eight months and require the following typical equipment: crawler tractors, rough terrain forklifts, tractor/loader backhoes, etc. Finally, the paving phase was estimated to last one month and require such typical equipment as rollers, paving equipment, etc.

The noisiest construction phase would be during the site fine grading period. The period would consist of fine grading/earthwork to further balance the site. As such, the following analyzes construction activities during the fine grading period to assess worst-case noise impacts.

As stated above, typical noise-generating equipment that would likely be used during grading/excavation for final site preparation would include equipment such as graders, rollers, water truck, etc. Maximum noise levels from these individual pieces of equipment range from approximately 79 to 85 dBA at a 50 foot distance, based on measured noise data conducted by the Federal Highway Administration (FHWA Roadway Construction Noise Model User's Guide, 2006). These maximum noise levels would occur when equipment is operating under full power conditions. To more accurately characterize construction noise levels, the average noise level is calculated based on the quantity, type, and usage factors for each type of equipment that would be used. The simultaneous operation of multiple pieces of construction equipment (i.e., excavator, loader, backhoe, haul truck, and water truck) is anticipated to result in a noise level of 89 dBA at a 50 feet distance during fine grading phase.[26] Using the industry standard sound attenuation rate of 6 dBA per doubling of distance for point sources (e.g., construction equipment), the construction noise levels were estimated at the nearest residential receptor. The nearest residential receptor is located approximately 170 feet east of the project site. Based on this distance and assuming the simultaneous operation of construction equipment, it is estimated that noise levels at the nearest residence during construction of the building would be up to approximately 78 dBA, which would exceed the County's noise limit of 75 dBA for mobile equipment uses during daytime hours. Thus, it is anticipated that noise generated during construction of the project would result in a potentially significant noise impact at the nearest residential use.

[26] *L.A. CEQA Thresholds Guide, 2006, Exhibit I.1-2- Outdoor Construction Noise Levels. This table provides typical noise levels for construction phases.*

The estimated noise levels represent a worst case scenario because construction activities are analyzed as if they were occurring along the perimeter of the construction area, whereas construction would typically occur throughout the site and at a further distance. In addition, the noise sensitive receptors that are located further from the construction site would experience less construction noise, as sound diminishes away from the source and due to intervening buildings between the source and receiver. The project would comply with all applicable regulations in the County noise ordinance. In addition, Mitigation Measure NOISE-1 has been prescribed that would provide at least 3 dBA noise reduction.[27] Implementation of Mitigation Measure NOISE-1 would reduce construction noise from 78 dBA to below 75 dBA. As such, noise would not exceed the 75 dBA threshold (per construction noise standards in LACMC Chapter 12.08.440) for mobile equipment. Thus, potentially significant construction noise impacts would be reduced to a less than significant level.

In addition, Mitigation Measures NOISE-2 and NOISE-3 have been prescribed to reduce construction noise levels to the maximum extent practicable. Mitigation Measure NOISE-2 would avoid operating several pieces of heavy equipment simultaneously, which causes higher noise levels. Mitigation Measure NOISE-3 would reduce the noise from engine idling. There would be no construction noise impact during nighttime since construction activities would not occur during nighttime.

In addition to on-site construction noise, haul trucks, delivery trucks, and construction workers would require access to the project site throughout the construction period. Haul trucks, delivery trucks, and construction workers would generally access the site via Hasley Canyon Road. Construction related traffic noise levels on local roadways was calculated using a noise prediction model developed based on calculation methodologies provided in the Caltrans Technical Noise Supplement (TeNS) document.[28] The construction related traffic noise calculation procedures provided in the Caltrans TeNS are consistent with Federal Highway Administration RD-77-108 roadway noise prediction methodologies. This methodology, considered an industry standard, allows for the definition of roadway configurations, barrier information (if any), and receiver locations. The traffic noise prediction model calculates hourly L_{eq}, noise levels based on specific information including; traffic volume, vehicle speed, and distance between the noise receptor and the roadway. Construction traffic would not occur during the noise-sensitive late evening and nighttime hours. It is anticipated that there would be a maximum of approximately 25 haul truck trips per day during fine grading of the site.[29] Based on a 9-hour operation and total number of haul truck trips per day, there would be a maximum of

[27] *Ibid.*

[28] *California Department of Transportation (Caltrans) Technical Noise Supplement (TeNS), 1998.*

[29] *Source: Verbal correspondence with Ken Schumann, P.E. Project Management Division II of the Los Angeles County Department of Public Works, August 19, 2009.*

3 haul truck trips on an hourly basis. It is estimated that the residential uses along Hasley Canyon Road would be exposed to haul truck noise level of 53 dBA L_{eq} over a one hour period. The estimated noise level due to truck movements would be below the existing ambient noise levels of 58 dBA L_{eq} at the residential uses. Therefore, significant noise impacts would not be expected from off-site construction traffic. Also, since the truck noise level of 53 dBA is well below the maximum on-site construction noise level of 75 dBA at the nearest residential use, off-site construction traffic would not increase the overall construction noise levels at the nearest residential use.

Mitigation Measures

NOISE-1 Noise-generating equipment operated at the project site shall be equipped with special noise control devices, i.e., mufflers, lagging, and/or motor enclosures. All equipment shall be routinely tested to ensure proper maintenance and to ensure that no additional noise, due to worn or improperly maintained parts, would be generated.

NOISE-2 Construction activities shall be scheduled so as to avoid operating several pieces of heavy equipment simultaneously. In no cases shall more than four pieces of heavy equipment be operated simultaneously.

NOISE-3 Engine idling from construction equipment such as graders and water trucks shall be limited to no more than five minutes.

6. Operational Impacts

(a) Traffic

Traffic generated from the project site during future operation would be limited to emergency (up to approximately five responses per day) and non-emergency responses including staff and visitor trips (less than 30 trips per day). It is estimated that the change in existing noise level attributed to the project operational traffic would be less than one dBA (a negligible increase) based on a maximum of 30 trips per day. In an outdoor environment, a change of one dBA would not be noticeable. Therefore, no significant noise impact would occur.

(b) Operational Equipment

Noise generating equipment associated with the typical operation of the fire station would include heating, ventilating, and air conditioning (HVAC) equipment (i.e., outdoor condenser fans), an external public address system, an emergency power generator (maximum power of

230 KW) and emergency equipment (sirens). The following provides a discussion of impacts associated with operational equipment at the fire station.

(1) Building HVAC Equipment

The operation of mechanical equipment such as air conditioning equipment and exhaust fans may generate audible noise levels. It is anticipated that roof-mounted equipment would be used and shielded from the public view. A typical outdoor condenser fan of the type anticipated for this project (air conditioning equipment) generates a noise level of approximately 75 dBA at 10 feet. The nearest residential use would be at least approximately 170 feet from the specific location of the HVAC equipment. It is estimated that the HVAC equipment noise level at the nearest residential use would be 41 dBA, which is below the County's limit of 45 dBA for nighttime hours and the 58 dBA daytime threshold. Further, it is acknowledged that the project's mechanical equipment would comply with the County's Noise Ordinance, which establishes maximum permitted noise levels from mechanical equipment.

(2) Public Address System

The fire station would have an outdoor public address (PA) system that would only be used on an intermittent basis during the daytime hours, between 8:00 A.M. to 5:00 P.M., to broadcast emergency calls. According to the fire department, it is estimated that the numbers of emergency calls would be a maximum of approximately five calls per day (24 hours). As such, noise from the PA system would be intermittent and would only occur for a few minutes per day. Furthermore, the PA system volume would be limited to the extent necessary for fire personnel to hear emergency announcements, so as to minimize off-site noise from the PA system. While the use of the PA system would result in noise levels to adjacent sensitive receptors that are expected to be less than 45 dBA under normal operating conditions, as discussed above, the use of the PA system for emergency basis is excluded from the County's Noise Ordinance. Therefore, with compliance to the Fire District policies regarding use of the PA system and the exemption from the County's noise ordinance, noise impacts from PA system are concluded to be less than significant.

(3) Generator

The generator would be located at the southeastern boundary of Fire Station 143 site. The generator would only be used during power outages; however, it would be tested for 30 minutes each week, during daytime hours, to ensure the operational readiness of the generator. The generator technical specification specifies a noise level of 82 dBA at a distance of 10 feet. The estimated generator noise level at the nearest residential use (170 feet north/northeast of the

site) would be 46 dBA, which is below the allowable 58 dBA noise limit for residential uses during daytime hours. The composite noise level from a typical generator anticipated for this project (46 dBA) and the HVAC equipment (41 dBA) at the nearest residential use would be 47 dBA, which is also below the daytime significance threshold of 58 dBA. Therefore, the emergency generator noise level would not pose a significant noise impact.

(4) Emergency Equipment

As part of the operation of the fire station and in compliance with the LA County Fire Department, Vehicle Operations Emergency Vehicle Response Policy (VD-C4-S5), the Fire Department would use discretion when activating the fire engine siren when responding to calls within the surrounding community. Fire Department policy states that intermittent siren use during emergency responses is permissible provided it is operated within at least 300 feet of an intersection where traffic control devices (signal lights, stop signs, etc.) are present. These practices would be implemented when the station is in operation. Fire Station 143 is anticipated to receive a maximum of approximately five emergency calls per day. Sirens would be used as necessary to warn pedestrians and motorists of fire engine trucks. Based on manufacturer's noise data (Federal Signal Corporation, Q2B Electro-Mechanical Siren), the siren would generate noise levels up to 123 dBA at a distance of 10 feet. When used, adjacent residences (150 feet to the north/northeast) to the outgoing fire engines from the fire station may temporarily experience noise levels up to 89 dBA. Such noise conditions would be temporary and intermittent, but are unavoidable with regards to emergency response. However, siren noise used in emergency circumstances is exempt from the County noise ordinance, which was developed to protect the public. Therefore, with compliance to the Fire District policy regarding use of sirens and the exemption of emergency sirens from the County's noise ordinance, impacts from siren noise are concluded to be less than significant.

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

Less Than Significant Impact. Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The peak particle velocity (PPV), in terms of inches/second, is usually used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak of the vibration signal. PPV is typically used for evaluating potential building damage and for evaluating human response. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Man-made vibration issues are therefore usually confined to short distances (i.e., 100 feet or less) from the source.

The construction activities that typically generate the most severe vibrations are blasting and impact pile driving, which are not necessary for the proposed project. The proposed project would be constructed using typical construction techniques. Construction equipment used during grading/excavation for final site preparation such as large bulldozer, graders, rollers, water truck, etc. would generate a limited amount of ground-borne vibration during construction activities at short distances away (i.e., within 100 feet) from the source.

Vibration velocities from the operation of project construction equipment would be up to 0.089 inch per second PPV at 25 feet from the source of activity such as large bulldozer and loaded truck.[30] The nearest off-site residential uses located approximately 170 feet from the project construction area, would be exposed to vibration velocities ranging from approximately 0.005 inches per second PPV. This value is considerably below the 0.5 inches per second PPV significance threshold (for potential residential building damage) and 0.04 inches per second PPV at off-site vibration sensitive receptors.[31] Post-construction on-site activities would be limited to on-site traffic and mechanical equipment (e.g., air handling unit and exhaust fans) that would not generate excessive ground-borne vibration or ground-borne noise, approximately 0.004 inches per second PPV based on the FTA published vibration data.[32] This vibration level is considered well below the perception threshold of 0.04 inches per second PPV. As such, project implementation would not expose any persons, including adjacent residential uses, to excessive ground-borne vibration or noise levels associated with operation the proposed project and 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?

Less Than Significant Impact. The existing noise environment in the project area is dominated by traffic noise along nearby roadways, as well as nearby residential uses to the north/northeast and industrial uses to the south and west and northwest. Long-term operation of the project would not have a significant effect on the community noise environment in proximity to the project site. Noise sources that would have potential noise impacts include: off-site auto traffic, on-site parking, and operational (i.e., air-conditioning, generator, PA system and sirens) equipment. As discussed in Response XI.a, the project would not substantially increase off-site auto traffic volumes, which would not result in an increase of ambient noise levels. Noise levels associated with on-site operations (e.g., parking and operational equipment) are also considered

[30] *Federal Transit Authority, Transit Noise and Vibration Impact Assessment, Final Report, page 7-3, April 1995.*

[31] *Ibid.*

[32] *Ibid.*

less than significant as discussed in Response XI.a. As such, long-term noise impacts would be less than significant.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact with Mitigation Incorporated. The project would result in a temporary increase in ambient noise near the project site during the construction period. Construction noise impacts are discussed in Response XI.a. As described therein, noise generated by on-site construction activities would temporary increase the existing ambient noise in the close vicinity of the project site, but would have a less than significant impact on surrounding sensitive uses with implementation of the prescribed mitigation measure. In addition, as discussed in Response XI.a, noise from operational equipment would not exceed the allowable levels established in the County noise ordinance. Thus, less than significant noise impacts would occur from construction and operation of the fire station.

Mitigation Measures

Refer to Mitigation Measure NOISE-1. No additional mitigation measures are necessary.

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?

No Impact. The project site is not located within an airport land use plan area or within two miles of a public airport or public use airport. Therefore, construction or operation of the project would not expose people to excessive airport related noise levels.

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

No Impact. The project site is not located within the vicinity of a private airstrip, or heliport or helistop. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels from such uses. No impacts would occur in this regard.

XII. POPULATION AND HOUSING

Would the project:

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)?

No Impact. The fire station would employ 14 fire personnel at full staffing. Given the incrementally insignificant population of employees, any residential growth in the area resulting from the new employment opportunities on-site would be inconsequential. Furthermore, the infrastructure improvements part of the project would support on-site uses and would not include major infrastructure that would induce growth. Thus, no impact would occur in this regard.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

and

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact (b-c). The project site is vacant and void of existing housing. As such, the project would not displace substantial numbers of existing housing or people that would necessitate the construction of replacement housing elsewhere. Thus, no impacts in these regards would occur.

XIII. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i) Fire protection?

No Impact. The project would include the development of a fire station to serve the surrounding community. The new fire station would increase response times within the service

area. Further, development of the fire station would not result in physical impacts associated with the provision of new or physically altered governmental facilities. As such, no impacts would occur in this regard. In fact, as the project includes the development of a new fire station, it would result in a beneficial impact regarding fire protection services.

ii) Police protection?

No Impact. The project would include the development of a fire station to serve the surrounding community. The project is not anticipated to place any additional demands on the police protection services in the area. Thus, no impacts to police protection services would occur.

iii) Schools?

No Impact. Development of the project would not generate new students and does not have the capability to increase the demand on the local school system. As such, no impacts to schools would occur.

iv) Parks?

No Impact. The project would not introduce any new population that would create additional demands on existing or planned park facilities. Furthermore, the project would not displace or directly impact any parks or recreational facilities. Thus, no impacts to park facilities would occur.

v) Other public facilities?

No Impact. The project would not introduce any new population and is not anticipated to create an increase in the need for additional government public facilities such as libraries in the area. Thus, no impact would occur in this regard.

XIV. RECREATION

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?

No Impact. The project would not introduce any new population that would create additional demands on existing or planned park facilities. Thus, no impacts to park facilities would occur.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The project would not introduce any new population that would create additional demands on existing or planned park facilities. Nor would the project displace or directly impact any parks or recreational facilities. In addition, no recreational facilities are proposed as part of the project. Thus, no impacts to park facilities would occur.

XV. TRANSPORTATION AND CIRCULATION.

Would the project:

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

Less Than Significant Impact. Construction-related traffic would be dispersed throughout the various phases of construction and would be short-term in nature lasting up to approximately 12 months. Construction traffic includes daily truck trips from on-site construction workers and construction-related vehicles. Construction traffic would include up to approximately 40 total truck trips per day (including haul trips), which would represent a nominal increase in daily traffic beyond existing conditions. Construction traffic, including worker trips, would generally occur outside of peak traffic hours. Regardless, the number of construction-related vehicular trips would not cause a substantial increase to traffic in relation to the existing traffic load and capacity of the street system. As such, construction-related traffic impacts would be less than significant.

Traffic generated from the project site during future operation would be limited to emergency (up to approximately five responses per day) and non-emergency responses including staff and visitor trips (less than 30 trips per day). The small number of trips would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system. As such, operational traffic impacts would be less than significant.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Less Than Significant Impact. As stated above in Response XV.a, traffic generated from the project site during operation would result in less than significant impacts considering the nominal increase in traffic based on the limited number of personnel and episodic nature of emergency responses. Traffic generated during construction would be limited to approximately 40 total truck trips (including haul trips) per day, and is not expected to generate a long-term source of traffic. As these trips would represent a nominal increase in traffic beyond existing conditions and would be temporary throughout the course of the construction activities, they would not cause a substantial increase in traffic. Thus, less than significant impacts would occur in this regard.

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?

No Impact. As the scope of the project is limited to construction of a fire station, it would not result in the disruption or change of air traffic patterns in the area. Therefore, no impacts regarding air traffic patterns 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)?

Less Than Significant Impact. The project does not include any design features (i.e., sharp turns, dangerous intersections) or propose any uses (e.g., farming equipment) that would create hazardous traffic conditions. Site access and circulation (i.e., turning radii and internal road widths) would be constructed in accordance with County code and standards set forth by the LA County Fire Department to ensure that the project would not substantially increase hazards due to a design feature. Thus, less than significant impacts would occur in this regard.

e) Result in inadequate emergency access?

Less Than Significant Impact. Access to the project site would be provided from two driveways; one driveway located on the private driveway and fire lane for public ingress and egress access and one driveway located on Hasley Canyon Road for staff ingress and egress. Ingress access for the fire engine truck would also be provided from Hasley Canyon Road while egress would be provided via the private driveway and fire lane only. Site access and circulation (i.e., turning radii, internal road widths, and clearance to sky heights) would be constructed in accordance with County code and standards set forth by the LA County Fire Department to ensure that the project provides adequate emergency access. Furthermore, a traffic signal would be installed at the fire station emergency egress driveway on the private driveway and fire lane with station controlled pre-emption during emergency and non-emergency responses. The traffic signal would promote emergency access for emergency vehicles leaving the fire station. Thus, impacts regarding emergency access would be less than significant.

f) Result in inadequate parking capacity?

No Impact. The proposed project would provide ample parking for fire personnel and visitors. A minimum of 14 employee parking spaces, two handicap stalls and two visitor parking stalls would be provided on-site. The proposed parking would accommodate the 14 staff members and visitors to the fire station. On-site parking would also be required to comply with the parking requirements as set forth in the Los Angeles County Code. Thus, no parking impacts would occur with project implementation.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

No Impact. The project site is not currently served by public transportation. In addition, project implementation would not result in an increased need for public transportation as the project is proposing the development of a new fire station. As such, construction and operation of the project would not impact any adopted policies, plans, or programs supporting alternative transportation.

XVI. UTILITIES AND SERVICE SYSTEMS.

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less Than Significant Impact. Wastewater treatment for the project area is provided by the Sanitation Districts of Los Angeles County. Located respectively approximately four miles and seven miles southeast of the project site are two wastewater treatment facilities: the Saugus Wastewater Treatment Plant (SWTP) and the Valencia Wastewater Treatment Plant (VWTP). Both facilities are interconnected through a joint powers agreement that creates the Santa Clarita Valley Joint Sewerage System (SCVJSS). The SCVJSS would service the project site by providing primary, secondary, and tertiary treatment of the wastewater generated on-site. Existing sewer infrastructure within Hasley Canyon Road would convey wastewater to either the SWTP or the VWTP. Given the limited number of personnel on-site (maximum of 14 staff per day), wastewater generated from the site would be cumulatively insignificant. Thus, the proposed project is not anticipated to exceed wastewater treatment requirements of the Regional Water Quality Control Board. Less than significant impacts would occur in this regard.

b) Require 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?

No Impact. The project site is located within the water service area of the SCWD of the CLWA. Wastewater treatment for the project area is provided by the Sanitation Districts of Los Angeles County. As described in Response XVI.a, above the SWTP and VWTP wastewater treatment facilities would treat wastewater from the site. Given the size and scope of the project, which includes a limited number of on-site personnel, the project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. Thus, no impacts would occur in this regard.

c) Require 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?

Less Than Significant Impact. The project site was previously graded in anticipation of a fire station. Surface water runoff on-site sheetflows south and southeastern direction towards existing drainage located at the southern and southeastern boundary of the project site. The

runoff then flows in a westerly direction towards the storm drainage located along the private driveway and fire lane. This drainage pattern would be retained with development of the project and appropriate drainage improvements would be made on-site to contain and direct stormwater flows to the local storm drain system. Project implementation would not require substantial new off-site new storm water drainage facilities or expansion of existing off-site facilities.

Furthermore, it is noted that the project implementation would comply with all applicable NPDES and County requirements, as discussed above including those regarding preparation of a SWPPP and SUSMP to reduce water quality impacts, including minimizing the potential for erosion or siltation on- or off-site, during construction and operation of the project. In conclusion, as the proposed drainage pattern would not be substantially altered when compared to existing conditions and substantial new or expanded storm water facilities would not be necessary with project implementation, less than significant impacts would occur.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact. As previously stated, the project site is located within the water service area of the SCWD of the CLWA. The project site is located on a lot designated for industrial use and zoned M-1 1/2DP for heavy manufacturing. The proposed fire station would be consistent with the land use designation of the site with approval of a Conditional Use Permit, in compliance with Section 22.40.700 and 22.56 of the County Code. As such, the proposed fire station would be consistent with the water demand projections for the site anticipated by SCWD. Given the project would be consistent with the anticipated land use for the project site and the project's nominal increase in overall water demand in SCWD's service area, no new or expanded entitlements would be necessary with project implementation. Thus, less than significant impacts would occur in this regard.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact. Sewer service would be provided to the project site by the Sanitation Districts of Los Angeles County. Given the limited number of personnel on-site (maximum of 14 staff per day), wastewater generated from the site would be cumulatively insignificant. Thus, the proposed project is not anticipated to generate a substantial demand for wastewater infrastructure or to create capacity problems at the treatment plant serving the project site. Therefore, impacts regarding the adequacy of wastewater conveyance and treatment facilities serving the project would be less than significant.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. Although Los Angeles County provides solid waste management services to the project site and unincorporated areas, disposal destinations for solid waste would be at the discretion of the private haulers, who maintain disposal agreements with landfill operators. The County has numerous private haulers to collect residential, industrial and commercial waste that is ultimately disposed of a of the County's 12 operating landfills. Solid waste generated within the Santa Clarita Valley, including the project site, would primarily be disposed at the Chiquita Canyon Landfill, but other open County landfills may also serve the City. The Chiquita Canyon Sanitary Landfill has a maximum daily capacity of 6,000 tons and remaining capacity to accommodate waste until its estimated closure date of 2019. The project's nominal increase in solid waste would be accommodated by the Chiquita Canyon Landfill or another County landfill. Furthermore, the project would incorporate recycling methods to reduce solid waste to the extent feasible. Therefore, impacts to landfills are concluded to be less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. The project would be subject to AB 939 which requires cities and counties to participate in countywide programs and to implement site-specific source reduction, recycling, and reuse programs to reduce their waste streams by 50 percent. The County has an approved list of solid waste haulers for construction, demolition, and commercial waste. These approved haulers are responsible for meeting the requirements of AB 939 (i.e., meeting specific diversion rates, recycling, etc.). As the LA County Fire Department would be required to utilize one of the approved waste haulers, the project would be in compliance with AB 939. Therefore, the proposed project would comply with federal, state, and local statutes and regulations related to solid waste. No impacts would occur in this regard.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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?

Less Than Significant Impact. The preceding analysis in this Initial Study does not reveal any significant unmitigable impacts to the environment that would degrade the quality of the environment. As discussed in Section IV, Biological Resources, the existing site is a previously graded lot and does not support sensitive plant or animal species. No impacts to biological resources would occur with project implementation. In addition, as discussed above in Section V, Cultural Resources, the project site does not contain any historical structures as defined by the CEQA Guidelines and no significant impacts to historic or archaeological resources would occur with project implementation. Further, as the site is an undeveloped, previously graded vacant lot, no examples of the major periods of California history or prehistory occur on the project site. Previous grading did not uncover any cultural artifacts. Based on the analysis contained herein, the project would not substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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. Therefore, impacts would be less than significant.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of an individual 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).

Less Than Significant Impact. The following discusses the cumulative impacts of the project when viewed in connection with the effects of other current projects and probable future projects ("related projects"). The list of related projects was obtained from the County of Los Angeles Department of Regional Planning (DRP) website, Sub-Net GIS database, accessed September 8, 2009 (http://planning.lacounty.gov/subnet). The list of related projects was determined by assessing those projects that may be visible in conjunction with the project site from surrounding roadways or could create construction traffic that would utilize the same roadways during construction as the project (i.e., Hasley Canyon Road and Commerce Center

Drive). None of the listed relates projects have a defined construction start date or schedule. Thus, it is conservatively assumed that construction of the related projects could occur simultaneously with the construction of the proposed fire station.

1. Pending subdivision application submitted by Newhall Land for commercial/industrial uses (square footage of proposed uses not yet defined) on an approximately 392-acre site (Tract No. PM18108) generally located north of the intersection of Commerce Center Drive and Henry Mayo Drive. Submitted to DRP on November 13, 2007.

2. Approved subdivision application submitted by Newhall Land and Farming Company for commercial/industrial uses on an approximately 113-acre site (Tract No. PM26363) generally located southwest of the intersection of Commerce Center Drive and Henry Mayo Drive. Submitted to DRP on January 31, 2007. Square footage of proposed uses to be determined.

3. Approved subdivision application submitted by Palmer Investments for 209 single-family residential units on an approximately 430-acre site (Tract No. TR52584) generally located northeast of the intersection of Hasley Canyon Road and Del Valley Road. Submitted to DRP April 16, 2007.

4. Pending subdivision application submitted by Sterling Gateway for industrial uses on an approximately 117-acre site (Tract No. PM060030) generally located west of the intersection of Witherspoon Parkway and Avenue Penn; and east of Del Valle Road. Submitted to DRP May 1, 2007.

5. Pending subdivision application submitted by Del Valle Land Co., LLC for 109 condominium units on an approximately 134-acre site (Tract No. TR060665) generally located on the north and south sides of Del Valle Road between Hasley Canyon Road and Arroyo Oak Lane. Submitted to DRP February 6, 2007.

6. Pending subdivision application submitted by Sterling Gateway for 19 condominium units on an approximately 95-acre site (Tract No. TR062000) generally located on the east and west sides of Hunstock Street and north of Jackson Street. Submitted to DRP June 12, 2006.

7. Pending subdivision application submitted by Santa Clarita Valley Facilities Fnd. for 58 single-family residential units on an approximately 70-acre site (Tract No.

TR52475) generally located north of Quail Oaks Drive between Sloan Canyon Road and Magic View Place. Submitted to DRP November 12, 2007.

8. Pending subdivision application submitted by Hasley Ranch Estates, LLC. for 82 single-family residential units on an approximately 168-acre site (Tract No. TR066190) generally located south of Hasley Canyon Road between Arroyo Oak Lane and Galloping Court. Submitted to DRP July 17, 2007.

9. Pending subdivision application submitted by Sterling Gateway for 244 single-family residential units and 109 multifamily units on an approximately 114-acre site (Tract No. TR060257) generally located on the north and south sides of Del Valle Road between Arroyo Oak Lane and Hunstock Street. Submitted to DRP May 31, 2006.

Cumulative impacts are less than significant for those issues for which it has been determined that the project would have no impact, since there would be no potential for the project to create a cumulative impact. Environmental issues meeting this criterion include agricultural resources, biological resources, mineral resources, population/housing, public services and recreation.

With regards to geology and soils, cultural resources, hazards and hazardous materials, and hydrology and water quality, impacts regarding these issue areas would be fully mitigated through compliance with existing regulations and implementation of site specific technical analysis or studies (i.e., geology study, hazardous materials assessment, etc.) for each related project (including site specific mitigation for each related project) such that less than significant cumulative impacts would occur with related projects. In other words, impacts with regards to these issue areas would be limited to the project site and would not be increased when viewed in conjunction with the related projects.

Traffic

Of the related projects listed above, only Nos. 2 and 3, which have been approved, potentially could have some overlap in construction with the proposed project. The remaining projects are pending and as such, are anticipated to be constructed after the proposed project. As noted in the analysis of traffic herein, the project would generate a nominal amount of construction-related traffic that would not cause a substantial increase to traffic in relation to the existing traffic load and capacity of the street system when viewed in conjunction with the Related Project Nos. 2 and 3. Traffic generated from the project site during future operation of the fire station would be limited to emergency (up to approximately five responses per day) and

non-emergency responses including staff and visitor trips (less than 30 trips per day). The small number of trips would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system. Given the negligible increase in traffic generated from the project, significant cumulative impacts would not occur with project implementation.

Aesthetics

The project site is located within an existing industrial building park area. The nearest related project is Related Project No. 3 located approximately 0.2 miles northwest of the project site. However, due to intervening development and topography, the potential for simultaneous viewing of the project and Related Project No. 3 is negligible, if any. Nonetheless, even if the fire station were to be visible in conjunction with related project No. 3, due to the size of the site and its location within an existing developed area, no substantial adverse impacts to existing visual resources or views in the surrounding vicinity would occur. Therefore, less than significant cumulative aesthetic impacts would occur.

Land Use and Planning

Implementation of the project and any potential related project could have a cumulative impact relative to consistency with applicable land use plans, policies or regulations. Those related projects that are consistent with applicable land use plans, policies or regulations would not contribute to a cumulative impact. Similarly, those related projects that are dependent on modifications to adopted land use plans would not have cumulative consistency impacts with necessary amendments in place. Notwithstanding, each related project would be subject to discretionary review by the County of Los Angeles in order to address and resolve land use impacts on an individual and cumulative basis. As such, cumulative land use impacts are concluded to be less than significant.

Public Utilities

The project proposes a use on the site that is consistent with the land use designation for the site and as such, would not conflict with any applicable anticipated demand forecasts for the site by the serving utilities. Given the limited number of personnel on-site (maximum of 14 staff per day), the demand for utilities on the site would be minimal. Due to the shared urban infrastructure, the wastewater generation, stormwater discharge and water consumption associated with the project and the related projects could have a cumulative impact. However, during the approval process for each related project, utility system capacity must be demonstrated. As the service providers conduct on-going evaluations to ensure facilities are

adequate to serve the forecasted growth of the community, cumulative impacts on utilities are concluded to be less than significant.

Air Quality

Since the fire station has no control over the timing or sequencing of the related projects, any quantitative analysis to ascertain daily construction emissions that assumes multiple, concurrent construction projects would be highly speculative. With respect to the project's construction-period air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to CAA mandates. In accordance with those strategies, the project would comply with SCAQMD Rule 403 requirements, and implement all feasible mitigation measures. In addition, the project would comply with adopted AQMP emissions control measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects Basin-wide, which would include each of the related projects mentioned above. As such, cumulative impacts to air quality during proposed project construction would less than significant.

The SCAQMD's approach for assessing cumulative impacts related to operations is based on attainment of ambient air quality standards in accordance with the requirements of the CAA and the CCAA. The SCAQMD has developed a comprehensive plan, the 2007 AQMP, which addresses the region's cumulative air quality condition.

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. Because the Basin is currently in nonattainment for ozone, PM_{10} and $PM_{2.5}$, related projects could exceed an air quality standard or contribute to an existing or projected air quality exceedance.

For purposes of the cumulative air quality analysis with respect to CEQA Guidelines Section 15064(h)(3), the project's incremental contribution to cumulative air quality impacts is determined based on compliance with the SCAQMD adopted 2007 AQMP.

The proposed project would not conflict with or obstruct implementation of the applicable air quality plan under the AQMP. A project is deemed inconsistent with air quality plans if it results in population and/or employment growth that exceeds growth estimates in the applicable air quality plan. In turn, the AQMP relies upon growth projections adopted by the SCAG, which in turn, relies upon adopted General Plan growth projections. The project would

result in only minimal employment growth, which would not exceed growth estimates in the AQMP. In addition, the project would comply with all rules and regulations as implemented by the SCAQMD and the CARB. Therefore, it was determined that the project would be consistent with the AQMP. Thus, given the project's consistency with the AQMP, the project's incremental contribution to cumulative air quality effects is not cumulatively considerable, per CEQA Section 15064(h)(3).

With respect to TAC emissions, the project nor any of the related projects appear to include substantial sources of long-term TAC emissions. Pursuant to the law enacted in 1983 by California Assembly Bill 1807 (Tanner, Stats. 1983, ch. 1047), as amended,[33] which directs the CARB to identify substances such as TAC and adopt airborne toxic control measures (ATCMs) to control such substances, the SCAQMD has adopted numerous rules (primarily in Regulation XIV) that specifically address TAC emissions. These SCAQMD rules have resulted in and will continue to result in substantial Basin-wide TAC emissions reductions. As such, cumulative TAC emissions during long-term operations would be less than significant.

As discussed in Section II, Air Quality, the project would have a less than significant impact with respect to its contribution to the cumulative impact of global climate change. As noted therein, conventional cumulative air quality analyses consider related projects; however, this approach is not appropriate because proximity is irrelevant to the transport and accumulation of GHG in the Earth's atmosphere.

Noise

The nearest related project to the project site is Related Project No. 3 located approximately 0.2 miles northwest of the project site. Given the distance of this project to the proposed fire station site and the intervening topography, there would be no cumulative increase in construction or operational noise levels to adjacent sensitive noise receptors. Given the nominal increase in traffic during construction and operation of the project, cumulative traffic noise would be a less-than-significant impact. No related projects are in proximity to the site that would create a cumulative increase regarding on-site noise sources. Overall, the project would result in less than significant cumulative noise impacts.

[33] *Calif. Health and Safety Code §§ 39650 et seq.*

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact. Based on the analysis provided above, implementation of the project would not cause environmental effects that cause substantial direct or indirect adverse effects on human beings. Also, the fire station would be beneficial to human beings as it would provide for increased safety. Thus, less than significant impacts would occur in this regard.

Appendix A
Air Worksheets

PROPOSED FIRE STATION 143

Mitigated Negative Declaration
Appendix A

Air Quality Assessment Files

Provided by PCR Services Corporation

September 2009

A-1 Project Construction Emissions

A-2 SCAQMD Rule 403 (Fugitive Dust) Control Requirements

A-3 Project Operation Emissions

A-4 Greenhouse Gas Emissions

Appendix A-1

- Construction Emissions
  - Regional Construction Emissions
    - URBEMIS2007 Output Files

LAFD 143
URBEMIS Construction Summer

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: V:\AQNOISE DIVISION\Active Projects\LACOFD\143\LAFD143.urb924

Project Name: Firestation 143

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009 TOTALS (lbs/day unmitigated)	2.86	21.95	10.62	0.01	4.82	1.40	5.87	1.01	1.28	1.97	2,113.15
2009 TOTALS (lbs/day mitigated)	2.86	21.95	10.62	0.01	2.74	1.40	3.78	0.57	1.28	1.54	2,113.15
2010 TOTALS (lbs/day unmitigated)	4.55	28.07	15.03	0.00	0.00	1.96	1.96	0.00	1.80	1.80	2,647.80
2010 TOTALS (lbs/day mitigated)	4.55	28.07	15.03	0.00	0.00	1.96	1.96	0.00	1.80	1.80	2,647.80

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.06	0.02	0.05	0.00	0.00	0.00	20.86

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.12	0.16	1.48	0.00	0.24	0.05	146.29

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.18	0.18	1.53	0.00	0.24	0.05	167.15

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

LAFD 143
URBEMIS Construction Summer

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Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 10/1/2009-10/30/2009 Active Days: 22	2.25	19.87	9.48	**0.01**	2.74	1.05	3.78	0.57	0.97	1.54	2,113.15
Mass Grading 10/01/2009-10/31/2009	2.25	19.87	9.48	0.01	2.74	1.05	3.78	0.57	0.97	1.54	2,113.15
Mass Grading Dust	0.00	0.00	0.00	0.00	2.71	0.00	2.71	0.57	0.00	0.57	0.00
Mass Grading Off Road Diesel	1.90	15.69	6.94	0.00	0.00	0.87	0.87	0.00	0.80	0.80	1,517.35
Mass Grading On Road Diesel	0.33	4.12	1.66	0.00	0.02	0.18	0.20	0.01	0.16	0.17	502.51
Mass Grading Worker Trips	0.03	0.05	0.87	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.29
Time Slice 11/2/2009-11/30/2009 Active Days: 21	0.87	5.96	4.16	0.00	0.01	0.46	0.47	0.00	0.42	0.43	674.17
Fine Grading 11/01/2009-11/30/2009	0.87	5.96	4.16	0.00	0.01	0.46	0.47	0.00	0.42	0.43	674.17
Fine Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Off Road Diesel	0.74	4.53	2.73	0.00	0.00	0.40	0.40	0.00	0.36	0.36	412.30
Fine Grading On Road Diesel	0.11	1.38	0.56	0.00	0.01	0.06	0.07	0.00	0.06	0.06	168.57
Fine Grading Worker Trips	0.03	0.05	0.87	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.29
Time Slice 12/1/2009-12/31/2009 Active Days: 23	2.86	21.95	10.62	0.00	0.00	1.40	1.40	0.00	1.28	1.28	2,021.19
Building 12/01/2009-07/31/2010	2.86	21.95	10.62	0.00	0.00	1.40	1.40	0.00	1.28	1.28	2,021.19
Building Off Road Diesel	2.86	21.91	10.43	0.00	0.00	1.39	1.39	0.00	1.28	1.28	1,998.58
Building Vendor Trips	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
Building Worker Trips	0.01	0.01	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.91
Time Slice 1/1/2010-6/30/2010 Active Days: 129	2.69	20.63	10.38	0.00	0.00	1.31	1.31	0.00	1.20	1.20	2,021.19
Building 12/01/2009-07/31/2010	2.69	20.63	10.38	0.00	0.00	1.31	1.31	0.00	1.20	1.20	2,021.19
Building Off Road Diesel	2.68	20.59	10.21	0.00	0.00	1.31	1.31	0.00	1.20	1.20	1,998.58
Building Vendor Trips	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
Building Worker Trips	0.01	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.91
Time Slice 7/1/2010-7/30/2010 Active Days: 22	**4.55**	**28.07**	**15.03**	0.00	0.00	**1.96**	1.96	0.00	**1.80**	1.80	**2,647.80**
Asphalt 07/01/2010-07/31/2010	1.26	7.44	4.61	0.00	0.00	0.65	0.65	0.00	0.60	0.60	623.18
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.22	7.35	4.05	0.00	0.00	0.65	0.65	0.00	0.59	0.59	554.09
Paving On Road Diesel	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.92
Paving Worker Trips	0.02	0.03	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.17
Building 12/01/2009-07/31/2010	2.69	20.63	10.38	0.00	0.00	1.31	1.31	0.00	1.20	1.20	2,021.19
Building Off Road Diesel	2.68	20.59	10.21	0.00	0.00	1.31	1.31	0.00	1.20	1.20	1,998.58
Building Vendor Trips	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
Building Worker Trips	0.01	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.91
Coating 07/01/2010-07/31/2010	0.60	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.43
Architectural Coating	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.43

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 10/1/2009 - 10/31/2009 - Default Mass Site Grading/Excavation Description

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

LAFD 143
URBEMIS Construction Summer

Phase Assumptions

Phase: Fine Grading 11/1/2009 - 11/30/2009 - Default Fine Site Grading/Excavation Description
Total Acres Disturbed: 0
Maximum Daily Acreage Disturbed: 0
Fugitive Dust Level of Detail: Default
  20 lbs per acre-day
On Road Truck Travel (VMT): 39.77
Off-Road Equipment:
1 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day
1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Mass Grading 10/1/2009 - 10/31/2009 - Default Mass Site Grading/Excavation Description
Total Acres Disturbed: 0.97
Maximum Daily Acreage Disturbed: 0.24
Fugitive Dust Level of Detail: Default
  20 lbs per acre-day
On Road Truck Travel (VMT): 118.56
Off-Road Equipment:
1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
1 Other Equipment (190 hp) operating at a 0.62 load factor for 8 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 8 hours per day

Phase: Paving 7/1/2010 - 7/31/2010 - Default Paving Description
Acres to be Paved: 0.1
Off-Road Equipment:
1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 12/1/2009 - 7/31/2010 - Default Building Construction Description
Off-Road Equipment:
1 Crawler Tractors (147 hp) operating at a 0.64 load factor for 8 hours per day
1 Other Equipment (190 hp) operating at a 0.62 load factor for 8 hours per day
1 Rough Terrain Forklifts (93 hp) operating at a 0.6 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 7/1/2010 - 7/31/2010 - Default Architectural Coating Description
Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100
Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50
Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250
Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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LAFD 143
URBEMIS Construction Annual

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: V:\AQNOISE DIVISION\Active Projects\LACOFD\143\LAFD143.urb924

Project Name: Firestation 143

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5	PM2.5	CO2
2009 TOTALS (tons/year unmitigated)	0.07	0.53	0.27	0.00	0.05	0.03	0.09	0.01	0.03	0.04	53.57
2009 TOTALS (tons/year mitigated)	0.07	0.53	0.27	0.00	0.03	0.03	0.06	0.01	0.03	0.04	53.57
Percent Reduction	0.00	0.00	0.00	0.00	43.16	0.00	26.81	42.99	0.00	11.70	0.00
2010 TOTALS (tons/year unmitigated)	0.22	1.64	0.83	0.00	0.00	0.11	0.11	0.00	0.10	0.10	159.49
2010 TOTALS (tons/year mitigated)	0.22	1.64	0.83	0.00	0.00	0.11	0.11	0.00	0.10	0.10	159.49
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.01	0.00	0.01	0.00	0.00	0.00	3.81

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.02	0.03	0.27	0.00	0.04	0.01	25.86

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.03	0.03	0.28	0.00	0.04	0.01	29.67

Appendix A-2

- SCAQMD Rule 403 (Fugitive Dust) Control Requirements

(Adopted May 7, 1976) (Amended November 6, 1992)
(Amended July 9, 1993) (Amended February 14, 1997)
(Amended December 11, 1998)(Amended April 2, 2004)
(Amended June 3, 2005)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

(1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.

(2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.

(3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.

(4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.

(5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

(6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.

(8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.

(10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

(11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.

(13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.

(14) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:

(A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) been paved or otherwise covered by a permanent structure; or

(C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.

(15) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(16) EARTH-MOVING ACTIVITIES means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.

(17) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.

(18) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.

(19) HIGH WIND CONDITIONS means that instantaneous wind speeds exceed 25 miles per hour.

(20) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.

(21) LARGE OPERATIONS means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

meters (5,000 cubic yards) or more three times during the most recent 365-day period.

(22) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.

(23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

(25) PM_{10} means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(26) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.

(28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.

(29) SIMULTANEOUS SAMPLING means the operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(31) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.

(32) TRACK-OUT means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(33) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.

(34) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(35) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(36) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(37) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Requirements

(1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

(A) the dust remains visible in the atmosphere beyond the property line of the emission source; or

(B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.

(2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.

(3) No person shall cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10}.

(B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.

(4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

(5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.

(A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

(B) Pave the surface extending at least 100 feet and at least 20 feet wide.

(C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).

(6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.

(e) Additional Requirements for Large Operations

(1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:

(A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;

(B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;

(C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;

(D) install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;

(E) identify a dust control supervisor that:

(i) is employed by or contracted with the property owner or developer;

(ii) is on the site or available on-site within 30 minutes during working hours;

(iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;

(iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and

(F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

(2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

(f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

(1) The provisions of this Rule shall not apply to:

(A) Dairy farms.

(B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.

(C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.

(I) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.

(J) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and

(ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.

(K) sandblasting operations.

(2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:

(A) When wind gusts exceed 25 miles per hour, provided that:

(i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;

(ii) records are maintained in accordance with subparagraph (e)(1)(C).

(B) To unpaved roads, provided such roads:

(i) are used solely for the maintenance of wind-generating equipment; or

(ii) are unpaved public alleys as defined in Rule 1186; or

(iii) are service roads that meet all of the following criteria:

(a) are less than 50 feet in width at all points along the road;

(b) are within 25 feet of the property line; and

(c) have a traffic volume less than 20 vehicle-trips per day.

(C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.

(3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.

(4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:

(A) Blasting operations which have been permitted by the California Division of Industrial Safety; and

(B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).

(6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.

(7) The provisions of subdivision (e) shall not apply to:

(A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.

(B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.

(C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.

(8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

(h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM_{10} pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	✓ Mix backfill soil with water prior to moving ✓ Dedicate water truck or high capacity hose to backfilling equipment ✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	✓ Follow permit conditions for crushing equipment ✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration ✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	✓ Limit vehicular traffic and disturbances on soils where possible ✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	✓ Grade each project phase separately, timed to coincide with construction phase ✓ Upwind fencing can prevent material movement on site ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes	✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities.	✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	✓ Haul waste material immediately off-site

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure		Guidance
Unpaved roads/parking lots	19-1	Stabilize soils to meet the applicable performance standards; and	✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
	19-2	Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	
Vacant land	20-1	In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES
Earth-moving	(1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice per hour during active operation; OR (3C) Stop all vehicular traffic.
Open storage piles	(1D) Apply water twice per hour; OR (2D) Install temporary coverings.
Paved road track-out	(1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Table 4
(Conservation Management Practices for Confined Animal Facilities)

SOURCE CATEGORY	CONSERVATION MANAGEMENT PRACTICES
Manure Handling **(Only applicable to Commercial Poultry Ranches)**	(1a) Cover manure prior to removing material off-site; AND (1b) Spread the manure before 11:00 AM and when wind conditions are less than 25 miles per hour; AND (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d). (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material.
Feedstock Handling	(2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins.
Disturbed Surfaces	(3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR (3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR (3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface.
Unpaved Roads	(4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR (4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR (4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface.
Equipment Parking Areas	(5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches).

Appendix A-3

- Operation Emissions Inventory
  - Regional Operation Emissions
    - Regional Emission Summary Sheets
    - Stationary Emission Summary Sheets
    - URBEMIS2007 Output Files
  - Tier 1 Analysis
  - Emergency Generator
  - TANKS 4.0.9d Output Files

Fire Station 143

Regional Emission Calculations (lbs/day)

		VOC	NOx	CO	SO2	PM10	PM2.5
Project							
	Mobile (non-fire trucks)	0	0	1	0	0	0
	Area	0	0	0	0	0	0
	Stationary	1	48	10	3	3	3
	Fire Trucks	1	4	2	0	0	0
	Total Project	**2**	**52**	**14**	**3**	**4**	**3**
	SCAQMD Significance Th	55	55	550	150	150	55
	Difference	**(53)**	**(3)**	**(536)**	**(147)**	**(146)**	**(52)**
	Significant?	**No**	**No**	**No**	**No**	**No**	**No**

LACOFD- Fire Station 143

Electricity Usage

Electricity Usage

Land Use	1,000 Sqft	Electricity Usage Rate [a] (kWh\sq.ft\yr)	Total Electricity Usage (KWh\year)	Total Electricity Usage (MWh\Day)	CO	ROC	NOx	PM10	SOx	CO2	CH4	NO2
					Emission Factors (lbs/MWh) [b]							
					0.2	0.01	1.15	0.04	0.12	804.54	0.0067	0.0037
Project												
Fire House/ Station	42.3	10.5	443,657	1.215	0.243	0.012	1.398	0.049	0.146	977.916	0.008	0.004
Total Project			**443,657**	**1.215**	**0.24**	**0.01**	**1.40**	**0.05**	**0.15**	**977.92**	**0.01**	**0.00**
Net Emissions From Electricity Usage					**0.24**	**0.01**	**1.40**	**0.05**	**0.15**	**977.92**	**0.01**	**0.00**

Summary of Stationary Emissions

	CO	ROC	NOx	PM10	SOx	PM2.5
TANK (lbs/day)	0	0.707	0	0	0	0
Backup Diesel Generator (lbs/day)	10.03	0.00	46.56	3.30	3.08	2.94
Total Existing Emissions (lbs/day)	0.00	0.00	0.00	0.00	0.00	0.00
Total Project Emissions (lbs/day)	**0.24**	**0.01**	**1.40**	**0.05**	**0.15**	0.04
Total Project Net Emissions (lbs/day)	**10.28**	**0.72**	**47.96**	**3.35**	**3.22**	**2.98**

[a] Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.
[b] Emission Factors from Table A9-11-B, CEQA Air Quality Handbook, SCAQMD, 1993.

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: V:\AQNOISE DIVISION\Active Projects\LACOFD\143\LAFD143.urb924

Project Name: Firestation 143

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.02	0.01	0.00	0.00	0.00	20.79
Hearth							
Landscape	0.01	0.00	0.04	0.00	0.00	0.00	0.07
Consumer Products	0.05						
Architectural Coatings	0.00						
TOTALS (lbs/day, unmitigated)	0.06	0.02	0.05	0.00	0.00	0.00	20.86

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.12	0.16	1.48	0.00	0.24	0.05	146.29
TOTALS (lbs/day, unmitigated)	0.12	0.16	1.48	0.00	0.24	0.05	146.29

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	0.33	14.00	dwelling units	1.00	14.00	141.44
					14.00	141.44

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.6	1.1	98.7	0.2
Light Truck < 3750 lbs	6.8	2.9	94.2	2.9
Light Truck 3751-5750 lbs	22.8	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.0	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.5	0.0	86.7	13.3
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.3	69.6	30.4	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: V:\AQNOISE DIVISION\Active Projects\LACOFD\143\LAFD143.urb924

Project Name: Firestation 143

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.02	0.01	0.00	0.00	0.00	20.79
Hearth							
Landscaping - No Winter Emissions							
Consumer Products	0.05						
Architectural Coatings	0.00						
TOTALS (lbs/day, unmitigated)	0.05	0.02	0.01	0.00	0.00	0.00	20.79

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.13	0.20	1.42	0.00	0.24	0.05	132.57
TOTALS (lbs/day, unmitigated)	0.13	0.20	1.42	0.00	0.24	0.05	132.57

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	0.33	14.00	dwelling units	1.00	14.00	141.44

10/28/2008 11:50:19 AM

			14.00	141.44

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.6	1.1	98.7	0.2
Light Truck < 3750 lbs	6.8	2.9	94.2	2.9
Light Truck 3751-5750 lbs	22.8	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.0	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.5	0.0	86.7	13.3
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.3	69.6	30.4	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Operational Changes to Defaults

Species	Lbs/Yr	Lbs/Hr	Cancer/Chronic Annual Threshold lbs/yr (50 meters to Sensitive Receptor)	Cancer/Chronic HI	Significant?	Acute Non-cancer Threshold lbs/hr (50 meters to Sensitive	Acute HI	Significant?
Benzene	2.91	0.93	2.99	0.33	No	1.48	0.23	No
Toluene	2.70	0.93	26000.00	0.00	No	37.00	0.01	No
Ethly Benzene	0.47	n/a	173000.00	0.00	No	n/a	n/a	No
Xylene	2.40	0.93	67000.00	0.00	No	22.00	0.02	No
Butane	0.00	0.45974			No		n/a	No
Heptane	0.00	0.45974			No		n/a	No
Hexane	0.90	n/a	607000.00	0.00	No	n/a	n/a	No
Cyclohexane	0.00	0.45974			No	n/a	n/a	No
Methylcyclohexane	0.00	0.45974			No	n/a	n/a	No
Pentane	0.00	0.45974			No	n/a	n/a	No
Naphthalene	0.32	n/a	2.49	0.04	No	n/a	n/a	No
Ethanol	0.00	0.45974			No	n/a	n/a	No
Tertiary amyl methyl ether (ETBE)	0.00	0.45974			No	n/a	n/a	No
Ethyl tert-butyl ether (ETBE)	0.00	0.45974			No	n/a	n/a	No

Total Lbs/Yr VOC	255.26
Total Lbs/Hr VOC	0.93
Working Loss Lbs/Yr	167.00
Breathing Loss Lbs/Yr	89.00
Working Loss Lbs/Hr	0.92
Breathing Loss Lbs/Hr	0.01
Toxic Content of VOCs	0.04
Benzene Content of Toxics	0.70
Benzene Lbs/Yr	2.37
Remaining Constituants Lbs/Yr	2.91
All TACs Lbs/Yr	9.70

Worst-Case Scenario
Back-Up Diesel Generator

Kw	Hours	Hp
200	8	268.2044216

*1 kilowatt hour = 1.341022108 horsepower hours

Pollutant	Emission Factor (lbs/hp-hr)	Emissions (lbs/Hr)	Worst-Case Day
NOx	0.031	8.31433707	46.56028759
CO	0.00668	1.791605536	10.032991
SOx	0.00205	0.549819064	3.07898676
PM10	0.0022	0.590049728	3.304278474
CO2	1.15	308.4350848	1727.236475
PM2.5	0.0022	0.590049728	2.940807842

Source:
http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s03.pdf
Worst Case is based on 8-hr usage with the generator working at 70% of capacity (AP42 Gasoline and Diesel Industrial Engine Source Emission Factors)

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification		
User Identification:	143	
City:	Los Angeles C.O.	
State:	California	
Company:		
Type of Tank:	Horizontal Tank	
Description:	Gasoline	
Tank Dimensions		
Shell Length (ft):		5.00
Diameter (ft):		4.00
Volume (gallons):		500.00
Turnovers:		52.00
Net Throughput(gal/yr):		26,000.00
Is Tank Heated (y/n):	N	
Is Tank Underground (y/n):	N	
Paint Characteristics		
Shell Color/Shade:	White/White	
Shell Condition	Good	
Breather Vent Settings		
Vacuum Settings (psig):		-0.03
Pressure Settings (psig)		0.03

Meterological Data used in Emissions Calculations: Los Angeles C.O., California (Avg Atmospheric Pressure = 14.67 psia)

Liquid Contents of Storage Tank

143 - Horizontal Tank
Los Angeles C.O., California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 9)	Jan	63.80	59.36	68.25	65.99	4.9667	4.5531	5.4100	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Feb	64.91	60.15	69.67	65.99	5.0741	4.6244	5.5584	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Mar	65.68	60.69	70.68	65.99	5.1508	4.6737	5.6662	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Apr	67.37	61.82	72.91	65.99	5.3197	4.7786	5.9088	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	May	68.64	63.30	73.97	65.99	5.4503	4.9185	6.0271	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Jun	70.44	64.85	76.03	65.99	5.6396	5.0681	6.2617	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Jul	72.67	66.46	78.87	65.99	5.8815	5.2281	6.5987	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Aug	72.78	66.93	78.64	65.99	5.8947	5.2755	6.5706	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Sep	71.62	66.36	76.88	65.99	5.7669	5.2179	6.3611	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Oct	69.38	64.44	74.33	65.99	5.5282	5.0281	6.0673	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Nov	65.99	61.40	70.59	65.99	5.1816	4.7398	5.6559	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Dec	63.72	59.31	68.12	65.99	4.9585	4.5490	5.3971	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3

Detail Calculations (AP-42)

143 - Horizontal Tank
Los Angeles C.O., California

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	5.5878	5.6040	6.6796	7.5719	7.8042	8.3680	10.3165	9.7461	8.1407	7.3727	5.9687	5.5212
Vapor Space Volume (cu ft):	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203
Vapor Density (lb/cu ft):	0.0592	0.0604	0.0612	0.0630	0.0644	0.0664	0.0690	0.0691	0.0678	0.0652	0.0615	0.0592
Vapor Space Expansion Factor:	0.1161	0.1273	0.1360	0.1565	0.1541	0.1677	0.1957	0.1847	0.1612	0.1445	0.1251	0.1148
Vented Vapor Saturation Factor:	0.6551	0.6503	0.6468	0.6394	0.6338	0.6259	0.6160	0.6154	0.6206	0.6305	0.6455	0.6555
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203
Tank Diameter (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Effective Diameter (ft):	5.0475	5.0475	5.0475	5.0475	5.0475	5.0475	5.0475	5.0475	5.0475	5.0475	5.0475	5.0475
Vapor Space Outage (ft):	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Tank Shell Length (ft):	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000

Vapor Density												
Vapor Density (lb/cu ft):	0.0592	0.0604	0.0612	0.0630	0.0644	0.0664	0.0690	0.0691	0.0678	0.0652	0.0615	0.0592
Vapor Molecular Weight (lb/lb-mole):	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	4.9667	5.0741	5.1508	5.3197	5.4503	5.6396	5.8815	5.8947	5.7669	5.5282	5.1816	4.9585
Daily Avg. Liquid Surface Temp. (deg. R):	523.4719	524.5773	525.3546	527.0355	528.3058	530.1053	532.3353	532.4545	531.2877	529.0522	525.6649	523.3862
Daily Average Ambient Temp. (deg. F):	58.3000	60.0000	60.6500	63.2500	65.8000	69.7000	74.2500	75.1000	73.6500	69.6500	62.9500	58.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	525.6567	525.6567	525.6567	525.6567	525.6567	525.6567	525.6567	525.6567	525.6567	525.6567	525.6567	525.6567
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	891.5287	1,157.7182	1,523.5305	1,923.2907	2,033.7007	2,095.8856	2,265.6251	2,075.8976	1,682.1655	1,328.0922	1,000.9869	827.7574
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.1161	0.1273	0.1360	0.1565	0.1541	0.1677	0.1957	0.1847	0.1612	0.1445	0.1251	0.1148
Daily Vapor Temperature Range (deg. R):	17.7797	19.0467	19.9960	22.1869	21.3444	22.3604	24.8244	23.4173	21.0391	19.7857	18.3727	17.6201
Daily Vapor Pressure Range (psia):	0.8569	0.9340	0.9924	1.1302	1.1085	1.1936	1.3706	1.2951	1.1432	1.0392	0.9161	0.8481
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	4.9667	5.0741	5.1508	5.3197	5.4503	5.6396	5.8815	5.8947	5.7669	5.5282	5.1816	4.9585
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	4.5531	4.6244	4.6737	4.7786	4.9185	5.0681	5.2281	5.2755	5.2179	5.0281	4.7398	4.5490
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	5.4100	5.5584	5.6662	5.9088	6.0271	6.2617	6.5987	6.5706	6.3611	6.0673	5.6559	5.3971
Daily Avg. Liquid Surface Temp. (deg R):	523.4719	524.5773	525.3546	527.0355	528.3058	530.1053	532.3353	532.4545	531.2877	529.0522	525.6649	523.3862
Daily Min. Liquid Surface Temp. (deg R):	519.0269	519.8157	520.3556	521.4888	522.9697	524.5152	526.1292	526.6001	526.0279	524.1057	521.0717	518.9812
Daily Max. Liquid Surface Temp. (deg R):	527.9168	529.3390	530.3536	532.5822	533.6419	535.6954	538.5414	538.3088	536.5475	533.9986	530.2580	527.7912
Daily Ambient Temp. Range (deg. R):	18.8000	18.8000	17.7000	18.1000	16.2000	17.2000	19.5000	18.8000	18.1000	18.7000	18.9000	19.0000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.6551	0.6503	0.6468	0.6394	0.6338	0.6259	0.6160	0.6154	0.6206	0.6305	0.6455	0.6555
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	4.9667	5.0741	5.1508	5.3197	5.4503	5.6396	5.8815	5.8947	5.7669	5.5282	5.1816	4.9585
Vapor Space Outage (ft):	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Working Losses (lb):	12.7650	13.0411	13.2381	13.6722	14.0078	14.4944	15.1162	15.1500	14.8215	14.2080	13.3173	12.7438
Vapor Molecular Weight (lb/lb-mole):	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	4.9667	5.0741	5.1508	5.3197	5.4503	5.6396	5.8815	5.8947	5.7669	5.5282	5.1816	4.9585
Net Throughput (gal/mo.):	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667
Annual Turnovers:	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000
Turnover Factor:	0.7436	0.7436	0.7436	0.7436	0.7436	0.7436	0.7436	0.7436	0.7436	0.7436	0.7436	0.7436
Tank Diameter (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	18.3529	18.6451	19.9176	21.2441	21.8119	22.8624	25.4326	24.8961	22.9621	21.5807	19.2861	18.2650

Individual Tank Emission Totals

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

143 - Horizontal Tank
Los Angeles C.O., California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Gasoline (RVP 9)	166.58	88.68	255.26

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	143
City:	Los Angeles C.O.
State:	California
Company:	
Type of Tank:	Horizontal Tank
Description:	Diesel

Tank Dimensions

Shell Length (ft):		10.00
Diameter (ft):		4.00
Volume (gallons):		1,000.00
Turnovers:		104.00
Net Throughput(gal/yr):		104,000.00
Is Tank Heated (y/n):	N	
Is Tank Underground (y/n):	N	

Paint Characteristics

Shell Color/Shade:	Gray/Medium
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Los Angeles C.O., California (Avg Atmospheric Pressure = 14.67 psia)

Liquid Contents of Storage Tank

156 - Horizontal Tank
Los Angeles C.O., California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Distillate fuel oil no. 2	Jan	69.11	61.48	76.74	69.05	0.0088	0.0069	0.0110	130.0000			188.00	Option 1: VP60 = .0065 VP70 = .009

Distillate fuel oil no. 2	Feb	71.29	62.39	80.18	69.05	0.0094	0.0071	0.0121	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Mar	73.54	63.10	83.97	69.05	0.0101	0.0073	0.0136	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Apr	76.83	64.42	89.24	69.05	0.0110	0.0076	0.0157	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	May	78.54	65.95	91.14	69.05	0.0116	0.0080	0.0167	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Jun	80.59	67.52	93.67	69.05	0.0122	0.0084	0.0182	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Jul	83.51	69.21	97.80	69.05	0.0134	0.0088	0.0207	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Aug	82.86	69.60	96.13	69.05	0.0131	0.0089	0.0197	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Sep	80.11	68.84	91.37	69.05	0.0120	0.0087	0.0168	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Oct	76.45	66.76	86.13	69.05	0.0109	0.0082	0.0145	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Nov	71.74	63.57	79.91	69.05	0.0095	0.0074	0.0120	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Dec	68.76	61.40	76.12	69.05	0.0087	0.0069	0.0108	130.0000	188.00	Option 1: VP60 = .0065 VP70 = .009

Detail Calculations (AP-42)

128 - Horizontal Tank
Los Angeles C.O., California

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.0269	0.0303	0.0423	0.0533	0.0581	0.0614	0.0755	0.0687	0.0518	0.0420	0.0300	0.0256
Vapor Space Volume (cu ft):	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002
Vapor Space Expansion Factor:	0.0539	0.0633	0.0746	0.0890	0.0901	0.0934	0.1020	0.0944	0.0799	0.0686	0.0577	0.0519
Vented Vapor Saturation Factor:	0.9991	0.9990	0.9989	0.9988	0.9988	0.9987	0.9986	0.9986	0.9987	0.9988	0.9990	0.9991
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406
Tank Diameter (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Effective Diameter (ft):	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383
Vapor Space Outage (ft):	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Tank Shell Length (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0088	0.0094	0.0101	0.0110	0.0116	0.0122	0.0134	0.0131	0.0120	0.0109	0.0095	0.0087
Daily Avg. Liquid Surface Temp. (deg. R):	528.7774	530.9554	533.2065	536.4981	538.2132	540.2632	543.1771	542.5319	539.7787	536.1166	531.4114	528.4348
Daily Average Ambient Temp. (deg. F):	58.3000	60.0000	60.6500	63.2500	65.8000	69.7000	74.2500	75.1000	73.6500	69.6500	62.9500	58.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	528.7167	528.7167	528.7167	528.7167	528.7167	528.7167	528.7167	528.7167	528.7167	528.7167	528.7167	528.7167
Tank Paint Solar Absorptance (Shell):	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800
Daily Total Solar Insulation Factor (Btu/sqft day):	891.5287	1,157.7182	1,523.5305	1,923.2907	2,033.7007	2,095.8856	2,265.6251	2,075.8976	1,682.1655	1,328.0922	1,000.9869	827.7574
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0539	0.0633	0.0746	0.0890	0.0901	0.0934	0.1020	0.0944	0.0799	0.0686	0.0577	0.0519
Daily Vapor Temperature Range (deg. R):	30.5107	35.5790	41.7520	49.6515	50.3857	52.2897	57.1775	53.0611	45.0604	38.7509	32.6668	29.4405
Daily Vapor Pressure Range (psia):	0.0042	0.0050	0.0063	0.0081	0.0087	0.0098	0.0119	0.0108	0.0081	0.0063	0.0046	0.0040

Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0088	0.0094	0.0101	0.0110	0.0116	0.0122	0.0134	0.0131	0.0120	0.0109	0.0095	0.0087
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0069	0.0071	0.0073	0.0076	0.0080	0.0084	0.0088	0.0089	0.0087	0.0082	0.0074	0.0069
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0110	0.0121	0.0136	0.0157	0.0167	0.0182	0.0207	0.0197	0.0168	0.0145	0.0120	0.0108
Daily Avg. Liquid Surface Temp. (deg R):	528.7774	530.9554	533.2065	536.4981	538.2132	540.2632	543.1771	542.5319	539.7787	536.1166	531.4114	528.4348
Daily Min. Liquid Surface Temp. (deg R):	521.1497	522.0607	522.7685	524.0852	525.6168	527.1908	528.8827	529.2666	528.5136	526.4289	523.2447	521.0747
Daily Max. Liquid Surface Temp. (deg R):	536.4051	539.8501	543.6445	548.9109	550.8096	553.3356	557.4714	555.7971	551.0438	545.8044	539.5781	535.7950
Daily Ambient Temp. Range (deg. R):	18.8000	18.8000	17.7000	18.1000	16.2000	17.2000	19.5000	18.8000	18.1000	18.7000	18.9000	19.0000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9991	0.9990	0.9989	0.9988	0.9988	0.9987	0.9986	0.9986	0.9987	0.9988	0.9990	0.9991
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0088	0.0094	0.0101	0.0110	0.0116	0.0122	0.0134	0.0131	0.0120	0.0109	0.0095	0.0087
Vapor Space Outage (ft):	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Working Losses (lb):	0.1072	0.1146	0.1228	0.1349	0.1412	0.1494	0.1636	0.1605	0.1470	0.1335	0.1163	0.1061
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0088	0.0094	0.0101	0.0110	0.0116	0.0122	0.0134	0.0131	0.0120	0.0109	0.0095	0.0087
Net Throughput (gal/mo.):	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667
Annual Turnovers:	104.0000	104.0000	104.0000	104.0000	104.0000	104.0000	104.0000	104.0000	104.0000	104.0000	104.0000	104.0000
Turnover Factor:	0.4551	0.4551	0.4551	0.4551	0.4551	0.4551	0.4551	0.4551	0.4551	0.4551	0.4551	0.4551
Tank Diameter (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	0.1340	0.1449	0.1651	0.1881	0.1993	0.2108	0.2392	0.2292	0.1989	0.1755	0.1463	0.1317

Individual Tank Emission Totals

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

143 - Horizontal Tank
Los Angeles C.O., California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	1.60	0.57	2.16

Appendix A-4

- Greenhouse Gas Emissions
  - Construction GHG Analysis
  - Operations GHG Analysis

CO_2e[d] (Metric Tons)			
Emission Source	**2009**	**2010**	**Total**
CO_2 Emissions	54	159	213
CH_4 Emissions	0	0	1
N_2O Emissions	0	0	1
CO_2e Emissions	**54**	**160**	**214**
2004 Statewide Total[c]	479,740,000	479,740,000	479,740,000
Net Increase as Percentage of 2004 Statewide Inventory	**0.000011%**	**0.000033%**	**0.000045%**

[a] *Mobile source values were derived using EMFAC2007 in addition to the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008.*

[b] *On site construction equipment values were derived using OFFROAD2007 in addition to the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008.*

Inventory.

[d] *All CO_2E factors were derived using the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008.*

Source: PCR Services Corporation, 2009.

Fire Station 143
Greenhouse Gas Analysis

Emission Source	CO_2E[e] (Metric Tons)
Project	
Construction	214
Construction (amortized)	7
On-road Vehicles[a]	29
Electricity[b]	1
Water Conveyance	1
Natural gas[c]	1
Emergency Generator	28
Fire Trucks	63
Total	**130**
Net Increase	
Total	130
2004 Statewide Total[d]	479,740,000
Net Increase as Percentage of 2004 Statewide Inventory	**0.000027%**

[a] *Mobile source values were derived using EMFAC2007 in addition to the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008.*

[b] *Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993. Water conveyance energy rates from California Energy Commission Staff Report: California's Water - Energy Relationship. 2005*

[c] *Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.*

[d] *Statewide Greenhouse Gas Emissions Inventory: http://www.arb.ca.gov/cc/ccei/emsinv/emsinv.htm*

[e] *All CO2e factors were derived using the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008*

Sources: PCR Services Corporation, 2009.

Electricity

Land Use	1,000 Sqft	Usage Rate [a] (kWh/sq.ft/yr)	(KWh/year)	MWh/year
Project				
Residential (DU)	1.0	4,164	4,164	4
Total Project			**4,164**	**4**
Net Project Electricity Usage			**4,164**	**4**

GHG	lbs/MWh[b]	lbs	metric tons	CO_2E (metric tons)
Existing				
CO_2	724.12	0	0	0
CH_4	0.0302	0	0	0
N_2O	0.0081	0	0	0
Project				**0.00**
CO_2	724.12	3014.953273	1.367558685	1.367558685
CH_4	0.0302	0.125741022	5.70351E-05	0.001197738
N_2O	0.0081	0.033725241	1.52975E-05	0.004742225
Net				**1.37**
CO_2	724.12	3,015	1	1
CH_4	0.0302	0	0.00	0.00
N_2O	0.0081	0	0.00	0
				1

Total Annual CO2e

[a] Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

[b] Electricity Usage Rates from California Energy Commission Staff Report: California's Water - Energy Relationship. 2005

[c] Emission factors for CO_2, CH_4, and N_2O were derived from the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008

Water and Wastewater Generation Factors

			Water			Wastewater		
Land Use	Amount	Units	AF/Year/Unit	MG/Year/Unit	MG/Year	GPD/Unit	MG/Year/Unit	MG/Year
Project								
Residential (DU)	1.0	DU	0.90	0.293	0.3	260	0.095	0.1
Total Project					**0.3**			**0.1**
Net Project					0.3			0.1

1 acre foot = 325851.433266421 gallon [US, liquid]

Water Conveyance (Water and Wastewater)

	Usage Rate [c]			
	MGD	kWh/MG	(KWh/year)	MWh/year
Water Supply, Conveyance, Treatment, and Distribution	0.00	10,200	**2,991**	**3**
Wastewater Treatment	0.00	2,500	**237**	**0**
Net Project Water Power Usage			**3,229**	**3**

GHG	lbs/MWh[b]	lbs	metric tons	CO_2E (metric tons)
Project				
CO_2	724.12	2337.869	1.060438823	1.060438823
CH_4	0.0302	0.097503	4.42264E-05	0.000928755
N_2O	0.0081	0.026151	1.18621E-05	0.003677238
Net				**1.07**
CO_2	724.12	2,338	1	1
CH_4	0.0302	0	0.00	0.00
N_2O	0.0081	0	0.00	0
				1

Total Annual CO2e

[a] Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

[b] Electricity Usage Rates from California Energy Commission Staff Report: California's Water - Energy Relationship. 2005

[c] Emission factors for CO_2, CH_4, and N_2O were derived from the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008

Natural Gas

Land Use	1,000 Sqft	Usage Rate[c] (cu.ft/sq.ft/mo)	Total Natural Gas Usage (cu.ft/mo)	Total Natural Gas Usage (cu.ft/year)	Total Natural Gas Usage (MMBTU/year)
Project					
Residential (DU)	1.0	2,969	2,969	35,622	36
Total Project			**2,969**	**35,622**	**36**
Net Project			**2,969**	**35,622**	**36**

[a] Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.

GHG	Kg/MMBtu[b]	Kg	metric tons	CO_2E (Metric Tons)
Existing				
CO_2	53.06	-	-	-
CH_4	0.001	-	-	-
N_2O	0.0001	-	-	-
Project				**0.00**
CO_2	53.06	1,927.91	0.87	0.87
CH_4	0.001	0.04	0.00	0.00
N_2O	0.0001	0.00	0.00	0.00
Net				**0.88**
CO_2	53.06	1,927.91	0.87	0.87
CH_4	0.001	0.04	0.00	0.00
N_2O	0.0001	0.00	0.00	0.00
				0.88 Total Annual CO2E

[b] Emission factors for CO_2, CH_4, and N_2O were derived from the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008.

On Road Mobile Source

Land Use	Daily VMT	Annual VMT[a]
Project		
Residential (DU)	141	51,626
Total Project	**141**	**51,625.60**
Net Project	**141**	**51,625.60**

[a] Multiplied Daily VMT by 365 to get Annual VMT
[b] Factors dervied from URBEMIS2007

Los Angeles County CO_2 2010 AVG Gram/Mile[c]	**548.0511429**
Los Angeles County CH_4 2010 AVG Gram/Mile[c]	**0.036857143**
Los Angeles County N_2O 2010 AVG Gram/Mile[d]	**0.05**

GHG	Gram/Mile	Grams	metric tons	CO_2E (Metric Tons)
Existing				
CO_2	548.0511429	-	-	-
CH_4	0.036857143	-	-	-
N_2O	0.05	-	-	-
Project				**-**
CO_2	548.05	28,293,469	28.29	28.2934691
CH_4	0.04	1,903	0.00	0.0399582
N_2O	0.05	2,581	0.00	0.8001968
Net				**29.1336241**
CO_2	548.05	28,293,469	28	28.2934691
CH_4	0.04	1,903	0	0.0399582
N_2O	0.05	2,581	0	0.8001968
				29.1 **Total Annual CO2E**

[c] Averaged EMFAC2007 fleet values for 0-65mph
[d] Emission factors for CH_4 and N_2O were derived from the California Climate Action Registry General Reporting Protocol; Version 2.2, March 2007

EMFAC2007 Summary

CO2	
Speed	**Grams/Mile**
0	341.823
5	1199.387
10	913.689
15	722.176
20	592.927
25	508.8
30	452.079
35	415.42
40	394.465
45	386.902
50	391.989
55	410.409
60	444.405
65	498.245
AVG	**548.0511429**

Pollutant Name: Carbon Dioxide **Temperature: 60F Relative Humidity: 50**

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	941.697	5140.81	0	0	341.823
5	952.132	1182.76	1712.78	2870.59	2748.56	242.056	1199.387
10	719.611	894.25	1264.503	2392.58	2543.5	204.646	913.689
15	564.5	701.79	975.625	2023.01	2422.4	176.886	722.176
20	459.611	571.646	785.559	1763.67	2348.67	156.274	592.927
25	388.394	483.279	659.251	1662.8	2302.85	141.125	508.8
30	340.644	424.032	575.973	1583.89	2274.3	130.317	452.079
35	310.077	386.104	523.371	1523.34	2257.12	123.131	415.42
40	292.934	364.834	494.255	1479.18	2248.08	119.164	394.465
45	287.21	357.731	484.87	1450.45	2245.58	118.287	386.902
50	292.25	363.985	494.056	1436.88	2249.21	120.646	391.989
55	308.63	384.309	522.993	1438.86	2259.57	126.72	410.409
60	338.263	421.077	575.47	1457.5	2278.51	137.426	444.405
65	384.777	478.792	658.754	1495.01	2309.66	154.339	498.245

CH4	
Speed	**Grams/Mile**
0	0.039
5	0.088
10	0.065
15	0.05
20	0.04
25	0.033
30	0.029
35	0.026
40	0.024
45	0.023
50	0.023
55	0.023
60	0.025
65	0.028
AVG	**0.036857143**

Pollutant Name: Methane **Temperature: 60F Relative Humidity: 50**

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	0.162	0.424	0	0	0.039
5	0.065	0.08	0.1	0.355	0.175	0.313	0.088
10	0.05	0.062	0.079	0.207	0.123	0.267	0.065
15	0.041	0.05	0.063	0.111	0.091	0.237	0.05
20	0.032	0.041	0.052	0.067	0.07	0.218	0.04
25	0.027	0.034	0.044	0.055	0.056	0.206	0.033
30	0.023	0.03	0.039	0.045	0.046	0.2	0.029
35	0.021	0.027	0.035	0.039	0.04	0.199	0.026
40	0.019	0.025	0.032	0.034	0.036	0.202	0.024
45	0.018	0.024	0.031	0.032	0.033	0.21	0.023
50	0.018	0.023	0.03	0.032	0.031	0.224	0.023
55	0.019	0.024	0.031	0.033	0.031	0.246	0.023
60	0.02	0.026	0.033	0.037	0.031	0.28	0.025
65	0.022	0.028	0.036	0.043	0.033	0.333	0.028

Operational On-Road Fire Station Equipment Emissions

Permanent Fire Station Apparatus

Scenario Year: 2010 -- Model Years: 1965 to 2010	
HHDT-DSL (grams/mile)	
CO_2	2386.56
CH_4	0.158857

Scenario Year: 2010 -- Model Years: 1965 to 2010	
HHDT-DSL (grams/idling hour)	
CO_2	2386.56
CH_4	0.158857

Worst-Case Day				
Classification	**Round Trips**	**Miles/Trip**	**Miles/Day**	**Hours Idling**
HHDV	7	10	70	2

Pollutant	**Emissions**		
	grams/day	**tons/year**	**tons/year CO_2e**
CO_2	171,832	62.72	62.72
CH_4	11.438	0.00	0.09
		total	62.81

Assumptions:
3 estimated emergency responses/day
1 estimated non-emergency responses/day
3 estimated business trips/day
5 miles one-way/trip
2 hours max. idling/day

Fire Station 143
Greenhouse Gas Analysis

Pollutant Name: Methane Temperature: 60F Relative Humidity: 50%

Speed MPH	ALL LDA	LDT	MDT	HDT	UBUS	MCY	ALL	
0	0	0	0	0.556	0	0	0.556	
5	0	0	0	0.593	0	0	0.593	
10	0	0	0	0.336	0	0	0.336	
15	0	0	0	0.168	0	0	0.168	
20	0	0	0	0.093	0	0	0.093	
25	0	0	0	0.076	0	0	0.076	
30	0	0	0	0.062	0	0	0.062	
35	0	0	0	0.051	0	0	0.051	
40	0	0	0	0.045	0	0	0.045	
45	0	0	0	0.042	0	0	0.042	
50	0	0	0	0.042	0	0	0.042	
55	0	0	0	0.045	0	0	0.045	
60	0	0	0	0.052	0	0	0.052	
65	0	0	0	0.063	0	0	0.063	
average							0.158857	grams/mile
								grams/idling hour

Pollutant Name: Carbon Dioxide Temperature: 60F Relative Humidity: 50%

Speed MPH	ALL							
0	0	0	0	6341.961	0	0	6341.961	
5	0	0	0	3789.975	0	0	3789.975	
10	0	0	0	3103.352	0	0	3103.352	
15	0	0	0	2536.887	0	0	2536.887	
20	0	0	0	2128.677	0	0	2128.677	
25	0	0	0	1986.225	0	0	1986.225	
30	0	0	0	1867.83	0	0	1867.83	
35	0	0	0	1772.484	0	0	1772.484	
40	0	0	0	1699.634	0	0	1699.634	
45	0	0	0	1649.01	0	0	1649.01	
50	0	0	0	1620.539	0	0	1620.539	
55	0	0	0	1614.326	0	0	1614.326	
60	0	0	0	1630.686	0	0	1630.686	
65	0	0	0	1670.236	0	0	1670.236	
average							2386.559	grams/mile
								grams/idling hour

Worst-Case Scenario

Back-Up Diesel Generator

Kw	Hours	Hp
200	8	268.2044216

*1 kilowatt hour = 1.341022108 horsepower hours

Pollutant	Emission Factor (lbs/hp-hr)	Emissions (lbs/Hr)	Annual Emissions (lbs)	Annual Emissions (tons)
CO_2	1.15	308.4350848	**61687.01697**	**27.98075543**

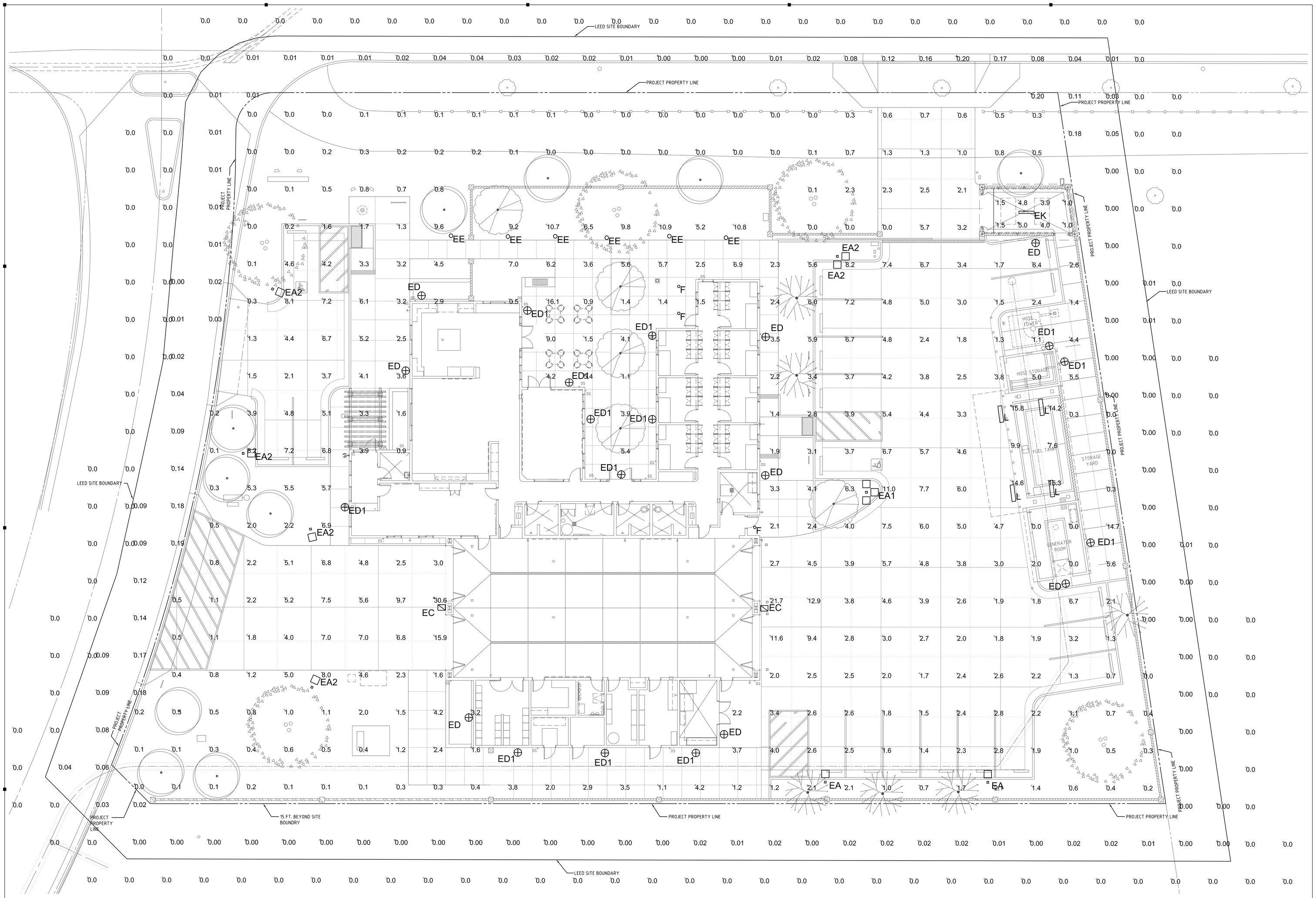
Source:

http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s03.pdf

Worst Case is based on 8-hr usage with the generator working at 70% of capacity (AP42 Gasoline and Diesel Industrial Engine Source Emission Factors)

Assumption: generator will be in operation no more than 200 hours/year

Appendix B
Photometric Site Plan



LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
	EA	2	KSF1 150S R4SC	Specification Area Luminaire, 150W High Pressure Sodium, R4SC Sharp Cutoff Reflector, Full Cutoff MEETS THE 'NIGHTTIME FRIENDLY' CRITERIA, MTD @ 20' AFF	ONE 150-WATT CLEAR ET-23.5 HIGH PRESSURE SODIUM. HORIZONTAL POSITION.	KSF1_150S_R4SC.ies	16000	0.69	189
	EA1	1	KSF1 150S R4SC	Specification Area Luminaire, 150W High Pressure Sodium, R4SC Sharp Cutoff Reflector, Full Cutoff MEETS THE 'NIGHTTIME FRIENDLY' CRITERIA, MTD @ 20' AFF	THREE 150-WATT CLEAR ET-23.5 HIGH PRESSURE SODIUM. HORIZONTAL POSITION.	KSF1_150S_R4SC.ies	16000	1.00	567
	EA2	6	KSF1 150S R4SC	Specification Area Luminaire, 150W High Pressure Sodium, R4SC Sharp Cutoff Reflector, Full Cutoff MEETS THE 'NIGHTTIME FRIENDLY' CRITERIA MTD @ 10' AFF	ONE 150-WATT CLEAR ET-23.5 HIGH PRESSURE SODIUM. HORIZONTAL POSITION.	KSF1_150S_R4SC.ies	16000	1.00	189

LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
	EC	2	TWR1C 150S FCV	BUILDING MOUNTED LUMINAIRE, FULL CUTOFF 150W HPS. W/ CLEAR LAMP AND FULL CUTOFF VISOR.	ONE 150-WATT CLEAR E-17 HIGH PRESSURE SODIUM, HORIZONTAL POSITION.	TWR1C_150S_FCV.ies	15800	0.69	189
	ED	8	MRW 50S FT	ARCHITECTURAL SCONCE WITH FORWARD THROW DISTRIBUTION WITH CLEAR, FLAT GLASS LENS. CLEAR LAMP. MEETS THE 'NIGHTTIME FRIENDLY' CRITERIA	ONE 50-WATT CLEAR ED-17 HIGH PRESSURE SODIUM, HORIZONTAL POSITION.	MRW_50S_FT_.ies	4000	0.69	66
	ED1	13	MRW 50S MD	ARCHITECTURAL SCONCE WITH MEDIUM THROW DISTRIBUTION WITH CLEAR, FLAT GLASS LENS. CLEAR LAMP. MEETS THE 'NIGHTTIME FRIENDLY' CRITERIA.	ONE 50-WATT CLEAR ED-17 HIGH PRESSURE SODIUM, HORIZONTAL POSITION.	MRW_50S_MD.ies	4000	0.69	66

LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
	EE	6	KBR6 50S R5	6 IN ROUND BOLLARD	ONE 50-WATT CLEAR E-17 HIGH PRESSURE SODIUM. VERTICAL BASE-DOWN POSITION.	940329006.IES	4000	0.69	66
	EK	1	DM/DMW 1 32	DAMP/WET LOCATION ENCLOSED INDUSTRIAL. 4' 1LP T8	ONE 32-WATT T8 LINEAR FLUORESCENT.	L5584.IES	2900	0.81	36
	F	3	LGFV 26DTT 8SB FFL	8"VERTICAL DOWNLIGHT, WHITE PAINTED REFLECTOR, 26 WATT DOUBLE TWIN TUBE FLOURESCENT LAMP. FRESNEL GLASS LENS AND BLACK STEP BAFFLE DOOR.	ONE 26-WATT COMPACT FLOURESCENT DOUBLE TWIN TUBE, VERTICAL BASE UP POS.	LTL14566.IES	1825	0.70	26
	L	4	VTW232-TG-120-1/2-EB	DAY-BRITE 4 FT VAPORTITE	F32T8	16144.IES	2900	0.81	60

STATISTICS

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
EXTERIOR	+	3.0 fc	30.6 fc	0.0 fc	N / A	N / A
FUEL TANK	+	12.9 fc	15.8 fc	7.6 fc	2.1:1	1.7:1
15 FT. BEYOND SITE BOUNDRY	+	0.0 fc	0.0 fc	0.0 fc	N / A	N / A
Outside Property Line	+	0.03 fc	0.20 fc	0.00 fc	N / A	N / A
TRASH ENCLOSURE	+	2.8 fc	5.0 fc	1.0 fc	5.0:1	2.8:1

N

PHOTOMETRIC SITE PLAN

1" = 10'-0"

1

CONSULTANTS

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STRUCTURAL ENGINEER
BRANDOW & JOHNSTON, INC.

MECHANICAL & PLUMBING ENGINEER
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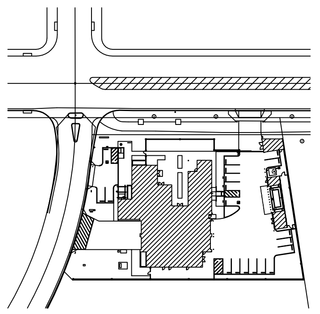

KEY PLAN
NTS

TRUE NORTH N

osborn
320 East Harvard Street / Glendale, CA 91205
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PROJECT A07060.04

LACO FIRE DEPARTMENT
FIRE STATION 143

28580 HASLEY CANYON ROAD
AND GIBRALTAR LANE
VALENCIA, CA 91384

PLAN CHECK	APRIL 2, 2009
BACK CHECK	JULY 20, 2009
BACK CHECK (2nd)	JULY 25, 2009

BACK CHECK
JULY 20, 2009

E01.01

PHOTOMETRIC SITE PLAN

Appendix C
Geotechnical Report

FILE COPY

RTF&A

GEOTECHNICAL ENGINEERING & ENGINEERING GEOLOGY

February 11, 2009

Parsons
100 West Walnut Street
Pasadena, California 91124

Job No. 89-519-01

Attention: Mr. Art Barajas
Principal Project Manager

Subject: Geotechnical Report Update and
Fine Grade Plan Review
Fire Station No. 143
Lot 6, Parcel Map 20685
Castaic, California

References: See Attached References

RECEIVED
FEB 12 2009
DEPT. PUBLIC WORKS
PROJECT MANAGEMENT DIVISION II

Ladies/Gentlemen:

This report presents the results of our Geotechnical Report Update and Fine Grade Plan Review prepared for Fire Station 143, planned for Lot 6 of Parcel Map 20685 (PM 20685), Castaic, California. The purpose of the report is to provide a geotechnical and engineering geologic update of the R.T. Frankian & Associates (RTF&A) May 19, 2006 "Supplemental Geotechnical and Geologic-Seismic Report" for submittal to Los Angeles County Department of Public Works (LACDPW) Geotechnical and Materials Engineering Division. Additionally, this report provides

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applicable grading and foundation recommendations commensurate with the January 29, 2009 Grading Plan prepared by Osborn (drawing No. C2.01).

The update and plan review have been performed in accordance with the 2007 California Building Code (CBC). The location of the site is shown on the Geotechnical Map, Figure 1. The scope of our services was planned in consultation with Ms. Kathy Risley of LACDPW, in accordance with our proposal dated October 9, 2008.

Our findings and recommendations are based on the results of our prior subsurface investigation, a review of published data, and appropriate engineering and geologic analyses. The assessment of general site environmental conditions for the presence of contaminants in the soils and groundwater at the site was beyond the scope of this investigation.

Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable geotechnical engineers and geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional advice included in this report. This report has been prepared for Parsons and LACDPW, and their design consultants, to be used solely for planning and design of Fire Station 143, and associated grading. The report has not been prepared for use by other parties and may not contain sufficient information for purposes of other parties or other uses.

SITE DESCRIPTION

The proposed Fire Station 143 site is situated two miles northwest of Castaic Junction. The site consists of a graded building pad that is surrounded by other

graded building pads or paved streets and roads. Lot 6 is bounded on the north by a private drive and fire lane, on the east by Hasley Canyon Road, and on the south and west by graded pads designated as Lot 5 and Lot 7, respectively. Based on the site grades indicated on the Grading Plan prepared by Osborn, elevations on site range from approximately 1,198 feet above mean sea level (msl), to 1,200 msl. It should be noted that the indicated site grades on the Osborn plan vary significantly from the site elevations previously shown by others for the subject site. We make no representations regarding the existing site elevations.

SITE HISTORY

Portions of PM 20685 were initially graded during bulk grading operations for adjacent Parcel Map 18229 and Hasley Canyon Road as Deeded Street 500 (DS 500). The initial grading operations consisted of removing and recompacting naturally-deposited soils and bedrock, as well as the placement of compacted fill soils to form fills suitable for structural and pavement support. The results of the DS 500 grading were presented in our February 24, 2003 report (RTF&A, 2003a).

The subject site was graded in 2004 to establish the current rough grades as recommended in our June 16, 2003 "Rough Grading Plan Review Report" (RTF&A, 2003b). At the conclusion of the rough grading, we prepared our October 27, 2004 "Geotechnical Report of Observation and Testing and As-Built Geologic Report" (RTF&A, 2004b).

RTF&A visited the site on January 6, 2009 to evaluate the current site conditions, relative to conditions addressed in our 2004 and 2006 reports (RTF&A, 2004b and 2006). The site conditions remain relatively unchanged. There is

minimal weed or vegetative growth, and the erosion control devices indicated on Figure 4 of our 2006 report remain in-place.

PROPOSED DEVELOPEMNT

Development of the fire station site will include grading of a level building pad at approximate elevation 1,200 feet msl. As such, only minimal site grading will be needed to establish pad grade. The fire station building will be centrally located within the site, with site access provided in the southwest corner, off of the Private Driveway/Fire Lane. The hose tower, fuel tank, and generator room will be located near the eastern property line.

The Grading Plan for the fire station is presented as Geotechnical Map, Figure 1. We have not been provided with any structural details for the proposed fire station. For the purposes of preparing this submittal, it will be assumed that the fire station will be one or two stories in height. It is further assumed that the buildings will have interior loads of not more than 300 kips at column locations and have continuous footing loads that will not exceed three kips per lineal foot.

If the description of the proposed development presented above is inaccurate, or if significant revisions to the development are planned, we should be notified to determine if the recommendations presented in this submittal will remain applicable.

PLAN REVIEW

We have reviewed the subject Grading Plan and have determined that the planned development is feasible, from a geotechnical engineering point of view, provided the geotechnical recommendations presented in this submittal are followed.

SUBSURFACE EXPLORATION

The fire station site was explored in 2006 as part of our Supplemental Geotechnical Investigation, following rough grading of the site. At that time, we explored the site by drilling two rotary-wash borings at the locations shown on the attached Geotechnical Map, Figure 1. The two borings were drilled to depths of 51.5 feet and 22 feet below the existing grade. We obtained undisturbed and Standard Penetration Test (SPT) samples from the borings for laboratory examination and testing. Previous investigations within and adjacent to the site were conducted in 1998 and 1989, prior to the rough grading being performed. The locations of relevant previous subsurface explorations are shown on the Geotechnical Map, Figure 1. The relevant boring logs are presented in Appendix A.

SOIL CONDITIONS

The subject site is currently underlain by relatively deep compacted fill soils placed during the 2004 grading operations. The depth of compacted fill is relatively uniform across the subject site and was encountered at a depth of 26 feet within rotary wash boring WB-1. The on-site fill soils generally consist of sand and silty sand with some clay. The fill soils are dense and moist. The fills soils are underlain by about 13 feet of alluvium that generally consist of silty sand and sand that is medium dense to dense. The alluvium is underlain by sedimentary rock units of the Saugus Formation.

LABORATORY ANALYSES

We previously performed laboratory tests on selected samples obtained from the borings to aid in the classification of the soils, for use in liquefaction analyses, and to determine the pertinent engineering properties of the foundation soils. The results of the tests are presented in Appendix B. The following tests were performed:

- moisture content and dry density determinations;
- direct shear tests;
- consolidation tests;
- sieve analyses; and
- hydrometer analyses.

Tests to determine the corrosivity of the soils were performed by Schiff Associates (Schiff) on samples we submitted to them from our previous investigation within Parcel Map 20685. The results of their tests and design recommendations are presented in their "Soil Corrosivity Study" report, which is attached as Appendix C.

GEOLOGY

REGIONAL GEOLOGY

The proposed fire station site is located at the eastern end of the Ventura basin within the Transverse Ranges geomorphic province of California. The Ventura basin consists of a narrow, elongate, sedimentary trough extending easterly from the Santa Barbara Channel. The axis of the trough trends east-west, reflecting the overall east-west trend of the Transverse Ranges, and generally coincides with the Santa Clara River Valley. The Ventura basin has been an area of subsidence and sediment

accumulation since the beginning of the Tertiary period, with the present trough-like form developing near the beginning of the Miocene epoch (Winterer and Durham, 1962). The San Gabriel fault, the dominant geologic feature in the Santa Clarita Valley, forms the eastern Ventura basin boundary, and separates the Ventura basin from the structurally similar Soledad basin. This active fault is located approximately two miles northeast of the site

SITE GEOLOGY

The site is situated on the northerly limb of the Ventura basin "synclinorium", between the east-west trending Holser fault to the southwest, and the northwest trending San Gabriel fault to the northeast. The Saugus Formation underlies the site and outcrops in the hills that border the east side of Hasley Canyon Road. The Saugus Formation consists of nonmarine Plio-Pleistocene Age sedimentary rock units. As observed in outcrops east of the site, and exploratory borings, the Saugus Formation is composed of poorly sorted, weakly cemented to moderately well cemented sandstone, pebbly sandstone, conglomeratic sandstone, and conglomerate; with alternating beds of poorly to moderately indurated siltstone, sandy siltstone/silty sandstone, claystone, and mudstone. Sandstone, pebbly sandstone, and siltstone constitute the dominant rock types. Sandstone units are primarily light brown to light gray/yellowish gray, fine to coarse grained, with some interbedded very fine to fine grained laminated and cross-bedded sandstone. The siltstone, mudstone, and claystone units are generally reddish-brown color. Bed thickness of the coarse grained units typically ranges from the laminated and thinly bedded, fine grained sandstone,

~~to thickly bedded pebbly sandstone, conglomeratic sandstone, and conglomerate.~~ The siltstone, mudstone, and claystone units are primarily massive.

Overlying the Saugus Formation, at a depth of approximately 40 feet below the site, are Holocene age alluvial deposits. As observed in exploratory borings, the alluvium consists of dense, fine to very coarse grained silty sand, with some fine gravel and trace clay. Mantling the site, and overlying the alluvial deposits, are certified engineered fill materials (map unit designation "cef"). The fill materials are composed of mixtures of sand and silty sand. The fill depth ranges from approximately 16 feet below existing ground surface on the east side of the site, along Hasley Canyon Road, to 34 feet on the west side.

The geologic conditions onsite are shown on the Geotechnical Map (Figure 1).

GROUNDWATER

Groundwater was not encountered during grading of the site, which included excavations on the order of 34 feet deep, nor in our 2006 exploratory borings, drilled to a maximum depth of 51½ feet below ground surface. Based on review of the historic high groundwater contours, the historic high groundwater is indicated at 10 feet below the original site elevation. The original site elevation ranged from 1,158 to 1,164 feet above msl which would result in an historic high groundwater elevation of 1,154 feet below the subject site. Based on a site elevation of 1,198 to 1,200 feet above msl, the historic high groundwater is greater than 32 feet below grade.

ENGINEERING GEOLOGY

The geologic hazards at the site were addressed in our 2006 report (RTF&A, 2006) and are briefly summarized below:

- No known active or potentially active faults underlie the site, and the site is not within an Alquist-Priolo Earthquake Fault Zone, as established by the California Geological Survey. The closest active (and zoned) fault to the site is the San Gabriel fault, located approximately two miles to the northeast. In our opinion, there is little probability of surface rupture due to faulting occurring onsite.

- The site is not on, or in the path of, any landslides; nor is the site within a State of California Seismic Hazard Zone for earthquake-induced landslides (CGS, 2002). Due to the graded conditions, the engineered cut and fill slopes in close proximity to the site are considered grossly stable. Consequently, there are no unstable slopes or landslides on or near the site that could adversely impact the site.

- The site is not located directly downslope of any potential debris flows or rockfalls. Debris basins are present on the east side of the Hasley Canyon Road. These basins will provide containment for debris emanating from natural slopes above Hasley Canyon Road and, therefore, prevent debris from reaching the subject site. Furthermore, engineered cut slopes along the east side of Hasley Canyon Road have been constructed with drainage terraces to control erosion and minimize debris generation. Consequently, the potential for debris flows or rockfalls impacting the site is judged to be low.

- Prior to rough grading in 2004, the site was designated as a "Zone AO" flood hazard by the Federal Emergency Management Agency (FEMA). Zone AO is defined as "areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined" (FEMA, 1980). As part of the grading of PM 20685, which included the subject site, Hasley Canyon Creek was channelized, including construction of bank protection, for flood control purposes.

Additionally, the site was graded in such a manner as to be above the FEMA 100-year flood hazard. Accordingly, the subject site is not within a flood hazard area.

- The site is not in a coastal zone and, therefore, not susceptible to tsunamis (seismic sea waves).

- The site is not located downslope of any large impounded bodies of water that would adversely impact the site as a result of seiches (oscillations in a body of water due to earthquake shaking).

- The site is not within an area of known subsidence associated with petroleum or groundwater withdrawal.

- The site is not in an area of active volcanism. Therefore, the site is considered safe from hazards associated with volcanic activity (volcanic eruptions, volcanic debris flows, volcanic ash, etc.).

GROUND MOTION

CALIFORNIA BUILDING CODE SEISMIC DESIGN

Under Section 1613 Earthquake Loads of the California Building Code (CBC), the following coefficients and factors apply to seismic force design at the subject site. The ground motion parameters were determined using the Ground Motion Parameter Calculator at the United States Geological Survey (USGS) website as presented in Figure 2.

Latitude	34.4544
Longitude	-118.5631
Site Class	D
Ss	2.364
S1	0.729
SMs	2.364
SM1	1.094
SDs	1.576
SD1	0.729

In addition, the design response spectrum was determined in accordance with Section 11.4.5 of ASCE Standard 7-05 and is presented on Figure 3. The probabilistic MCE was determined in accordance with Section 21.2.1 of ASCE Standard 7-05 for five percent damped acceleration response spectrum having a two percent probability of exceedance within a 50-year period. The MCE spectral response and the design spectral response is shown on Figure 4. As required by Section 21.3 of ASCE Standard 7-05, the design spectral response is greater than 80 percent of the Sa determined in accordance with Section 11.4.5. A deterministic MCE was not performed. The design spectral response on Figure 4 may be utilized in accordance with Section 21.3 since it is either the lesser of the spectral response accelerations from the probabilistic MCE of Section 21.2.1 and the deterministic MCE of Section 21.2.2, or is conservative.

An FRISKSP Ground Motion study was previously performed at the site as presented in our referenced Supplemental Geotechnical Investigation Report (RTF&A, 2006). Our referenced report should be reviewed if this information is desired.

HISTORIC SEISMICITY

The historic occurrence of earthquakes within the region of the site was previously determined using the program EQSEARCH for Windows (Blake, 2000a), as presented in our previous investigation (RTF&A, 2006). This program computes and prints the epicentral distance from a selected site to each of the earthquakes within a specified search radius (100 miles). From the computed distances, the program also estimates the peak horizontal ground acceleration that may have occurred at the site, due to each earthquake, utilizing the Boore et al (1997) attenuation relation. The EQSEARCH output is presented in Appendix D.

We used a combined earthquake catalog for magnitude 4.0 or larger events between 1800 and 2000. The earthquake catalog for events prior to about 1932 is limited to the higher magnitude events. Using this catalog for probabilistic calculations would skew the results. A listing of historic earthquakes within 100 miles of the site is presented in Appendix D.

The closest recorded earthquake epicenter was located 4.2 miles from the site. This earthquake event occurred on July 7, 1999 with a measured magnitude (M) of 4. The calculated site-specific ground motion associated with this event was 0.182g. At least nine events of M5 or greater have occurred within 15 miles of the site during the period of 1893 and 1999. These nine events included the February 9, 1971 M6.4 San Fernando earthquake and four aftershocks (M5.2 to M5.8).

The epicenter of the M6.7 Northridge earthquake of January 17, 1994 was located 17.6 miles from the site. This earthquake resulted in the largest recorded ground motion at the site, with the calculated site-specific ground motion measured at 0.309g. The largest known earthquake event occurring within 100 miles of the site

was the Fort Tejon earthquake of January 9, 1857, with an estimated magnitude of M7.9. The epicenter of this earthquake was approximately 88 miles from the site. The estimated site-specific ground motion from the Fort Tejon earthquake was 0.163g.

LIQUEFACTION

The State of California Seismic Hazard Map for the Val Verde Quadrangle shows the subject site to be in an area where there is a potential for liquefaction to occur.

Liquefaction may occur when saturated, loose to medium dense, cohesionless soils are densified by ground vibrations. The densification results in increased pore water pressures if the soils are not sufficiently permeable to dissipate these pressures during and immediately following an earthquake. When the pore water pressure is equal to or exceeds the overburden pressure, liquefaction of the affected soil layers occurs. For liquefaction to occur, three conditions are required:

- ground shaking of sufficient magnitude and duration;
- soils that are susceptible to liquefaction; and
- a groundwater level at or above the level of the susceptible soils during the ground shaking.

For a site to be considered susceptible to liquefaction using the criteria and methodology initially developed by Seed and Idriss (1982), liquefaction of underlying soil layers must result in an observed surface effect such as sand boils, mud-spouts, surface water seepage, ground cracking, or quicksand-like conditions.

Lateral spreading can result in ground cracking and may occur when a site is sloped or is near a free-face and there is a sufficiently continuous liquefiable layer on which the overlying soils can move laterally.

Ground settlement may occur during seismic shaking of an area. The settlement can be caused by liquefaction of loose granular soils and by compaction of loose, but not necessarily liquefiable, soils.

ANALYSES

Ground shaking of sufficient magnitude and duration to cause liquefaction can occur virtually anywhere in California. The groundwater level at the site was assumed to rise to within 10 feet of the original grade at the subject site which is at a depth of 32 feet below the existing pad elevation at the subject site. Data from the rotary wash borings was used to evaluate the susceptibility of soils to liquefaction and to calculate the anticipated seismically induced settlement. The liquefaction calculations were performed in accordance with the national treatise on liquefaction (Youd, et al., 2001). The liquefaction calculation indicates 1.06 inches of potential liquefaction-induced settlement.

CONCLUSIONS

Our analyses indicate that some sandy soil layers beneath the site may liquefy in the event of a major earthquake on a nearby fault. The site is not considered as being subject to lateral spreading. Some settlement of the ground surface may occur as a result of seismic shaking. This seismically induced settlement (liquefaction and dry settlement)

~~is expected to be less than 1.25 inches. The anticipated seismically induced differential~~ settlement beneath a building is expected to be about 0.5 inches.

LIQUEFACTION MITIGATION

The liquefaction mitigations already performed at the site consisted of removal of some of the alluvial soils subject to liquefaction and replacing them with compacted fill soils not subject to liquefaction and raising the elevation of the subject site. In addition to the mitigations performed during the grading of the subject site, it is recommended that structural mitigation be incorporated in the project design to reduce damage resulting from seismically induced settlements. Future mitigation should consist of designing the proposed fire station to withstand the estimated differential settlements due to static loads, liquefaction induced settlements, and seismically induced dry settlements. Even with the incorporation of the recommended structural mitigation, some repair and remedial work may be necessary after liquefaction and/or a high ground acceleration seismic event. If the structural engineer determines that the estimated settlements are too excessive for proper performance of the proposed essential facility building supported on a conventional foundation system, a mat foundation system could be utilized. Recommendations for a mat foundation are also included within this report for the use by the design team in determining which foundation type will be utililzed at the site.

SUMMARY OF GEOTECHNICAL RECOMMENDATIONS

This portion of the submittal has been prepared to summarize our geotechnical recommendations pertaining to fine grading of the site and construction of the proposed developments.

Over-excavation and recompaction of existing soils is not anticipated to be required for the subject site. However, some processing of the near-surface soils will be required as discussed in the following section of this report.

The recommended bearing material for the proposed fire station is the compacted fill soil placed as part of the 2004 grading operations discussed in this report. The recommendations of RTF&A's 2006 report remain applicable except where superseded in this submittal.

GRADING

It is anticipated that some minor cuts and fills will be required to establish the final grades for the proposed fire station. The fill soils at the site were moist and compact following the completion of the previous rough grading operations. It is likely that the upper six to 12 inches of those fill soils have become dry and/or disturbed and will require processing as discussed below.

Processing of soil should consist of scarifying the upper six to 12 inches of the exposed grade, adjusting the moisture content of the scarified soils to approximately two percent above optimum moisture content, and compacting the soil to at least 90 percent of the maximum dry density of the soil.

It is anticipated that the exposed grade will consist of moist compact fill in areas where cuts in excess of 12 inches in depth are required. If the cut to final grade

is less than 12 inches, and dry or disturbed soils are exposed, it will be required to process those soils as discussed in the preceding paragraph. Processing of the existing soil will be required in areas where cuts expose dry or disturbed soils and in areas where it will be required to place new compacted fill.

GENERAL GRADING REQUIREMENTS

1. All fills, unless otherwise specifically designed, shall be compacted to at least 90 percent of the maximum dry unit weight as determined by ASTM D 1557-02 Method of Soil Compaction.

2. No fill shall be placed until the area to receive the fill has been adequately prepared and approved by the Geotechnical Consultant of Record or his representative.

3. Fill soils should be kept free of all debris and organic material.

4. Rocks or hard fragments larger then eight inches may not be placed in the fill without approval of the Geotechnical Consultant of Record or his representative, and in a manner specified for each occurrence.

5. Bedrock fragments larger than eight inches, or fill soils containing greater than 25 percent of bedrock fragments larger than five inches in diameter, must be compacted using successive passes of a sheepsfoot compactor, or until rock fragments constitute less than 25 percent of the fill material.

6. The fill material shall be placed in layers which, when compacted, shall not exceed eight inches per layer. Each layer shall be spread evenly and shall be thoroughly mixed during the spreading to insure uniformity of material and moisture.

7. When moisture content of the fill material is too low to obtain adequate compaction, water shall be added and thoroughly dispersed until the soil is approximately two percent over optimum moisture content.

8. When the moisture content of the fill material is too high to obtain adequate compaction, the fill material shall be aerated by blading or other satisfactory methods until the soil is approximately two percent over optimum moisture content.

9. Fill and cut slopes should not be constructed at gradients steeper than 2:1 (horizontal:vertical).

TEMPORARY EXCAVATIONS

Temporary excavations will be required during the grading and construction phases of the project. Compacted fill soils are not expected to stand vertically for any significant length of time in cuts of four feet or higher. Compacted fill soils are expected to be temporarily stable when excavated at a gradient of ¾:1. Temporary excavations that are greater than 15 feet in height should be sloped at a 1:1 gradient.

If excavations are made during the rainy season (normally from November through April), particular care should be taken to protect slopes against erosion. Mitigative measures, such as the installation of berms, plastic sheeting, or other devices, may be warranted to prevent surface water from flowing over or ponding at the top of excavations.

FOUNDATIONS

General: Due to the potential future differential settlements, it is recommended that the fire station be supported on a post-tensioned slab foundation system with isolated footings interconnected with grade beams designed to protect the structures from the anticipated differential settlements. Protection of utilities and lifeline services provided from outside the structure should be considered. Repair and remedial work should be anticipated after liquefaction or a strong groundshaking event occurs. If the structural engineer determines that the estimated settlements are too excessive for proper performance of the proposed essential facility supported on a conventional foundation system, a mat foundation system could be utilized. Foundations and floor slabs should be designed by the Project Structural Engineer in accordance with the minimum requirements of the 2007 CBC.

Footings should not be constructed any closer than five feet to the face of a descending slope, measured horizontally from the outer bottom edge of the proposed footing. In addition, footings should not be constructed any closer to the face of a descending slope than one-third the height of the slope, with a maximum setback distance of 40 feet.

Footings should not be constructed any closer to the face of an ascending slope than one-half the height of the slope, with a maximum required setback distance of 15 feet and a minimum setback distance of three feet. All foundation excavations should be observed and approved by a representative from our firm prior to placement of reinforcing steel.

Bearing Capacity: It is assumed that the proposed fire station structures will be founded near final grade, have interior loads of not more than 200 kips at column

locations and continuous footing loads that will not exceed three kips per lineal foot, and have normal floor loads with no special requirements. Individual column pads or wall footings should have a width of at least 18 inches and be placed at a depth of at least 24 inches below the lowest final adjacent grade.

It is anticipated that structures may be supported on spread footings using a bearing value of 2,500 pounds per square foot (psf). The recommended bearing value is a net value and the weight of the concrete in the footings may be taken as 50 pounds per cubic foot (pcf). The weight of soil backfill may be neglected when determining the downward loads from the footings. A one-third increase in the bearing value may be used for temporary loads such as wind or seismic loads when allowed by the CBC.

Lateral Resistance: Lateral loads may be resisted by soil friction and by the passive resistance of the soils. A coefficient of friction of 0.4 may be used between the footings and floor slabs and the supporting soils. The passive resistance of properly compacted fill soils may be assumed to be equal to the pressure developed by a fluid with a density of 250 pcf to a maximum of 2,500 psf. A one-third increase in the passive value may be used for wind or seismic loads. The frictional resistance and the passive resistance of the soils may be combined without reduction in determining the total lateral resistance.

Footing Reinforcement: Footings should be reinforced in accordance with the recommendations of the Project Structural Engineer and the CBC. Continuous footings should be reinforced with at least the equivalent of one No. 4 deformed steel reinforcing bar located near the top of the footing or stem wall and at least the

equivalent of one No. 4 bar near the bottom of the footing unless otherwise recommended by the Project Structural Engineer.

Settlement: Provided that relatively light structures that do not exceed the assumed structural loads are founded in compacted fill soils as recommended, we estimate that the total static settlement will be less than 0.75 inches. Liquefaction induced settlement and dry settlement is expected to be about 1.25 inches. The total seismic and static settlement is expected to be about two inches. The differential settlement is expected to be less than one inch. The differential compression ratio Б:L is expected to be less than 1:500 if a conventional foundation is utilized. If a mat foundation is utilized at the site, it is expected that total settlement will be less than 0.75 inches, and that differential settlements will be less than 0.5 inches within a horizontal distance of 25 feet.

Foundation Observations: To verify the presence of satisfactory soils at foundation design elevations, the excavations should be observed by the Geotechnical Consultant of Record. Excavations should be deepened as necessary to extend into satisfactory soils. Where the foundation excavations are deeper than four feet, the sides of the excavations should be sloped back at ¾:1, or shored, for safety.

Inspection of foundation excavations may also be required by the appropriate reviewing governmental agencies. The contractor should be familiar with the inspection requirements of the reviewing agencies.

FLOOR SLAB SUPPORT

General: The floor slab design recommendations presented in this section are based upon the assumption that the soil subgrade in proposed floor slab areas will

consist of compacted fill soil and that floor slabs will be subjected to normal loads with no special requirements. Any surficial soils which become dried or disturbed during the course of construction should be moisture-conditioned and compacted prior to casting the floor slab.

Post-Tensioned Floor Slabs: The design values presented below assume that the proposed floor slabs will be at least five inches thick and will be poured monolithic with continuous perimeter edge footings. (See following pages for values.)

Net Bearing Value:	An allowable net bearing value of 2,500 psf for footings with a minimum width of 24 inches and a minimum depth of 24 inches below the top of slab or below the lowest adjacent grade may be used. For temporary loads due to wind or seismic forces, the recommended bearing value may be increased by one-third.
Coefficient of Friction:	0.75 if vapor barrier is utilized, 1.0 if no barrier
Passive Pressure:	250 pcf for level ground condition.
Modulus of Subgrade Reaction (K):	150 pounds per cubic inch (pci) for a footing width of 1 foot. For larger footings or floor slabs this value should be reduced using the following equation:

$$Kr = K\left[\frac{(B+1)}{2B}\right]^2$$

where:

Kr = Reduced Modulus Value
K = Modulus of Subgrade Reaction for a 1 foot wide Plate
B= Width of Large Footing or Slab

Modulus of Elasticity:	1,000 pounds per square inch (psi)
Edge Moisture Variation Distance	
Me (Center Lift):	5.25 feet
Me (Edge Lift):	2.5 feet
Estimated Differential Movement	
My (Center Lift):	2.5 inch
My (Edge Lift):	1.5 inch

Mat Foundation: A mat foundation system may be utilized as an alternative to a conventional foundation system. A base modulus of subgrade reaction of 150 pounds per cubic inch is recommended for mat design. The base modulus should be reduced in accordance with the following equation:

$$k = k_b\left(\frac{1+B}{2\times B}\right)^2$$

where:

k	=	modulus of subgrade reaction for design
k_b	=	150 pci = base modulus of subgrade reaction in pci
B	=	least dimension of mat foundation in feet

The mat is anticipated to range in thickness from about two to three feet and should be continuously reinforced. The mat, including weight of the structure, is

expected to impose pressures on the underlying soil of less than 1,500 pounds per square foot.

Expansive Soil Conditions: Special considerations for potentially expansive soils are not anticipated to be required for the proposed developments. However, site-specific grading for the proposed development may affect the soil type exposed at final grade. Therefore, it is recommended that additional testing and classification, relative to potentially expansive soils, be performed at the conclusion of the proposed fine grading operations.

Moisture Sensitive Floor Coverings: Water vapor transmitted through floor slabs is a common cause of floor covering problems. In areas where moisture-sensitive floor coverings are planned, a vapor barrier should be installed to reduce excess vapor drive through the floor slab. Floor slabs with moisture-sensitive floor coverings should be underlain by a vapor barrier surrounded by two inches of sand above and below it.

The function of the recommended impermeable membrane is to reduce the amount of water vapor that is transmitted through the floor slab. The membrane should be at least 10-mil thick and care should be taken to preserve the continuity and integrity of the membrane beneath the floor slab. The sand, both above and below the membrane, should be sufficiently moist to remain in place and be stable during construction. However, if the sand is saturated before placing concrete, the moisture in the sand can become a source of water vapor. If two inches of sand is not placed over the membrane, the potential for curling of the slab exists and should be controlled by other means.

Another factor affecting vapor transmission through floor slabs is the water-to-cement ratio in the concrete used for the floor slab. A high water-to-cement ratio increases the porosity of the concrete, thereby facilitating the transmission of water vapor through the slab. The Project Structural Engineer should provide recommendations for the design of concrete footings and floor slabs in accordance with the CBC.

SOIL CORROSIVITY

Bulk samples of soils within PM 20685 were previously obtained by a field representative from our firm; the samples were submitted to Schiff for laboratory corrosion testing. Sample S-24 was obtained from the subject site. A corrosion study prepared by Schiff, summarizing the test results and presenting recommendations, is presented in attached Appendix C - Soil Corrosivity Study. The results of the tests generally indicate that the soils at the site are considered corrosive to ferrous metals but not to concrete. For specific corrosion protection recommendations, please review the attached report or contact Schiff directly.

PAVEMENT DESIGN

We obtained one sample for R-value tests from within the proposed paving areas at the subject site. The R-Value tests perfomed by Labelle•Marvin are presented in Appendix C. The plans indicate that Portland Cement Concrete (PCC) pavement will be utilized at the site. In addition to PCC pavement thickness recommendations, we are also providing asphalt pavement section recommendations which may be used as an alternative to PCC concrete.

Asphalt Pavement Section: The following asphalt pavement section recommendations are based on an R-value of 20, which is lower than the obtained results of 22 as presented in Appendix E.

Traffic Index	Asphalt Thickness (Inches)	Base Course (CAB) Thickness (Inches)	Base Course (CMB) Thickness (Inches)
4	3	5	6
6	4	9	10
8	6	12	13
10	7	17	19

Base course material should consist of crushed aggregate base (CAB) as defined by Section 200-2.2 of the Standard Specifications for Public Works Construction ("Greenbook"). If crushed miscellaneous base (CMB) is used, it should meet the specifications outlined in Section 200-2.4 of the Greenbook. Base course should be compacted to at least 95 percent of the maximum dry density of that material.

Base course material should be purchased from a supplier who will certify that the base course will meet or exceed the specifications in the Greenbook as indicated. We could, at your request, perform sieve analysis and sand equivalency tests on material delivered to the site which appears suspect. Additional tests could be performed, upon request, to determine if the material is in compliance with the specifications.

The asphalt pavement section recommendations presented above are based upon assumed Traffic Index values. R. T. Frankian & Associates does not take responsibility for the numerical determination of the Traffic Index values or the areas where they apply within the site. We would be pleased to provide pavement section recommendations for alternative Traffic Index values upon request.

Concrete curbs and gutters should be deepened to extend below the base course material and be seated in the compacted fill. The intent of deepening the curbs and gutters is to form a "cut-off" wall to reduce the amount of water flow through the base course material from adjacent landscaped areas. Subgrade soils which become saturated as a result of water flowing through base course material can reduce the life of the pavement. The curbs should be deepened to an elevation of at least six inches below the base of the proposed base course section. The curb subgrade should be thoroughly moistened prior to casting concrete.

Portland Cement Concrete Pavement (PCC): PCC pavement can be placed directly on native subgrade soils compacted to a minimum of 95 percent of the maximum dry density. The thickness of pavement should be in accordance with the following table. The water-to-cement ratio of the concrete should be no more than 0.5, with a minimum compressive strength of 3,000 psi.

TRAFFIC INDEX	PCC PAVEMENT THICKNESS (INCHES)
4	6.5
6	7.0
8	8.0
10	8.5
11	9.0

The layout of PCC paving joints should be determined by the Civil Engineer, preparing the site plan with consideration of the following joint spacing and reinforcement recommendations. These recommendations may be superseded by a Civil Engineer with pavement design expertise. The PCC pavement should include longitude and transverse joints at intervals not to exceed 15 feet on center. The

joints should be saw cut within four hours of the concrete pour. Jointing should not allow any concrete areas to remain in which the length of the concrete rectangle exceeds 1.5 times the base. All joints should be reinforced with centered 30 inch long, #4 bars at 30 inches on center.

RETAINING WALLS

General: It is not anticipated that significant retaining walls be required as part of the fire station development. The following recommendations will be applicable for retaining walls less than 12 feet in height. Backfill placed behind retaining walls should be compacted to a minimum of 90 percent of the maximum dry density as determined by ASTM D 1557-91. When backfilling behind walls, it is recommended that the walls be braced and heavy compaction equipment not be used closer to the back of the wall than the height of the wall. Soils which have a potential for expansion in excess of five percent should not be utilized for backfill behind walls which are greater than three feet in height. The back of retaining walls should be water-proofed where aesthetics are concerned.

Lateral Earth Pressures: For design of cantilevered retaining walls (independent and separated from buildings), where the surface of the backfill is level and the retained height of soils is less than 12 feet, it may be assumed that drained soils will exert a lateral pressure equal to that developed by a fluid with a density of 30 pcf. Where the surface of the backfill is inclined at 2:1, it may be assumed that drained soils will exert a lateral pressure equal to that developed by a fluid with a density of 43 pcf.

In addition to the recommended earth pressure, the walls should be designed to resist any lateral surcharges due to nearby buildings, storage, or traffic loads. As discussed below, a drainage system should be provided behind the walls to reduce the potential for the development of hydrostatic pressure. If a drainage system is not installed, the walls should be designed to resist a soil and hydrostatic pressure equal to that developed by a fluid with a density of 80 pcf for the full height of the wall.

In addition to the pressures recommended above, the upper 10 feet of walls adjacent to vehicular traffic areas should be designed to resist a uniform lateral pressure of 100 psf, acting as a result of an assumed 300 psf surcharge behind the walls due to normal traffic. If the traffic is kept at least 10 feet from the backs of the walls, the traffic surcharge may be neglected.

Wall Drainage: A drainage system should be provided behind retaining walls or the walls should be designed to resist hydrostatic pressures. The drainage system could also consist of a four-inch diameter perforated pipe placed at the base of the wall with the perforations pointed down. The pipe should be sloped to provide positive drainage and be surrounded by at least six inches of uniform-sized gravel. The gravel should be separated from the surrounding soils by a filter fabric, such as Mirafi 140N or equivalent, and wrapped around the gravel ("burrito-wrapped"). Alternatively, the filter fabric and gravel may be omitted when using a continuous slotted pipe and a graded sand which conforms to Los Angeles County Department of Public Works "F-1" Designated Filter Material.

The installed drainage system should be observed by the Geotechnical Consultant of Record prior to backfilling the system. Observation of the drainage

system may also be required by the reviewing governmental agencies prior to backfilling.

Drainage panels, or a six-inch wide gravel blanket, should be installed behind retaining walls that are greater than three feet in height to reduce the potential for build-up of water behind the walls. Excessive build-up of water could result in wall failure.

SECTION 111 STATEMENT

Based on the findings summarized in this submittal, it is our professional opinion that the completed grading, and any proposed structures at the fire station site, will be safe from hazards of settlement, slippage, or landslide, provided that the recommendations of this submittal, and those of the Los Angeles County Code, are incorporated into the proposed construction. Additionally, the grading performed at the site and the fire station site development will not adversely affect the geotechnical conditions on adjacent properties.

OBSERVATION AND TESTING

This report has been prepared assuming that R. T. Frankian & Associates will perform all geotechnically-related field observations and testing. If the recommendations presented in this report are utilized, and observation of the geotechnical work is performed by others, the party performing the observations must review this report and assume responsibility for recommendations presented herein. That party would then assume the title "Geotechnical Consultant of Record."

A representative of the Geotechnical Consultant should be present to observe all grading operations, as well as all footing excavations. A report presenting the results of these observations and related testing should be issued upon completion of these operations.

-oOo-

Should you have any questions regarding this report, please contact our office. The following are attached and complete this report.

- References
- Geotechnical Map – Figure 1 (in pocket)
- Appendix A - Explorations
  - Unified Soil Classification System (1 page)
  - Log of Borings - WB-1, WB-2, B-1, B-2, and B-3 (7 pages)
- Appendix B - Laboratory Tests
  - Direct Shear Test Data (2 pages)
  - Consolidation Test Data (2 pages)
  - Gradation Test Data (5 pages)
- Appendix C - Soil Corrosivity Study (5 pages)
- Appendix D - Historic Earthquake Search Results (28 pages)
- Appendix E - Labelle•Marvin R-Value Test Results (3 pages)
- USGS Geoundmotion Parameters, Figure 2
- Probablistic MCE, Figure 3
- Design Spectral Response, Figure 4

Respectfully submitted,

R. T. FRANKIAN & ASSOCIATES

by: Alan W. Rasplicka
Principal Geotechnical Engineer

and: Timothy P. Latiolait
Principal Engineering Geologist

TPL/AWR/cma

Distribution: (1) Parsons
Attn: Mr. Art Barajas
(7) Los Angeles County Department of Public Works
Attn: Ms. Kathy Risley
(including one CD of report in pdf format)

RTF&A
GEOTECHNICAL ENGINEERING & ENGINEERING GEOLOGY

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Appendix D
Mitigation Monitoring and Reporting Program

APPENDIX D - MITIGATION MONITORING AND REPORTING PROGRAM

As of January 1, 1989, CEQA requires a Mitigation Monitoring and Reporting Program (MMRP) for projects where mitigation measures are a condition of their approval and development. This MMRP has been prepared for the Fire Station 143 Project in compliance with the requirements of Section 21081.6 of CEQA. This document identifies the potential significant environmental impacts associated with the proposed project and specifies measures designed to mitigate adverse impacts to the environment. Table D-1 on page D-2 lists all of the mitigation measures required in connection with approval of the proposed project. The MMRP defines the responsible party will ensure the mitigation measure is implemented and identifies at what point the mitigation measure is to be executed by the monitoring agency or party. Monitoring refers to the observation of mitigation activities at the project site, in the design of plans, or in the construction or operation of the proposed project.

Table D-1

Mitigation Monitoring and Reporting Program

When Monitoring to Occur		Mitigation Measure/Action Required	Responsible Agency or Party	Monitoring Agency or Party
GEOLOGY AND SOILS				
Prior to issuance of building or grading permits	**GEO-1**	Prior to the issuance of building or grading permits, the County of Los Angeles Department of Public Works shall ensure that the site-specific design recommendations in the Final Geotechnical Report are incorporated into the final project plans/design.	LA County Dept. of Public Works	LA County Dept. of Public Works
NOISE				
During construction activities	**NOISE-1**	Noise-generating equipment operated at the project site shall be equipped with special noise control devices, i.e., mufflers, lagging, and/or motor enclosures. All equipment shall be routinely tested to ensure proper maintenance and to ensure that no additional noise, due to worn or improperly maintained parts, would be generated.	Construction Contractor	Periodic site inspections by LA County Dept. of Public Works
During construction activities	**NOISE-2**	Construction activities shall be scheduled so as to avoid operating several pieces of heavy equipment simultaneously. In no cases shall more than four pieces of heavy equipment be operated simultaneously.	Construction Contractor	Periodic site inspections by OCFA
During construction activities	**NOISE-3**	Engine idling from construction equipment such as graders and water trucks shall be limited to no more than five minutes.	Construction Contractor	Periodic site inspections by OCFA

Source: PCR Services Corporation, December 2009.

Appendix E
Responses to Comments

RESPONSES TO COMMENTS

This section provides the comment letters received on the Draft Initial Study and the responses to comments. The presentation of the comments and responses starts on the following page.

DEPARTMENT OF TRANSPORTATION
DISTRICT 7, REGIONAL PLANNING
IGR/CEQA BRANCH
100 MAIN STREET, MS # 16
LOS ANGELES, CA 90012-3606
PHONE: (213) 897-6696
FAX: (213) 897-1337

Flex your power!
Be energy efficient!

IGR/CEQA No. 091103AL, ND
Fire Station 143 Project
Vic. LA-05 / PM R56.60
SCH # 2009111004

November 23, 2009

Mr. Ken Schumann
County of Los Angeles
Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803

RECEIVED
DEC 03 2009
DEPT. PUBLIC WORKS
PROJECT MANAGEMENT DIVISION II

Dear Mr. Schumann:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The proposed project is to construct a fire station. The project site is about 1 mile away from I-5. 1

Storm water run-off is a sensitive issue for Los Angeles. Please be mindful that projects need to be designed to discharge clean run-off water. Any transportation of heavy construction equipment and/or materials which requires the use of oversized-transport vehicles on State highways will require a Caltrans transportation permit. We recommend that large size truck trips be limited to off-peak commute periods. Thank you for the opportunity to have reviewed this project. 2

If you have any questions, please feel free to contact me at (213) 897-6696 or Alan Lin the project coordinator at (213) 897-8391 and refer to IGR/CEQA No. 091103AL. 3

Sincerely,

Elmer Alvarez

ELMER ALVAREZ
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

LETTER 1

Elmer Alvarez, IGR/Branch Chief
California Department of Transportation (Caltrans)
District 7, Regional Planning
IGR/CEQA Branch
100 Main Street, MS #16
Los Angeles, CA 90012

November 23, 2009

RESPONSE 1

Comment noted.

RESPONSE 2

Regarding stormwater runoff, as discussed on page B-45 of the Draft Initial Study/Mitigated Declaration, construction-related water quality impacts would be less than significant as the project would comply with applicable state, regional and local water quality regulatory requirements. During project operation, site specific design features would be implemented as best management practices (BMPs) to treat on-site surface water (i.e., from the rear driveway and employee parking areas) prior to entering the storm drain. Further, the project would comply with applicable long-term state, regional and local water quality regulatory requirements. Thus, less than significant water quality impacts during project operation would occur.

Should transportation of heavy construction equipment and/or materials which requires the use of oversized-transport vehicles on State Highways be necessary during project implementation, a Caltrans transportation permit will be obtained, as appropriate. Further, large size truck trips will be limited to off-peak commute period to the maximum extent practicable.

RESPONSE 3

Comment noted.

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ENVIRONMENTAL CHECKLIST FORM

1. **Project Title** Los Angeles County Fire Department Fire Station 143

2. **Lead agency name and address:** County of Los Angeles Department of Public Works
900 South Fremont Avenue
Alhambra, California 91803-1331

3. **Contact person and phone number:** Ken Schumann, P.E.
Project Management Division II
Phone: (626) 300-3246

4. **Project location:** 28580 Hasley Canyon Road, Valencia, California 91355

5. **Project sponsor's name and address:** Los Angeles County Fire Department

6. **General plan designation:** Industrial

7. **Zoning:** M-1 1/2DP: Restricted Heavy Manufacturing

8. **Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)**

The project includes the construction of Fire Station 143. Fire Station 143 would be located on approximately 1.07 acres (46,609 square feet) and would be 12,000 square feet with a maximum height of 32 feet. Please refer to Attachment A, Project Description, for a detailed discussion of the project.

9. **Surrounding land uses and setting: Briefly describe the project's surroundings:**

The general vicinity of the site is characterized by existing or planned development in an urbanizing environment. The project site is regionally located west of Interstate 5 (I-5) and north of the Santa Paula Freeway (Route 126) within unincorporated Valencia in the Santa Clarita Valley, Los Angeles County. The project site is located within the northwestern portion of Los Angeles County known as the Castaic Junction Area. The project site is bounded by Hasley Canyon Road and residential development to the north/northeast, existing industrial uses to the west and south, and proposed industrial uses to the northwest. The project site is has been rough graded and is currently vacant (unoccupied). The project would require minimal fine grading/earthwork to further balance the site. Direct access to the project site is provided by Hasley Canyon Road to the north and a private driveway and fire lane to the west of the site.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

The Fire Department would obtain all required approvals for construction of the station and site improvements from the following agencies including, but not limited to: Los Angeles County Building and Safety (plan check), Los Angeles County Regional Planning (site plan), Los Angeles County Fire Department Prevention Bureau (VHFHSZ), Regional Water Quality Control Board (NPDES, fueling station), Air Quality Management District (fueling station), Los Angeles County Health Department, and the Los Angeles County Land Development Department.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☒ Geology/Soils
☐ Hazards/Hazardous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☒ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities/Service Systems	☐ Mandatory Findings of Significance	

DETERMINATION: (To be completed by the Lead Agency)

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 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.

Signature

10/28/09
Date

Ie-Ling Chou
Printed Name

LA COUNTY DEPARTMENT OF PUBIC WORKS
For

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 a lead agency 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 agency 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 process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 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) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

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

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐
II. AGRICULTURE RESOURCES – 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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. 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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒
III. 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. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No 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)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
IV. BIOLOGICAL RESOURCES – 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 Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
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 nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
VI. GEOLOGY AND SOILS – Would the project:				
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 fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☒	☐	☐
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?	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐
VIII. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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)?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alternation 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?	☐	☐	☒	☐
e) 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?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) 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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) 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?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒
<u>IX. LAND USE AND PLANNING</u> – Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
X. MINERAL RESOURCES – Would the project:				
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
XI. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
XII. POPULATION AND HOUSING – Would the project:				
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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XIII. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒
XIV. RECREATION				
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?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒
XV. TRANSPORTATION/TRAFFIC – Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☒	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Result in inadequate parking capacity?	☐	☐	☐	☒
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒
XVI. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require 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?	☐	☐	☐	☒
c) Require 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?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. MANDATORY FINDINGS OF SIGNIFICANCE				
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, 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?	☐	☐	☒	☐
b) 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)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

ATTACHMENT A
PROJECT DESCRIPTION

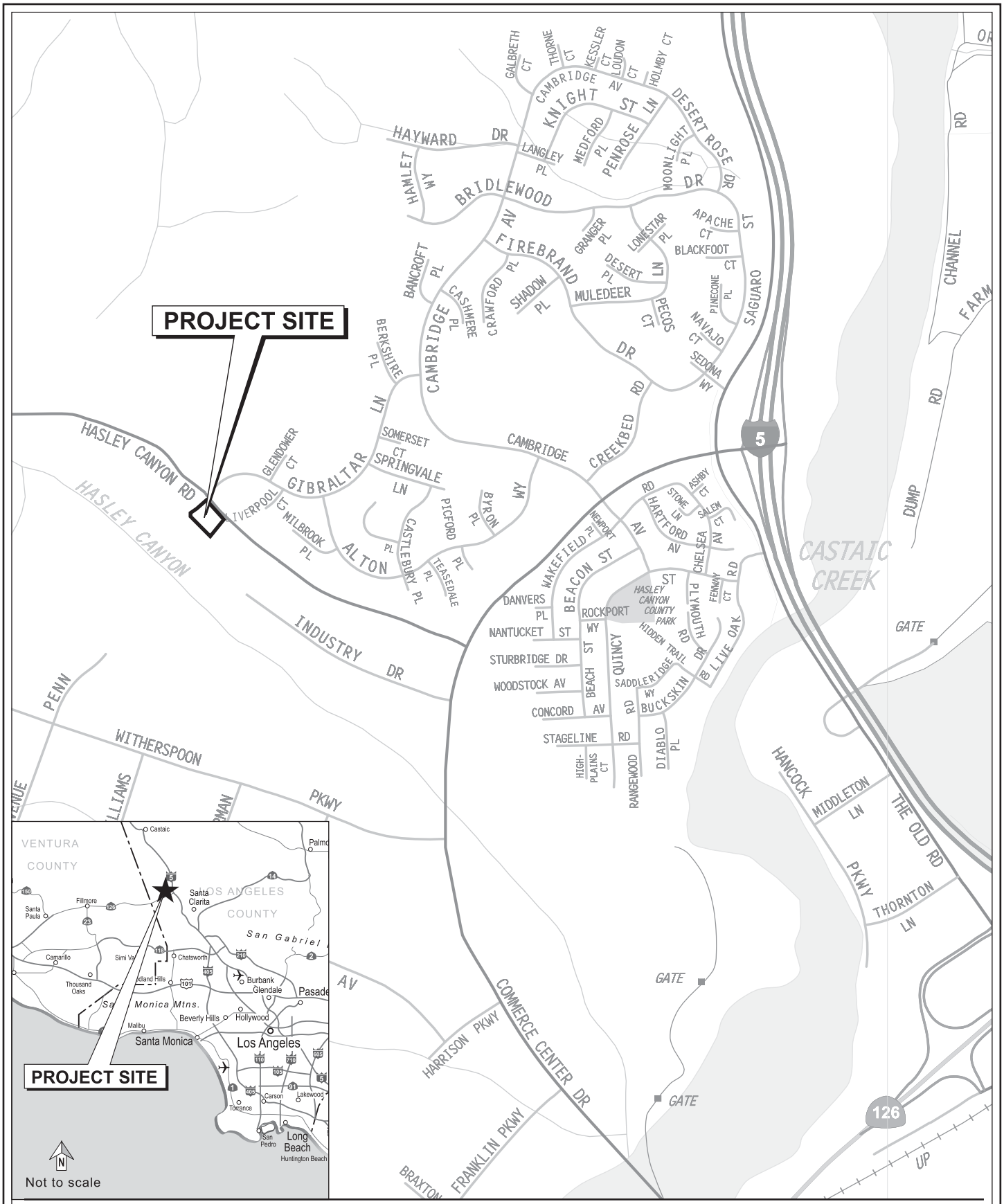
A. INTRODUCTION

The Los Angeles County Fire Department is proposing to construct Fire Station 143 on an approximate 1.07 acres (46,609 square feet) site that would consist of one single-story structure totaling 10,648 square feet with a maximum height of 32 feet.

B. PROJECT LOCATION AND SURROUNDING USES

The project site is regionally located west of Interstate 5 (I-5) and north of California State Route 126 (Santa Paula Freeway) within unincorporated Valencia within the Santa Clarita Valley, Los Angeles County. Regional access to the project site is provided by I-5, located approximately one mile east of the project site and the Santa Paula Freeway, approximately two miles south of the project site. A regional and vicinity map is provided in Figure A-1 on page A-2. The project site is located within the northwestern portion of Los Angeles County known as the Castaic Junction Area.

The approximate 1.07-acre project site address is 28580 Hasley Canyon Road, Valencia, CA 91355. The project site is bounded by Hasley Canyon Road and residential development to the north/northeast, existing industrial uses to the west and south, and proposed industrial uses to the northwest. Direct access to the project site is provided by Hasley Canyon Road to the north and a private driveway and fire lane to the west of the site. Figure A-2 on page A-3 provides an aerial photograph of the site and its surrounding uses. Figure A-3 on page A-4 provides views of the surrounding land uses. Photograph 1 shows the single-family residential uses to the north/northeast of the site across Hasley Canyon Road, which are followed by undeveloped hillsides. Photograph 2 shows a view to the southeast across the site from the private driveway and fire lane. Photograph 3 shows a view to the southwest across the site from the residential uses to the north/northeast of the site. As shown in Photograph 3, the industrial uses beyond the site to the south are visible from this vantage. Photograph 4 shows a southerly view from the site of the adjacent industrial uses.



Source: PCR Services Corporation, 2009.

Figure A-1
Regional and Project Vicinity Map

PCR

0 200 400 Feet

Source: Google Earth and PCR Services Corporation, 2009.

Figure A-2
Aerial Photograph

Photograph 1: View north from the Project Site.

Photograph 2: View southeast from the private driveway and fire lane.

Photograph 3:View southwest from the residential uses north of the Project Site.

Photograph 4: View south from the Project Site.

PCR

Figure A-3
Site Photographs

Source: PCR Services Corporation, 2009.

C. EXISTING SITE CONDITIONS

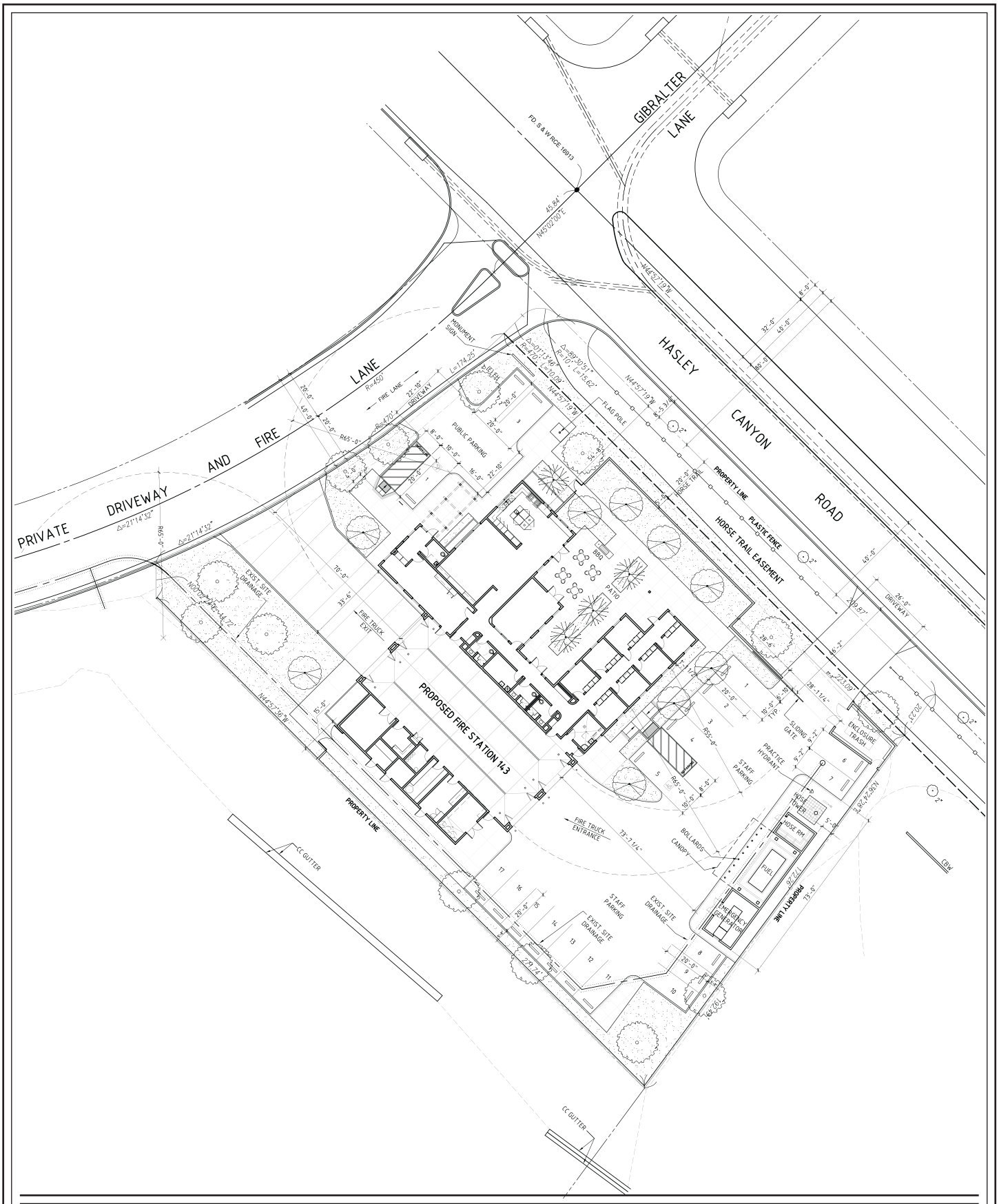
The project site is a vacant, flat site that has been previously rough graded in anticipation of a fire station. The site was initially graded during bulk grading operations for adjacent Parcel Map 18229 and Hasley Canyon Road as Deeded Street 500 (DS 500). The initial grading operations consisted of removing and recompacting naturally-deposited soils and bedrock, as well as the placement of compacted fill soils to form fills suitable for structural and pavement support. The project would require minimal fine grading/earthwork to further balance the site. Fine grading would consist of minimal grading to establish pad grade. This would include excavating current fill soils to a maximum depth of approximately five (5) feet in the central portion of the site where the building pad is to be located. Outside of the building pad, excavation will occur at depths ranging from approximately two to five feet to prepare the site for development. The depth of the compacted fill materials across the site are relatively uniform across the site at a depth of approximately 26 feet.[1] A total of approximately 2,600 cubic yards of existing fill soils would be removed from the site as part of the project fine grading. No undisturbed native soils would be excavated as part of the project excavation/grading and construction activities. The site is designated for industrial land use and zoned for M-1 1/2DP - Restricted Heavy Manufacturing.

D. DESCRIPTION OF PROPOSED PROJECT

The proposed Fire Station 143 would consist of one single-story structure totaling 10,648 square feet with a maximum height of 32 feet. The structure would include an approximately 7,275 square foot firehouse for general house operations including dormitory units and an adjacent enclosure that would include a fuel station, generator room, and hose room; and an approximately 3,373 square foot apparatus bay with two bays for fire engines. The construction of the firehouse would also include a 30-foot tall hose tower equipped with an electric powered hose drying rack. Three, 10-foot high exterior antennas would be located at the firehouse and would extend beyond the high point of the roof. Other equipment on-site would include a 200 kilowatt (KW) emergency generator and above-ground storage facilities (or tanks) containing 600 gallons of diesel fuel for the emergency generator, 2,500 gallons of diesel fuel for the on-site apparatus, 500 gallons of unleaded gasoline, and 10 gallons (two 5-gallon containers) of gasoline for yard maintenance equipment. The firehouse would also maintain an external public address system that would be turned off from 5:00 P.M. to 8:00 A.M. The site plan for the project is illustrated in Figure A-4 on page A-6.

At full staffing, Fire Station 143 would employ a maximum of seven (7), 24-hour firefighters with 14 firefighters on-site during shift change. Initial staffing would consist of four

[1] *Geotechnical Report and Fine Grade Plan Review for Fire Station 143 ("Geotechnical Report"), prepared by RTF&A, dated February 11, 2009.*



PCR

0 50 100 Feet

Figure A-4
Site Plan

Source: Osborn,2008.

firefighters with eight firefighters on-site during shift change. Full staffing would occur as deemed necessary by the fire department. A minimum of 14 employee parking spaces, two handicap stalls and two visitor parking stalls would be provided on-site. Public access to and from the project site would be provided from the private driveway and fire lane located west of the project site. Fire staff and fire truck engine ingress access would be provided from Hasley Canyon Road while an emergency egress driveway onto the private driveway and fire lane that would lead to Hasley Canyon Road would be utilized during emergency responses. A traffic signal would be installed at the fire station emergency egress driveway with station controlled pre-emption during emergency and non-emergency responses. The traffic signal would promote emergency access for emergency vehicles leaving the fire station.

When the fire station is complete, the station would provide for an on-going improved level of fire protection, emergency medical, and other life safety services to the adjacent communities, and it would add to the resources available for other requests for services throughout the Fire Department's jurisdiction. The Fire Department's goal, when areas have transitioned from rural to urbanized areas, is to arrive on the scene of an emergency call within five minutes from the time of dispatch. Fire Station 143 would be a strategic part of this goal.

E. CONSTRUCTION SCHEDULE

The anticipated construction start date for Fire Station 143 would commence in the first half of 2010 and last up to approximately 12 months. Construction activities would occur in one phase.

F. NECESSARY APPROVALS

The Fire Department would obtain all required approvals for construction of the station and site improvements from the following agencies including, but not limited to: Los Angeles County Building and Safety (plan check), Los Angeles County Regional Planning (site plan), Los Angeles County Fire Department Prevention Bureau (VHFHSZ), Regional Water Quality Control Board (NPDES, fueling station), Air Quality Management District (fueling station), Los Angeles County Health Department, and the Los Angeles County Land Development Department.

ATTACHMENT B
EXPLANATION OF CHECKLIST DETERMINATIONS

I. AESTHETICS.

Would the project:

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. A scenic vista generally provides focal views of objects, settings, or features of visual interest; or panoramic views of large geographic areas of scenic quality, primarily from a given vantage point. Scenic vistas are generally associated with public vantages. A significant impact may occur if the proposed project introduced incompatible visual elements within a field of view containing a scenic vista or substantially altered a view of a scenic vista.

The site may be visible from areas of higher topography in the surrounding area; however, the site has not been identified within a designated scenic vista. Views from areas of higher topography in the surrounding area of the site and its surrounding vicinity currently include adjacent single-family residential and industrial uses. In addition, the project site has been rough graded and is vacant (unoccupied). Sporadic weedy vegetation exists on the project site that does not positively contribute to the aesthetic character of the site or its surroundings. The initial grading operations in 2002 consisted of removing and recompacting naturally-deposited soils and bedrock, as well as the placement of compacted fill soils to form fills suitable for structural and pavement support. The site was graded in 2004 to establish current rough grades. The project would require minimal fine grading/earthwork to further balance the site. Fine grading would consist of minimal grading to establish pad grade. This would include excavating current fill soils to a maximum depth of approximately five (5) feet in the central portion of the site where the building pad is to be located. Outside of the building pad, excavation will occur at depths ranging from approximately two to five feet to prepare the site for development.

The addition of the fire station would not result in the introduction of an incompatible element in relationship with the surrounding industrial and residential uses. Further, no impacts regarding views of scenic resources beyond the site would occur from long-range views towards the site. Thus, less than significant impacts would occur regarding scenic vistas.

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The addition of the fire station would not result in the introduction of an incompatible element in relationship with the surrounding industrial and residential uses. Further, no impacts regarding views of scenic resources beyond the site would occur from long-range views towards the site. Thus, less than significant impacts would occur regarding scenic vistas.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcrops, and historic buildings within a state scenic highway?

No Impact. The project site is currently vacant, undeveloped property. The site has been rough graded in anticipation of a fire station. There are no designated scenic highways in the immediate project vicinity. The nearest scenic highway to the project site is I-5, one mile east of the project site. Views of the project site from I-5 are limited by the intervening residential development and topography. Furthermore, the project site is not located within a scenic corridor or viewshed. Regardless, no scenic resources, including trees, rock, outcroppings, or historic buildings are located on the site. Thus, project implementation would not damage any scenic resources on the project site and no impacts would occur in this regard.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact. The project site is currently vacant, undeveloped property. The site has been rough graded in anticipation of a fire station. The general vicinity of the site is characterized by existing or planned development in an urbanizing environment. There are existing two-story, single-family residences to the north/northeast across Hasley Canyon Road approximately 150 feet from the site along Gibraltar Lane. Existing multi-story (up to approximately 30 feet) industrial buildings are located within approximately 100 feet immediately adjacent to the south and west of the site. To the northwest of the site is a vacant, rough graded building pad designated for industrial use. No unique aesthetic features or scenic resources are located on or surrounding the site.

Building design and landscaping for the proposed project would be compatible with the massing and scale of the surrounding uses since it would be a single-story building not to exceed 32 feet in height. The project would include antennas on the building up to approximately 10– feet above the roof top. Given that the site is a vacant lot surrounded by industrial uses to the south and west and no unique aesthetic features or scenic resources are located on or surrounding the site, the addition of the fire station, including antennas, would not substantially degrade existing visual character or quality of the site and its surroundings. Thus, project implementation would result in less than significant impacts.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. The project site is currently vacant, undeveloped property. As such, no light generating sources are present on the site. The surrounding area that

consists of single-family residential uses and industrial uses currently generates low-level exterior building lighting for nighttime way finding and security purposes. In addition, off-site sources of light that contribute to ambient nighttime light levels in the area include headlights from vehicles traveling along local roadways.

Development of the proposed fire station would entail the construction of one single-story building to house staff and equipment. The single-story building would not exceed 32 feet in height and would be constructed on previously rough graded land. Since no sensitive uses (receptors) exist in the immediate project vicinity, with the exception of the residential development approximately 150 feet northeast/east of the project site, no negative effects associated with shadows would occur.

The project would also introduce low-level lighting on the site for signage, security, and night visibility at similar lighting levels to the existing adjacent industrial lighting to the south and west. The nearest sensitive receptor to the site would be the residences to the north of the site, which are located approximately 170 feet from the site. A photometric analysis was prepared for the project that illustrates the level of lighting in foot-candles off the site.[1,2] The photometric analysis for the project shows a maximum of 0.7 foot candles near the northern boundary of the site at Hasley Canyon Road. Along Hasley Canyon Road, there would be less than 0.1 foot candles of light from the project site. While the lighting on the project site would be visible from adjacent uses, including the residences north/northeast of the site, due to the distance between the site and the residences (approximately 170 feet) there would be no noticeable change in the lighting levels at the adjacent residences. Additionally, the project would not include the use of highly reflective materials which would result in substantial glare impacts. Overall, light and glare impacts would be less than significant.

II. AGRICULTURAL RESOURCES.

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown the maps prepared pursuant to the Farmland Mapping Monitoring Program of the California Resources Agency, to non-agricultural uses?

No Impact. No agricultural uses or related operations exist within the project site or surrounding area. In addition, the project site has not been mapped as Prime Farmland, Unique

[1] *Source: Photometric Site Plan, prepared by Osborn, July 2009. Included as Appendix B of this document.*

[2] *Foot-Candle is a unit of illuminance on a surface that is everywhere one foot from a uniform point source of light of one candle and equal to one lumen per square foot.*

Farmland, or Farmland of Statewide importance pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. Therefore, the project would not result in impacts to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The site is zoned M-1 1/2DP for restricted heavy manufacturing uses and designated for industrial uses. No agricultural uses are present on the project site. As no portions of the project site are enrolled in a Williamson Act contract or anticipated to affect agricultural zones, development of the project would not result in a conflict relative to existing zoning for an agricultural use or with Williamson Act contracts.[3] Therefore, no impacts associated with this issue would occur.

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

No Impact. As stated above, the project would be constructed on a site currently vacant site and is not located on any land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Development of the fire station site would not result in the conversion of farmland to non-agricultural use. Thus, no impacts to agricultural resources would occur.

III. AIR QUALITY

The significance criteria established by the South Coast Air Quality Management District (SCAQMD) may be relied upon to make the following determinations. Would the project:

a. Conflict with or obstruct implementation of the AQMP or Congestion Management Plan?

Less Than Significant Impact. The project site is located within the 6,745 square mile South Coast Air Basin (SCAB). The South Coast Air Quality Management District (SCAQMD)

[3] *The California Legislature passed the Williamson Act in 1965 to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. The Act creates an arrangement whereby private landowners contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. The vehicle for these agreements is a rolling term 10-year contract (i.e., unless either party files a "notice of nonrenewal," the contract is automatically renewed for an additional year.). In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather then potential market value.*

is required, pursuant to the Clean Air Act, to reduce emissions of criteria pollutants for which the Basin is in non-attainment (i.e., ozone, PM_{10}, and $PM_{2.5}$). The project would be subject to the SCAQMD's Air Quality Management Plan (AQMP). The AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by the Southern California Association of Governments (SCAG).

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment.[4] With regard to air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide (RCPG), which includes Growth Management and Regional Mobility chapters that form the basis for the land use and transportation control portions of the AQMP and are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. Both the RCPG and AQMP are based on projections originating with County and City General Plans.

A project is consistent with the AQMP if it is consistent with the population, housing and employment assumptions that were used in the development of the AQMP. The project is also consistent with local zoning ordinances. Because the SCAQMD has incorporated these same projections into the AQMP, it can be concluded that the proposed Project would be consistent with the projections in the AQMP. In addition, as discussed below, project implementation would not exceed any ambient air quality standards or thresholds. Therefore, the proposed project would not be anticipated to conflict with or obstruct implementation of the SCAQMD's AQMP.

The Congestion Management Program (CMP) was enacted by the Metropolitan Transportation Authority (Metro) to address traffic congestion issues that could impact quality of life and economic vitality. The intent of the program is to provide an analytical basis for transportation decisions throughout the state. An analysis is required at all CMP monitoring intersections for which a project is projected to add 50 or more trips during any peak hour. In addition, analysis is required for all freeway segments for which a project is projected to add 150 or more hourly trips, in each direction, during the peak hours analyzed.

As described in further detail below in Response III (b), the proposed project is not expected to generate additional emergency Fire Department vehicle trips, as the proposed fire station would be more centrally located to surrounding business and residences and would

[4] *SCAG serves as the federally designated metropolitan planning organization (MPO) for the southern California region.*

reduce response time to within 5 minutes. Non-emergency responses and business trips are estimated to generate a total of four trips per day. The proposed project would generate a conservative maximum of 14 new employee roundtrips per day. This is based on a maximum of seven employees at the fire station during shift changes. A total of 19 trips would not result in an increase of 50 or more trips during any peak hour at the nearest CMP intersection. As a result, the project would not exceed any CMP thresholds, and no impact to the CMP network would occur. Thus, the project would not conflict with or obstruct implementation of the CMP.

Based on the above discussion of applicable air quality plans, implementation of the proposed project would result in less than significant impacts.

b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact. As indicated above, the project site is located within the SCAB, which is characterized by relatively poor air quality. State and federal air quality standards are often exceeded in many parts of the Basin, including those monitoring stations nearest to the project location. The proposed project would contribute to local and regional air pollutant emissions during construction (short-term) and project occupancy (long-term). However, based on the following analysis, construction and operation of the project would result in less than significant impacts relative to the daily significance thresholds for criteria air pollutant emissions established by the SCAQMD for construction and operational phases.

Construction

Construction has the potential to create regional air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers traveling to and from the project site. In addition, fugitive dust emissions would result from demolition, site preparation, and construction activities. Mobile source emissions, primarily particulate matter (PM) and nitrogen oxides (NO_X), would result from the use of construction equipment such as bulldozers, loaders, and haul trucks. During the finishing phase, paving operations and the application of architectural coatings (i.e., paints) and other building materials would release volatile organic compounds (VOCs). Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

Regional Impacts

Regional construction-related emissions associated with heavy construction equipment were calculated using the URBEMIS2007 emissions inventory model originally developed by

the California Air Resources Board (CARB). Model results are provided in Appendix A of this document. The analysis assumed that all construction activities would comply with SCAQMD Rule 403 regarding the control of fugitive dust. A summary of maximum daily regional emissions by construction phase are presented in Table B-1 on page B-8, along with the regional significance thresholds for each air pollutant. As shown therein, maximum regional construction emissions would not exceed the thresholds for VOC, NO_X, carbon monoxide (CO), sulfur dioxide (SO_X), PM_{10}, or $PM_{2.5}$.

Localized Impacts

The localized effects of daily construction emissions generated on-site were evaluated for sensitive receptor locations potentially impacted by the project according to the SCAQMD's localized significance threshold (LST) methodology, which utilizes on-site mass emissions rate look-up tables and project specific modeling, where appropriate. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA) and distance to the nearest sensitive receptor. For PM_{10} and $PM_{2.5,}$ LSTs were derived based on the requirements of SCAQMD Rule 403, Fugitive Dust. The mass rate look-up tables were developed for each SRA and can be used to determine whether or not a project may generate significant adverse localized air quality impacts. The LST mass rate look-up tables only apply to projects that are less than or equal to five acres in size. A conservative estimate of maximum local (on-site) daily emissions for NO_X, PM_{10}, $PM_{2.5}$, and CO for each phase of construction is presented in Table B-1. Localized construction emissions thresholds, based on the construction site acreage and distance to the closest off-site sensitive receptor, were obtained from the LST look-up tables and are also listed in Table B-1. There are existing single-family residential uses located southeast of the project site along Gibraltar Lane at a distance of 60 meters.

As presented in Table B-1, construction-related daily maximum localized emissions would not exceed the SCAQMD daily significance thresholds for NO_X, CO, PM_{10}, and $PM_{2.5}$. Therefore, localized construction emissions resulting from the project would not result in a significant short-term impact and no mitigation measures would be necessary.

Also shown above, emissions from project construction activities with incorporation of the Rule 403-compliant project features described would fall below both localized and regional SCAQMD significance thresholds. Therefore, project construction would not violate an air quality standard or contribute significantly to an existing or projected air quality violation, and impacts would be less than significant and no mitigation measures would be necessary.

Table B-1

Regional and Localized - Unmitigated Construction Emissions [a]
(pounds per day)

	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Regional Emissions						
Mass Site Grading	2	20	9	<1	6	2
Fine Site Grading	1	6	4	<1	<1	<1
Building Erection/Finishing	5	29	15	<1	2	2
Maximum Regional Emissions	**5**	**29**	**15**	**<1**	**6**	**2**
Regional Construction Daily Significance Threshold	75	100	550	150	150	55
Over/(Under)	(70)	(71)	(535)	(150)	(144)	(53)
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Localized Emissions						
Mass Site Grading	2	16	7	<1	6	2
Fine Site Grading	1	5	3	<1	<1	<1
Building Erection/Finishing	5	29	15	<1	2	2
Maximum Localized Emissions	**5**	**29**	**15**	**<1**	**6**	**2**
Localized Significance Thresholds	-	107	879	-	12	4
Over/(Under) Threshold	-	(78)	(864)	-	(6)	(2)
Exceed Threshold?	**-**	**No**	**No**	**-**	**No**	**No**

[a] *Compiled using the URBEMIS 2007emissions inventory model. The equipment mix and use assumption for each phase is provided in Appendix A.*
[b] *PM_{10} emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.*
[c] *The SCAQMD Localized Significance Thresholds (LSTs) are based on Source Receptor Area No. 13 (Santa Clarita Valley) for a one acre site with a 50 meter receptor distance.*

Source: PCR Services Corporation, 2008.

Operational Impacts

The SCAQMD has also established separate significance thresholds to evaluate potential impacts associated with the incremental increase in criteria air pollutants associated with long-term project operations. Operational emissions related to baseline and project conditions were computed using the URBEMIS2007 emissions inventory model.

Regional Impacts

Implementation of the proposed Project would not result in an increase in the number of emergency Fire Department vehicle trips. Operation of the Fire Station may result in a decrease in the vehicle miles traveled, as this station is closer to surrounding residences and businesses than existing stations. However, as a worst-case evaluation, this study considers emissions from

new employee commuter trips as incremental sources of emissions. The 10,648 square feet of space would result in an increase in stationary source emissions, including the consumption of fossil fuels for comfort heating and the generation of electricity for cooling, lighting, and power needs, as compared to existing conditions. Operational impacts include worst-case scenario days for the operation of the above-ground gasoline and diesel storage tanks, and a diesel powered 200 kilowatt (kW) emergency generator. The emissions associate with the storage tanks were calculated using the CARB TANKS 4.0.9d program and the emergency generators were calculated using emission factors container in the USEPA AP42 Tables, and are described as a stationary source during operation. The results of the detailed emissions calculations are provided in Table B-2 on page B-10, and URBEMIS model output files are contained in Appendix A. As indicated therein, the project would result in an increase of criteria pollutant emissions. However, this increase would be below the SCAQMD daily significance thresholds for long-term regional operations. Therefore, the project would have a less than significant impact on air quality resulting from long-term operational emissions, and no mitigation measures would be necessary.

Localized Impacts

The SCAQMD recommends a hot-spot evaluation of potential localized CO impacts when vehicle to capacity (V/C) ratios are increased by two percent or more at intersections with a level of service (LOS) of D or worse. As mentioned previously, the project would not generate any additional emergency and non-emergency Fire Department vehicle trips. As a result, a traffic study was not required to be completed and no additional analysis of this issue is necessary. It is concluded that the proposed project would not cause any new or exacerbate any existing CO hotspots, and, as a result, impacts related to localized mobile-source CO emissions would be less than significant.

c. Result in a cumulatively considerable net increase of any criteria pollutant for which the air basin is non-attainment (ozone, carbon monoxide, & PM_{10}) under an applicable federal or state ambient air quality standard?

Less Than Significant Impact. The SCAQMD's approach for assessing cumulative impacts related to operations is based on attainment of ambient air quality standards in accordance with the requirements of the Federal and State Clean Air Acts. As discussed earlier, the SCAQMD has developed a comprehensive plan, the 2007 AQMP, which addresses the region's cumulative air quality condition.

Table B-2

Maximum Incremental Increase in Project-Related Operational Emissions [a]
(Pounds per Day)

Emission Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Project Emissions						
Mobile (employee commute trips)	<1	<1	1	<1	<1	<1
Fire Trucks	1	4	2	<1	<1	<1
Area [a]	<1	<1	<1	<1	<1	<1
Stationary [b]	<1	48	10	3	3	3
Total	**2**	**52**	**14**	**3**	**4**	**3**
SCAQMD Significance Threshold	55	55	550	150	150	55
Difference	**(54)**	**(3)**	**(536)**	**(147)**	**(146)**	**(52)**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

[a] *Area source emissions are calculated using the URBEMIS 2007 emissions model. Area sources include natural gas consumption, landscape fuel consumption, consumer products and miscellaneous sources (e.g., commercial solvent usage, architectural coatings).*

[b] *Stationary source emissions include emissions due to project-related electricity generation, emissions from the backup diesel generator, and emissions from above ground storage tanks. Electricity generation-related emissions are calculated based on guidance provided in the SCAQMD CEQA Air Quality Handbook. Stationary sources emissions include worst-case day emergency generator usage.*

Worksheets and modeling output files are provided in Appendix A.

Source: PCR Services Corporation, 2008.

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. Because the Basin is currently in nonattainment for ozone, PM_{10} and $PM_{2.5}$, related projects could cause ambient concentrations to exceed an air quality standard or contribute to an existing or projected air quality exceedance. Cumulative impacts to air quality are evaluated under two sets of thresholds for CEQA and the SCAQMD. In particular, CEQA Guidelines Sections 15064(h)(3) provides guidance in determining the significance of cumulative impacts. Specifically, Section 15064(h)(3) states in part that:

> "A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review

process to implement, interpret, or make specific the law enforced or administered by the public agency…"

For purposes of the cumulative air quality analysis with respect to CEQA Guidelines Section 15064(h)(3), the project's incremental contribution to cumulative air quality impacts is determined based on compliance with the SCAQMD adopted 2007 Air Quality Management Plan (AQMP).

A project is deemed inconsistent with air quality plans if it results in population and/or employment growth that exceeds growth estimates in the applicable air quality plan. In turn, the AQMP relies upon growth projections adopted by the SCAG, which in turn, relies upon adopted General Plan growth projections. Consequently, compliance with the County's General Plan typically results in compliance with the AQMP.

As the proposed project is not part of an ongoing regulatory program, the SCAQMD recommends that project specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As discussed above, peak daily emissions of operation-related pollutants would not exceed SCAQMD regional significance thresholds. By applying SCAQMD's cumulative air quality impact methodology, implementation of the proposed project would not result in an addition of criteria pollutants such that cumulative impacts would occur, in conjunction with related projects in the region. Therefore, the emissions of non-attainment pollutants and precursors generated by project operation in excess of the SCAQMD project-level thresholds would be less than significant.

Greenhouse Gas Emissions

Background

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. Historical records indicate that global climate changes have occurred in the past due to natural phenomena; however some data indicate that the current global conditions differ from past climate changes in rate and magnitude; thus, the current changes in global climate have been attributed to anthropogenic activities by the Intergovernmental Panel on Climate Change (IPCC).[5] There continues to be significant scientific uncertainty concerning the extent to which increased concentrations of greenhouse gases (GHGs) have caused or will cause climate change, and over the appropriate actions to limit and/or respond to climate change.

[5] *Intergovernmental Panel on Climate Change (IPCC), Fourth Assessment Report, The Physical Science Basis, Summary for Policy Makers, 2007.*

GHGs are those compounds in the Earth's atmosphere which play a critical role in determining temperature near the Earth's surface. Specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth's atmosphere, but retain some of the low frequency infrared energy which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Increased concentrations of GHGs in the Earth's atmosphere have been linked to global climate change and such conditions as rising surface temperatures, melting icebergs and snowpack, rising sea levels, and the increased frequency and magnitude of severe weather conditions. Existing climate change models also show that climate warming portends a variety of impacts on agriculture, including loss of microclimates that support specific crops, increased pressure from invasive weeds and diseases, and loss of productivity due to changes in water reliability and availability. In addition, rising temperatures and shifts in microclimates associated with global climate change are expected to increase the frequency and intensity of wildfires.

GHGs include carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor (H_2O), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). CO_2 is the most abundant GHG in the atmosphere, and represents 77 percent of total GHG emissions.[6] GHGs are the result of both natural and anthropogenic activities. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions. In the state of California, the transportation sector is the greatest source of GHG emissions, accounting for 38 percent of total GHG emissions in 2004, the latest year for which data are available.[7]

Not all GHGs exhibit the same ability to induce climate change; as a result, GHG contributions are commonly quantified in the equivalent mass of CO_2, denoted as CO_2e. CO_2e allows for comparability among GHGs with regard to the global warming potential (GWP). Mass emissions are calculated by converting pollutant specific emissions to CO_2e emissions by applying the proper global warming potential (GWP) value.[8] These GWP ratios are available from the United States Environmental Protection Agency (USEPA) and published in the California Climate Action Registry (CCAR) Protocol. By applying the GWP ratios, project related CO_2e emissions can be tabulated in metric tons per year. The CO_2e values are calculated for the entire construction period. Construction output values used in this analysis are adjusted to represent a CO_2e value representative of CO_2, CH_4, and N_2O emissions from project

[6] *IPCC, Fourth Assessment Report, Synthesis Report, 2007.*

[7] *California Air Resources Board, Greenhouse Gas Emissions Inventory Data: 2004 GHG emissions by Sector, 2008.*

[8] *CO_2e was developed by the Intergovernmental Panel on Climate Change (IPCC), and published in its Second Assessment Report (SAR) 1996.*

construction activities. HFCs, PFCs, and SF_6 are not byproducts of combustion, the primary source of construction-related GHG emissions, and therefore are not included in the analysis. Construction CH_4 and N_2O values are derived from factors published in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. These values are then converted to metric tons of CO_2e for consistency.

Our understanding of the fundamental processes responsible for global climate change has improved over the past decade, and our predictive capabilities are advancing. However, there remains significant scientific uncertainty, for example, in predictions of local effects of climate change, occurrence of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of the Earth's climate system, the uncertainty surrounding climate change may never be completely eliminated. Because of these uncertainties, there continues to be significant debate as to the extent to which increased concentrations of GHGs have caused or will cause climate change, and with respect to the appropriate actions to limit and/or respond to climate change.

The IPCC, in its Fourth Assessment Report (FAR), stated that "it is likely that there has been significant anthropogenic warming over the past 50 years."[9] However, it is impossible to identify a single development project as the cause of future specific climate change impacts due to the global nature of climate change. Also in the FAR, the IPCC holds that the impacts of future climate change will vary across regions. While "large-scale climate events have the potential to cause very large impacts," the impacts of future climate change will be mixed across regions.

Regulatory Framework

Federal. On May 19, 2009, President Obama announced a new federal policy "aimed at both increasing fuel economy and reducing greenhouse gas pollution for all new cars and trucks sold in the United States." The policy proposes fuel efficiency standards that would apply to model years 2012 through 2016. These standards would be more aggressive than the federal Corporate Average Fuel Economy (CAFE) standards and would result in a reduction of approximately 900 million metric tons of GHG.

State. In response to growing scientific and political concern regarding global climate change, California has recently adopted a series of laws to reduce both the level of GHGs in the atmosphere and to reduce emissions of GHGs from commercial and private activities within the

[9] *Intergovernmental Panel on Climate Change, Fourth Assessment Report, Summary for Policy Makers, 2007.*

State. In September 2002, Governor Gray Davis signed Assembly Bill (AB) 1493, requiring the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. It should be noted that setting emission standards on automobiles is solely the responsibility of the USEPA. The federal Clean Air Act (CAA) allows States to set state-specific emission standards on automobiles if they first obtain a waiver from the USEPA. The USEPA denied California's request for a waiver, thus delaying the CARB's proposed implementation schedule for setting emission standards on automobiles to help reduce GHGs.

In June 2005, Governor Schwarzenegger signed Executive Order S-3-05, which established GHG emissions targets for the state, as well as a process to ensure the targets are met. The order directed the Secretary for California EPA to report every two years on the State's progress toward meeting the Governor's GHG emission reduction targets. As a result of this executive order, the California Climate Action Team (CAT), led by the Secretary of the California EPA, was formed. The CAT is made up of representatives from a number of State agencies and was formed to implement global warming emission reduction programs and reporting on the progress made toward meeting statewide targets established under the Executive Order. State agency members include the Business, Transportation and Housing Agency; Department of Food and Agriculture; Resources Agency; Air Resources Board; California Energy Commission; the Public Utilities Commission; and Department of Water Resources. The CAT published its Climate Action Team Report to Governor Schwarzenegger and the Legislature in March 2006, in which it laid out forty-six specific emission reduction strategies for reducing GHG emissions and reaching the targets established in the executive order.

In September 2006, Governor Arnold Schwarzenegger signed the California Global Warming Solutions Act of 2006, also known as AB 32, into law. AB 32 commits the State to achieving the following:

- A reduction of GHG emissions to 2000 levels by 2010 (which represents an approximately 11 percent reduction from business as usual).
- A reduction of GHG emissions to 1990 levels by 2020 (approximately 30 percent below business as usual).

To achieve these goals, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. The following schedule outlines the CARB actions mandated by AB 32:

- By January 1, 2008, CARB adopts regulations for mandatory (GHG) emissions reporting, defines 1990 emissions baseline for California (including emissions from imported power), and adopts it as the 2020 statewide cap. CARB adopted 427 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) as the total statewide greenhouse gas 1990 emissions level and the 2020 emissions limit in 2007.[10]
- By January 1, 2009, CARB adopts plan to effect GHG reductions from significant sources of GHG via regulations, market mechanisms and other actions.[11] CARB approved the AB32 Scoping Plan in December 2008.
- During 2009, CARB drafts rule language to implement its plan and holds a series of public workshop on each measure (including market mechanisms). CARB has adopted "early action" measures required by the Scoping Plan and has scheduled and is in the process of adopting more than 20 other Scoping Plan measures.
- By January 1, 2010, early action measures will take effect.
- During 2010, CARB, after workshops and public hearings, conducts series of rulemakings to adopt GHG regulations including rules governing market mechanisms.
- By January 1, 2011, CARB completes major rulemakings for reducing GHGs, including market mechanisms. CARB may revise and adopt new rules after January 1, 2011 to achieve the 2020 goal.
- By January 1, 2012, GHG rules and market mechanisms adopted by CARB take effect and become legally enforceable.
- December 31, 2020 is the deadline for achieving 2020 GHG emissions cap.

CARB's list of discrete early action measures that can be adopted and implemented before January 1, 2010 was approved on June 21, 2007, and focuses on major State-wide contributing sources and industries, not on individual development projects or practices. These early action measures are: 1) a low-carbon fuel standard; 2) reduction of refrigerant losses from motor vehicle air conditioning system maintenance; and 3) increased methane capture from landfills. Recently, CARB released emissions inventory estimates for 1990 through 2004.

[10] *CARB Staff Report, California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit, 2007.*

[11] *CARB released the Climate Change Proposed Scoping Plan in October 2008, which details the strategies that the State will use to reduce GHG emissions. The Plan was approved at the Board hearing in December 2008.*

A companion bill to AB 32, Senate Bill (SB) 1368, requires the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) to establish GHG emission performance standards for the generation of electricity. These standards will also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting ARB to meet its mandate under AB 32. On January 25, 2007, the CPUC adopted an interim GHG Emissions Performance Standard (EPS), which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have GHG emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO_2 per megawatt-hour (MW/hr). Further, on May 23, 2007, the CEC adopted regulations that establish and implement an identical EPS of 1,100 pounds of CO_2 per MW/hr (see CEC order No. 07-523-7).

An additional bill related to AB 32, SB 97, requires the California Office of Planning and Research (OPR), by July 1, 2009, to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions, as required by CEQA, including but not limited to, effects associated with transportation or energy consumption. The Resources Agency will then be required to certify and adopt the guidelines by January 1, 2010, and to periodically update the guidelines to incorporate new information or criteria established by the CARB pursuant to AB 32.[12] The OPR released a technical advisory on addressing climate change through CEQA Review on June 19, 2008. This guidance document outlines suggested components to CEQA disclosure: quantification of GHG emissions from a project's construction and operation, determination of significance of the project's impact to climate change, and if the project is found to be significant, the identification of suitable alternatives and mitigation measures.

There has also been California legislative activity acknowledging the relationship between land use planning and transportation sector GHG emissions. California SB 375 (passed Assembly on 8/25/2008; passed Senate on 8/30/2008; signed by the Governor on September 30, 2008) links regional planning for housing and transportation with the greenhouse gas reduction goals outlined in AB 32. Reductions in GHG emissions would be achieved by, for example, locating housing closer to jobs, retail, and transit. Under the bill, each Metropolitan Planning Organization would be required to adopt a sustainable community strategy to encourage compact development so that the region will meet a target, created by CARB, for reducing GHG emissions.

[12] *Senate Bill No. 97, Chapter 185, approved by Governor Schwarzenegger and filed with the Secretary of State, August 24, 2007.*

Local. In January 2007, as part of the County's efforts to help conserve natural resources and protect the environment, the County of Los Angeles Board of Supervisors adopted a comprehensive Countywide Energy and Environmental Policy. The goal of the Policy is to provide guidelines for the development, implementation, and enhancement of energy conservation and environmental programs. The Policy established an Energy and Environmental Team to coordinate the efforts of various County departments, establish a program to integrate sustainable technologies into its Capital Project Program, reduce energy consumption in County facilities by 20 percent by the year 2105, and commit to joining the California Climate Action Registry to assist the County in establishing goals for the reduction of GHG emissions. The County joined the Climate Action Registry in 2007. The Policy consists of the following four program areas designed to promote "green" design and operation of County facilities and to reduce the County's "environmental footprint:"

- energy and water efficiency,
- environmental stewardship,
- public outreach and education, and
- sustainable design.

The energy and water efficiency program area's goal is to reduce energy consumption in County facilities by 2015 through decreasing energy and water waste, implementing energy and water efficiency projects, and educating employees on energy and water conservation. The environmental stewardship program area focuses on measuring and reducing the County's environmental footprint by becoming a member of the California Climate Action Registry and implementing strategies to "green" the County's basic operations. These strategies include looking into environmentally responsible purchasing standards, having recycling bins in County buildings, investigating green cleaning products for custodial operations, and investigating the utilization of existing resources. The public outreach and education program area will augment County communication and outreach to include energy and water conservation practices, utility rates and rate changes, rotating power outage information, emergency power outage information, and energy efficiency incentives. Finally, the sustainable design program area intends to incorporate sustainable and green features into the County's capital improvement and refurbishment projects with the intention of optimizing the performance and extending the useful life of County buildings.

Recognizing the overlap between land use and GHG emissions, the Los Angeles County Board of Supervisors adopted a set of green building program ordinances in November, 2008 that cover low impact development (LID) standards, drought-tolerant landscaping requirements, and green building development standards.

The LID ordinance states: "LID encourages site sustainability and smart growth in a manner that respects and preserves the characteristics of the County's watersheds, drainage paths, water supplies, and natural resources."[13] For developments consisting of four or fewer residential units, at least two LID best management practices (BMPs) must be implemented in the site design. BMPs are "designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint sources of discharges, including stormwater," and include such methods or practices as disconnecting impervious surfaces, using porous pavement, landscaping and irrigation requirements, and a green roof.

The drought-tolerant landscaping ordinance is designed to "help conserve water resources by requiring landscaping that is appropriate to the region's climate and to the nature of a project's use."[14] The ordinance applies to all projects regardless of size, and requires that 75 percent of projects' total landscaped areas contain drought-tolerant plants. The ordinance limits the amount of turf allowed on a project site to 25 percent of the total landscaped area, or 5,000 square feet. All turf within a landscaped area must be water-efficient. In addition, landscaped areas must be organized by "hydrozones in accordance with their respective water, cultural (soil, climate, sun and light), and maintenance requirements."

The green building ordinance is intended to encourage building practices that conserve water, energy and natural resources; divert waste from landfills; minimize impacts to existing infrastructure; and promote a healthier environment.[15] Implementation of this ordinance will reduce energy demand in new buildings, and thus GHG emissions from new projects. For projects having a gross floor area more than 10,000 and less than 25,000 square feet, the ordinance requires that structures be built to new building standards in addition to being designed to meet LEED certification standards. The Green Building Standards are summarized below.

- **Energy Conservation**: Buildings must reduce energy demand by at least 15% below Title 24.
- **Outdoor Water Conservation**: A smart irrigation controller must be installed for any landscaped area of the project.

[13] *Title 12, Chapter 12.84, Low Impact Development Standards, of the Los Angeles County Code. http://planning.lacounty.gov/assets/upl/project/green_20080507-green-building-program-ordinances.pdf*

[14] *Title 21, Chapter 22.52, Part 21, Drought Tolerant Landscaping, of the Los Angeles County Code. http://planning.lacounty.gov/assets/upl/project/green_20080507-green-building-program-ordinances.pdf*

[15] *Title 22, Chapter 22.52, Part 20, Green Building, of the Los Angeles County Code. http://planning.lacounty.gov/assets/upl/project/green_20080507-green-building-program-ordinances.pdf*

- **Resource Conservation**: At least 50 percent of construction waste (by weight) must be recycled.

- **Tree Planting**: A minimum of one 15-gallon trees must be planted and maintained for every 5,000 square feet of developed area. At least 50 percent of the trees must be listed on the drought-tolerant approved plant list.

Since the adoption of the Policy, the County has taken steps to ensure compliance with the goals of the Policy and ultimately, AB 32. In order to meet the 20 percent reduction of energy consumption goal, the County has implemented energy efficient projects in County facilities, specifically retrofitting or replacing building lighting systems and air conditioning equipment. Accordingly, annual electrical consumption in County facilities was reduced by 2.31 percent in 2007 and 3.09 percent in 2008; annual gas consumption was reduced by 1.17 percent in 2007 and 1.83 percent in 2008 (LACDPW 2008). Additionally, the Los Angeles County Recycled Water Task Force accomplished the following milestones towards its goal of recommending and implementing the use of recycled water for non-potable purposes to meet the demands of an additional 1.3 million people:

- Established membership in the Water Reuse Association and the Los Angeles County Recycled Water Advisory Committee.

- Secured Adoption of an ordinance by the Board naming the Director of Public Works or his designee the lead County official on matters related to recycled water.

- Assisted County Waterworks Districts in drafting revised policies and procedures to require its customers to use recycled water for non-potable, outdoor use.

- Participated in efforts to develop recycled water supplies within the Antelope Valley area of Los Angeles County.

- Prepared a draft 5 signature letter from the Board to the Governor requesting that Caltrans be directed to prepare a master plan for converting its irrigation systems to recycled water.

- Established effective working relationships with all recycled water providers within Los Angeles County.

- Assisted the Department of Parks and Recreation in beginning the capital planning process for converting all of their facilities to recycled water for irrigation purposes by the year 2020.

- Facilitated discussions between the Department of Parks and Recreation (DPR) and West Basin Municipal Water District (WBMWD) to enable delivery of recycled water to DPR facilities in WBMWD service area.

- Initiated development of a County-wide strategic plan in cooperation with the Chief Executive Office for converting all County facilities to recycled water for irrigation.

- Facilitated an agreement between the City of Los Angeles Department of Water and Power, the West Basin MWD, the Water Replenishment District, and Public Works to conduct a study of the Department's Modified Fouling Index standard for water delivered to the seawater barriers to potentially increase the amount of recycled water used for barrier injection.

- Developed County positions on bills pending in the California Assembly or Senate, including AB 1481, SB 201, and AB 2270.

The County has also developed, adopted, and implemented tools and policies to support the reduction of GHG emissions, promote “green” development, and provide employees and the public with information and opportunities to reduce their energy consumption. These tools and policies include: the Electronic Products Environmental Assessment Tool, which identifies and certifies environmentally preferable electronic equipment; the green building ordinance, which requires all new private development within the unincorporated areas of the County to incorporate green building elements and will lead to all projects over 10,000 square feet in size to be certified under LEED™ or equivalent standards, and the incorporation of Low Impact Design Standards and drought tolerant landscaping; County-sponsored recycling programs, which have distributed 40,000 paper recycling bins to County employees and require that all County departments purchase paper with a minimum 30 percent recycled content; the Vehicle Purchasing Services Program which provides incentives for County employees, retirees, family members, and contractors/sub-contractors to purchase alternate fuel vehicles; and the Single Use Bag Reduction and Recycling Program which aims to reduce the consumption and disposal of plastic carryout bags in County unincorporated areas and partner cities (LACDPW 2008).

In addition to the achievements discussed above, the County has also committed to achieving several additional goals and standards moving forward. The County has pledged to be a “Cool County” by establishing a GHG footprint, developing a GHG mitigation plan, working with local entities to reduce regional GHG emissions by 80 percent by 2050, and supporting further legislation to raise CAFE standards. The County plans to install energy saving systems on all vending machines on its properties to reduce operating costs and GHG emissions. The County will also develop a program to allow employees to purchase public transportation passes through a "pre-tax" payroll plan and has created a countywide “solar mapping” portal to provide

an internet-based resource for residential and commercial building owners to receive information on the viability of installing rooftop solar projects (LACDPW 2008).

Regional: There is no regional agency responsible for the regulation of GHG emissions related to global climate change. The SCAQMD is the agency principally responsible for comprehensive air pollution control in Basin. Although the SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate factors leading to global climate change or GHG emission issues associated with plans and new development projects throughout the SCAB.

In order to provide GHG emission analysis guidance to the local jurisdictions within the SCAB, the SCAQMD has organized a Working Group to develop GHG emission analysis guidance and thresholds.

SCAQMD released a draft guidance document regarding interim CEQA GHG significance thresholds in October 2008. SCAQMD proposed a tiered approach, whereby the level of detail and refinement needed to determine significance increases with a project's total GHG emissions. SCAQMD also proposed a screening level of 3,000 metric tons per year for commercial or residential projects, under which project impacts are considered "less than significant." The 3,000 metric ton screening level was intended "to achieve the same policy objective of capturing 90 percent of the GHG emissions from new development projects in the residential/commercial sectors."[16] For projects with GHG increases greater than 3,000 metric tons per year, the use of a percent emission reduction target (e.g., 30 percent) was proposed to determine significance. This emission reduction target is a reduction below what is considered "business as usual." SCAQMD also proposes that projects amortize construction emissions over the 30-year lifetime of any given project. Project construction emissions can be amortized by calculating total construction period emissions and dividing by the 30-year lifetime of the project. In December 2008, SCAQMD adopted interim CEQA GHG significance thresholds for use only when SCAQMD is the lead agency on Projects. These thresholds apply to stationary source (industrial) projects only, and include a 10,000 metric ton CO_2e screening level. SCAQMD has not recommended them for use by other lead agencies at this time. As of September 2009, SCAQMD and the Working Group are developing interim CEQA GHG significance thresholds for use in a broader context by other lead agencies.

[16] *SCAQMD, Board Meeting, December 5, 2008, Agenda No. 31, Interim GHG Significance Threshold Proposal – Key Issues/Comments Attachment D.*

Significance Thresholds

Section 15064.7 of the CEQA Guidelines defines a threshold of significance as an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. CEQA gives wide latitude to lead agencies in determining what impacts are significant and does not prescribe thresholds of significance, analytical methodologies, or specific mitigation measures. CEQA leaves the determination of significance to the reasonable discretion of the lead agency and encourages lead agencies to develop and publish thresholds of significance to use in determining the significance of environmental effects. However, neither the County of Los Angeles nor the SCAQMD (for projects where SCAQMD is not the lead agency) have yet established specific quantitative significance thresholds for GHG emissions. The regulations required to meet the State goals under AB 32 are still under development. Furthermore, pursuant to SB 97, guidelines to be prepared by OPR for addressing greenhouse gas emissions under CEQA may not be adopted until January 1, 2010. Additionally, OPR released preliminary draft CEQA guideline amendments for GHG emissions in January 2009. OPR does not identify a threshold of significance for GHG emissions, nor has it prescribed assessment methodologies or specific mitigation measures. The preliminary draft amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations based on substantial evidence. The draft guideline amendments augmented Appendix G of the CEQA Guidelines, the environmental checklist form, to include a section on greenhouse gas emissions. The draft guideline amendments suggested the following questions:

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

The preliminary draft amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. OPR is required to “prepare, develop, and transmit” the guidelines to the Resources Agency on or before July 1, 2009, for certification and adoption. The draft guidelines were transmitted on April 13, 2009 by OPR to the Natural Resources Agency.

While the OPR has not yet adopted formal significance thresholds, OPR issued a guidance document on June 19, 2008 to provide interim advice to lead agencies regarding the analysis of GHG emissions in environmental documents. The technical advisory suggests three components for CEQA disclosure: quantification of GHG emissions from a project's construction and operation, determination of significance of the project's impact to climate change, and if the project is found to be significant, the identification of suitable alternatives and mitigation measures. The analysis contained herein follows this guidance. CAPCOA released a white paper, entitled CEQA and Climate Change, in January, 2008. The white paper examines various threshold approaches available to air districts and lead agencies for determining whether GHG emissions are significant. One of CAPCOA's proposed approaches in the white paper is a "non-zero" threshold of 900 annual metric tons for residential and office projects. Although not directly applicable, the commercial or residential threshold is considered appropriate for this project, because the fire station serves as a residence for fire department employees during their shifts. In addition, "house side" square footage represents a larger portion of the station than the apparatus bays.

CAPCOA and the State of California's Attorney General recognize that potential GHG impacts are exclusively cumulative in nature. Therefore, CAPCOA recommends that lead agencies require some level of mitigation even for projects that result in GHG emissions that are less than a numeric threshold. Because the County's Energy and Environmental Policy serves to reduce GHG emissions from new projects and existing operations, it is supportive of the goals of AB32 and is consistent with the CAPCOA recommendations. Thus, if a project results in emissions less than the numeric thresholds and implements design strategies consistent with the County of Los Angeles Energy and Environmental Policy, it is considered consistent with the goals of AB32, and is considered to have a less than significant impact with respect to its contribution to the cumulative impact of global climate change.

SCAQMD released a draft guidance document regarding interim CEQA GHG significance thresholds in October 2008. SCAQMD proposed a tiered approach, whereby the level of detail and refinement needed to determine significance increases with a project's total GHG emissions. SCAQMD also proposed a screening level of 3,000 metric tons per year for commercial or residential projects, under which project impacts are considered "less than significant." The 3,000 metric ton screening level was intended "to achieve the same policy objective of capturing 90 percent of the GHG emissions from new development projects in the residential/commercial sectors."[17] For projects with GHG emissions increases greater than 3,000 metric tons per year, the use of a percent emission reduction target (e.g., 30 percent) was proposed to determine significance. This emission reduction target is a reduction below what is

[17] *SCAQMD, Board Meeting, December 5, 2008, Agenda No. 31, Interim GHG Significance Threshold Proposal – Key Issues/Comments Attachment D.*

considered "business as usual." SCAQMD also proposes that projects amortize construction emissions over the 30-year lifetime of any given project. Project construction emissions can be amortized by calculating total construction period emissions and dividing by the 30-year lifetime of the project. In December 2008, SCAQMD adopted interim CEQA GHG significance thresholds for use only when SCAQMD is the lead agency on Projects. These draft thresholds apply to stationary source (industrial) projects only, and include a 10,000 metric ton CO_2e screening level. SCAQMD has not recommended them for use by other lead agencies at this time. As of September 2009, SCAQMD and the Working Group are developing interim CEQA GHG significance thresholds for use in a broader context by other lead agencies.

In October 2008, CARB released a draft guidance document regarding interim CEQA GHG significance thresholds, wherein CARB proposed a tiered approach. CARB also proposed separate performance standards for construction, operational energy efficiency, water use, waste, and transportation, as well as a quantitative significance threshold in metric tons of CO_2e per year. The draft guidance included neither specific performance standards nor numeric significance thresholds for residential or commercial projects. On April 27, 2009, CARB revealed that it had abandoned its development of the proposed interim CEQA GHG significance thresholds in a public meeting; however, as of September 2009 no formal announcement has been publicized on CARB's website or elsewhere.

While it is difficult to predict the specific impact of one project's incremental contribution to the global effects of GHG emissions due to a variety of factors, including the complex and long term nature of such effects and the global scale of climate change, it is possible to quantify a project's incremental increase in GHG emissions for comparison with the numeric threshold proposed in the CAPCOA white paper. The threshold of 900 annual metric tons proposed in the CAPCOA white paper will be utilized for determining significance on a project level, in accordance with Appendix G draft amendments discussed above. The residential threshold is considered appropriate for this project, because the fire station serves as a residence for fire department employees during their shifts. In addition, "house side" square footage represents a larger portion of the station than the apparatus bays. Due to the complex physical, chemical and atmospheric mechanisms involved in global climate change, there is no basis for concluding that the project's very small theoretical emissions increase could actually cause a measurable increase in global GHG emissions necessary to force global climate change. It cannot be determined that the GHG emissions of any single project alone can cause a direct physical change in the environment. It is global emissions in their aggregate that contribute to climate change, not any one source of emissions alone. Therefore, due to the incremental amount of GHG emissions estimated for this project, the lack of any evidence for concluding that the project's GHG emissions could cause any measurable increase in global GHG emissions necessary to force global climate change, and the fact that the project incorporates design features to reduce potential GHG emissions that are consistent with the goals of AB32, the

project is not considered to have a significant impact with respect to global climate change on a project-specific basis. Moreover, there is no non-speculative method for assessing how the project's very small theoretical GHG emissions increase could cause a significant project-specific effect on global climate change.

CAPCOA,[18] the State of California's Attorney General,[19] and OPR[20] recognize that potential GHG impacts are exclusively cumulative in nature. Therefore, CAPCOA recommends that lead agencies require some level of mitigation even for projects that result in GHG emissions that are less than a numeric threshold. Because the County's Energy and Environmental Policy serves to reduce GHG emissions from new projects and existing operations, it is supportive of the goals of AB32 and is consistent with the CAPCOA recommendations. Thus, if a project results in emissions less than the applicable numeric thresholds and implements design and operational strategies consistent with the an applicable GHG reduction policy (County of Los Angeles Energy and Environmental Policy), it is considered to have a less than significant impact with respect to its contribution to the cumulative impact of global climate change. These criteria are consistent with Appendix G draft amendments discussed above.

Methodology

Construction. Construction emissions are calculated using the URBEMIS 2007 model, which is based on OFFROAD2007 model outputs. OFFROAD 2007 is an emissions estimation model developed by CARB to calculate emissions from construction activities. The output values used in this analysis were adjusted to be project-specific, based on usage rates of construction equipment, type of fuel, and construction schedule. These values were then applied to the construction phasing assumptions used in the criteria pollutant analysis to generate GHG emissions values for each construction year (refer to Attachment A). The URBEMIS 2007 model outputs CO_2 emissions only. Therefore, CH_4 and N_2O emissions were estimated based on the emissions ratios for construction and industrial equipment from the *2006 IPCC Guidelines for National Greenhouse Gas Inventories.*

Operation. Mobile source emission calculations associated with operation of the proposed project utilize a projection of trip rate and annual vehicle miles traveled (VMT), which

[18] *CAPCOA, CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, 2008.*

[19] *Office of the Attorney General, Global Warming's Unequal Impacts. http://ag.ca.gov/globalwarming/unequal.php. Accessed October 2009.*

[20] *OPR, Technical Advisory. CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review, 2008.*

is derived from URBEMIS2007 defaults. Mobile source emissions are generated from vehicle traffic traveling to and from the project site, specifically fire trucks and commuter trips. Mobile source calculations also utilize EMFAC2007 and the CCAR GRP, Version 3.1 to generate emission factors for CO_2 and CH_4, and N_2O. It should be noted that greenhouse gas reduction factors from *Alternative Compliance Strategies*, contained in AB 1493, were not applied in the EMFAC2007 software. Therefore, such emissions are likely overstated as emission factors for fleet mixes containing post 2009 vehicles would not emulate reductions that would otherwise go into effect as a result of AB 1493 (if the federal waiver is granted). Should the federal waiver be granted, the State of California will be able to tighten emissions standards for those vehicles sold in the State.

The consumption of fossil fuels to generate electricity and to provide heating and hot water creates GHG emissions. Future fuel consumption rates and water demand are estimated based on square footage of the project. Natural gas and electricity usage factors derived from the CEQA Handbook (1993)[21] are used to project fuel consumption rates. Embodied energy rates associated with the proposed project's future water supply needs are calculated using factors derived from the California Energy Commission (CEC). GHG emission factors from the Los Angeles Department of Water and Powers 2007 Annual GHG Emissions Report and the CCAR protocol are then applied to the respective usage rates, to calculate annual greenhouse gas emissions in metric tons. These emission factors do not reflect targeted future reductions in GHG emissions under SB 1368. Thus, these emission factors are considered conservative and representative. Operational impacts also include the operation of a diesel powered 200 Kw emergency generator, which is assumed to operate no more than 200 hours per year.

The CEC estimate for energy intensity of the water use cycle in southern California is used to calculate the energy usage related to water conveyance. Emission factors from the CCAR GRP, Version 3.1 are implemented in calculating the associated GHGs. Because water conveyance associated with the proposed project is regional in nature, the emission factors used in this component of the analysis represent a State-wide average of known power producing facilities, utilizing various technologies and emission control strategies.

GHG Emission Impacts

Project-level

Construction. Construction of the proposed fire station will last up to approximately 12 months and is anticipated to begin in the first half of 2010. Emissions were calculated from fossil fuel powered on-site construction equipment and off-site vehicles used to transport

[21] *South Coast Air Quality Management District, California Environmental Quality Act Handbook, 1993.*

construction workers and supplies. The first phase, mass site grading, is assumed to require one month and utilize the following typical equipment: graders, rollers, water truck, etc. The second phase, building foundation, is estimated to require one month and utilize the following typical equipment: cement and mortar mixers, concrete/industrial saws, and tractors/loaders/backhoes. The third phase, building construction, is estimated to last eight months and require the following typical equipment: crawler tractors, rough terrain forklifts, tractor/loader backhoes, etc. Finally, the paving phase is estimated to last one month and require such typical equipment as rollers, paving equipment, etc.

Construction of the fire station is projected to emit a total of 200 tons of CO_2e. Results of this analysis are presented in Table B-3 on page B-28. These emissions are less than the 900 annual metric ton threshold proposed by CAPCOA.

The project has committed to diverting seventy-five percent of the non-hazardous construction waste from landfills and either recycled or sent to the appropriate sites for reuse. Diversion of this amount of construction waste represents an improvement above business as usual and exceeds the County's proposed requirements. Construction emissions will be amortized across the 30 year lifetime of the proposed project, as recommended by the SCAQMD, and therefore, significance of construction-related GHG emissions will be discussed in conjunction with operational GHG emissions below.

Operation. The proposed fire station would be approximately 10,600 square feet in size. The fire station would house seven firefighters at full staffing and a total of 14 personnel would be onsite during shift changes. The fire station design includes GHG–reduction measures that have been included in the quantitative analysis, such as improved energy efficiency and reduced water demand. As shown in Table 1, annual GHG emissions resulting from vehicle, electrical, and natural gas usage associated with operation of the proposed fire station was estimated to be a maximum of 123 metric tons CO_2e with implementation of the above listed design features. Including construction emissions, which were amortized over 30 years, total anticipated project emissions (213 metric tons/30 years = 7 metric tons +123 metric tons = 130 metric tons) are substantially lower than the 900 annual metric ton threshold proposed by CAPCOA, which has been selected for the project. Therefore, construction and operational emissions are not expected to result in a significant impact at the project level.

Cumulative

The County has proposed delivering Fire Station 143 using a Design-Bid-Build (DBB) approach, which the County traditionally uses for capital projects. Recent legislation now allows the County the option to use a Design-Build (DB) delivery method. In the DB approach, the

Table B-3

Construction and Operational Greenhouse Gas Emissions

Emission Source	CO_2e (Metric Tons)
Construction (total)	213
2004 Statewide Emissions	479,740,000
Percent	0.00004%
Construction (Amortized)	7
Annual Operations	
On-Road Mobile Sources (vehicles)[a]	29
Electricity	1
Water Conveyance	1
Natural Gas	1
Emergency Generator	28
Fire Trucks	63
Total Annual Operations	123
2004 Statewide Emissions	479,740,000
Percent	0.000026%
Total (Amortized Construction + Total Annual Operations)	130
Less than 900 tons CO_2e annually?	**Yes**
2004 Statewide Emissions	479,740,000
Percent	0.000027%

Source: PCR Services Corporation, 2009.

County prepares Scoping Documents based on the County facility objectives, user needs, and program requirements. The scoping documents are used to select a design-build team to carry out both the design and construction of the project. Design-builder selection is on a "Best Value" basis, which means a value determined by objective criteria related to price, features, functions, life-cycle costs and experience.

The County provides general guidance on County-desired LEED credits to the designers and final LEED credit selection occurs during the design process. The selected designer may change the mix of LEED points from those anticipated by the County. This report is based on the County's experience on similar projects and the expected LEED measures which would be included in the project. The fire station would be constructed to achieve a "Silver" rating from the USGBC's LEED green building program. "Silver" is one of LEED's four levels of certification, which also include "certified," "gold", and "platinum." Each level requires that projects pursue a minimum number of LEED credits beyond the LEED prerequisites. Projects have flexibility with regard to which LEED credits to pursue. The expected project features are listed below:

- **Energy Conservation**: The project will install roofing materials with a high Solar Reflectance Index. The project will also consider integrating non-roof strategies, such as providing shade to paved areas and using paving materials with a high Solar Reflectance Index. By mitigating the heat island effect around the project site, the project will lower its air conditioning demand, and thus its peak energy usage. The project would reduce its energy usage by at least 26 percent below its ASHRE/IESNA 90.1-2004 baseline. This level of energy conservation exceeds the County's proposed requirements.

- **Outdoor Water Conservation**: Landscape irrigation for the project will eliminate the use of potable water by incorporating drought resistant or low-water plants and water-efficient irrigation techniques in addition to the use of recycled water for irrigation, and will include a smart irrigation controller.

- **Resource Conservation**: At least 50 percent of construction waste (by weight) will be recycled.

- **Tree Planting**: The proposed project will plant at least four 15-gallon trees on the project site to comply with the Green Building Ordinance.

In addition, the project will reduce its domestic water demand by at least 20 percent through the use of low-water or high-efficiency fixtures.

Furthermore, the California Office of the Attorney General released a Fact Sheet of various GHG mitigation measures that was updated in December 2008. The proposed project is consistent with the following applicable measures:

Energy Efficiency

- *Design buildings to be energy efficient.* The proposed project has committed to achieving LEED™ Silver Certification and is subject to the County of Los Angeles Green Building Ordinance. Accordingly, the project will achieve at least a 15 percent reduction in energy demand below Title 24, California's Energy Efficiency Standards.

- *Install light colored "cool" roofs and cool pavements.* The project will install roofing materials with a high Solar Reflectance Index. The project will also consider integrating non-roof strategies, such as providing shade to paved areas and using paving materials with a high Solar Reflectance Index.

Water Conservation and Efficiency

- *Create water-efficient landscapes.* Landscaping for the proposed project will incorporating drought resistant or low-water plants, water-efficient irrigation techniques, a smart irrigation controller, and use of recycled water for irrigation.

- *Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.* The proposed project will utilize water-efficient irrigation techniques and a smart irrigation controller.

- *Used reclaimed water for landscape irrigation in new developments and on public property. Install the infrastructure to deliver and use reclaimed water.* The proposed project will use recycled water for irrigation, thereby eliminating the need for potable water for irrigation.

- *Design buildings to be water*-efficient. Install water-efficient fixtures and appliances. The proposed project will install water-efficient and low-water fixtures, and reduce potable water demand by 20 percent.

Solid Waste Measures

- *Reduce and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).* The proposed project will divert 75 percent of construction waste from landfills.

Annual GHG emissions resulting from vehicle, electrical, and natural gas usage associated with operation of the proposed fire station was estimated to be a maximum of 123 metric tons CO_2e with implementation of the above listed design features. This represents an approximately 0.000027 percent increase over existing state-wide GHG emissions.

It should be noted that implementation of the proposed project design features would result in lower GHG emissions as compared to a building constructed in accordance with current applicable building standards. The emissions estimated in Table B-1 are conservatively presented as new emissions and do not represent a net increase over current operations.

Due to the complex physical, chemical and atmospheric mechanisms involved in global climate change, there is no basis for concluding that the project's very small theoretical emissions increase could actually cause a measurable increase in global GHG emissions necessary to influence global climate change. The GHG emissions of the project alone will not likely cause a direct physical change in the environment. It is global emissions in their aggregate that

contribute to climate change, not any one source of emissions alone. Therefore, due to the incremental amount of GHG emissions estimated for this project, the lack of any evidence for concluding that the project's GHG emissions could cause any measurable increase in global GHG emissions necessary to force global climate change, and the fact that the project incorporates design features to reduce potential GHG emissions the project is considered not to hinder the goals of AB32. Conventional cumulative air quality analyses consider related projects; this approach is not appropriate because proximity is irrelevant to the transport and accumulation of GHG in the Earth's atmosphere. The County has adopted an Energy Policy, however, which sets the goal of reducing energy consumption in County facilities by 20 percent by the year 2015. The County's suggested measures to facilitate achieving this goal include implementing and monitoring energy and water conservation practices, implementing energy and water efficiency projects, and enhancing employee energy and water conservation awareness through education and promotions. These measures would not hinder AB32 on a cumulative level. As stated above, the project will reduce its baseline energy consumption by 26 percent as part of its LEED certification. Thus, because the project would result in total GHG emissions less than the 900 annual metric ton threshold proposed by CAPCOA and adheres to the County's Energy and Environmental Policy, the project is not considered to have a significant impact on a cumulative level. The GHG emissions associated with the proposed project also fall below the threshold proposed by SCAQMD in October 2008. However, it should be noted that this proposed threshold is applicable to industrial uses and as such, is not directly applicable to the proposed project.

Effects of Global Climate Change on the Project

A substantial change in the global climate is anticipated to result in potential increases, globally, regionally, and/or locally, in the frequency and intensity of forest/wildland fires, rising sea levels and increased flooding, and decreasing water availability. The anticipated impact of each of these on the project is discussed below.

The proposed fire station is to be located within a suburban environment, incorporating fire resistant design and materials, as appropriate. Thus, wildfires are not expected to threaten the fire station directly. There are no heavily forested areas surrounding the project site. However, portions of the fire station's proposed service area abut naturally vegetated landscapes. Even with enforcement of California Public Resources Code 4291, requiring property owners to maintain appropriate firebreaks, structures within the service area of the proposed fire station may become vulnerable to climate change-induced wildfires. However, the location, equipment and staffing of the proposed fire station make it well situated and poised to combat any climate change-induced fires that may occur in its service area. Thus, impacts associated with climate change-induced wildland fires are considered to be minimal.

Climate change-induced flooding may occur from either a permanent rise in sea levels or temporary or seasonal rise in surface water. Valencia is located approximately 30 miles inland from the nearest sea (Pacific Ocean), at an elevation of approximately 1,500 feet above mean sea level (msl). According to the California Climate Change Center's March 2009 draft paper, entitled The Impacts of Sea Level Rise on the California Coast, under medium to medium-high emissions scenarios the "mean sea level along the California coast will rise from 1.0 to 1.4 meters (m) by the year 2100." Thus, it is unlikely that sea rise will directly impact the greater Valencia area. The Hasley Canyon Creek lies approximately 0.25 miles south of the project site and flows southwest, crossing Industry Drive and Commerce Center Drive until it empties into the Castaic Creek. Additional creek tributaries are located approximately 0.5 miles north of the project site. According to Flood Plain Map #06037C0800F, the site is located in a "Zone D," which indicates an area where flood hazards are undetermined, but possible. The site and surrounding area has or will be graded in accordance with County grading regulations and standard engineering practices to ensure that storm water would be directed off-site into the municipal storm drain system and/or natural conveyance features. Therefore, risks to the proposed project from climate change-induced flooding are assumed to be minimal.

Operation of the fire station would create a new nominal water demand for the water provider. Decreased water availability could negatively affect the operation of the proposed fire station. However, potential impacts from climate change-induced water shortages are anticipated to be minimal given the nominal demand for water by the station.

d. Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Certain population groups are especially sensitive to air pollution and should be given special consideration when evaluating potential air quality impacts. These population groups include children, the elderly, persons with pre-existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. As defined in the SCAQMD *CEQA Air Quality Handbook*, a sensitive receptor to air quality is defined as any of the following land use categories: (1) long-term health care facilities; (2) rehabilitation centers; (3) convalescent centers; (4) retirement homes; (5) residences; (6) schools; (7) parks and playgrounds; (8) child care centers; and (9) athletic fields. The nearest sensitive receptors to the project site consist of single-family residential uses approximately 150 feet north/northeast on Gibraltar Road.

As described in Response No. III.b above, construction and operation of the project would not result in any substantial localized or regional air pollution impacts, and therefore would not expose nearby sensitive receptors to substantial pollutant concentrations. In addition, construction activities would comply with SCAQMD Rule 403 regarding the control of fugitive

dust and other specified dust control measures. As such, impacts to off-site sensitive receptors from criteria pollutants would be less than significant and no mitigation measures would be necessary. Due to the relatively short construction duration and low demand for heavy duty diesel construction equipment (e.g., limited earthmoving activities) needed to complete the project, toxic air contaminates (TAC) emissions from construction activities would not result in long-term health risks to existing off-site sensitive populations.

e. Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. Potential sources that may emit odors during construction activities include the use of architectural coatings and solvents. According to the SCAQMD *CEQA Air Quality Handbook*, construction equipment is not a typical source of odors. SCAQMD Rule 1113 limits the amount of volatile organic compounds from architectural coatings and solvents. Via mandatory compliance with SCAQMD Rules, no construction activities or materials are proposed which would create objectionable odors. The nearest sensitive receptors to the site are located at a minimum of 150 feet from the site to the north of Hasley Canyon Road. Given the proximity of the site from the nearest sensitive receptors (150 feet and beyond), construction equipment would not create objectionable odors affecting a substantial number of people.

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The project would not involve elements related to these types of uses. On-site trash receptacles used by the project would be covered and properly maintained to prevent adverse odors. With proper housekeeping practices, trash receptacles would be maintained in a manner that promotes odor control, no adverse odor impacts are anticipated from these types of land uses. In addition, because the amount of fuel stored onsite would be low, no odor impacts are anticipated from the fuel tanks. While there is a potential for odors to occur, compliance with industry standard odor control practices, SCAQMD Rule 402 (Nuisance), and SCAQMD Best Available Control Technology Guidelines would limit potential objectionable odor impacts to a less than significant level.

IV. BIOLOGICAL RESOURCES

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 Game or U.S. Fish and Wildlife Service?

No Impact. The project site is vacant, underdeveloped land that has been previously rough graded in anticipation of a fire station. The project would require minimal fine grading/earthwork to further balance the site. Fine grading would consist of minimal grading to establish pad grade. This would include excavating current fill soils to a maximum depth of approximately five (5) feet in the central portion of the site where the building pad is to be located. Outside of the building pad, excavation will occur at depths ranging from approximately two to five feet to prepare the site for development. Sporadic weedy vegetation exists on the project site. The project site does not include suitable habitat for candidate, sensitive, or special status species. Consequently, project implementation would not have a substantial adverse effect on candidate, sensitive, or special status species. No impact would occur in this regard.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. The project site is vacant, underdeveloped land that has been previously rough graded in anticipation of a fire station. The project site is not located within a significant ecological area (SEA) and no riparian habitat or other sensitive natural communities exist on site. Los Angeles County developed the concept of the SEA in the 1970's in conjunction with adopting the original General Plan for the County, and SEAs are defined and delineated in conjunction with the Land Use and Open Space Elements of the County General Plan. An SEA is a designation in the Los Angeles County General Plan that denotes a particularly important natural area. Therefore, implementation of the project would not result in a substantial adverse effect on riparian habitat or other sensitive natural community.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The project site is vacant, underdeveloped land that has been previously rough graded in anticipation of a fire station. The site does not contain any federally protected wetlands as defined by Section 404 of the Clean Water Act. Therefore, implementation of the project would not result in a substantial adverse effect on federally protected wetlands.

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 nursery sites?

No Impact. The project site is vacant, underdeveloped land that has been previously rough graded in anticipation of a fire station. The project would require minimal fine grading/earthwork to further balance the site. Sporadic weedy vegetation exists on the project site. The site is void of any habitat or vegetation that would support a wildlife corridor or native wildlife nursery site. Surrounding land uses for the project site consist of single-family residential and industrial uses. Due to the urbanized nature of the project area, the potential for native resident or migratory wildlife species movement through the site is very low. Accordingly, the project would not substantially interfere with the movement of native resident or migratory fish or wildlife species or use of wildlife nursery site. Thus, no impacts would occur in this regard.

e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?

No Impact. The project site is vacant, underdeveloped land that has been previously rough graded in anticipation of a fire station and contains no on-site vegetation. Thus, no locally protected biological resources exist on the project site. Therefore, the project would not conflict with local policies or ordinances protecting biological resources and no impacts would occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. As discussed above, the site is not located within a SEA. Additionally, there is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other

approved local, regional, or state habitat conservation plan in place for the project site. Therefore, implementation of the project would not conflict with any habitat conservation plans, and no impacts would occur in this regard.

V. CULTURAL RESOURCES

Would the project:

a) Cause a substantial adverse change in significance of a historical resource as defined in State CEQA §15064.5?

No Impact. A historical resource is defined in Section 15064.5(a)(3) of the CEQA Guidelines as any object, building, structure, site, area, place, record, or manuscript determined to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Historical resources are further defined as being associated with significant events, important persons, or distinctive characteristics of a type, period or method of construction; representing the work of an important creative individual; or possessing high artistic values. The site does not contain any historical resources as defined by the CEQA Guidelines. There are no extant buildings, structures, objects, or sites with any historical associations or significance necessary for California Register eligibility.

The project would require minimal fine grading/earthwork to further balance the site. Fine grading would consist of minimal grading to establish pad grade. This would include excavating current fill soils to a maximum depth of approximately five (5) feet in the central portion of the site where the building pad is to be located. Outside of the building pad, excavation will occur at depths ranging from approximately two to five feet to prepare the site for development. The depth of the compacted fill materials is relatively uniform across the site at a depth of approximately 26 feet.[22] Thus, no undisturbed native soils would be excavated as part of the project excavation/grading and construction activities.

Since the project site does not contain any known historic resources and grading to be performed as part of the project would involve excavation of engineered fill soils, no impacts to historic resources would occur with project implementation.

[22] *Geotechnical Report and Fine Grade Plan Review for Fire Station 143 ("Geotechnical Report"), prepared by RTF&A, dated February 11, 2009.*

b) Cause a substantial adverse change in significance of an archaeological resource pursuant to §15064.5?

Less Than Significant Impact. The project site is currently vacant and has been rough graded in accordance with prior permits and approvals. As discussed in Response No. V.a, undisturbed native soils are not anticipated to be encountered during project grading/excavation activities; thus, archaeological resources are not likely to be encountered. Although no archeological resources are likely to be encountered in the unlikely event that an archaeological resource is discovered during grading activities, work in the area would cease and deposits would be treated in accordance with Federal, State, and local guidelines including those set forth in California Public Resources Code Section 21083.2. In addition, if it is determined that an archaeological site is a historical resource, the provisions of Section 21084.1 of the Public Resources Code and CEQA Guidelines Section 15064.5 would be implemented. Thus, impacts to archaeological resources would be less than significant.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact. The project site has recently been rough graded in accordance with previous grading permits. As discussed in Response No. V.a, additional grading of the site would be limited to fine grading activities that would only result in the excavation of existing fill materials. No excavation activities in undisturbed native soils are anticipated to occur that could destroy a unique paleontological resource or site or unique geologic feature. In the unlikely event paleontological resources are discovered during project construction, the resources would be treated in accordance with Federal, State, and local guidelines, as appropriate. As a result, project activities are anticipated to result in less than significant impacts to paleontological resources.

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

Less Than Significant Impact. There are no known burial sites located on the project site or in the immediate surrounding vicinity. Therefore, the potential for encountering human remains is minimal. Nonetheless, should human remains be encountered during project construction activities, the remains would be treated in accordance with Section 5097.98 of the Public Resources Code (PRC) and Section 7050.5 of the Health and Safety Code. These regulations require that if human remains are found, the Los Angeles County Coroner must be notified within 24 hours of the discovery. If the coroner determines that the remains are not recent, the coroner would notify the Native American Heritage Commission (NAHC) in Sacramento to determine the most likely descendent for the area. The designated Native American representative would then determine in consultation with the property owner the

disposition of the human remains. Thus, impacts to human remains would be less than significant.

VI. GEOLOGY AND SOILS.

The following analysis is based on the *Geotechnical Report and Fine Grade Plan Review for Fire Station 143 (*"Geotechnical Report*")*, prepared by RTF&A, dated February 11, 2009. The Geotechnical Report is included as Appendix C of this document.

Would the project:

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 State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact. The project site is not located in an active or potentially active fault zone, Seismic Hazard Zone, or Alquist-Priolo Earthquake Fault Zone as mapped by the California Geological Survey (State of California Seismic Hazards Zones Map). As such no impacts would occur in this regard.

ii) Strong seismic ground shaking?

Less Than Significant Impact With Mitigation Incorporated. Although the project site is not located on an active fault, there are faults in the region capable of seismic activity. Consequently, the project site could be subject to moderate to severe ground shaking in the event of a major earthquake on any of the active faults. This is considered to be a potentially significant impact. The project would be designed and constructed in accordance with applicable seismic design standards in the International Building Code (UBC), California Building Code (CBC), and/or Los Angeles Uniform Building Code, which would ensure that the proposed building would withstand groundshaking associated with the maximum credible earthquake at the project site.[23] In addition, a Geotechnical Report prepared for the project includes site-

[23] *Maximum credible earthquake is the largest earthquake, usually expressed in magnitude, judged to be possible in an area.*

specific design recommendations that address design features such as foundations, floor slab support, soil corrosivity, pavement design, and retaining walls. Implementation of Mitigation Measure GEO-1 would ensure that the site-specific design recommendations included in the Geotechnical Report are incorporated into the project, which would ensure impacts regarding seismic ground shaking are reduced to a less than significant level.

Mitigation Measures

GEO-1 Prior to the issuance of building or grading permits, the County of Los Angeles Department of Public Works shall ensure that the site-specific design recommendations in the Final Geotechnical Report are incorporated into the final project plans/design.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact With Mitigation Incorporated. Liquefaction is a phenomenon where loose, saturated, granular soils lose their inherent shear strength due to excess water pressure that builds up during repeated movement from seismic activity. Factors that contribute to the potential for liquefaction include a low relative density of granular materials, a shallow groundwater table, and a long duration and high acceleration of seismic shaking. Liquefaction usually results in horizontal and vertical movements from lateral spreading of liquefied materials and post-earthquake settlement of liquefied materials. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine-to medium-grained, primarily sandy soil.

Lateral spreading can result in ground cracking and may occur when a site is sloped or is near a free-face and there is a sufficiently continuous liquefiable layer on which the overlying soils can move laterally. Ground settlement may occur during seismic shaking of an area. The settlement can be caused by liquefaction of loose granular soils and by compaction of loose, but not necessarily liquefiable, soils.

The subject site is currently underlain by relatively deep compacted fill soils placed during the 2004 grading operations. The depth of compacted fill is relatively uniform across the subject site and was encountered at a depth of 26 feet within during on-site boring activities in 2006. The on- site fill soils generally consist of sand and silty sand with some clay. The fill soils are dense and moist. The fills soils are underlain by about 13 feet of alluvium that generally consist of silty sand and sand that is medium dense to dense. The alluvium is underlain by sedimentary rock units of the Saugus Formation.

The State of California Seismic Hazard Map for the Val Verde Quadrangle shows the subject site to be in an area where there is a potential for liquefaction to occur. In addition, the Geotechnical Report states that some sandy soil layers beneath the site may liquefy in the event of a major earthquake on a nearby fault. The site is not considered as being subject to lateral spreading. Some settlement of the ground surface may occur as a result of seismic shaking. This seismically induced settlement (liquefaction and dry settlement) is expected to be less than 1.25 inches, which would not adversely impact the fire station structure.

The liquefaction mitigations already performed at the site consisted of removal of some of the alluvial soils subject to liquefaction and replacing them with compacted fill soils not subject to liquefaction and raising the elevation of the subject site. In addition to the mitigations performed during the grading of the subject site, the Geotechnical Report recommends that structural design requirements be incorporated in the project to reduce damage resulting from seismically induced settlements.

As described above, the project could be subject to seismic-related ground failure hazards, including liquefaction. These impacts are considered to be potentially significant. Implementation of Mitigation Measure GEO-1 would ensure that the site-specific design recommendations included in the Geotechnical Report are incorporated into the project, which would reduce impacts regarding seismic-related ground failure to a less than significant level.

Mitigation Measures

Refer to Mitigation Measure GEO-1. No additional mitigation measures are necessary.

iv) Landslides?

Less Than Significant Impact. Landslides tend to occur in loosely consolidated soils, wet soil, and/or rock on sloping terrain. Over-steepened slopes are often prone to collapse when shaken by an earthquake. The project site is characterized by relatively flat topography and as such, is not considered to be subject to hazards associated with landslides. Furthermore, the site is not immediately adjacent to areas susceptible to landslides. As such, less than significant impacts regarding landslides would occur with project implementation.

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

Less Than Significant Impact. Construction activities have the potential to result in minor soil erosion during excavation, grading and soil stockpiling, subsequent siltation, and conveyance of other pollutants into municipal storm drains. However, the site has been rough

graded in accordance with previous grading permits. The project would require minimal fine grading/earthwork to further balance the site. Fine grading would consist of minimal grading to establish pad grade. This would include excavating current fill soils to a maximum depth of approximately five (5) feet in the central portion of the site where the building pad is to be located. Outside of the building pad, excavation will occur at depths ranging from approximately two to five feet to prepare the site for development. The depth of the compacted fill materials is relatively uniform across the site at a depth of approximately 26 feet. A total of approximately 2,600 cubic yards of existing fill soils would be removed from the site as part of the project fine grading.

Project construction would comply with State Water Resources Control Boards' (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Construction Permit, which requires development of and compliance with a Stormwater Pollution Prevention Plan (SWPPP) for projects of one acre or more in size. The SWPPP would include Best Management Practices (BMPs), which are activities, practices, procedures, or devices implemented to avoid, prevent or reduce pollution of the municipal storm drain system and receiving waters. Basic structural construction stormwater BMPs include: construction entrance/exit stabilization, temporary sediment traps/filters, storm drain inlet and outlet protection, and sediment barriers (typically silt fence). Additional BMPs will be designed and installed for the operational phase of the project to comply with the NPDES General Permit and the County of Los Angeles' Standard Urban Stormwater Mitigation Plan (SUSMP) to control runoff from the site. The final selection of BMPs will be completed through coordination with the County of Los Angeles. Thus, impacts regarding topsoil erosion or the loss of topsoil would be less than significant.

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 landslides, lateral spreading, subsidence, liquefaction, or collapse?

Less Than Significant Impact With Mitigation Incorporated. As discussed in Response No. IV.a.iv, less than significant impacts would occur with regards to landslides. In addition, as discussed in Response No. IV.a.ii, potentially significant impacts associated with lateral spreading, subsidence, and liquefaction would be reduced to a less than significant level with implementation of Mitigation Measure GEO-1.

Mitigation Measures

Refer to Mitigation Measure GEO-1. No additional mitigation measures are necessary.

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?

Less Than Significant Impact With Mitigation Incorporated. According to the Geotechnical Report, special considerations for potentially expansive soils are not anticipated to be required for the proposed project. However, fine grading of the site may affect the soil type exposed at final grade upon completion of the fine grading activities. As part of the site-specific design recommendation in the Geotechnical Report, it is recommended that additional testing and classification, relative to potentially expansive soils, be performed at the conclusion of the proposed fine grading operations. Implementation of Mitigation Measure GEO-1 would ensure that the site specific design recommendations in the final Geotechnical Report prepared for the project site are implemented as part of the project. Implementation of Mitigation Measure GEO-1 would ensure that potentially significant impacts regarding expansive soils are reduced to a less than significant level.

Mitigation Measures

Refer to Mitigation Measure GEO-1. No additional mitigation measures are necessary.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The project would not involve the use of septic tanks or alternative wastewater disposal systems. As such, no impact would occur in this regard.

VII. HAZARDS AND HAZARDOUS MATERIALS.

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. Construction of the proposed project would involve the use of potentially hazardous materials such as vehicle fuels, oils, paints, and transmission fluids. Operation of the fire station would involve the use of small quantities of potentially hazardous materials typical of those used at fire stations (i.e., oil and gasoline, cleaning solvents, pesticides for landscaping, etc.) would be used and stored on-site. In addition, the project would include above-ground storage facilities (or tanks) containing 600 gallons of diesel fuel for the emergency

generator, 2,500 gallons of diesel fuel for the on-site apparatus, 500 gallons of unleaded gasoline, and 10 gallons (two 5-gallon containers) of gasoline for yard maintenance equipment. However, all hazardous materials used during construction and operation would be contained, stored, and used in accordance with applicable local, State, and/or Federal regulations and handled in accordance with manufacturer's specifications. In addition, permits to construct and operate the tanks would be obtained from the SCAQMD, as necessary. Therefore, risks associated with the use of these materials would be reduced to 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 into the environment?

Less Than Significant Impact. As discussed in Response to Checklist Question VII.a, above, impacts regarding the project's potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials would be less than significant through compliance with the applicable regulatory requirements. No buildings or structures exist on the project site that could contain hazardous materials. The operation of the fire station would include an above-ground storage facility containing 600 gallons of diesel fuel for the emergency generator, 2,500 gallons of diesel fuel for the on-site apparatus, 500 gallons of unleaded gasoline, and 10 gallons (two 5-gallon containers) of gasoline for yard maintenance equipment. The use and storage of such materials would comply with applicable standards and regulations, and would not pose significant hazards. Furthermore, it is not anticipated that the use of such hazardous materials would create a significant hazard associated with a risk of upset or accident conditions involving the release of hazardous materials during project operations. Thus, less than significant impacts would occur in this regard.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The project site is not within one-quarter mile of an existing or proposed school. Thus, no impacts would occur in this regard.

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

No Impact. The project site is currently a graded lot with no active uses and prior to grading it was vegetated land. No hazardous materials exist on-site, and the site is not included on the Cortese List, which is updated annually by the California Environmental Protection

Agency (Cal-EPA) pursuant to Government Code Section 65962.5. Thus, no impacts would occur in this regard.

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?

No Impact. The project site is not located within an airport land use plan or within two miles of a public airport. The closest airport is Burbank Airport located in the City of Burbank approximately 27 miles southeast of the project site. Thus, no safety hazards to people residing or working in the project area due to a public use airport would occur. No impacts would occur in this regard.

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

No Impact. There are no private airstrips in the vicinity of the project site and the site is not located within a designated airport land use plan. Therefore, the project would not result in airport-related safety hazards for the people residing or working in the area. Thus, no impacts would occur in this regard.

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

No Impact. Development of the fire station would provide for an ongoing improved level of fire protection, emergency medical, and other life safety services to the adjacent communities, and would add to the resources available for other requests for services throughout the department's jurisdiction. The Los Angeles County Fire Department's goal, when areas have transitioned from rural to urbanized areas, is to arrive on the scene of an emergency call within five minutes from the time of dispatch. Fire Station 143 is a strategic part of this goal. As such, Fire Station 143 would be a positive factor to an adopted emergency response plan or emergency evacuation plan. Thus, the project would not physically interfere with an adopted emergency response plan and no impacts would occur in this regard.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less Than Significant Impact. The project site is currently a graded lot and does not contain wildland features. In addition, the site is not located adjacent to any wildland areas. Therefore, development of the project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, and no impacts would occur in this regard.

VIII. HYDROLOGY AND WATER QUALITY

Would the project:

a) Violate any water quality standards or waste discharge requirements?

Less Than Significant Impact. As the project would only require minimal earthwork to balance the site, grading activities for the project would not be expected to affect groundwater. In addition, construction of the project would occur in accordance with the requirements of the NPDES General Construction permit, which requires the preparation and implementation of a SWPPP with BMPs designed to ensure that construction activities do not affect the quality of runoff. In addition, the project will implement County grading permit regulations that include compliance with erosion control measures, including grading and dust control measures. Compliance with the applicable regulatory requirements and County erosion control regulations would ensure that project construction activities result in less than significant short-term construction impacts.

In accordance with NPDES General Permit and County requirements, a SUSMP with BMPs would be prepared for approval by the County and would be implemented throughout the operational life of the project to ensure that project operation would not adversely affect the quality of storm water runoff. Proposed project post-development water quality BMPs would include the installation of fossil filter systems to treat on-site surface water (i.e., from the rear driveway and employee parking areas) prior to entering the storm drain. Likewise, the apparatus bay floor drains would enter a clarifier (i.e. CDS unit) prior to entering the storm drain system. Therefore, the proposed project would not contribute substantial pollutants to the storm water conveyance system and/or downstream receiving water bodies during operation. Thus, less than significant water quality impacts during project operation 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 land uses for which permits have been granted)?

Less Than Significant Impact. The project would develop an existing undeveloped site, but given the size of the site, only 1.07 acres, it would not substantially interfere with groundwater recharge. The project site is located within the water service area of the Santa Clarita Water Division (SCWD) of the Castaic Lake Water Agency (CLWA). While there would be an incremental increase in the amount of water utilized and provided by the water purveyor, the increase in water usage would not substantially deplete groundwater supplies. Furthermore, no on-site water well installation or usage would occur with project implementation. As such, impacts to groundwater 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?

and

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?

Less Than Significant Impact. The project site was previously graded and no natural streamcourses occur on-site. Surface water runoff on-site sheetflows to the south and southeast towards existing drainage facilities located at the southern and southeastern boundary of the project site. The runoff then flows in a westerly direction towards the storm drainage located along the private driveway and fire lane. This drainage pattern would be retained with development of the project and appropriate drainage improvements would be made on-site to contain and direct stormwater flows to the local storm drain system. Since the site would be entirely developed, paved, or landscaped, the potential for erosion or siltation would be minimal. Additionally, project construction would comply with applicable NPDES and County requirements, as discussed above including those regarding preparation of a SWPPP and SUSMP. Therefore, less than significant impacts associated with alterations to existing drainage patterns would occur with project implementation.

e) 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?

Less Than Significant Impact. As discussed under Response VIII.c-d, the drainage pattern of the site would be retained with development of the project and appropriate drainage improvements would be made on-site to contain and direct stormwater flows to the local storm drain system. Given the size of the site, the amount of impervious surfaces under the proposed conditions would not substantially increase the volume of runoff under the proposed conditions. Nonetheless, the local storm drain system has been designed in anticipation of the site being developed and as such would accommodate the increase in stormwater runoff from the site. Therefore, the project would not create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems. Furthermore, project implementation would comply with all applicable water regulations including implementation of SWPPP and a SUSMP to reduce water quality impacts, including minimizing the potential for erosion or siltation on- or off-site, during construction and operation of the project. The SUSMP would include BMPs that are not currently in place for the site and as such, it can be expected that water quality of runoff from the site would improve under the proposed conditions. In conclusion, less than significant impacts would occur in this regard.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. As previously indicated in Responses VI.a and VIII.b, the project would comply with applicable NPDES and County requirements, which include the implementation of BMPs during construction and operation of the project as stipulated within a SWPPP and SUSMP, respectively. Compliance with these regulatory requirements would ensure that the project would not otherwise substantially degrade water quality. Thus, impacts would be less than significant in this regard.

g) Place housing within a 100-year flood plain as mapped on federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. The project does not propose the development of housing within a 100-year flood plain as mapped on a Federal Emergency Management Agency (FEMA).[24] Therefore, no impacts associated with a 100-year flood plain would occur.

[24] *FEMA website. http://msc.fema.gov, flood plain map panel ID #*06037C0800F*, website accessed January 20, 2009.*

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. As indicated above, the project site is not located within a 100-year flood plain. Thus, the project would not place structures within a 100-year flood plain which would impede or redirect flood flows.

i) 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?

No Impact. The site is not located within a dam inundation area as mapped by the California Department of Water Resources. Therefore, no potential for dam inundation exists on-site. Therefore, no impacts would occur in this regard.

j) Inundation by seiche, tsunami, or mudflow?

No Impact. A tsunami is a great sea wave produced by a significant undersea disturbance. Given that the project site is located approximately 40 miles east of the Pacific Ocean, the project site is not susceptible to inundation by a tsunami. Mudflows result from the downslope movement of soil and/or rock under the influence of gravity. While some areas in the project vicinity could be susceptible to mudflows, the relatively flat terrain in the immediate project vicinity is not conducive to sustaining mudflows. A seiche is an oscillation of an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. No water bodies are present in the immediate site vicinity that could result in the project site being affected by a seiche. Therefore, no impacts would occur in these regards

IX. LAND USE AND PLANNING.

Would the project:

a) Physically divide an established community?

No Impact. The project would include the development of a new fire station on a site that has been previously graded. As the surrounding land uses include residential use to the north and northeast, industrial uses to the south and west, and proposed industrial uses to the northwest, development of the site with a fire station would not divide an established community. As such, no impact would occur in this regard.

b) Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The project site is located on a lot designated for industrial use and zoned M-1 1/2DP for heavy manufacturing. The project's proposed fire station would be consistent with the land use designations of the site with approval of a Conditional Use Permit, in compliance with Section 22.40.700 and 22.56 of the County's Code. Overall, the project would be consistent with the applicable land use plans and policies for the site and less than significant impacts would occur in this regard.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. There is no adopted Habitat Conservation Plan or Natural Community Conservation Plan in place for the project site. Therefore, implementation of the project would not conflict with any habitat conservation plans, and no impacts would occur in this regard.

X. MINERAL RESOURCES.

Would the project:

a) Result in the loss or availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. No mineral resources (i.e., oil, sand, gravel, rock) are known to exist on the project site and no mineral extraction activities occur on the site. The project site is not located within a designated mineral extraction area. In addition, the project does not have the capability to result in the loss of availability of a mineral resource. Thus, no impacts to mineral resources 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?

No Impact. Refer to Response X.a.

XI. NOISE

Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact with Mitigation Incorporated. The following analysis evaluates the potential noise impacts at noise-sensitive land uses resulting from construction and operation of the proposed project.

1. Applicable Noise Standards

(a) County of Los Angeles Noise Ordinance

(1) Operational Noise

Chapter 12.08 of the County of Los Angeles Municipal Code (LACMC) provides exterior noise standards and specific noise restrictions and exemptions for noise sources within the unincorporated areas within the county. Section 12.08.390 of the LACMC specifies exterior noise standards of 45 dBA and 50 dBA in a residential zone, for nighttime and daytime hours, respectively. These noise limits are applied to noise sources which last a minimum of 30 minutes in an hour (L_{50}). In the event that the actual measured ambient noise level exceeds the County's standard, the measured ambient noise level becomes the noise standard (LACMC Section 12.08.390.B). In addition, noise from fire engine sirens and the public address systems (used for emergency announcement) is exempt from the County's Exterior Noise Standard as it is necessary for the protection of public safety, per LACMC Section 12.08.570.

(2) Construction Noise

LACMC Chapter 12.08.440 specifies maximum noise level for construction activities at residential structures as follows:

a) Mobile Equipment – Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment:

Period	Maximum Noise Level due to Construction Activities at Single-Family Residential
Daily, except Sundays and legal holidays, 7:00 A.M. to 8:00 P.M.	75 dBA
Daily, 8:00 P.M. to 7:00 A.M. and all day Sunday and legal holidays	60 dBA

b) Stationary Equipment - Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment:

Period	Maximum Noise Level due to Construction Activities at Single-family Residential
Daily, except Sundays and legal holidays, 7:00 A.M. to 8:00 P.M.	60 dBA
Daily, 8:00 P.M. to 7:00 A.M. and all day Sunday and legal holidays	50 dBA

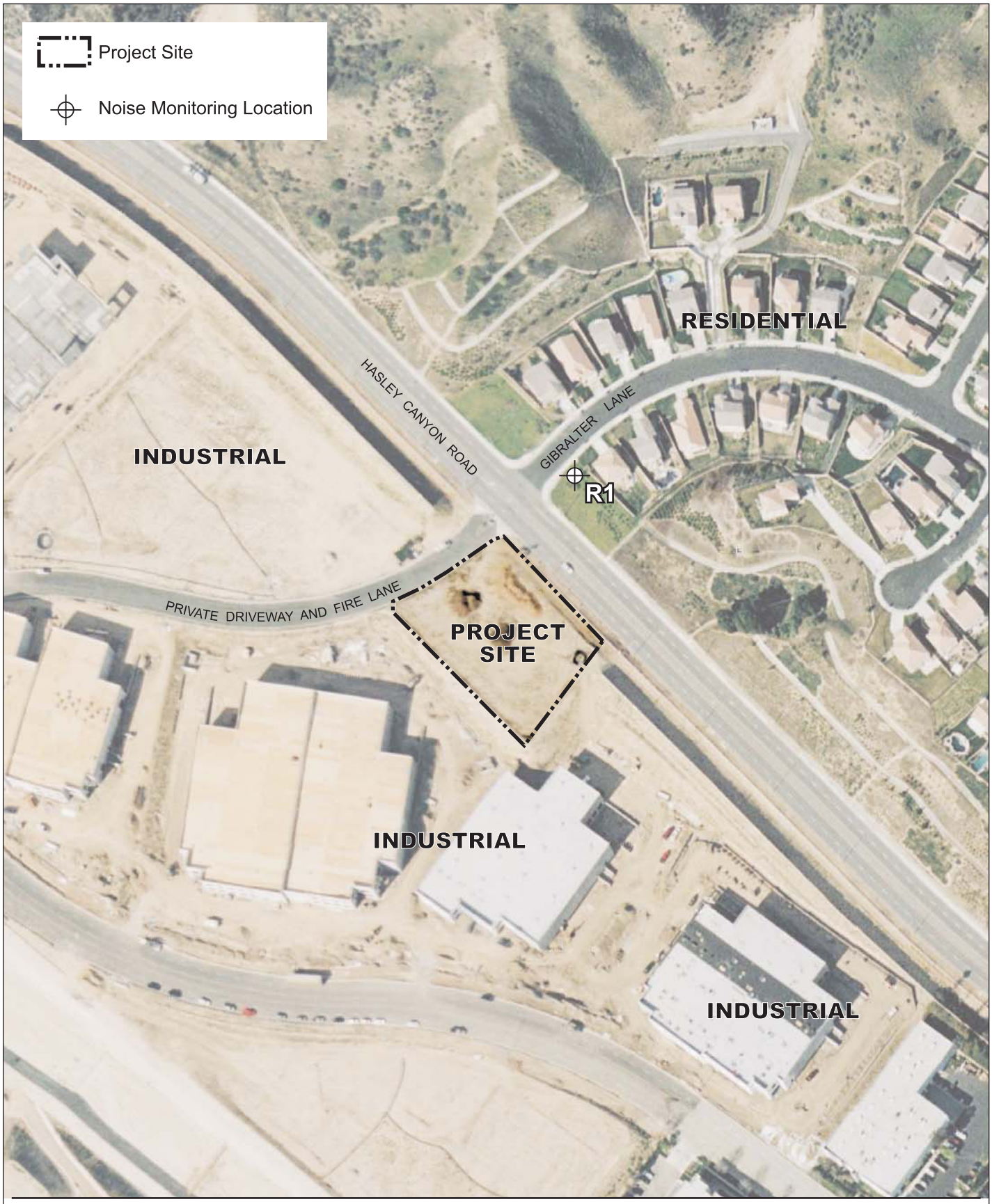
2. Noise Sensitive Receptor Locations

Some land uses are considered more sensitive to intrusive noise than others due to the types of activities typically involved at the receptor location. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, nursing homes, and parks are generally more sensitive to noise than commercial and industrial land uses. Based on site visit by PCR and the distances to the noise sensitive receptors measured, using Google Earth, the closest residential use (identified in this report as R1) to the project site is located approximately 170 feet north/northeast on Gibraltar Road.[25] This is the closest of the single-family residences located north and east of the site across Hasley Canyon Road. Figure B-1 on page B-52 illustrates the RI location. The nearest school location is a Kindercare Learning Center (daycare, pre-school and kindergarten) located approximately 2,700 feet to the southeast along Commerce Center Drive, which, due to its proximity to the site, would not be exposed to project related noise during construction activities or from mechanical equipment operating at the project site.

3. Existing Noise levels

The existing ambient sound levels at the nearest residence on Gibraltar Lane, northeast of the proposed Fire Station were measured on October 27, 2008, between 3 P.M. and 4 P.M to determine if the daytime ambient noise level was higher than 50 dBA, which is the County's daytime exterior noise standard. Existing ambient sound levels in the vicinity of the project site are mostly controlled by the auto traffic on Hasley Canyon Road. The noise measurement was conducted using a Larson Davis Model 820, a Type 1 sound level meter. The sound level meter was mounted on a tripod at a height of 5 feet above the local grade elevation and was set up to record sound level for a fifteen minute interval. The measured sound level at the nearest

[25] *Google Earth, updated as of June 2009. http://earth.google.com/*



PCR

N

0 1 2 Miles

Source: Google Earth and PCR Services Corporation, 2009.

Figure B-1
Noise Measurement and Sensitive Receptor Locations

residence was 58 dBA (L_{50}). The existing ambient sound level at the residential community exceeds the County's exterior noise standard of 50 dBA for daytime hours. As such, per LACMC Section 12.08.390.B, since the measured ambient noise level (58 dBA) exceeds the County's 50 dBA noise standard, the measured ambient noise level becomes the daytime noise standard for operation noise. A nighttime noise measurement was not taken since construction and operational noise, other than emergency siren noise, would primarily be limited to daytime hours. Furthermore, it is anticipated that the noise level from the project operation would not exceed the existing nighttime ambient noise level or the nighttime exterior noise standard of 45dBA.

4. Significance Thresholds

The following thresholds of significance were developed to determine project noise impacts during construction and operation periods.

(a) Construction

Utilizing the construction noise thresholds established in LACMC Chapter 12.08.440, noise during construction would have a significant impact if:

- Mobile Equipment - Project on-site mobile equipment exceeds 75 dBA at single-family residential uses daily between the hours of 7:00 A.M. and 8:00 P.M., except Sundays and legal holidays; or exceeds 60 dBA daily between the hours of 8:00 P.M. and 7:00 A.M. and all day Sunday and legal holidays.

- Stationary Equipment - Project on-site stationary equipment exceeds 60 dBA at single-family residential uses daily between the hours of 7:00 A.M. and 8:00 P.M., except Sundays and legal holidays; or exceeds 50 dBA daily between the hours of 8:00 P.M. and 7:00 A.M. and all day Sunday and legal holidays.

(b) Operation

Project related noise would have a significant impact if:

- Project on-site stationary sources exceed 45 dBA during nighttime and 58 dBA during the daytime at any residential use, pursuant to the noise standards set forth in LACMC Section 12.08.390.

5. Construction Impacts

Construction of the proposed fire station is anticipated to commence in the first half of 2010 and last up to approximately 12 months. The first phase, site fine grading, is assumed to require one month and utilize the following typical equipment: graders, rollers, water truck, etc. The second phase, building foundation, was estimated to require one month and utilize the following typical equipment: cement and mortar mixers, concrete/industrial saws, and tractors/loaders/backhoes. The third phase, building construction, was estimated to last eight months and require the following typical equipment: crawler tractors, rough terrain forklifts, tractor/loader backhoes, etc. Finally, the paving phase was estimated to last one month and require such typical equipment as rollers, paving equipment, etc.

The noisiest construction phase would be during the site fine grading period. The period would consist of fine grading/earthwork to further balance the site. As such, the following analyzes construction activities during the fine grading period to assess worst-case noise impacts.

As stated above, typical noise-generating equipment that would likely be used during grading/excavation for final site preparation would include equipment such as graders, rollers, water truck, etc. Maximum noise levels from these individual pieces of equipment range from approximately 79 to 85 dBA at a 50 foot distance, based on measured noise data conducted by the Federal Highway Administration (FHWA Roadway Construction Noise Model User's Guide, 2006). These maximum noise levels would occur when equipment is operating under full power conditions. To more accurately characterize construction noise levels, the average noise level is calculated based on the quantity, type, and usage factors for each type of equipment that would be used. The simultaneous operation of multiple pieces of construction equipment (i.e., excavator, loader, backhoe, haul truck, and water truck) is anticipated to result in a noise level of 89 dBA at a 50 feet distance during fine grading phase.[26] Using the industry standard sound attenuation rate of 6 dBA per doubling of distance for point sources (e.g., construction equipment), the construction noise levels were estimated at the nearest residential receptor. The nearest residential receptor is located approximately 170 feet east of the project site. Based on this distance and assuming the simultaneous operation of construction equipment, it is estimated that noise levels at the nearest residence during construction of the building would be up to approximately 78 dBA, which would exceed the County's noise limit of 75 dBA for mobile equipment uses during daytime hours. Thus, it is anticipated that noise generated during construction of the project would result in a potentially significant noise impact at the nearest residential use.

[26] *L.A. CEQA Thresholds Guide, 2006, Exhibit I.1-2- Outdoor Construction Noise Levels. This table provides typical noise levels for construction phases.*

The estimated noise levels represent a worst case scenario because construction activities are analyzed as if they were occurring along the perimeter of the construction area, whereas construction would typically occur throughout the site and at a further distance. In addition, the noise sensitive receptors that are located further from the construction site would experience less construction noise, as sound diminishes away from the source and due to intervening buildings between the source and receiver. The project would comply with all applicable regulations in the County noise ordinance. In addition, Mitigation Measure NOISE-1 has been prescribed that would provide at least 3 dBA noise reduction.[27] Implementation of Mitigation Measure NOISE-1 would reduce construction noise from 78 dBA to below 75 dBA. As such, noise would not exceed the 75 dBA threshold (per construction noise standards in LACMC Chapter 12.08.440) for mobile equipment. Thus, potentially significant construction noise impacts would be reduced to a less than significant level.

In addition, Mitigation Measures NOISE-2 and NOISE-3 have been prescribed to reduce construction noise levels to the maximum extent practicable. Mitigation Measure NOISE-2 would avoid operating several pieces of heavy equipment simultaneously, which causes higher noise levels. Mitigation Measure NOISE-3 would reduce the noise from engine idling. There would be no construction noise impact during nighttime since construction activities would not occur during nighttime.

In addition to on-site construction noise, haul trucks, delivery trucks, and construction workers would require access to the project site throughout the construction period. Haul trucks, delivery trucks, and construction workers would generally access the site via Hasley Canyon Road. Construction related traffic noise levels on local roadways was calculated using a noise prediction model developed based on calculation methodologies provided in the Caltrans Technical Noise Supplement (TeNS) document.[28] The construction related traffic noise calculation procedures provided in the Caltrans TeNS are consistent with Federal Highway Administration RD-77-108 roadway noise prediction methodologies. This methodology, considered an industry standard, allows for the definition of roadway configurations, barrier information (if any), and receiver locations. The traffic noise prediction model calculates hourly L_{eq}, noise levels based on specific information including; traffic volume, vehicle speed, and distance between the noise receptor and the roadway. Construction traffic would not occur during the noise-sensitive late evening and nighttime hours. It is anticipated that there would be a maximum of approximately 25 haul truck trips per day during fine grading of the site.[29] Based on a 9-hour operation and total number of haul truck trips per day, there would be a maximum of

[27] *Ibid.*

[28] *California Department of Transportation (Caltrans) Technical Noise Supplement (TeNS), 1998.*

[29] *Source: Verbal correspondence with Ken Schumann, P.E. Project Management Division II of the Los Angeles County Department of Public Works, August 19, 2009.*

3 haul truck trips on an hourly basis. It is estimated that the residential uses along Hasley Canyon Road would be exposed to haul truck noise level of 53 dBA L_{eq} over a one hour period. The estimated noise level due to truck movements would be below the existing ambient noise levels of 58 dBA L_{eq} at the residential uses. Therefore, significant noise impacts would not be expected from off-site construction traffic. Also, since the truck noise level of 53 dBA is well below the maximum on-site construction noise level of 75 dBA at the nearest residential use, off-site construction traffic would not increase the overall construction noise levels at the nearest residential use.

Mitigation Measures

NOISE-1 Noise-generating equipment operated at the project site shall be equipped with special noise control devices, i.e., mufflers, lagging, and/or motor enclosures. All equipment shall be routinely tested to ensure proper maintenance and to ensure that no additional noise, due to worn or improperly maintained parts, would be generated.

NOISE-2 Construction activities shall be scheduled so as to avoid operating several pieces of heavy equipment simultaneously. In no cases shall more than four pieces of heavy equipment be operated simultaneously.

NOISE-3 Engine idling from construction equipment such as graders and water trucks shall be limited to no more than five minutes.

6. Operational Impacts

(a) Traffic

Traffic generated from the project site during future operation would be limited to emergency (up to approximately five responses per day) and non-emergency responses including staff and visitor trips (less than 30 trips per day). It is estimated that the change in existing noise level attributed to the project operational traffic would be less than one dBA (a negligible increase) based on a maximum of 30 trips per day. In an outdoor environment, a change of one dBA would not be noticeable. Therefore, no significant noise impact would occur.

(b) Operational Equipment

Noise generating equipment associated with the typical operation of the fire station would include heating, ventilating, and air conditioning (HVAC) equipment (i.e., outdoor condenser fans), an external public address system, an emergency power generator (maximum power of

230 KW) and emergency equipment (sirens). The following provides a discussion of impacts associated with operational equipment at the fire station.

(1) Building HVAC Equipment

The operation of mechanical equipment such as air conditioning equipment and exhaust fans may generate audible noise levels. It is anticipated that roof-mounted equipment would be used and shielded from the public view. A typical outdoor condenser fan of the type anticipated for this project (air conditioning equipment) generates a noise level of approximately 75 dBA at 10 feet. The nearest residential use would be at least approximately 170 feet from the specific location of the HVAC equipment. It is estimated that the HVAC equipment noise level at the nearest residential use would be 41 dBA, which is below the County's limit of 45 dBA for nighttime hours and the 58 dBA daytime threshold. Further, it is acknowledged that the project's mechanical equipment would comply with the County's Noise Ordinance, which establishes maximum permitted noise levels from mechanical equipment.

(2) Public Address System

The fire station would have an outdoor public address (PA) system that would only be used on an intermittent basis during the daytime hours, between 8:00 A.M. to 5:00 P.M., to broadcast emergency calls. According to the fire department, it is estimated that the numbers of emergency calls would be a maximum of approximately five calls per day (24 hours). As such, noise from the PA system would be intermittent and would only occur for a few minutes per day. Furthermore, the PA system volume would be limited to the extent necessary for fire personnel to hear emergency announcements, so as to minimize off-site noise from the PA system. While the use of the PA system would result in noise levels to adjacent sensitive receptors that are expected to be less than 45 dBA under normal operating conditions, as discussed above, the use of the PA system for emergency basis is excluded from the County's Noise Ordinance. Therefore, with compliance to the Fire District policies regarding use of the PA system and the exemption from the County's noise ordinance, noise impacts from PA system are concluded to be less than significant.

(3) Generator

The generator would be located at the southeastern boundary of Fire Station 143 site. The generator would only be used during power outages; however, it would be tested for 30 minutes each week, during daytime hours, to ensure the operational readiness of the generator. The generator technical specification specifies a noise level of 82 dBA at a distance of 10 feet. The estimated generator noise level at the nearest residential use (170 feet north/northeast of the

site) would be 46 dBA, which is below the allowable 58 dBA noise limit for residential uses during daytime hours. The composite noise level from a typical generator anticipated for this project (46 dBA) and the HVAC equipment (41 dBA) at the nearest residential use would be 47 dBA, which is also below the daytime significance threshold of 58 dBA. Therefore, the emergency generator noise level would not pose a significant noise impact.

(4) Emergency Equipment

As part of the operation of the fire station and in compliance with the LA County Fire Department, Vehicle Operations Emergency Vehicle Response Policy (VD-C4-S5), the Fire Department would use discretion when activating the fire engine siren when responding to calls within the surrounding community. Fire Department policy states that intermittent siren use during emergency responses is permissible provided it is operated within at least 300 feet of an intersection where traffic control devices (signal lights, stop signs, etc.) are present. These practices would be implemented when the station is in operation. Fire Station 143 is anticipated to receive a maximum of approximately five emergency calls per day. Sirens would be used as necessary to warn pedestrians and motorists of fire engine trucks. Based on manufacturer's noise data (Federal Signal Corporation, Q2B Electro-Mechanical Siren), the siren would generate noise levels up to 123 dBA at a distance of 10 feet. When used, adjacent residences (150 feet to the north/northeast) to the outgoing fire engines from the fire station may temporarily experience noise levels up to 89 dBA. Such noise conditions would be temporary and intermittent, but are unavoidable with regards to emergency response. However, siren noise used in emergency circumstances is exempt from the County noise ordinance, which was developed to protect the public. Therefore, with compliance to the Fire District policy regarding use of sirens and the exemption of emergency sirens from the County's noise ordinance, impacts from siren noise are concluded to be less than significant.

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

Less Than Significant Impact. Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The peak particle velocity (PPV), in terms of inches/second, is usually used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak of the vibration signal. PPV is typically used for evaluating potential building damage and for evaluating human response. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Man-made vibration issues are therefore usually confined to short distances (i.e., 100 feet or less) from the source.

The construction activities that typically generate the most severe vibrations are blasting and impact pile driving, which are not necessary for the proposed project. The proposed project would be constructed using typical construction techniques. Construction equipment used during grading/excavation for final site preparation such as large bulldozer, graders, rollers, water truck, etc. would generate a limited amount of ground-borne vibration during construction activities at short distances away (i.e., within 100 feet) from the source.

Vibration velocities from the operation of project construction equipment would be up to 0.089 inch per second PPV at 25 feet from the source of activity such as large bulldozer and loaded truck.[30] The nearest off-site residential uses located approximately 170 feet from the project construction area, would be exposed to vibration velocities ranging from approximately 0.005 inches per second PPV. This value is considerably below the 0.5 inches per second PPV significance threshold (for potential residential building damage) and 0.04 inches per second PPV at off-site vibration sensitive receptors.[31] Post-construction on-site activities would be limited to on-site traffic and mechanical equipment (e.g., air handling unit and exhaust fans) that would not generate excessive ground-borne vibration or ground-borne noise, approximately 0.004 inches per second PPV based on the FTA published vibration data.[32] This vibration level is considered well below the perception threshold of 0.04 inches per second PPV. As such, project implementation would not expose any persons, including adjacent residential uses, to excessive ground-borne vibration or noise levels associated with operation the proposed project and 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?

Less Than Significant Impact. The existing noise environment in the project area is dominated by traffic noise along nearby roadways, as well as nearby residential uses to the north/northeast and industrial uses to the south and west and northwest. Long-term operation of the project would not have a significant effect on the community noise environment in proximity to the project site. Noise sources that would have potential noise impacts include: off-site auto traffic, on-site parking, and operational (i.e., air-conditioning, generator, PA system and sirens) equipment. As discussed in Response XI.a, the project would not substantially increase off-site auto traffic volumes, which would not result in an increase of ambient noise levels. Noise levels associated with on-site operations (e.g., parking and operational equipment) are also considered

[30] *Federal Transit Authority, Transit Noise and Vibration Impact Assessment, Final Report, page 7-3, April 1995.*

[31] *Ibid.*

[32] *Ibid.*

less than significant as discussed in Response XI.a. As such, long-term noise impacts would be less than significant.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact with Mitigation Incorporated. The project would result in a temporary increase in ambient noise near the project site during the construction period. Construction noise impacts are discussed in Response XI.a. As described therein, noise generated by on-site construction activities would temporary increase the existing ambient noise in the close vicinity of the project site, but would have a less than significant impact on surrounding sensitive uses with implementation of the prescribed mitigation measure. In addition, as discussed in Response XI.a, noise from operational equipment would not exceed the allowable levels established in the County noise ordinance. Thus, less than significant noise impacts would occur from construction and operation of the fire station.

Mitigation Measures

Refer to Mitigation Measure NOISE-1. No additional mitigation measures are necessary.

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?

No Impact. The project site is not located within an airport land use plan area or within two miles of a public airport or public use airport. Therefore, construction or operation of the project would not expose people to excessive airport related noise levels.

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

No Impact. The project site is not located within the vicinity of a private airstrip, or heliport or helistop. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels from such uses. No impacts would occur in this regard.

XII. POPULATION AND HOUSING

Would the project:

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)?

No Impact. The fire station would employ 14 fire personnel at full staffing. Given the incrementally insignificant population of employees, any residential growth in the area resulting from the new employment opportunities on-site would be inconsequential. Furthermore, the infrastructure improvements part of the project would support on-site uses and would not include major infrastructure that would induce growth. Thus, no impact would occur in this regard.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

and

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact (b-c). The project site is vacant and void of existing housing. As such, the project would not displace substantial numbers of existing housing or people that would necessitate the construction of replacement housing elsewhere. Thus, no impacts in these regards would occur.

XIII. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i) Fire protection?

No Impact. The project would include the development of a fire station to serve the surrounding community. The new fire station would increase response times within the service

area. Further, development of the fire station would not result in physical impacts associated with the provision of new or physically altered governmental facilities. As such, no impacts would occur in this regard. In fact, as the project includes the development of a new fire station, it would result in a beneficial impact regarding fire protection services.

ii) Police protection?

No Impact. The project would include the development of a fire station to serve the surrounding community. The project is not anticipated to place any additional demands on the police protection services in the area. Thus, no impacts to police protection services would occur.

iii) Schools?

No Impact. Development of the project would not generate new students and does not have the capability to increase the demand on the local school system. As such, no impacts to schools would occur.

iv) Parks?

No Impact. The project would not introduce any new population that would create additional demands on existing or planned park facilities. Furthermore, the project would not displace or directly impact any parks or recreational facilities. Thus, no impacts to park facilities would occur.

v) Other public facilities?

No Impact. The project would not introduce any new population and is not anticipated to create an increase in the need for additional government public facilities such as libraries in the area. Thus, no impact would occur in this regard.

XIV. RECREATION

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?

No Impact. The project would not introduce any new population that would create additional demands on existing or planned park facilities. Thus, no impacts to park facilities would occur.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The project would not introduce any new population that would create additional demands on existing or planned park facilities. Nor would the project displace or directly impact any parks or recreational facilities. In addition, no recreational facilities are proposed as part of the project. Thus, no impacts to park facilities would occur.

XV. TRANSPORTATION AND CIRCULATION.

Would the project:

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

Less Than Significant Impact. Construction-related traffic would be dispersed throughout the various phases of construction and would be short-term in nature lasting up to approximately 12 months. Construction traffic includes daily truck trips from on-site construction workers and construction-related vehicles. Construction traffic would include up to approximately 40 total truck trips per day (including haul trips), which would represent a nominal increase in daily traffic beyond existing conditions. Construction traffic, including worker trips, would generally occur outside of peak traffic hours. Regardless, the number of construction-related vehicular trips would not cause a substantial increase to traffic in relation to the existing traffic load and capacity of the street system. As such, construction-related traffic impacts would be less than significant.

Traffic generated from the project site during future operation would be limited to emergency (up to approximately five responses per day) and non-emergency responses including staff and visitor trips (less than 30 trips per day). The small number of trips would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system. As such, operational traffic impacts would be less than significant.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Less Than Significant Impact. As stated above in Response XV.a, traffic generated from the project site during operation would result in less than significant impacts considering the nominal increase in traffic based on the limited number of personnel and episodic nature of emergency responses. Traffic generated during construction would be limited to approximately 40 total truck trips (including haul trips) per day, and is not expected to generate a long-term source of traffic. As these trips would represent a nominal increase in traffic beyond existing conditions and would be temporary throughout the course of the construction activities, they would not cause a substantial increase in traffic. Thus, less than significant impacts would occur in this regard.

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?

No Impact. As the scope of the project is limited to construction of a fire station, it would not result in the disruption or change of air traffic patterns in the area. Therefore, no impacts regarding air traffic patterns 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)?

Less Than Significant Impact. The project does not include any design features (i.e., sharp turns, dangerous intersections) or propose any uses (e.g., farming equipment) that would create hazardous traffic conditions. Site access and circulation (i.e., turning radii and internal road widths) would be constructed in accordance with County code and standards set forth by the LA County Fire Department to ensure that the project would not substantially increase hazards due to a design feature. Thus, less than significant impacts would occur in this regard.

e) Result in inadequate emergency access?

Less Than Significant Impact. Access to the project site would be provided from two driveways; one driveway located on the private driveway and fire lane for public ingress and egress access and one driveway located on Hasley Canyon Road for staff ingress and egress. Ingress access for the fire engine truck would also be provided from Hasley Canyon Road while egress would be provided via the private driveway and fire lane only. Site access and circulation (i.e., turning radii, internal road widths, and clearance to sky heights) would be constructed in accordance with County code and standards set forth by the LA County Fire Department to ensure that the project provides adequate emergency access. Furthermore, a traffic signal would be installed at the fire station emergency egress driveway on the private driveway and fire lane with station controlled pre-emption during emergency and non-emergency responses. The traffic signal would promote emergency access for emergency vehicles leaving the fire station. Thus, impacts regarding emergency access would be less than significant.

f) Result in inadequate parking capacity?

No Impact. The proposed project would provide ample parking for fire personnel and visitors. A minimum of 14 employee parking spaces, two handicap stalls and two visitor parking stalls would be provided on-site. The proposed parking would accommodate the 14 staff members and visitors to the fire station. On-site parking would also be required to comply with the parking requirements as set forth in the Los Angeles County Code. Thus, no parking impacts would occur with project implementation.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

No Impact. The project site is not currently served by public transportation. In addition, project implementation would not result in an increased need for public transportation as the project is proposing the development of a new fire station. As such, construction and operation of the project would not impact any adopted policies, plans, or programs supporting alternative transportation.

XVI. UTILITIES AND SERVICE SYSTEMS.

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less Than Significant Impact. Wastewater treatment for the project area is provided by the Sanitation Districts of Los Angeles County. Located respectively approximately four miles and seven miles southeast of the project site are two wastewater treatment facilities: the Saugus Wastewater Treatment Plant (SWTP) and the Valencia Wastewater Treatment Plant (VWTP). Both facilities are interconnected through a joint powers agreement that creates the Santa Clarita Valley Joint Sewerage System (SCVJSS). The SCVJSS would service the project site by providing primary, secondary, and tertiary treatment of the wastewater generated on-site. Existing sewer infrastructure within Hasley Canyon Road would convey wastewater to either the SWTP or the VWTP. Given the limited number of personnel on-site (maximum of 14 staff per day), wastewater generated from the site would be cumulatively insignificant. Thus, the proposed project is not anticipated to exceed wastewater treatment requirements of the Regional Water Quality Control Board. Less than significant impacts would occur in this regard.

b) Require 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?

No Impact. The project site is located within the water service area of the SCWD of the CLWA. Wastewater treatment for the project area is provided by the Sanitation Districts of Los Angeles County. As described in Response XVI.a, above the SWTP and VWTP wastewater treatment facilities would treat wastewater from the site. Given the size and scope of the project, which includes a limited number of on-site personnel, the project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. Thus, no impacts would occur in this regard.

c) Require 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?

Less Than Significant Impact. The project site was previously graded in anticipation of a fire station. Surface water runoff on-site sheetflows south and southeastern direction towards existing drainage located at the southern and southeastern boundary of the project site. The

runoff then flows in a westerly direction towards the storm drainage located along the private driveway and fire lane. This drainage pattern would be retained with development of the project and appropriate drainage improvements would be made on-site to contain and direct stormwater flows to the local storm drain system. Project implementation would not require substantial new off-site new storm water drainage facilities or expansion of existing off-site facilities.

Furthermore, it is noted that the project implementation would comply with all applicable NPDES and County requirements, as discussed above including those regarding preparation of a SWPPP and SUSMP to reduce water quality impacts, including minimizing the potential for erosion or siltation on- or off-site, during construction and operation of the project. In conclusion, as the proposed drainage pattern would not be substantially altered when compared to existing conditions and substantial new or expanded storm water facilities would not be necessary with project implementation, less than significant impacts would occur.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact. As previously stated, the project site is located within the water service area of the SCWD of the CLWA. The project site is located on a lot designated for industrial use and zoned M-1 1/2DP for heavy manufacturing. The proposed fire station would be consistent with the land use designation of the site with approval of a Conditional Use Permit, in compliance with Section 22.40.700 and 22.56 of the County Code. As such, the proposed fire station would be consistent with the water demand projections for the site anticipated by SCWD. Given the project would be consistent with the anticipated land use for the project site and the project's nominal increase in overall water demand in SCWD's service area, no new or expanded entitlements would be necessary with project implementation. Thus, less than significant impacts would occur in this regard.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact. Sewer service would be provided to the project site by the Sanitation Districts of Los Angeles County. Given the limited number of personnel on-site (maximum of 14 staff per day), wastewater generated from the site would be cumulatively insignificant. Thus, the proposed project is not anticipated to generate a substantial demand for wastewater infrastructure or to create capacity problems at the treatment plant serving the project site. Therefore, impacts regarding the adequacy of wastewater conveyance and treatment facilities serving the project would be less than significant.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. Although Los Angeles County provides solid waste management services to the project site and unincorporated areas, disposal destinations for solid waste would be at the discretion of the private haulers, who maintain disposal agreements with landfill operators. The County has numerous private haulers to collect residential, industrial and commercial waste that is ultimately disposed of a of the County's 12 operating landfills. Solid waste generated within the Santa Clarita Valley, including the project site, would primarily be disposed at the Chiquita Canyon Landfill, but other open County landfills may also serve the City. The Chiquita Canyon Sanitary Landfill has a maximum daily capacity of 6,000 tons and remaining capacity to accommodate waste until its estimated closure date of 2019. The project's nominal increase in solid waste would be accommodated by the Chiquita Canyon Landfill or another County landfill. Furthermore, the project would incorporate recycling methods to reduce solid waste to the extent feasible. Therefore, impacts to landfills are concluded to be less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. The project would be subject to AB 939 which requires cities and counties to participate in countywide programs and to implement site-specific source reduction, recycling, and reuse programs to reduce their waste streams by 50 percent. The County has an approved list of solid waste haulers for construction, demolition, and commercial waste. These approved haulers are responsible for meeting the requirements of AB 939 (i.e., meeting specific diversion rates, recycling, etc.). As the LA County Fire Department would be required to utilize one of the approved waste haulers, the project would be in compliance with AB 939. Therefore, the proposed project would comply with federal, state, and local statutes and regulations related to solid waste. No impacts would occur in this regard.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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?

Less Than Significant Impact. The preceding analysis in this Initial Study does not reveal any significant unmitigable impacts to the environment that would degrade the quality of the environment. As discussed in Section IV, Biological Resources, the existing site is a previously graded lot and does not support sensitive plant or animal species. No impacts to biological resources would occur with project implementation. In addition, as discussed above in Section V, Cultural Resources, the project site does not contain any historical structures as defined by the CEQA Guidelines and no significant impacts to historic or archaeological resources would occur with project implementation. Further, as the site is an undeveloped, previously graded vacant lot, no examples of the major periods of California history or prehistory occur on the project site. Previous grading did not uncover any cultural artifacts. Based on the analysis contained herein, the project would not substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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. Therefore, impacts would be less than significant.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of an individual 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).

Less Than Significant Impact. The following discusses the cumulative impacts of the project when viewed in connection with the effects of other current projects and probable future projects ("related projects"). The list of related projects was obtained from the County of Los Angeles Department of Regional Planning (DRP) website, Sub-Net GIS database, accessed September 8, 2009 (http://planning.lacounty.gov/subnet). The list of related projects was determined by assessing those projects that may be visible in conjunction with the project site from surrounding roadways or could create construction traffic that would utilize the same roadways during construction as the project (i.e., Hasley Canyon Road and Commerce Center

Drive). None of the listed relates projects have a defined construction start date or schedule. Thus, it is conservatively assumed that construction of the related projects could occur simultaneously with the construction of the proposed fire station.

1. Pending subdivision application submitted by Newhall Land for commercial/industrial uses (square footage of proposed uses not yet defined) on an approximately 392-acre site (Tract No. PM18108) generally located north of the intersection of Commerce Center Drive and Henry Mayo Drive. Submitted to DRP on November 13, 2007.

2. Approved subdivision application submitted by Newhall Land and Farming Company for commercial/industrial uses on an approximately 113-acre site (Tract No. PM26363) generally located southwest of the intersection of Commerce Center Drive and Henry Mayo Drive. Submitted to DRP on January 31, 2007. Square footage of proposed uses to be determined.

3. Approved subdivision application submitted by Palmer Investments for 209 single-family residential units on an approximately 430-acre site (Tract No. TR52584) generally located northeast of the intersection of Hasley Canyon Road and Del Valley Road. Submitted to DRP April 16, 2007.

4. Pending subdivision application submitted by Sterling Gateway for industrial uses on an approximately 117-acre site (Tract No. PM060030) generally located west of the intersection of Witherspoon Parkway and Avenue Penn; and east of Del Valle Road. Submitted to DRP May 1, 2007.

5. Pending subdivision application submitted by Del Valle Land Co., LLC for 109 condominium units on an approximately 134-acre site (Tract No. TR060665) generally located on the north and south sides of Del Valle Road between Hasley Canyon Road and Arroyo Oak Lane. Submitted to DRP February 6, 2007.

6. Pending subdivision application submitted by Sterling Gateway for 19 condominium units on an approximately 95-acre site (Tract No. TR062000) generally located on the east and west sides of Hunstock Street and north of Jackson Street. Submitted to DRP June 12, 2006.

7. Pending subdivision application submitted by Santa Clarita Valley Facilities Fnd. for 58 single-family residential units on an approximately 70-acre site (Tract No.

TR52475) generally located north of Quail Oaks Drive between Sloan Canyon Road and Magic View Place. Submitted to DRP November 12, 2007.

8. Pending subdivision application submitted by Hasley Ranch Estates, LLC. for 82 single-family residential units on an approximately 168-acre site (Tract No. TR066190) generally located south of Hasley Canyon Road between Arroyo Oak Lane and Galloping Court. Submitted to DRP July 17, 2007.

9. Pending subdivision application submitted by Sterling Gateway for 244 single-family residential units and 109 multifamily units on an approximately 114-acre site (Tract No. TR060257) generally located on the north and south sides of Del Valle Road between Arroyo Oak Lane and Hunstock Street. Submitted to DRP May 31, 2006.

Cumulative impacts are less than significant for those issues for which it has been determined that the project would have no impact, since there would be no potential for the project to create a cumulative impact. Environmental issues meeting this criterion include agricultural resources, biological resources, mineral resources, population/housing, public services and recreation.

With regards to geology and soils, cultural resources, hazards and hazardous materials, and hydrology and water quality, impacts regarding these issue areas would be fully mitigated through compliance with existing regulations and implementation of site specific technical analysis or studies (i.e., geology study, hazardous materials assessment, etc.) for each related project (including site specific mitigation for each related project) such that less than significant cumulative impacts would occur with related projects. In other words, impacts with regards to these issue areas would be limited to the project site and would not be increased when viewed in conjunction with the related projects.

Traffic

Of the related projects listed above, only Nos. 2 and 3, which have been approved, potentially could have some overlap in construction with the proposed project. The remaining projects are pending and as such, are anticipated to be constructed after the proposed project. As noted in the analysis of traffic herein, the project would generate a nominal amount of construction-related traffic that would not cause a substantial increase to traffic in relation to the existing traffic load and capacity of the street system when viewed in conjunction with the Related Project Nos. 2 and 3. Traffic generated from the project site during future operation of the fire station would be limited to emergency (up to approximately five responses per day) and

non-emergency responses including staff and visitor trips (less than 30 trips per day). The small number of trips would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system. Given the negligible increase in traffic generated from the project, significant cumulative impacts would not occur with project implementation.

Aesthetics

The project site is located within an existing industrial building park area. The nearest related project is Related Project No. 3 located approximately 0.2 miles northwest of the project site. However, due to intervening development and topography, the potential for simultaneous viewing of the project and Related Project No. 3 is negligible, if any. Nonetheless, even if the fire station were to be visible in conjunction with related project No. 3, due to the size of the site and its location within an existing developed area, no substantial adverse impacts to existing visual resources or views in the surrounding vicinity would occur. Therefore, less than significant cumulative aesthetic impacts would occur.

Land Use and Planning

Implementation of the project and any potential related project could have a cumulative impact relative to consistency with applicable land use plans, policies or regulations. Those related projects that are consistent with applicable land use plans, policies or regulations would not contribute to a cumulative impact. Similarly, those related projects that are dependent on modifications to adopted land use plans would not have cumulative consistency impacts with necessary amendments in place. Notwithstanding, each related project would be subject to discretionary review by the County of Los Angeles in order to address and resolve land use impacts on an individual and cumulative basis. As such, cumulative land use impacts are concluded to be less than significant.

Public Utilities

The project proposes a use on the site that is consistent with the land use designation for the site and as such, would not conflict with any applicable anticipated demand forecasts for the site by the serving utilities. Given the limited number of personnel on-site (maximum of 14 staff per day), the demand for utilities on the site would be minimal. Due to the shared urban infrastructure, the wastewater generation, stormwater discharge and water consumption associated with the project and the related projects could have a cumulative impact. However, during the approval process for each related project, utility system capacity must be demonstrated. As the service providers conduct on-going evaluations to ensure facilities are

adequate to serve the forecasted growth of the community, cumulative impacts on utilities are concluded to be less than significant.

Air Quality

Since the fire station has no control over the timing or sequencing of the related projects, any quantitative analysis to ascertain daily construction emissions that assumes multiple, concurrent construction projects would be highly speculative. With respect to the project's construction-period air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to CAA mandates. In accordance with those strategies, the project would comply with SCAQMD Rule 403 requirements, and implement all feasible mitigation measures. In addition, the project would comply with adopted AQMP emissions control measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects Basin-wide, which would include each of the related projects mentioned above. As such, cumulative impacts to air quality during proposed project construction would less than significant.

The SCAQMD's approach for assessing cumulative impacts related to operations is based on attainment of ambient air quality standards in accordance with the requirements of the CAA and the CCAA. The SCAQMD has developed a comprehensive plan, the 2007 AQMP, which addresses the region's cumulative air quality condition.

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. Because the Basin is currently in nonattainment for ozone, PM_{10} and $PM_{2.5}$, related projects could exceed an air quality standard or contribute to an existing or projected air quality exceedance.

For purposes of the cumulative air quality analysis with respect to CEQA Guidelines Section 15064(h)(3), the project's incremental contribution to cumulative air quality impacts is determined based on compliance with the SCAQMD adopted 2007 AQMP.

The proposed project would not conflict with or obstruct implementation of the applicable air quality plan under the AQMP. A project is deemed inconsistent with air quality plans if it results in population and/or employment growth that exceeds growth estimates in the applicable air quality plan. In turn, the AQMP relies upon growth projections adopted by the SCAG, which in turn, relies upon adopted General Plan growth projections. The project would

result in only minimal employment growth, which would not exceed growth estimates in the AQMP. In addition, the project would comply with all rules and regulations as implemented by the SCAQMD and the CARB. Therefore, it was determined that the project would be consistent with the AQMP. Thus, given the project's consistency with the AQMP, the project's incremental contribution to cumulative air quality effects is not cumulatively considerable, per CEQA Section 15064(h)(3).

With respect to TAC emissions, the project nor any of the related projects appear to include substantial sources of long-term TAC emissions. Pursuant to the law enacted in 1983 by California Assembly Bill 1807 (Tanner, Stats. 1983, ch. 1047), as amended,[33] which directs the CARB to identify substances such as TAC and adopt airborne toxic control measures (ATCMs) to control such substances, the SCAQMD has adopted numerous rules (primarily in Regulation XIV) that specifically address TAC emissions. These SCAQMD rules have resulted in and will continue to result in substantial Basin-wide TAC emissions reductions. As such, cumulative TAC emissions during long-term operations would be less than significant.

As discussed in Section II, Air Quality, the project would have a less than significant impact with respect to its contribution to the cumulative impact of global climate change. As noted therein, conventional cumulative air quality analyses consider related projects; however, this approach is not appropriate because proximity is irrelevant to the transport and accumulation of GHG in the Earth's atmosphere.

Noise

The nearest related project to the project site is Related Project No. 3 located approximately 0.2 miles northwest of the project site. Given the distance of this project to the proposed fire station site and the intervening topography, there would be no cumulative increase in construction or operational noise levels to adjacent sensitive noise receptors. Given the nominal increase in traffic during construction and operation of the project, cumulative traffic noise would be a less-than-significant impact. No related projects are in proximity to the site that would create a cumulative increase regarding on-site noise sources. Overall, the project would result in less than significant cumulative noise impacts.

[33] *Calif. Health and Safety Code §§ 39650 et seq.*

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact. Based on the analysis provided above, implementation of the project would not cause environmental effects that cause substantial direct or indirect adverse effects on human beings. Also, the fire station would be beneficial to human beings as it would provide for increased safety. Thus, less than significant impacts would occur in this regard.

PROPOSED FIRE STATION 143

Mitigated Negative Declaration
Appendix A

Air Quality Assessment Files

Provided by PCR Services Corporation

September 2009

A-1 Project Construction Emissions

A-2 SCAQMD Rule 403 (Fugitive Dust) Control Requirements

A-3 Project Operation Emissions

A-4 Greenhouse Gas Emissions

Appendix A-1

- Construction Emissions
  - Regional Construction Emissions
    - URBEMIS2007 Output Files

LAFD 143
URBEMIS Construction Summer

10/28/2008 05:28:52 PM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: V:\AQNOISE DIVISION\Active Projects\LACOFD\143\LAFD143.urb924

Project Name: Firestation 143

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009 TOTALS (lbs/day unmitigated)	2.86	21.95	10.62	0.01	4.82	1.40	5.87	1.01	1.28	1.97	2,113.15
2009 TOTALS (lbs/day mitigated)	2.86	21.95	10.62	0.01	2.74	1.40	3.78	0.57	1.28	1.54	2,113.15
2010 TOTALS (lbs/day unmitigated)	4.55	28.07	15.03	0.00	0.00	1.96	1.96	0.00	1.80	1.80	2,647.80
2010 TOTALS (lbs/day mitigated)	4.55	28.07	15.03	0.00	0.00	1.96	1.96	0.00	1.80	1.80	2,647.80

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.06	0.02	0.05	0.00	0.00	0.00	20.86

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.12	0.16	1.48	0.00	0.24	0.05	146.29

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.18	0.18	1.53	0.00	0.24	0.05	167.15

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

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Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 10/1/2009-10/30/2009 Active Days: 22	2.25	19.87	9.48	**0.01**	2.74	1.05	3.78	0.57	0.97	1.54	2,113.15
Mass Grading 10/01/2009-10/31/2009	2.25	19.87	9.48	0.01	2.74	1.05	3.78	0.57	0.97	1.54	2,113.15
Mass Grading Dust	0.00	0.00	0.00	0.00	2.71	0.00	2.71	0.57	0.00	0.57	0.00
Mass Grading Off Road Diesel	1.90	15.69	6.94	0.00	0.00	0.87	0.87	0.00	0.80	0.80	1,517.35
Mass Grading On Road Diesel	0.33	4.12	1.66	0.00	0.02	0.18	0.20	0.01	0.16	0.17	502.51
Mass Grading Worker Trips	0.03	0.05	0.87	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.29
Time Slice 11/2/2009-11/30/2009 Active Days: 21	0.87	5.96	4.16	0.00	0.01	0.46	0.47	0.00	0.42	0.43	674.17
Fine Grading 11/01/2009-11/30/2009	0.87	5.96	4.16	0.00	0.01	0.46	0.47	0.00	0.42	0.43	674.17
Fine Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Off Road Diesel	0.74	4.53	2.73	0.00	0.00	0.40	0.40	0.00	0.36	0.36	412.30
Fine Grading On Road Diesel	0.11	1.38	0.56	0.00	0.01	0.06	0.07	0.00	0.06	0.06	168.57
Fine Grading Worker Trips	0.03	0.05	0.87	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.29
Time Slice 12/1/2009-12/31/2009 Active Days: 23	2.86	21.95	10.62	0.00	0.00	1.40	1.40	0.00	1.28	1.28	2,021.19
Building 12/01/2009-07/31/2010	2.86	21.95	10.62	0.00	0.00	1.40	1.40	0.00	1.28	1.28	2,021.19
Building Off Road Diesel	2.86	21.91	10.43	0.00	0.00	1.39	1.39	0.00	1.28	1.28	1,998.58
Building Vendor Trips	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
Building Worker Trips	0.01	0.01	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.91
Time Slice 1/1/2010-6/30/2010 Active Days: 129	2.69	20.63	10.38	0.00	0.00	1.31	1.31	0.00	1.20	1.20	2,021.19
Building 12/01/2009-07/31/2010	2.69	20.63	10.38	0.00	0.00	1.31	1.31	0.00	1.20	1.20	2,021.19
Building Off Road Diesel	2.68	20.59	10.21	0.00	0.00	1.31	1.31	0.00	1.20	1.20	1,998.58
Building Vendor Trips	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
Building Worker Trips	0.01	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.91
Time Slice 7/1/2010-7/30/2010 Active Days: 22	**4.55**	**28.07**	**15.03**	0.00	0.00	**1.96**	1.96	0.00	**1.80**	1.80	**2,647.80**
Asphalt 07/01/2010-07/31/2010	1.26	7.44	4.61	0.00	0.00	0.65	0.65	0.00	0.60	0.60	623.18
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.22	7.35	4.05	0.00	0.00	0.65	0.65	0.00	0.59	0.59	554.09
Paving On Road Diesel	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.92
Paving Worker Trips	0.02	0.03	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.17
Building 12/01/2009-07/31/2010	2.69	20.63	10.38	0.00	0.00	1.31	1.31	0.00	1.20	1.20	2,021.19
Building Off Road Diesel	2.68	20.59	10.21	0.00	0.00	1.31	1.31	0.00	1.20	1.20	1,998.58
Building Vendor Trips	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
Building Worker Trips	0.01	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.91
Coating 07/01/2010-07/31/2010	0.60	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.43
Architectural Coating	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.43

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 10/1/2009 - 10/31/2009 - Default Mass Site Grading/Excavation Description

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

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Phase Assumptions

Phase: Fine Grading 11/1/2009 - 11/30/2009 - Default Fine Site Grading/Excavation Description
Total Acres Disturbed: 0
Maximum Daily Acreage Disturbed: 0
Fugitive Dust Level of Detail: Default
  20 lbs per acre-day
On Road Truck Travel (VMT): 39.77
Off-Road Equipment:
1 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day
1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Mass Grading 10/1/2009 - 10/31/2009 - Default Mass Site Grading/Excavation Description
Total Acres Disturbed: 0.97
Maximum Daily Acreage Disturbed: 0.24
Fugitive Dust Level of Detail: Default
  20 lbs per acre-day
On Road Truck Travel (VMT): 118.56
Off-Road Equipment:
1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
1 Other Equipment (190 hp) operating at a 0.62 load factor for 8 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 8 hours per day

Phase: Paving 7/1/2010 - 7/31/2010 - Default Paving Description
Acres to be Paved: 0.1
Off-Road Equipment:
1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 12/1/2009 - 7/31/2010 - Default Building Construction Description
Off-Road Equipment:
1 Crawler Tractors (147 hp) operating at a 0.64 load factor for 8 hours per day
1 Other Equipment (190 hp) operating at a 0.62 load factor for 8 hours per day
1 Rough Terrain Forklifts (93 hp) operating at a 0.6 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 7/1/2010 - 7/31/2010 - Default Architectural Coating Description
Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100
Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50
Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250
Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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LAFD 143
URBEMIS Construction Annual

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: V:\AQNOISE DIVISION\Active Projects\LACOFD\143\LAFD143.urb924

Project Name: Firestation 143

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5	PM2.5	CO2
2009 TOTALS (tons/year unmitigated)	0.07	0.53	0.27	0.00	0.05	0.03	0.09	0.01	0.03	0.04	53.57
2009 TOTALS (tons/year mitigated)	0.07	0.53	0.27	0.00	0.03	0.03	0.06	0.01	0.03	0.04	53.57
Percent Reduction	0.00	0.00	0.00	0.00	43.16	0.00	26.81	42.99	0.00	11.70	0.00
2010 TOTALS (tons/year unmitigated)	0.22	1.64	0.83	0.00	0.00	0.11	0.11	0.00	0.10	0.10	159.49
2010 TOTALS (tons/year mitigated)	0.22	1.64	0.83	0.00	0.00	0.11	0.11	0.00	0.10	0.10	159.49
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.01	0.00	0.01	0.00	0.00	0.00	3.81

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.02	0.03	0.27	0.00	0.04	0.01	25.86

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.03	0.03	0.28	0.00	0.04	0.01	29.67

Appendix A-2

- SCAQMD Rule 403 (Fugitive Dust) Control Requirements

(Adopted May 7, 1976) (Amended November 6, 1992)
(Amended July 9, 1993) (Amended February 14, 1997)
(Amended December 11, 1998)(Amended April 2, 2004)
(Amended June 3, 2005)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

(1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.

(2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.

(3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.

(4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.

(5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

(6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.

(8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.

(10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

(11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.

(13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.

(14) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:

(A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) been paved or otherwise covered by a permanent structure; or

(C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.

(15) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(16) EARTH-MOVING ACTIVITIES means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.

(17) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.

(18) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.

(19) HIGH WIND CONDITIONS means that instantaneous wind speeds exceed 25 miles per hour.

(20) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.

(21) LARGE OPERATIONS means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

meters (5,000 cubic yards) or more three times during the most recent 365-day period.

(22) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.

(23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

(25) PM_{10} means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(26) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.

(28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.

(29) SIMULTANEOUS SAMPLING means the operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(31) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.

(32) TRACK-OUT means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(33) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.

(34) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(35) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(36) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(37) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Requirements

(1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

(A) the dust remains visible in the atmosphere beyond the property line of the emission source; or

(B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.

(2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.

(3) No person shall cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10}.

(B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.

(4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

(5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.

(A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

(B) Pave the surface extending at least 100 feet and at least 20 feet wide.

(C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).

(6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.

(e) Additional Requirements for Large Operations

(1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:

(A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;

(B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;

(C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;

(D) install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;

(E) identify a dust control supervisor that:

(i) is employed by or contracted with the property owner or developer;

(ii) is on the site or available on-site within 30 minutes during working hours;

(iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;

(iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and

(F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

(2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

(f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

(1) The provisions of this Rule shall not apply to:

(A) Dairy farms.

(B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.

(C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.

(I) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.

(J) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and

(ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.

(K) sandblasting operations.

(2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:

(A) When wind gusts exceed 25 miles per hour, provided that:

(i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;

(ii) records are maintained in accordance with subparagraph (e)(1)(C).

(B) To unpaved roads, provided such roads:

(i) are used solely for the maintenance of wind-generating equipment; or

(ii) are unpaved public alleys as defined in Rule 1186; or

(iii) are service roads that meet all of the following criteria:

(a) are less than 50 feet in width at all points along the road;

(b) are within 25 feet of the property line; and

(c) have a traffic volume less than 20 vehicle-trips per day.

(C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.

(3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.

(4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:

(A) Blasting operations which have been permitted by the California Division of Industrial Safety; and

(B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).

(6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.

(7) The provisions of subdivision (e) shall not apply to:

(A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.

(B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.

(C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.

(8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

(h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM_{10} pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	✓ Mix backfill soil with water prior to moving ✓ Dedicate water truck or high capacity hose to backfilling equipment ✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	✓ Follow permit conditions for crushing equipment ✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration ✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	✓ Limit vehicular traffic and disturbances on soils where possible ✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	✓ Grade each project phase separately, timed to coincide with construction phase ✓ Upwind fencing can prevent material movement on site ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes	✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities.	✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	✓ Haul waste material immediately off-site

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure		Guidance
Unpaved roads/parking lots	19-1	Stabilize soils to meet the applicable performance standards; and	✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
	19-2	Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	
Vacant land	20-1	In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES
Earth-moving	(1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice per hour during active operation; OR (3C) Stop all vehicular traffic.
Open storage piles	(1D) Apply water twice per hour; OR (2D) Install temporary coverings.
Paved road track-out	(1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Table 4
(Conservation Management Practices for Confined Animal Facilities)

SOURCE CATEGORY	CONSERVATION MANAGEMENT PRACTICES
Manure Handling **(Only applicable to Commercial Poultry Ranches)**	(1a) Cover manure prior to removing material off-site; AND (1b) Spread the manure before 11:00 AM and when wind conditions are less than 25 miles per hour; AND (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d). (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material.
Feedstock Handling	(2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins.
Disturbed Surfaces	(3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR (3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR (3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface.
Unpaved Roads	(4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR (4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR (4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface.
Equipment Parking Areas	(5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches).

Appendix A-3

- Operation Emissions Inventory
  - Regional Operation Emissions
    - Regional Emission Summary Sheets
    - Stationary Emission Summary Sheets
    - URBEMIS2007 Output Files
  - Tier 1 Analysis
  - Emergency Generator
  - TANKS 4.0.9d Output Files

Fire Station 143

Regional Emission Calculations (lbs/day)

		VOC	NOx	CO	SO2	PM10	PM2.5
Project							
	Mobile (non-fire trucks)	0	0	1	0	0	0
	Area	0	0	0	0	0	0
	Stationary	1	48	10	3	3	3
	Fire Trucks	1	4	2	0	0	0
	Total Project	**2**	**52**	**14**	**3**	**4**	**3**
	SCAQMD Significance Th	55	55	550	150	150	55
	Difference	**(53)**	**(3)**	**(536)**	**(147)**	**(146)**	**(52)**
	Significant?	**No**	**No**	**No**	**No**	**No**	**No**

LACOFD- Fire Station 143

Electricity Usage

Electricity Usage

Land Use	1,000 Sqft	Electricity Usage Rate [a] (kWh\sq.ft\yr)	Total Electricity Usage (KWh\year)	Total Electricity Usage (MWh\Day)	CO	ROC	NOx	PM10	SOx	CO2	CH4	NO2
					Emission Factors (lbs/MWh) [b]							
					0.2	0.01	1.15	0.04	0.12	804.54	0.0067	0.0037
Project												
Fire House/ Station	42.3	10.5	443,657	1.215	0.243	0.012	1.398	0.049	0.146	977.916	0.008	0.004
Total Project			**443,657**	**1.215**	**0.24**	**0.01**	**1.40**	**0.05**	**0.15**	**977.92**	**0.01**	**0.00**
Net Emissions From Electricity Usage					**0.24**	**0.01**	**1.40**	**0.05**	**0.15**	**977.92**	**0.01**	**0.00**

Summary of Stationary Emissions

	CO	ROC	NOx	PM10	SOx	PM2.5
TANK (lbs/day)	0	0.707	0	0	0	0
Backup Diesel Generator (lbs/day)	10.03	0.00	46.56	3.30	3.08	2.94
Total Existing Emissions (lbs/day)	0.00	0.00	0.00	0.00	0.00	0.00
Total Project Emissions (lbs/day)	**0.24**	**0.01**	**1.40**	**0.05**	**0.15**	0.04
Total Project Net Emissions (lbs/day)	**10.28**	**0.72**	**47.96**	**3.35**	**3.22**	**2.98**

[a] Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.
[b] Emission Factors from Table A9-11-B, CEQA Air Quality Handbook, SCAQMD, 1993.

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: V:\AQNOISE DIVISION\Active Projects\LACOFD\143\LAFD143.urb924

Project Name: Firestation 143

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.02	0.01	0.00	0.00	0.00	20.79
Hearth							
Landscape	0.01	0.00	0.04	0.00	0.00	0.00	0.07
Consumer Products	0.05						
Architectural Coatings	0.00						
TOTALS (lbs/day, unmitigated)	0.06	0.02	0.05	0.00	0.00	0.00	20.86

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.12	0.16	1.48	0.00	0.24	0.05	146.29
TOTALS (lbs/day, unmitigated)	0.12	0.16	1.48	0.00	0.24	0.05	146.29

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	0.33	14.00	dwelling units	1.00	14.00	141.44
					14.00	141.44

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.6	1.1	98.7	0.2
Light Truck < 3750 lbs	6.8	2.9	94.2	2.9
Light Truck 3751-5750 lbs	22.8	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.0	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.5	0.0	86.7	13.3
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.3	69.6	30.4	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: V:\AQNOISE DIVISION\Active Projects\LACOFD\143\LAFD143.urb924

Project Name: Firestation 143

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.02	0.01	0.00	0.00	0.00	20.79
Hearth							
Landscaping - No Winter Emissions							
Consumer Products	0.05						
Architectural Coatings	0.00						
TOTALS (lbs/day, unmitigated)	0.05	0.02	0.01	0.00	0.00	0.00	20.79

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.13	0.20	1.42	0.00	0.24	0.05	132.57
TOTALS (lbs/day, unmitigated)	0.13	0.20	1.42	0.00	0.24	0.05	132.57

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	0.33	14.00	dwelling units	1.00	14.00	141.44

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			14.00	141.44

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.6	1.1	98.7	0.2
Light Truck < 3750 lbs	6.8	2.9	94.2	2.9
Light Truck 3751-5750 lbs	22.8	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.0	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.5	0.0	86.7	13.3
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.3	69.6	30.4	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Operational Changes to Defaults

Species	Lbs/Yr	Lbs/Hr	Cancer/Chronic Annual Threshold lbs/yr (50 meters to Sensitive Receptor)	Cancer/Chronic HI	Significant?	Acute Non-cancer Threshold lbs/hr (50 meters to Sensitive	Acute HI	Significant?
Benzene	2.91	0.93	2.99	0.33	No	1.48	0.23	No
Toluene	2.70	0.93	26000.00	0.00	No	37.00	0.01	No
Ethly Benzene	0.47	n/a	173000.00	0.00	No	n/a	n/a	No
Xylene	2.40	0.93	67000.00	0.00	No	22.00	0.02	No
Butane	0.00	0.45974			No		n/a	No
Heptane	0.00	0.45974			No		n/a	No
Hexane	0.90	n/a	607000.00	0.00	No	n/a	n/a	No
Cyclohexane	0.00	0.45974			No	n/a	n/a	No
Methylcyclohexane	0.00	0.45974			No	n/a	n/a	No
Pentane	0.00	0.45974			No	n/a	n/a	No
Naphthalene	0.32	n/a	2.49	0.04	No	n/a	n/a	No
Ethanol	0.00	0.45974			No	n/a	n/a	No
Tertiary amyl methyl ether (ETBE)	0.00	0.45974			No	n/a	n/a	No
Ethyl tert-butyl ether (ETBE)	0.00	0.45974			No	n/a	n/a	No

Total Lbs/Yr VOC	255.26
Total Lbs/Hr VOC	0.93
Working Loss Lbs/Yr	167.00
Breathing Loss Lbs/Yr	89.00
Working Loss Lbs/Hr	0.92
Breathing Loss Lbs/Hr	0.01
Toxic Content of VOCs	0.04
Benzene Content of Toxics	0.70
Benzene Lbs/Yr	2.37
Remaining Constituants Lbs/Yr	2.91
All TACs Lbs/Yr	9.70

Worst-Case Scenario
Back-Up Diesel Generator

Kw	Hours	Hp
200	8	268.2044216

*1 kilowatt hour = 1.341022108 horsepower hours

Pollutant	Emission Factor (lbs/hp-hr)	Emissions (lbs/Hr)	Worst-Case Day
NOx	0.031	8.31433707	46.56028759
CO	0.00668	1.791605536	10.032991
SOx	0.00205	0.549819064	3.07898676
PM10	0.0022	0.590049728	3.304278474
CO2	1.15	308.4350848	1727.236475
PM2.5	0.0022	0.590049728	2.940807842

Source:
http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s03.pdf
Worst Case is based on 8-hr usage with the generator working at 70% of capacity (AP42 Gasoline and Diesel Industrial Engine Source Emission Factors)

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification		
User Identification:	143	
City:	Los Angeles C.O.	
State:	California	
Company:		
Type of Tank:	Horizontal Tank	
Description:	Gasoline	
Tank Dimensions		
Shell Length (ft):		5.00
Diameter (ft):		4.00
Volume (gallons):		500.00
Turnovers:		52.00
Net Throughput(gal/yr):		26,000.00
Is Tank Heated (y/n):	N	
Is Tank Underground (y/n):	N	
Paint Characteristics		
Shell Color/Shade:	White/White	
Shell Condition	Good	
Breather Vent Settings		
Vacuum Settings (psig):		-0.03
Pressure Settings (psig)		0.03

Meterological Data used in Emissions Calculations: Los Angeles C.O., California (Avg Atmospheric Pressure = 14.67 psia)

Liquid Contents of Storage Tank

143 - Horizontal Tank
Los Angeles C.O., California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 9)	Jan	63.80	59.36	68.25	65.99	4.9667	4.5531	5.4100	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Feb	64.91	60.15	69.67	65.99	5.0741	4.6244	5.5584	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Mar	65.68	60.69	70.68	65.99	5.1508	4.6737	5.6662	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Apr	67.37	61.82	72.91	65.99	5.3197	4.7786	5.9088	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	May	68.64	63.30	73.97	65.99	5.4503	4.9185	6.0271	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Jun	70.44	64.85	76.03	65.99	5.6396	5.0681	6.2617	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Jul	72.67	66.46	78.87	65.99	5.8815	5.2281	6.5987	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Aug	72.78	66.93	78.64	65.99	5.8947	5.2755	6.5706	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Sep	71.62	66.36	76.88	65.99	5.7669	5.2179	6.3611	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Oct	69.38	64.44	74.33	65.99	5.5282	5.0281	6.0673	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Nov	65.99	61.40	70.59	65.99	5.1816	4.7398	5.6559	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3
Gasoline (RVP 9)	Dec	63.72	59.31	68.12	65.99	4.9585	4.5490	5.3971	67.0000			92.00	Option 4: RVP=9, ASTM Slope=3

Detail Calculations (AP-42)

143 - Horizontal Tank
Los Angeles C.O., California

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	5.5878	5.6040	6.6796	7.5719	7.8042	8.3680	10.3165	9.7461	8.1407	7.3727	5.9687	5.5212
Vapor Space Volume (cu ft):	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203
Vapor Density (lb/cu ft):	0.0592	0.0604	0.0612	0.0630	0.0644	0.0664	0.0690	0.0691	0.0678	0.0652	0.0615	0.0592
Vapor Space Expansion Factor:	0.1161	0.1273	0.1360	0.1565	0.1541	0.1677	0.1957	0.1847	0.1612	0.1445	0.1251	0.1148
Vented Vapor Saturation Factor:	0.6551	0.6503	0.6468	0.6394	0.6338	0.6259	0.6160	0.6154	0.6206	0.6305	0.6455	0.6555
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203	40.0203
Tank Diameter (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Effective Diameter (ft):	5.0475	5.0475	5.0475	5.0475	5.0475	5.0475	5.0475	5.0475	5.0475	5.0475	5.0475	5.0475
Vapor Space Outage (ft):	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Tank Shell Length (ft):	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000

Vapor Density												
Vapor Density (lb/cu ft):	0.0592	0.0604	0.0612	0.0630	0.0644	0.0664	0.0690	0.0691	0.0678	0.0652	0.0615	0.0592
Vapor Molecular Weight (lb/lb-mole):	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	4.9667	5.0741	5.1508	5.3197	5.4503	5.6396	5.8815	5.8947	5.7669	5.5282	5.1816	4.9585
Daily Avg. Liquid Surface Temp. (deg. R):	523.4719	524.5773	525.3546	527.0355	528.3058	530.1053	532.3353	532.4545	531.2877	529.0522	525.6649	523.3862
Daily Average Ambient Temp. (deg. F):	58.3000	60.0000	60.6500	63.2500	65.8000	69.7000	74.2500	75.1000	73.6500	69.6500	62.9500	58.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	525.6567	525.6567	525.6567	525.6567	525.6567	525.6567	525.6567	525.6567	525.6567	525.6567	525.6567	525.6567
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	891.5287	1,157.7182	1,523.5305	1,923.2907	2,033.7007	2,095.8856	2,265.6251	2,075.8976	1,682.1655	1,328.0922	1,000.9869	827.7574
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.1161	0.1273	0.1360	0.1565	0.1541	0.1677	0.1957	0.1847	0.1612	0.1445	0.1251	0.1148
Daily Vapor Temperature Range (deg. R):	17.7797	19.0467	19.9960	22.1869	21.3444	22.3604	24.8244	23.4173	21.0391	19.7857	18.3727	17.6201
Daily Vapor Pressure Range (psia):	0.8569	0.9340	0.9924	1.1302	1.1085	1.1936	1.3706	1.2951	1.1432	1.0392	0.9161	0.8481
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	4.9667	5.0741	5.1508	5.3197	5.4503	5.6396	5.8815	5.8947	5.7669	5.5282	5.1816	4.9585
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	4.5531	4.6244	4.6737	4.7786	4.9185	5.0681	5.2281	5.2755	5.2179	5.0281	4.7398	4.5490
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	5.4100	5.5584	5.6662	5.9088	6.0271	6.2617	6.5987	6.5706	6.3611	6.0673	5.6559	5.3971
Daily Avg. Liquid Surface Temp. (deg R):	523.4719	524.5773	525.3546	527.0355	528.3058	530.1053	532.3353	532.4545	531.2877	529.0522	525.6649	523.3862
Daily Min. Liquid Surface Temp. (deg R):	519.0269	519.8157	520.3556	521.4888	522.9697	524.5152	526.1292	526.6001	526.0279	524.1057	521.0717	518.9812
Daily Max. Liquid Surface Temp. (deg R):	527.9168	529.3390	530.3536	532.5822	533.6419	535.6954	538.5414	538.3088	536.5475	533.9986	530.2580	527.7912
Daily Ambient Temp. Range (deg. R):	18.8000	18.8000	17.7000	18.1000	16.2000	17.2000	19.5000	18.8000	18.1000	18.7000	18.9000	19.0000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.6551	0.6503	0.6468	0.6394	0.6338	0.6259	0.6160	0.6154	0.6206	0.6305	0.6455	0.6555
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	4.9667	5.0741	5.1508	5.3197	5.4503	5.6396	5.8815	5.8947	5.7669	5.5282	5.1816	4.9585
Vapor Space Outage (ft):	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Working Losses (lb):	12.7650	13.0411	13.2381	13.6722	14.0078	14.4944	15.1162	15.1500	14.8215	14.2080	13.3173	12.7438
Vapor Molecular Weight (lb/lb-mole):	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	4.9667	5.0741	5.1508	5.3197	5.4503	5.6396	5.8815	5.8947	5.7669	5.5282	5.1816	4.9585
Net Throughput (gal/mo.):	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667	2,166.6667
Annual Turnovers:	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000
Turnover Factor:	0.7436	0.7436	0.7436	0.7436	0.7436	0.7436	0.7436	0.7436	0.7436	0.7436	0.7436	0.7436
Tank Diameter (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	18.3529	18.6451	19.9176	21.2441	21.8119	22.8624	25.4326	24.8961	22.9621	21.5807	19.2861	18.2650

Individual Tank Emission Totals

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

143 - Horizontal Tank
Los Angeles C.O., California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Gasoline (RVP 9)	166.58	88.68	255.26

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	143
City:	Los Angeles C.O.
State:	California
Company:	
Type of Tank:	Horizontal Tank
Description:	Diesel

Tank Dimensions

Shell Length (ft):		10.00
Diameter (ft):		4.00
Volume (gallons):		1,000.00
Turnovers:		104.00
Net Throughput(gal/yr):		104,000.00
Is Tank Heated (y/n):	N	
Is Tank Underground (y/n):	N	

Paint Characteristics

Shell Color/Shade:	Gray/Medium
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Los Angeles C.O., California (Avg Atmospheric Pressure = 14.67 psia)

Liquid Contents of Storage Tank

156 - Horizontal Tank
Los Angeles C.O., California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Distillate fuel oil no. 2	Jan	69.11	61.48	76.74	69.05	0.0088	0.0069	0.0110	130.0000			188.00	Option 1: VP60 = .0065 VP70 = .009

Distillate fuel oil no. 2	Feb	71.29	62.39	80.18	69.05	0.0094	0.0071	0.0121	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Mar	73.54	63.10	83.97	69.05	0.0101	0.0073	0.0136	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Apr	76.83	64.42	89.24	69.05	0.0110	0.0076	0.0157	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	May	78.54	65.95	91.14	69.05	0.0116	0.0080	0.0167	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Jun	80.59	67.52	93.67	69.05	0.0122	0.0084	0.0182	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Jul	83.51	69.21	97.80	69.05	0.0134	0.0088	0.0207	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Aug	82.86	69.60	96.13	69.05	0.0131	0.0089	0.0197	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Sep	80.11	68.84	91.37	69.05	0.0120	0.0087	0.0168	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Oct	76.45	66.76	86.13	69.05	0.0109	0.0082	0.0145	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Nov	71.74	63.57	79.91	69.05	0.0095	0.0074	0.0120	130.0000	188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Dec	68.76	61.40	76.12	69.05	0.0087	0.0069	0.0108	130.0000	188.00	Option 1: VP60 = .0065 VP70 = .009

Detail Calculations (AP-42)

128 - Horizontal Tank
Los Angeles C.O., California

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.0269	0.0303	0.0423	0.0533	0.0581	0.0614	0.0755	0.0687	0.0518	0.0420	0.0300	0.0256
Vapor Space Volume (cu ft):	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002
Vapor Space Expansion Factor:	0.0539	0.0633	0.0746	0.0890	0.0901	0.0934	0.1020	0.0944	0.0799	0.0686	0.0577	0.0519
Vented Vapor Saturation Factor:	0.9991	0.9990	0.9989	0.9988	0.9988	0.9987	0.9986	0.9986	0.9987	0.9988	0.9990	0.9991
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406	80.0406
Tank Diameter (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Effective Diameter (ft):	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383
Vapor Space Outage (ft):	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Tank Shell Length (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0088	0.0094	0.0101	0.0110	0.0116	0.0122	0.0134	0.0131	0.0120	0.0109	0.0095	0.0087
Daily Avg. Liquid Surface Temp. (deg. R):	528.7774	530.9554	533.2065	536.4981	538.2132	540.2632	543.1771	542.5319	539.7787	536.1166	531.4114	528.4348
Daily Average Ambient Temp. (deg. F):	58.3000	60.0000	60.6500	63.2500	65.8000	69.7000	74.2500	75.1000	73.6500	69.6500	62.9500	58.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	528.7167	528.7167	528.7167	528.7167	528.7167	528.7167	528.7167	528.7167	528.7167	528.7167	528.7167	528.7167
Tank Paint Solar Absorptance (Shell):	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800
Daily Total Solar Insulation Factor (Btu/sqft day):	891.5287	1,157.7182	1,523.5305	1,923.2907	2,033.7007	2,095.8856	2,265.6251	2,075.8976	1,682.1655	1,328.0922	1,000.9869	827.7574
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0539	0.0633	0.0746	0.0890	0.0901	0.0934	0.1020	0.0944	0.0799	0.0686	0.0577	0.0519
Daily Vapor Temperature Range (deg. R):	30.5107	35.5790	41.7520	49.6515	50.3857	52.2897	57.1775	53.0611	45.0604	38.7509	32.6668	29.4405
Daily Vapor Pressure Range (psia):	0.0042	0.0050	0.0063	0.0081	0.0087	0.0098	0.0119	0.0108	0.0081	0.0063	0.0046	0.0040

Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0088	0.0094	0.0101	0.0110	0.0116	0.0122	0.0134	0.0131	0.0120	0.0109	0.0095	0.0087
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0069	0.0071	0.0073	0.0076	0.0080	0.0084	0.0088	0.0089	0.0087	0.0082	0.0074	0.0069
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0110	0.0121	0.0136	0.0157	0.0167	0.0182	0.0207	0.0197	0.0168	0.0145	0.0120	0.0108
Daily Avg. Liquid Surface Temp. (deg R):	528.7774	530.9554	533.2065	536.4981	538.2132	540.2632	543.1771	542.5319	539.7787	536.1166	531.4114	528.4348
Daily Min. Liquid Surface Temp. (deg R):	521.1497	522.0607	522.7685	524.0852	525.6168	527.1908	528.8827	529.2666	528.5136	526.4289	523.2447	521.0747
Daily Max. Liquid Surface Temp. (deg R):	536.4051	539.8501	543.6445	548.9109	550.8096	553.3356	557.4714	555.7971	551.0438	545.8044	539.5781	535.7950
Daily Ambient Temp. Range (deg. R):	18.8000	18.8000	17.7000	18.1000	16.2000	17.2000	19.5000	18.8000	18.1000	18.7000	18.9000	19.0000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9991	0.9990	0.9989	0.9988	0.9988	0.9987	0.9986	0.9986	0.9987	0.9988	0.9990	0.9991
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0088	0.0094	0.0101	0.0110	0.0116	0.0122	0.0134	0.0131	0.0120	0.0109	0.0095	0.0087
Vapor Space Outage (ft):	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Working Losses (lb):	0.1072	0.1146	0.1228	0.1349	0.1412	0.1494	0.1636	0.1605	0.1470	0.1335	0.1163	0.1061
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0088	0.0094	0.0101	0.0110	0.0116	0.0122	0.0134	0.0131	0.0120	0.0109	0.0095	0.0087
Net Throughput (gal/mo.):	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667	8,666.6667
Annual Turnovers:	104.0000	104.0000	104.0000	104.0000	104.0000	104.0000	104.0000	104.0000	104.0000	104.0000	104.0000	104.0000
Turnover Factor:	0.4551	0.4551	0.4551	0.4551	0.4551	0.4551	0.4551	0.4551	0.4551	0.4551	0.4551	0.4551
Tank Diameter (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	0.1340	0.1449	0.1651	0.1881	0.1993	0.2108	0.2392	0.2292	0.1989	0.1755	0.1463	0.1317

Individual Tank Emission Totals

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

143 - Horizontal Tank
Los Angeles C.O., California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	1.60	0.57	2.16

Appendix A-4

- Greenhouse Gas Emissions
  - Construction GHG Analysis
  - Operations GHG Analysis

CO_2e[d] (Metric Tons)			
Emission Source	**2009**	**2010**	**Total**
CO_2 Emissions	54	159	213
CH_4 Emissions	0	0	1
N_2O Emissions	0	0	1
CO_2e Emissions	**54**	**160**	**214**
2004 Statewide Total[c]	479,740,000	479,740,000	479,740,000
Net Increase as Percentage of 2004 Statewide Inventory	**0.000011%**	**0.000033%**	**0.000045%**

[a] *Mobile source values were derived using EMFAC2007 in addition to the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008.*

[b] *On site construction equipment values were derived using OFFROAD2007 in addition to the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008.*

Inventory.

[d] *All CO_2E factors were derived using the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008.*

Source: PCR Services Corporation, 2009.

Fire Station 143
Greenhouse Gas Analysis

Emission Source	CO_2E[e] (Metric Tons)
Project	
Construction	214
Construction (amortized)	7
On-road Vehicles[a]	29
Electricity[b]	1
Water Conveyance	1
Natural gas[c]	1
Emergency Generator	28
Fire Trucks	63
Total	**130**
Net Increase	
Total	130
2004 Statewide Total[d]	479,740,000
Net Increase as Percentage of 2004 Statewide Inventory	**0.000027%**

[a] *Mobile source values were derived using EMFAC2007 in addition to the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008.*

[b] *Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993. Water conveyance energy rates from California Energy Commission Staff Report: California's Water - Energy Relationship. 2005*

[c] *Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.*

[d] *Statewide Greenhouse Gas Emissions Inventory: http://www.arb.ca.gov/cc/ccei/emsinv/emsinv.htm*

[e] *All CO2e factors were derived using the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008*

Sources: PCR Services Corporation, 2009.

Electricity

Land Use	1,000 Sqft	Usage Rate [a] (kWh/sq.ft/yr)	(KWh/year)	MWh/year
Project				
Residential (DU)	1.0	4,164	4,164	4
Total Project			**4,164**	**4**
Net Project Electricity Usage			**4,164**	**4**

GHG	lbs/MWh[b]	lbs	metric tons	CO_2E (metric tons)
Existing				
CO_2	724.12	0	0	0
CH_4	0.0302	0	0	0
N_2O	0.0081	0	0	0
Project				**0.00**
CO_2	724.12	3014.953273	1.367558685	1.367558685
CH_4	0.0302	0.125741022	5.70351E-05	0.001197738
N_2O	0.0081	0.033725241	1.52975E-05	0.004742225
Net				**1.37**
CO_2	724.12	3,015	1	1
CH_4	0.0302	0	0.00	0.00
N_2O	0.0081	0	0.00	0
				1

Total Annual CO2e

[a] Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

[b] Electricity Usage Rates from California Energy Commission Staff Report: California's Water - Energy Relationship. 2005

[c] Emission factors for CO_2, CH_4, and N_2O were derived from the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008

Water and Wastewater Generation Factors

			Water			Wastewater		
Land Use	Amount	Units	AF/Year/Unit	MG/Year/Unit	MG/Year	GPD/Unit	MG/Year/Unit	MG/Year
Project								
Residential (DU)	1.0	DU	0.90	0.293	0.3	260	0.095	0.1
Total Project					**0.3**			**0.1**
Net Project					0.3			0.1

1 acre foot = 325851.433266421 gallon [US, liquid]

Water Conveyance (Water and Wastewater)

	MGD	Usage Rate [c] kWh/MG	(KWh/year)	MWh/year
Water Supply, Conveyance, Treatment, and Distribution	0.00	10,200	**2,991**	**3**
Wastewater Treatment	0.00	2,500	**237**	**0**
Net Project Water Power Usage			**3,229**	**3**

GHG	lbs/MWh[b]	lbs	metric tons	CO_2E (metric tons)
Project				
CO_2	724.12	2337.869	1.060438823	1.060438823
CH_4	0.0302	0.097503	4.42264E-05	0.000928755
N_2O	0.0081	0.026151	1.18621E-05	0.003677238
Net				**1.07**
CO_2	724.12	2,338	1	1
CH_4	0.0302	0	0.00	0.00
N_2O	0.0081	0	0.00	0
				1

Total Annual CO2e

[a] Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

[b] Electricity Usage Rates from California Energy Commission Staff Report: California's Water - Energy Relationship. 2005

[c] Emission factors for CO_2, CH_4, and N_2O were derived from the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008

Natural Gas

Land Use	1,000 Sqft	Usage Rate[c] (cu.ft/sq.ft/mo)	Total Natural Gas Usage (cu.ft/mo)	Total Natural Gas Usage (cu.ft/year)	Total Natural Gas Usage (MMBTU/year)
Project					
Residential (DU)	1.0	2,969	2,969	35,622	36
Total Project			**2,969**	**35,622**	**36**
Net Project			**2,969**	**35,622**	**36**

[a] Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.

GHG	Kg/MMBtu[b]	Kg	metric tons	CO_2E (Metric Tons)
Existing				
CO_2	53.06	-	-	-
CH_4	0.001	-	-	-
N_2O	0.0001	-	-	-
Project				**0.00**
CO_2	53.06	1,927.91	0.87	0.87
CH_4	0.001	0.04	0.00	0.00
N_2O	0.0001	0.00	0.00	0.00
Net				**0.88**
CO_2	53.06	1,927.91	0.87	0.87
CH_4	0.001	0.04	0.00	0.00
N_2O	0.0001	0.00	0.00	0.00
				0.88 Total Annual CO2E

[b] Emission factors for CO_2, CH_4, and N_2O were derived from the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008.

On Road Mobile Source

Land Use	Daily VMT	Annual VMT[a]
Project		
Residential (DU)	141	51,626
Total Project	**141**	**51,625.60**
Net Project	**141**	**51,625.60**

[a] Multiplied Daily VMT by 365 to get Annual VMT
[b] Factors dervied from URBEMIS2007

Los Angeles County CO_2 2010 AVG Gram/Mile[c]	**548.0511429**
Los Angeles County CH_4 2010 AVG Gram/Mile[c]	**0.036857143**
Los Angeles County N_2O 2010 AVG Gram/Mile[d]	**0.05**

GHG	Gram/Mile	Grams	metric tons	CO_2E (Metric Tons)
Existing				
CO_2	548.0511429	-	-	-
CH_4	0.036857143	-	-	-
N_2O	0.05	-	-	-
Project				**-**
CO_2	548.05	28,293,469	28.29	28.2934691
CH_4	0.04	1,903	0.00	0.0399582
N_2O	0.05	2,581	0.00	0.8001968
Net				**29.1336241**
CO_2	548.05	28,293,469	28	28.2934691
CH_4	0.04	1,903	0	0.0399582
N_2O	0.05	2,581	0	0.8001968
				29.1 **Total Annual CO2E**

[c] Averaged EMFAC2007 fleet values for 0-65mph
[d] Emission factors for CH_4 and N_2O were derived from the California Climate Action Registry General Reporting Protocol; Version 2.2, March 2007

EMFAC2007 Summary

CO2	
Speed	**Grams/Mile**
0	341.823
5	1199.387
10	913.689
15	722.176
20	592.927
25	508.8
30	452.079
35	415.42
40	394.465
45	386.902
50	391.989
55	410.409
60	444.405
65	498.245
AVG	**548.0511429**

Pollutant Name: Carbon Dioxide **Temperature: 60F Relative Humidity: 50**

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	941.697	5140.81	0	0	341.823
5	952.132	1182.76	1712.78	2870.59	2748.56	242.056	1199.387
10	719.611	894.25	1264.503	2392.58	2543.5	204.646	913.689
15	564.5	701.79	975.625	2023.01	2422.4	176.886	722.176
20	459.611	571.646	785.559	1763.67	2348.67	156.274	592.927
25	388.394	483.279	659.251	1662.8	2302.85	141.125	508.8
30	340.644	424.032	575.973	1583.89	2274.3	130.317	452.079
35	310.077	386.104	523.371	1523.34	2257.12	123.131	415.42
40	292.934	364.834	494.255	1479.18	2248.08	119.164	394.465
45	287.21	357.731	484.87	1450.45	2245.58	118.287	386.902
50	292.25	363.985	494.056	1436.88	2249.21	120.646	391.989
55	308.63	384.309	522.993	1438.86	2259.57	126.72	410.409
60	338.263	421.077	575.47	1457.5	2278.51	137.426	444.405
65	384.777	478.792	658.754	1495.01	2309.66	154.339	498.245

CH4	
Speed	**Grams/Mile**
0	0.039
5	0.088
10	0.065
15	0.05
20	0.04
25	0.033
30	0.029
35	0.026
40	0.024
45	0.023
50	0.023
55	0.023
60	0.025
65	0.028
AVG	**0.036857143**

Pollutant Name: Methane **Temperature: 60F Relative Humidity: 50**

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	0.162	0.424	0	0	0.039
5	0.065	0.08	0.1	0.355	0.175	0.313	0.088
10	0.05	0.062	0.079	0.207	0.123	0.267	0.065
15	0.041	0.05	0.063	0.111	0.091	0.237	0.05
20	0.032	0.041	0.052	0.067	0.07	0.218	0.04
25	0.027	0.034	0.044	0.055	0.056	0.206	0.033
30	0.023	0.03	0.039	0.045	0.046	0.2	0.029
35	0.021	0.027	0.035	0.039	0.04	0.199	0.026
40	0.019	0.025	0.032	0.034	0.036	0.202	0.024
45	0.018	0.024	0.031	0.032	0.033	0.21	0.023
50	0.018	0.023	0.03	0.032	0.031	0.224	0.023
55	0.019	0.024	0.031	0.033	0.031	0.246	0.023
60	0.02	0.026	0.033	0.037	0.031	0.28	0.025
65	0.022	0.028	0.036	0.043	0.033	0.333	0.028

Operational On-Road Fire Station Equipment Emissions

Permanent Fire Station Apparatus

Scenario Year: 2010 -- Model Years: 1965 to 2010	
HHDT-DSL (grams/mile)	
CO_2	2386.56
CH_4	0.158857

Scenario Year: 2010 -- Model Years: 1965 to 2010	
HHDT-DSL (grams/idling hour)	
CO_2	2386.56
CH_4	0.158857

Worst-Case Day				
Classification	**Round Trips**	**Miles/Trip**	**Miles/Day**	**Hours Idling**
HHDV	7	10	70	2

Pollutant	**Emissions**		
	grams/day	**tons/year**	**tons/year CO_2e**
CO_2	171,832	62.72	62.72
CH_4	11.438	0.00	0.09
		total	62.81

Assumptions:
3 estimated emergency responses/day
1 estimated non-emergency responses/day
3 estimated business trips/day
5 miles one-way/trip
2 hours max. idling/day

Fire Station 143
Greenhouse Gas Analysis

Pollutant Name: Methane Temperature: 60F Relative Humidity: 50%

Speed MPH	ALL LDA	LDT	MDT	HDT	UBUS	MCY	ALL	
0	0	0	0	0.556	0	0	0.556	
5	0	0	0	0.593	0	0	0.593	
10	0	0	0	0.336	0	0	0.336	
15	0	0	0	0.168	0	0	0.168	
20	0	0	0	0.093	0	0	0.093	
25	0	0	0	0.076	0	0	0.076	
30	0	0	0	0.062	0	0	0.062	
35	0	0	0	0.051	0	0	0.051	
40	0	0	0	0.045	0	0	0.045	
45	0	0	0	0.042	0	0	0.042	
50	0	0	0	0.042	0	0	0.042	
55	0	0	0	0.045	0	0	0.045	
60	0	0	0	0.052	0	0	0.052	
65	0	0	0	0.063	0	0	0.063	
average							0.158857	grams/mile
								grams/idling hour

Pollutant Name: Carbon Dioxide Temperature: 60F Relative Humidity: 50%

Speed MPH	ALL							
0	0	0	0	6341.961	0	0	6341.961	
5	0	0	0	3789.975	0	0	3789.975	
10	0	0	0	3103.352	0	0	3103.352	
15	0	0	0	2536.887	0	0	2536.887	
20	0	0	0	2128.677	0	0	2128.677	
25	0	0	0	1986.225	0	0	1986.225	
30	0	0	0	1867.83	0	0	1867.83	
35	0	0	0	1772.484	0	0	1772.484	
40	0	0	0	1699.634	0	0	1699.634	
45	0	0	0	1649.01	0	0	1649.01	
50	0	0	0	1620.539	0	0	1620.539	
55	0	0	0	1614.326	0	0	1614.326	
60	0	0	0	1630.686	0	0	1630.686	
65	0	0	0	1670.236	0	0	1670.236	
average							2386.559	grams/mile
								grams/idling hour

Worst-Case Scenario

Back-Up Diesel Generator

Kw	Hours	Hp
200	8	268.2044216

*1 kilowatt hour = 1.341022108 horsepower hours

Pollutant	Emission Factor (lbs/hp-hr)	Emissions (lbs/Hr)	Annual Emissions (lbs)	Annual Emissions (tons)
CO_2	1.15	308.4350848	**61687.01697**	**27.98075543**

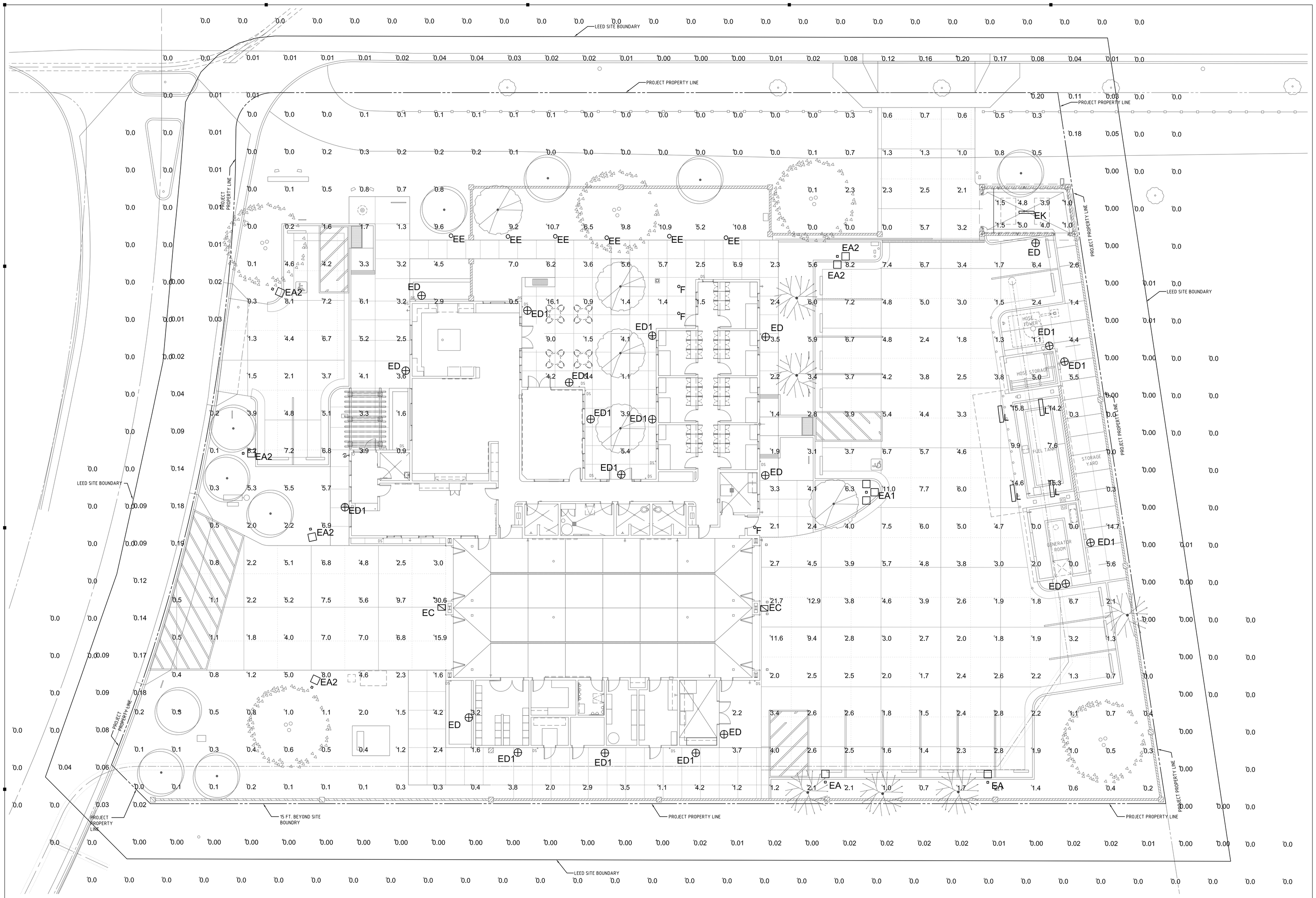
Source:

http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s03.pdf

Worst Case is based on 8-hr usage with the generator working at 70% of capacity (AP42 Gasoline and Diesel Industrial Engine Source Emission Factors)

Assumption: generator will be in operation no more than 200 hours/year

Appendix B
Photometric Site Plan



LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
	EA	2	KSF1 150S R4SC	Specification Area Luminaire, 150W High Pressure Sodium, R4SC Sharp Cutoff Reflector, Full Cutoff MEETS THE 'NIGHTTIME FRIENDLY' CRITERIA, MTD @ 20' AFF	ONE 150-WATT CLEAR ET-23.5 HIGH PRESSURE SODIUM. HORIZONTAL POSITION.	KSF1_150S_R4SC.ies	16000	0.69	189
	EA1	1	KSF1 150S R4SC	Specification Area Luminaire, 150W High Pressure Sodium, R4SC Sharp Cutoff Reflector, Full Cutoff MEETS THE 'NIGHTTIME FRIENDLY' CRITERIA, MTD @ 20' AFF	THREE 150-WATT CLEAR ET-23.5 HIGH PRESSURE SODIUM. HORIZONTAL POSITION.	KSF1_150S_R4SC.ies	16000	1.00	567
	EA2	6	KSF1 150S R4SC	Specification Area Luminaire, 150W High Pressure Sodium, R4SC Sharp Cutoff Reflector, Full Cutoff MEETS THE 'NIGHTTIME FRIENDLY' CRITERIA MTD @ 10' AFF	ONE 150-WATT CLEAR ET-23.5 HIGH PRESSURE SODIUM. HORIZONTAL POSITION.	KSF1_150S_R4SC.ies	16000	1.00	189

LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
	EC	2	TWR1C 150S FCV	BUILDING MOUNTED LUMINAIRE, FULL CUTOFF 150W HPS. W/ CLEAR LAMP AND FULL CUTOFF VISOR.	ONE 150-WATT CLEAR E-17 HIGH PRESSURE SODIUM, HORIZONTAL POSITION.	TWR1C_150S_FCV.ies	15800	0.69	189
	ED	8	MRW 50S FT	ARCHITECTURAL SCONCE WITH FORWARD THROW DISTRIBUTION WITH CLEAR, FLAT GLASS LENS. CLEAR LAMP. MEETS THE 'NIGHTTIME FRIENDLY' CRITERIA	ONE 50-WATT CLEAR ED-17 HIGH PRESSURE SODIUM, HORIZONTAL POSITION.	MRW_50S_FT_.ies	4000	0.69	66
	ED1	13	MRW 50S MD	ARCHITECTURAL SCONCE WITH MEDIUM THROW DISTRIBUTION WITH CLEAR, FLAT GLASS LENS. CLEAR LAMP. MEETS THE 'NIGHTTIME FRIENDLY' CRITERIA.	ONE 50-WATT CLEAR ED-17 HIGH PRESSURE SODIUM, HORIZONTAL POSITION.	MRW_50S_MD.ies	4000	0.69	66

LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
	EE	6	KBR6 50S R5	6 IN ROUND BOLLARD	ONE 50-WATT CLEAR E-17 HIGH PRESSURE SODIUM. VERTICAL BASE-DOWN POSITION.	940329006.IES	4000	0.69	66
	EK	1	DM/DMW 1 32	DAMP/WET LOCATION ENCLOSED INDUSTRIAL. 4' 1LP T8	ONE 32-WATT T8 LINEAR FLUORESCENT.	L5584.IES	2900	0.81	36
	F	3	LGFV 26DTT 8SB FFL	8"VERTICAL DOWNLIGHT, WHITE PAINTED REFLECTOR, 26 WATT DOUBLE TWIN TUBE FLOURESCENT LAMP. FRESNEL GLASS LENS AND BLACK STEP BAFFLE DOOR.	ONE 26-WATT COMPACT FLOURESCENT DOUBLE TWIN TUBE, VERTICAL BASE UP POS.	LTL14566.IES	1825	0.70	26
	L	4	VTW232-TG-120-1/2-EB	DAY-BRITE 4 FT VAPORTITE	F32T8	16144.IES	2900	0.81	60

STATISTICS

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
EXTERIOR	+	3.0 fc	30.6 fc	0.0 fc	N / A	N / A
FUEL TANK	+	12.9 fc	15.8 fc	7.6 fc	2.1:1	1.7:1
15 FT. BEYOND SITE BOUNDRY	+	0.0 fc	0.0 fc	0.0 fc	N / A	N / A
Outside Property Line	+	0.03 fc	0.20 fc	0.00 fc	N / A	N / A
TRASH ENCLOSURE	+	2.8 fc	5.0 fc	1.0 fc	5.0:1	2.8:1

N

PHOTOMETRIC SITE PLAN

1" = 10'-0"

1

CONSULTANTS

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BARBARA L. HALL, P.E., INC.

STRUCTURAL ENGINEER
BRANDOW & JOHNSTON, INC.

MECHANICAL & PLUMBING ENGINEER
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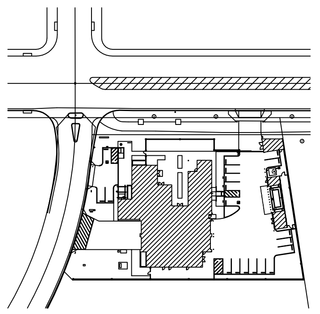

KEY PLAN
NTS

TRUE NORTH N

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PROJECT A07060.04

LACO FIRE DEPARTMENT
FIRE STATION 143

28580 HASLEY CANYON ROAD
AND GIBRALTAR LANE
VALENCIA, CA 91384

PLAN CHECK	APRIL 2, 2009
BACK CHECK	JULY 20, 2009
BACK CHECK (2nd)	JULY 25, 2009

BACK CHECK
JULY 20, 2009

E01.01

PHOTOMETRIC SITE PLAN

Appendix C
Geotechnical Report

FILE COPY

RTF&A

GEOTECHNICAL ENGINEERING & ENGINEERING GEOLOGY

February 11, 2009

Parsons
100 West Walnut Street
Pasadena, California 91124

Job No. 89-519-01

Attention: Mr. Art Barajas
Principal Project Manager

Subject: Geotechnical Report Update and
Fine Grade Plan Review
Fire Station No. 143
Lot 6, Parcel Map 20685
Castaic, California

References: See Attached References

RECEIVED
FEB 12 2009
DEPT. PUBLIC WORKS
PROJECT MANAGEMENT DIVISION II

Ladies/Gentlemen:

This report presents the results of our Geotechnical Report Update and Fine Grade Plan Review prepared for Fire Station 143, planned for Lot 6 of Parcel Map 20685 (PM 20685), Castaic, California. The purpose of the report is to provide a geotechnical and engineering geologic update of the R.T. Frankian & Associates (RTF&A) May 19, 2006 "Supplemental Geotechnical and Geologic-Seismic Report" for submittal to Los Angeles County Department of Public Works (LACDPW) Geotechnical and Materials Engineering Division. Additionally, this report provides

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applicable grading and foundation recommendations commensurate with the January 29, 2009 Grading Plan prepared by Osborn (drawing No. C2.01).

The update and plan review have been performed in accordance with the 2007 California Building Code (CBC). The location of the site is shown on the Geotechnical Map, Figure 1. The scope of our services was planned in consultation with Ms. Kathy Risley of LACDPW, in accordance with our proposal dated October 9, 2008.

Our findings and recommendations are based on the results of our prior subsurface investigation, a review of published data, and appropriate engineering and geologic analyses. The assessment of general site environmental conditions for the presence of contaminants in the soils and groundwater at the site was beyond the scope of this investigation.

Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable geotechnical engineers and geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional advice included in this report. This report has been prepared for Parsons and LACDPW, and their design consultants, to be used solely for planning and design of Fire Station 143, and associated grading. The report has not been prepared for use by other parties and may not contain sufficient information for purposes of other parties or other uses.

SITE DESCRIPTION

The proposed Fire Station 143 site is situated two miles northwest of Castaic Junction. The site consists of a graded building pad that is surrounded by other

graded building pads or paved streets and roads. Lot 6 is bounded on the north by a private drive and fire lane, on the east by Hasley Canyon Road, and on the south and west by graded pads designated as Lot 5 and Lot 7, respectively. Based on the site grades indicated on the Grading Plan prepared by Osborn, elevations on site range from approximately 1,198 feet above mean sea level (msl), to 1,200 msl. It should be noted that the indicated site grades on the Osborn plan vary significantly from the site elevations previously shown by others for the subject site. We make no representations regarding the existing site elevations.

SITE HISTORY

Portions of PM 20685 were initially graded during bulk grading operations for adjacent Parcel Map 18229 and Hasley Canyon Road as Deeded Street 500 (DS 500). The initial grading operations consisted of removing and recompacting naturally-deposited soils and bedrock, as well as the placement of compacted fill soils to form fills suitable for structural and pavement support. The results of the DS 500 grading were presented in our February 24, 2003 report (RTF&A, 2003a).

The subject site was graded in 2004 to establish the current rough grades as recommended in our June 16, 2003 "Rough Grading Plan Review Report" (RTF&A, 2003b). At the conclusion of the rough grading, we prepared our October 27, 2004 "Geotechnical Report of Observation and Testing and As-Built Geologic Report" (RTF&A, 2004b).

RTF&A visited the site on January 6, 2009 to evaluate the current site conditions, relative to conditions addressed in our 2004 and 2006 reports (RTF&A, 2004b and 2006). The site conditions remain relatively unchanged. There is

minimal weed or vegetative growth, and the erosion control devices indicated on Figure 4 of our 2006 report remain in-place.

PROPOSED DEVELOPEMNT

Development of the fire station site will include grading of a level building pad at approximate elevation 1,200 feet msl. As such, only minimal site grading will be needed to establish pad grade. The fire station building will be centrally located within the site, with site access provided in the southwest corner, off of the Private Driveway/Fire Lane. The hose tower, fuel tank, and generator room will be located near the eastern property line.

The Grading Plan for the fire station is presented as Geotechnical Map, Figure 1. We have not been provided with any structural details for the proposed fire station. For the purposes of preparing this submittal, it will be assumed that the fire station will be one or two stories in height. It is further assumed that the buildings will have interior loads of not more than 300 kips at column locations and have continuous footing loads that will not exceed three kips per lineal foot.

If the description of the proposed development presented above is inaccurate, or if significant revisions to the development are planned, we should be notified to determine if the recommendations presented in this submittal will remain applicable.

PLAN REVIEW

We have reviewed the subject Grading Plan and have determined that the planned development is feasible, from a geotechnical engineering point of view, provided the geotechnical recommendations presented in this submittal are followed.

SUBSURFACE EXPLORATION

The fire station site was explored in 2006 as part of our Supplemental Geotechnical Investigation, following rough grading of the site. At that time, we explored the site by drilling two rotary-wash borings at the locations shown on the attached Geotechnical Map, Figure 1. The two borings were drilled to depths of 51.5 feet and 22 feet below the existing grade. We obtained undisturbed and Standard Penetration Test (SPT) samples from the borings for laboratory examination and testing. Previous investigations within and adjacent to the site were conducted in 1998 and 1989, prior to the rough grading being performed. The locations of relevant previous subsurface explorations are shown on the Geotechnical Map, Figure 1. The relevant boring logs are presented in Appendix A.

SOIL CONDITIONS

The subject site is currently underlain by relatively deep compacted fill soils placed during the 2004 grading operations. The depth of compacted fill is relatively uniform across the subject site and was encountered at a depth of 26 feet within rotary wash boring WB-1. The on-site fill soils generally consist of sand and silty sand with some clay. The fill soils are dense and moist. The fills soils are underlain by about 13 feet of alluvium that generally consist of silty sand and sand that is medium dense to dense. The alluvium is underlain by sedimentary rock units of the Saugus Formation.

LABORATORY ANALYSES

We previously performed laboratory tests on selected samples obtained from the borings to aid in the classification of the soils, for use in liquefaction analyses, and to determine the pertinent engineering properties of the foundation soils. The results of the tests are presented in Appendix B. The following tests were performed:

- moisture content and dry density determinations;
- direct shear tests;
- consolidation tests;
- sieve analyses; and
- hydrometer analyses.

Tests to determine the corrosivity of the soils were performed by Schiff Associates (Schiff) on samples we submitted to them from our previous investigation within Parcel Map 20685. The results of their tests and design recommendations are presented in their "Soil Corrosivity Study" report, which is attached as Appendix C.

GEOLOGY

REGIONAL GEOLOGY

The proposed fire station site is located at the eastern end of the Ventura basin within the Transverse Ranges geomorphic province of California. The Ventura basin consists of a narrow, elongate, sedimentary trough extending easterly from the Santa Barbara Channel. The axis of the trough trends east-west, reflecting the overall east-west trend of the Transverse Ranges, and generally coincides with the Santa Clara River Valley. The Ventura basin has been an area of subsidence and sediment

accumulation since the beginning of the Tertiary period, with the present trough-like form developing near the beginning of the Miocene epoch (Winterer and Durham, 1962). The San Gabriel fault, the dominant geologic feature in the Santa Clarita Valley, forms the eastern Ventura basin boundary, and separates the Ventura basin from the structurally similar Soledad basin. This active fault is located approximately two miles northeast of the site

SITE GEOLOGY

The site is situated on the northerly limb of the Ventura basin "synclinorium", between the east-west trending Holser fault to the southwest, and the northwest trending San Gabriel fault to the northeast. The Saugus Formation underlies the site and outcrops in the hills that border the east side of Hasley Canyon Road. The Saugus Formation consists of nonmarine Plio-Pleistocene Age sedimentary rock units. As observed in outcrops east of the site, and exploratory borings, the Saugus Formation is composed of poorly sorted, weakly cemented to moderately well cemented sandstone, pebbly sandstone, conglomeratic sandstone, and conglomerate; with alternating beds of poorly to moderately indurated siltstone, sandy siltstone/silty sandstone, claystone, and mudstone. Sandstone, pebbly sandstone, and siltstone constitute the dominant rock types. Sandstone units are primarily light brown to light gray/yellowish gray, fine to coarse grained, with some interbedded very fine to fine grained laminated and cross-bedded sandstone. The siltstone, mudstone, and claystone units are generally reddish-brown color. Bed thickness of the coarse grained units typically ranges from the laminated and thinly bedded, fine grained sandstone,

~~to thickly bedded pebbly sandstone, conglomeratic sandstone, and conglomerate.~~ The siltstone, mudstone, and claystone units are primarily massive.

Overlying the Saugus Formation, at a depth of approximately 40 feet below the site, are Holocene age alluvial deposits. As observed in exploratory borings, the alluvium consists of dense, fine to very coarse grained silty sand, with some fine gravel and trace clay. Mantling the site, and overlying the alluvial deposits, are certified engineered fill materials (map unit designation "cef"). The fill materials are composed of mixtures of sand and silty sand. The fill depth ranges from approximately 16 feet below existing ground surface on the east side of the site, along Hasley Canyon Road, to 34 feet on the west side.

The geologic conditions onsite are shown on the Geotechnical Map (Figure 1).

GROUNDWATER

Groundwater was not encountered during grading of the site, which included excavations on the order of 34 feet deep, nor in our 2006 exploratory borings, drilled to a maximum depth of 51½ feet below ground surface. Based on review of the historic high groundwater contours, the historic high groundwater is indicated at 10 feet below the original site elevation. The original site elevation ranged from 1,158 to 1,164 feet above msl which would result in an historic high groundwater elevation of 1,154 feet below the subject site. Based on a site elevation of 1,198 to 1,200 feet above msl, the historic high groundwater is greater than 32 feet below grade.

ENGINEERING GEOLOGY

The geologic hazards at the site were addressed in our 2006 report (RTF&A, 2006) and are briefly summarized below:

- No known active or potentially active faults underlie the site, and the site is not within an Alquist-Priolo Earthquake Fault Zone, as established by the California Geological Survey. The closest active (and zoned) fault to the site is the San Gabriel fault, located approximately two miles to the northeast. In our opinion, there is little probability of surface rupture due to faulting occurring onsite.

- The site is not on, or in the path of, any landslides; nor is the site within a State of California Seismic Hazard Zone for earthquake-induced landslides (CGS, 2002). Due to the graded conditions, the engineered cut and fill slopes in close proximity to the site are considered grossly stable. Consequently, there are no unstable slopes or landslides on or near the site that could adversely impact the site.

- The site is not located directly downslope of any potential debris flows or rockfalls. Debris basins are present on the east side of the Hasley Canyon Road. These basins will provide containment for debris emanating from natural slopes above Hasley Canyon Road and, therefore, prevent debris from reaching the subject site. Furthermore, engineered cut slopes along the east side of Hasley Canyon Road have been constructed with drainage terraces to control erosion and minimize debris generation. Consequently, the potential for debris flows or rockfalls impacting the site is judged to be low.

- Prior to rough grading in 2004, the site was designated as a "Zone AO" flood hazard by the Federal Emergency Management Agency (FEMA). Zone AO is defined as "areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined" (FEMA, 1980). As part of the grading of PM 20685, which included the subject site, Hasley Canyon Creek was channelized, including construction of bank protection, for flood control purposes.

Additionally, the site was graded in such a manner as to be above the FEMA 100-year flood hazard. Accordingly, the subject site is not within a flood hazard area.

- The site is not in a coastal zone and, therefore, not susceptible to tsunamis (seismic sea waves).

- The site is not located downslope of any large impounded bodies of water that would adversely impact the site as a result of seiches (oscillations in a body of water due to earthquake shaking).

- The site is not within an area of known subsidence associated with petroleum or groundwater withdrawal.

- The site is not in an area of active volcanism. Therefore, the site is considered safe from hazards associated with volcanic activity (volcanic eruptions, volcanic debris flows, volcanic ash, etc.).

GROUND MOTION

CALIFORNIA BUILDING CODE SEISMIC DESIGN

Under Section 1613 Earthquake Loads of the California Building Code (CBC), the following coefficients and factors apply to seismic force design at the subject site. The ground motion parameters were determined using the Ground Motion Parameter Calculator at the United States Geological Survey (USGS) website as presented in Figure 2.

Latitude	34.4544
Longitude	-118.5631
Site Class	D
Ss	2.364
S1	0.729
SMs	2.364
SM1	1.094
SDs	1.576
SD1	0.729

In addition, the design response spectrum was determined in accordance with Section 11.4.5 of ASCE Standard 7-05 and is presented on Figure 3. The probabilistic MCE was determined in accordance with Section 21.2.1 of ASCE Standard 7-05 for five percent damped acceleration response spectrum having a two percent probability of exceedance within a 50-year period. The MCE spectral response and the design spectral response is shown on Figure 4. As required by Section 21.3 of ASCE Standard 7-05, the design spectral response is greater than 80 percent of the Sa determined in accordance with Section 11.4.5. A deterministic MCE was not performed. The design spectral response on Figure 4 may be utilized in accordance with Section 21.3 since it is either the lesser of the spectral response accelerations from the probabilistic MCE of Section 21.2.1 and the deterministic MCE of Section 21.2.2, or is conservative.

An FRISKSP Ground Motion study was previously performed at the site as presented in our referenced Supplemental Geotechnical Investigation Report (RTF&A, 2006). Our referenced report should be reviewed if this information is desired.

HISTORIC SEISMICITY

The historic occurrence of earthquakes within the region of the site was previously determined using the program EQSEARCH for Windows (Blake, 2000a), as presented in our previous investigation (RTF&A, 2006). This program computes and prints the epicentral distance from a selected site to each of the earthquakes within a specified search radius (100 miles). From the computed distances, the program also estimates the peak horizontal ground acceleration that may have occurred at the site, due to each earthquake, utilizing the Boore et al (1997) attenuation relation. The EQSEARCH output is presented in Appendix D.

We used a combined earthquake catalog for magnitude 4.0 or larger events between 1800 and 2000. The earthquake catalog for events prior to about 1932 is limited to the higher magnitude events. Using this catalog for probabilistic calculations would skew the results. A listing of historic earthquakes within 100 miles of the site is presented in Appendix D.

The closest recorded earthquake epicenter was located 4.2 miles from the site. This earthquake event occurred on July 7, 1999 with a measured magnitude (M) of 4. The calculated site-specific ground motion associated with this event was 0.182g. At least nine events of M5 or greater have occurred within 15 miles of the site during the period of 1893 and 1999. These nine events included the February 9, 1971 M6.4 San Fernando earthquake and four aftershocks (M5.2 to M5.8).

The epicenter of the M6.7 Northridge earthquake of January 17, 1994 was located 17.6 miles from the site. This earthquake resulted in the largest recorded ground motion at the site, with the calculated site-specific ground motion measured at 0.309g. The largest known earthquake event occurring within 100 miles of the site

was the Fort Tejon earthquake of January 9, 1857, with an estimated magnitude of M7.9. The epicenter of this earthquake was approximately 88 miles from the site. The estimated site-specific ground motion from the Fort Tejon earthquake was 0.163g.

LIQUEFACTION

The State of California Seismic Hazard Map for the Val Verde Quadrangle shows the subject site to be in an area where there is a potential for liquefaction to occur.

Liquefaction may occur when saturated, loose to medium dense, cohesionless soils are densified by ground vibrations. The densification results in increased pore water pressures if the soils are not sufficiently permeable to dissipate these pressures during and immediately following an earthquake. When the pore water pressure is equal to or exceeds the overburden pressure, liquefaction of the affected soil layers occurs. For liquefaction to occur, three conditions are required:

- ground shaking of sufficient magnitude and duration;
- soils that are susceptible to liquefaction; and
- a groundwater level at or above the level of the susceptible soils during the ground shaking.

For a site to be considered susceptible to liquefaction using the criteria and methodology initially developed by Seed and Idriss (1982), liquefaction of underlying soil layers must result in an observed surface effect such as sand boils, mud-spouts, surface water seepage, ground cracking, or quicksand-like conditions.

Lateral spreading can result in ground cracking and may occur when a site is sloped or is near a free-face and there is a sufficiently continuous liquefiable layer on which the overlying soils can move laterally.

Ground settlement may occur during seismic shaking of an area. The settlement can be caused by liquefaction of loose granular soils and by compaction of loose, but not necessarily liquefiable, soils.

ANALYSES

Ground shaking of sufficient magnitude and duration to cause liquefaction can occur virtually anywhere in California. The groundwater level at the site was assumed to rise to within 10 feet of the original grade at the subject site which is at a depth of 32 feet below the existing pad elevation at the subject site. Data from the rotary wash borings was used to evaluate the susceptibility of soils to liquefaction and to calculate the anticipated seismically induced settlement. The liquefaction calculations were performed in accordance with the national treatise on liquefaction (Youd, et al., 2001). The liquefaction calculation indicates 1.06 inches of potential liquefaction-induced settlement.

CONCLUSIONS

Our analyses indicate that some sandy soil layers beneath the site may liquefy in the event of a major earthquake on a nearby fault. The site is not considered as being subject to lateral spreading. Some settlement of the ground surface may occur as a result of seismic shaking. This seismically induced settlement (liquefaction and dry settlement)

~~is expected to be less than 1.25 inches. The anticipated seismically induced differential~~ settlement beneath a building is expected to be about 0.5 inches.

LIQUEFACTION MITIGATION

The liquefaction mitigations already performed at the site consisted of removal of some of the alluvial soils subject to liquefaction and replacing them with compacted fill soils not subject to liquefaction and raising the elevation of the subject site. In addition to the mitigations performed during the grading of the subject site, it is recommended that structural mitigation be incorporated in the project design to reduce damage resulting from seismically induced settlements. Future mitigation should consist of designing the proposed fire station to withstand the estimated differential settlements due to static loads, liquefaction induced settlements, and seismically induced dry settlements. Even with the incorporation of the recommended structural mitigation, some repair and remedial work may be necessary after liquefaction and/or a high ground acceleration seismic event. If the structural engineer determines that the estimated settlements are too excessive for proper performance of the proposed essential facility building supported on a conventional foundation system, a mat foundation system could be utilized. Recommendations for a mat foundation are also included within this report for the use by the design team in determining which foundation type will be utililzed at the site.

SUMMARY OF GEOTECHNICAL RECOMMENDATIONS

This portion of the submittal has been prepared to summarize our geotechnical recommendations pertaining to fine grading of the site and construction of the proposed developments.

Over-excavation and recompaction of existing soils is not anticipated to be required for the subject site. However, some processing of the near-surface soils will be required as discussed in the following section of this report.

The recommended bearing material for the proposed fire station is the compacted fill soil placed as part of the 2004 grading operations discussed in this report. The recommendations of RTF&A's 2006 report remain applicable except where superseded in this submittal.

GRADING

It is anticipated that some minor cuts and fills will be required to establish the final grades for the proposed fire station. The fill soils at the site were moist and compact following the completion of the previous rough grading operations. It is likely that the upper six to 12 inches of those fill soils have become dry and/or disturbed and will require processing as discussed below.

Processing of soil should consist of scarifying the upper six to 12 inches of the exposed grade, adjusting the moisture content of the scarified soils to approximately two percent above optimum moisture content, and compacting the soil to at least 90 percent of the maximum dry density of the soil.

It is anticipated that the exposed grade will consist of moist compact fill in areas where cuts in excess of 12 inches in depth are required. If the cut to final grade

is less than 12 inches, and dry or disturbed soils are exposed, it will be required to process those soils as discussed in the preceding paragraph. Processing of the existing soil will be required in areas where cuts expose dry or disturbed soils and in areas where it will be required to place new compacted fill.

GENERAL GRADING REQUIREMENTS

1. All fills, unless otherwise specifically designed, shall be compacted to at least 90 percent of the maximum dry unit weight as determined by ASTM D 1557-02 Method of Soil Compaction.

2. No fill shall be placed until the area to receive the fill has been adequately prepared and approved by the Geotechnical Consultant of Record or his representative.

3. Fill soils should be kept free of all debris and organic material.

4. Rocks or hard fragments larger then eight inches may not be placed in the fill without approval of the Geotechnical Consultant of Record or his representative, and in a manner specified for each occurrence.

5. Bedrock fragments larger than eight inches, or fill soils containing greater than 25 percent of bedrock fragments larger than five inches in diameter, must be compacted using successive passes of a sheepsfoot compactor, or until rock fragments constitute less than 25 percent of the fill material.

6. The fill material shall be placed in layers which, when compacted, shall not exceed eight inches per layer. Each layer shall be spread evenly and shall be thoroughly mixed during the spreading to insure uniformity of material and moisture.

7. When moisture content of the fill material is too low to obtain adequate compaction, water shall be added and thoroughly dispersed until the soil is approximately two percent over optimum moisture content.

8. When the moisture content of the fill material is too high to obtain adequate compaction, the fill material shall be aerated by blading or other satisfactory methods until the soil is approximately two percent over optimum moisture content.

9. Fill and cut slopes should not be constructed at gradients steeper than 2:1 (horizontal:vertical).

TEMPORARY EXCAVATIONS

Temporary excavations will be required during the grading and construction phases of the project. Compacted fill soils are not expected to stand vertically for any significant length of time in cuts of four feet or higher. Compacted fill soils are expected to be temporarily stable when excavated at a gradient of ¾:1. Temporary excavations that are greater than 15 feet in height should be sloped at a 1:1 gradient.

If excavations are made during the rainy season (normally from November through April), particular care should be taken to protect slopes against erosion. Mitigative measures, such as the installation of berms, plastic sheeting, or other devices, may be warranted to prevent surface water from flowing over or ponding at the top of excavations.

FOUNDATIONS

General: Due to the potential future differential settlements, it is recommended that the fire station be supported on a post-tensioned slab foundation system with isolated footings interconnected with grade beams designed to protect the structures from the anticipated differential settlements. Protection of utilities and lifeline services provided from outside the structure should be considered. Repair and remedial work should be anticipated after liquefaction or a strong groundshaking event occurs. If the structural engineer determines that the estimated settlements are too excessive for proper performance of the proposed essential facility supported on a conventional foundation system, a mat foundation system could be utilized. Foundations and floor slabs should be designed by the Project Structural Engineer in accordance with the minimum requirements of the 2007 CBC.

Footings should not be constructed any closer than five feet to the face of a descending slope, measured horizontally from the outer bottom edge of the proposed footing. In addition, footings should not be constructed any closer to the face of a descending slope than one-third the height of the slope, with a maximum setback distance of 40 feet.

Footings should not be constructed any closer to the face of an ascending slope than one-half the height of the slope, with a maximum required setback distance of 15 feet and a minimum setback distance of three feet. All foundation excavations should be observed and approved by a representative from our firm prior to placement of reinforcing steel.

Bearing Capacity: It is assumed that the proposed fire station structures will be founded near final grade, have interior loads of not more than 200 kips at column

locations and continuous footing loads that will not exceed three kips per lineal foot, and have normal floor loads with no special requirements. Individual column pads or wall footings should have a width of at least 18 inches and be placed at a depth of at least 24 inches below the lowest final adjacent grade.

It is anticipated that structures may be supported on spread footings using a bearing value of 2,500 pounds per square foot (psf). The recommended bearing value is a net value and the weight of the concrete in the footings may be taken as 50 pounds per cubic foot (pcf). The weight of soil backfill may be neglected when determining the downward loads from the footings. A one-third increase in the bearing value may be used for temporary loads such as wind or seismic loads when allowed by the CBC.

Lateral Resistance: Lateral loads may be resisted by soil friction and by the passive resistance of the soils. A coefficient of friction of 0.4 may be used between the footings and floor slabs and the supporting soils. The passive resistance of properly compacted fill soils may be assumed to be equal to the pressure developed by a fluid with a density of 250 pcf to a maximum of 2,500 psf. A one-third increase in the passive value may be used for wind or seismic loads. The frictional resistance and the passive resistance of the soils may be combined without reduction in determining the total lateral resistance.

Footing Reinforcement: Footings should be reinforced in accordance with the recommendations of the Project Structural Engineer and the CBC. Continuous footings should be reinforced with at least the equivalent of one No. 4 deformed steel reinforcing bar located near the top of the footing or stem wall and at least the

equivalent of one No. 4 bar near the bottom of the footing unless otherwise recommended by the Project Structural Engineer.

Settlement: Provided that relatively light structures that do not exceed the assumed structural loads are founded in compacted fill soils as recommended, we estimate that the total static settlement will be less than 0.75 inches. Liquefaction induced settlement and dry settlement is expected to be about 1.25 inches. The total seismic and static settlement is expected to be about two inches. The differential settlement is expected to be less than one inch. The differential compression ratio Б:L is expected to be less than 1:500 if a conventional foundation is utilized. If a mat foundation is utilized at the site, it is expected that total settlement will be less than 0.75 inches, and that differential settlements will be less than 0.5 inches within a horizontal distance of 25 feet.

Foundation Observations: To verify the presence of satisfactory soils at foundation design elevations, the excavations should be observed by the Geotechnical Consultant of Record. Excavations should be deepened as necessary to extend into satisfactory soils. Where the foundation excavations are deeper than four feet, the sides of the excavations should be sloped back at ¾:1, or shored, for safety.

Inspection of foundation excavations may also be required by the appropriate reviewing governmental agencies. The contractor should be familiar with the inspection requirements of the reviewing agencies.

FLOOR SLAB SUPPORT

General: The floor slab design recommendations presented in this section are based upon the assumption that the soil subgrade in proposed floor slab areas will

consist of compacted fill soil and that floor slabs will be subjected to normal loads with no special requirements. Any surficial soils which become dried or disturbed during the course of construction should be moisture-conditioned and compacted prior to casting the floor slab.

Post-Tensioned Floor Slabs: The design values presented below assume that the proposed floor slabs will be at least five inches thick and will be poured monolithic with continuous perimeter edge footings. (See following pages for values.)

Net Bearing Value:	An allowable net bearing value of 2,500 psf for footings with a minimum width of 24 inches and a minimum depth of 24 inches below the top of slab or below the lowest adjacent grade may be used. For temporary loads due to wind or seismic forces, the recommended bearing value may be increased by one-third.
Coefficient of Friction:	0.75 if vapor barrier is utilized, 1.0 if no barrier
Passive Pressure:	250 pcf for level ground condition.
Modulus of Subgrade Reaction (K):	150 pounds per cubic inch (pci) for a footing width of 1 foot. For larger footings or floor slabs this value should be reduced using the following equation:

$$Kr = K\left[\frac{(B+1)}{2B}\right]^2$$

where:

Kr = Reduced Modulus Value
K = Modulus of Subgrade Reaction for a 1 foot wide Plate
B= Width of Large Footing or Slab

Modulus of Elasticity:	1,000 pounds per square inch (psi)
Edge Moisture Variation Distance	
Me (Center Lift):	5.25 feet
Me (Edge Lift):	2.5 feet
Estimated Differential Movement	
My (Center Lift):	2.5 inch
My (Edge Lift):	1.5 inch

Mat Foundation: A mat foundation system may be utilized as an alternative to a conventional foundation system. A base modulus of subgrade reaction of 150 pounds per cubic inch is recommended for mat design. The base modulus should be reduced in accordance with the following equation:

$$k = k_b\left(\frac{1+B}{2\times B}\right)^2$$

where:

k	=	modulus of subgrade reaction for design
k_b	=	150 pci = base modulus of subgrade reaction in pci
B	=	least dimension of mat foundation in feet

The mat is anticipated to range in thickness from about two to three feet and should be continuously reinforced. The mat, including weight of the structure, is

expected to impose pressures on the underlying soil of less than 1,500 pounds per square foot.

Expansive Soil Conditions: Special considerations for potentially expansive soils are not anticipated to be required for the proposed developments. However, site-specific grading for the proposed development may affect the soil type exposed at final grade. Therefore, it is recommended that additional testing and classification, relative to potentially expansive soils, be performed at the conclusion of the proposed fine grading operations.

Moisture Sensitive Floor Coverings: Water vapor transmitted through floor slabs is a common cause of floor covering problems. In areas where moisture-sensitive floor coverings are planned, a vapor barrier should be installed to reduce excess vapor drive through the floor slab. Floor slabs with moisture-sensitive floor coverings should be underlain by a vapor barrier surrounded by two inches of sand above and below it.

The function of the recommended impermeable membrane is to reduce the amount of water vapor that is transmitted through the floor slab. The membrane should be at least 10-mil thick and care should be taken to preserve the continuity and integrity of the membrane beneath the floor slab. The sand, both above and below the membrane, should be sufficiently moist to remain in place and be stable during construction. However, if the sand is saturated before placing concrete, the moisture in the sand can become a source of water vapor. If two inches of sand is not placed over the membrane, the potential for curling of the slab exists and should be controlled by other means.

Another factor affecting vapor transmission through floor slabs is the water-to-cement ratio in the concrete used for the floor slab. A high water-to-cement ratio increases the porosity of the concrete, thereby facilitating the transmission of water vapor through the slab. The Project Structural Engineer should provide recommendations for the design of concrete footings and floor slabs in accordance with the CBC.

SOIL CORROSIVITY

Bulk samples of soils within PM 20685 were previously obtained by a field representative from our firm; the samples were submitted to Schiff for laboratory corrosion testing. Sample S-24 was obtained from the subject site. A corrosion study prepared by Schiff, summarizing the test results and presenting recommendations, is presented in attached Appendix C - Soil Corrosivity Study. The results of the tests generally indicate that the soils at the site are considered corrosive to ferrous metals but not to concrete. For specific corrosion protection recommendations, please review the attached report or contact Schiff directly.

PAVEMENT DESIGN

We obtained one sample for R-value tests from within the proposed paving areas at the subject site. The R-Value tests perfomed by Labelle•Marvin are presented in Appendix C. The plans indicate that Portland Cement Concrete (PCC) pavement will be utilized at the site. In addition to PCC pavement thickness recommendations, we are also providing asphalt pavement section recommendations which may be used as an alternative to PCC concrete.

Asphalt Pavement Section: The following asphalt pavement section recommendations are based on an R-value of 20, which is lower than the obtained results of 22 as presented in Appendix E.

Traffic Index	Asphalt Thickness (Inches)	Base Course (CAB) Thickness (Inches)	Base Course (CMB) Thickness (Inches)
4	3	5	6
6	4	9	10
8	6	12	13
10	7	17	19

Base course material should consist of crushed aggregate base (CAB) as defined by Section 200-2.2 of the Standard Specifications for Public Works Construction ("Greenbook"). If crushed miscellaneous base (CMB) is used, it should meet the specifications outlined in Section 200-2.4 of the Greenbook. Base course should be compacted to at least 95 percent of the maximum dry density of that material.

Base course material should be purchased from a supplier who will certify that the base course will meet or exceed the specifications in the Greenbook as indicated. We could, at your request, perform sieve analysis and sand equivalency tests on material delivered to the site which appears suspect. Additional tests could be performed, upon request, to determine if the material is in compliance with the specifications.

The asphalt pavement section recommendations presented above are based upon assumed Traffic Index values. R. T. Frankian & Associates does not take responsibility for the numerical determination of the Traffic Index values or the areas where they apply within the site. We would be pleased to provide pavement section recommendations for alternative Traffic Index values upon request.

Concrete curbs and gutters should be deepened to extend below the base course material and be seated in the compacted fill. The intent of deepening the curbs and gutters is to form a "cut-off" wall to reduce the amount of water flow through the base course material from adjacent landscaped areas. Subgrade soils which become saturated as a result of water flowing through base course material can reduce the life of the pavement. The curbs should be deepened to an elevation of at least six inches below the base of the proposed base course section. The curb subgrade should be thoroughly moistened prior to casting concrete.

Portland Cement Concrete Pavement (PCC): PCC pavement can be placed directly on native subgrade soils compacted to a minimum of 95 percent of the maximum dry density. The thickness of pavement should be in accordance with the following table. The water-to-cement ratio of the concrete should be no more than 0.5, with a minimum compressive strength of 3,000 psi.

TRAFFIC INDEX	PCC PAVEMENT THICKNESS (INCHES)
4	6.5
6	7.0
8	8.0
10	8.5
11	9.0

The layout of PCC paving joints should be determined by the Civil Engineer, preparing the site plan with consideration of the following joint spacing and reinforcement recommendations. These recommendations may be superseded by a Civil Engineer with pavement design expertise. The PCC pavement should include longitude and transverse joints at intervals not to exceed 15 feet on center. The

joints should be saw cut within four hours of the concrete pour. Jointing should not allow any concrete areas to remain in which the length of the concrete rectangle exceeds 1.5 times the base. All joints should be reinforced with centered 30 inch long, #4 bars at 30 inches on center.

RETAINING WALLS

General: It is not anticipated that significant retaining walls be required as part of the fire station development. The following recommendations will be applicable for retaining walls less than 12 feet in height. Backfill placed behind retaining walls should be compacted to a minimum of 90 percent of the maximum dry density as determined by ASTM D 1557-91. When backfilling behind walls, it is recommended that the walls be braced and heavy compaction equipment not be used closer to the back of the wall than the height of the wall. Soils which have a potential for expansion in excess of five percent should not be utilized for backfill behind walls which are greater than three feet in height. The back of retaining walls should be water-proofed where aesthetics are concerned.

Lateral Earth Pressures: For design of cantilevered retaining walls (independent and separated from buildings), where the surface of the backfill is level and the retained height of soils is less than 12 feet, it may be assumed that drained soils will exert a lateral pressure equal to that developed by a fluid with a density of 30 pcf. Where the surface of the backfill is inclined at 2:1, it may be assumed that drained soils will exert a lateral pressure equal to that developed by a fluid with a density of 43 pcf.

In addition to the recommended earth pressure, the walls should be designed to resist any lateral surcharges due to nearby buildings, storage, or traffic loads. As discussed below, a drainage system should be provided behind the walls to reduce the potential for the development of hydrostatic pressure. If a drainage system is not installed, the walls should be designed to resist a soil and hydrostatic pressure equal to that developed by a fluid with a density of 80 pcf for the full height of the wall.

In addition to the pressures recommended above, the upper 10 feet of walls adjacent to vehicular traffic areas should be designed to resist a uniform lateral pressure of 100 psf, acting as a result of an assumed 300 psf surcharge behind the walls due to normal traffic. If the traffic is kept at least 10 feet from the backs of the walls, the traffic surcharge may be neglected.

Wall Drainage: A drainage system should be provided behind retaining walls or the walls should be designed to resist hydrostatic pressures. The drainage system could also consist of a four-inch diameter perforated pipe placed at the base of the wall with the perforations pointed down. The pipe should be sloped to provide positive drainage and be surrounded by at least six inches of uniform-sized gravel. The gravel should be separated from the surrounding soils by a filter fabric, such as Mirafi 140N or equivalent, and wrapped around the gravel ("burrito-wrapped"). Alternatively, the filter fabric and gravel may be omitted when using a continuous slotted pipe and a graded sand which conforms to Los Angeles County Department of Public Works "F-1" Designated Filter Material.

The installed drainage system should be observed by the Geotechnical Consultant of Record prior to backfilling the system. Observation of the drainage

system may also be required by the reviewing governmental agencies prior to backfilling.

Drainage panels, or a six-inch wide gravel blanket, should be installed behind retaining walls that are greater than three feet in height to reduce the potential for build-up of water behind the walls. Excessive build-up of water could result in wall failure.

SECTION 111 STATEMENT

Based on the findings summarized in this submittal, it is our professional opinion that the completed grading, and any proposed structures at the fire station site, will be safe from hazards of settlement, slippage, or landslide, provided that the recommendations of this submittal, and those of the Los Angeles County Code, are incorporated into the proposed construction. Additionally, the grading performed at the site and the fire station site development will not adversely affect the geotechnical conditions on adjacent properties.

OBSERVATION AND TESTING

This report has been prepared assuming that R. T. Frankian & Associates will perform all geotechnically-related field observations and testing. If the recommendations presented in this report are utilized, and observation of the geotechnical work is performed by others, the party performing the observations must review this report and assume responsibility for recommendations presented herein. That party would then assume the title "Geotechnical Consultant of Record."

A representative of the Geotechnical Consultant should be present to observe all grading operations, as well as all footing excavations. A report presenting the results of these observations and related testing should be issued upon completion of these operations.

-oOo-

Should you have any questions regarding this report, please contact our office. The following are attached and complete this report.

- References
- Geotechnical Map – Figure 1 (in pocket)
- Appendix A - Explorations
  - Unified Soil Classification System (1 page)
  - Log of Borings - WB-1, WB-2, B-1, B-2, and B-3 (7 pages)
- Appendix B - Laboratory Tests
  - Direct Shear Test Data (2 pages)
  - Consolidation Test Data (2 pages)
  - Gradation Test Data (5 pages)
- Appendix C - Soil Corrosivity Study (5 pages)
- Appendix D - Historic Earthquake Search Results (28 pages)
- Appendix E - Labelle•Marvin R-Value Test Results (3 pages)
- USGS Geoundmotion Parameters, Figure 2
- Probablistic MCE, Figure 3
- Design Spectral Response, Figure 4

Respectfully submitted,

R. T. FRANKIAN & ASSOCIATES

by: Alan W. Rasplicka
Principal Geotechnical Engineer

and: Timothy P. Latiolait
Principal Engineering Geologist

TPL/AWR/cma

Distribution: (1) Parsons
Attn: Mr. Art Barajas
(7) Los Angeles County Department of Public Works
Attn: Ms. Kathy Risley
(including one CD of report in pdf format)

RTF&A
GEOTECHNICAL ENGINEERING & ENGINEERING GEOLOGY

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Appendix D
Mitigation Monitoring and Reporting Program

APPENDIX D - MITIGATION MONITORING AND REPORTING PROGRAM

As of January 1, 1989, CEQA requires a Mitigation Monitoring and Reporting Program (MMRP) for projects where mitigation measures are a condition of their approval and development. This MMRP has been prepared for the Fire Station 143 Project in compliance with the requirements of Section 21081.6 of CEQA. This document identifies the potential significant environmental impacts associated with the proposed project and specifies measures designed to mitigate adverse impacts to the environment. Table D-1 on page D-2 lists all of the mitigation measures required in connection with approval of the proposed project. The MMRP defines the responsible party will ensure the mitigation measure is implemented and identifies at what point the mitigation measure is to be executed by the monitoring agency or party. Monitoring refers to the observation of mitigation activities at the project site, in the design of plans, or in the construction or operation of the proposed project.

Table D-1

Mitigation Monitoring and Reporting Program

When Monitoring to Occur		Mitigation Measure/Action Required	Responsible Agency or Party	Monitoring Agency or Party
GEOLOGY AND SOILS				
Prior to issuance of building or grading permits	**GEO-1**	Prior to the issuance of building or grading permits, the County of Los Angeles Department of Public Works shall ensure that the site-specific design recommendations in the Final Geotechnical Report are incorporated into the final project plans/design.	LA County Dept. of Public Works	LA County Dept. of Public Works
NOISE				
During construction activities	**NOISE-1**	Noise-generating equipment operated at the project site shall be equipped with special noise control devices, i.e., mufflers, lagging, and/or motor enclosures. All equipment shall be routinely tested to ensure proper maintenance and to ensure that no additional noise, due to worn or improperly maintained parts, would be generated.	Construction Contractor	Periodic site inspections by LA County Dept. of Public Works
During construction activities	**NOISE-2**	Construction activities shall be scheduled so as to avoid operating several pieces of heavy equipment simultaneously. In no cases shall more than four pieces of heavy equipment be operated simultaneously.	Construction Contractor	Periodic site inspections by OCFA
During construction activities	**NOISE-3**	Engine idling from construction equipment such as graders and water trucks shall be limited to no more than five minutes.	Construction Contractor	Periodic site inspections by OCFA

Source: PCR Services Corporation, December 2009.

Appendix E
Responses to Comments

RESPONSES TO COMMENTS

This section provides the comment letters received on the Draft Initial Study and the responses to comments. The presentation of the comments and responses starts on the following page.

DEPARTMENT OF TRANSPORTATION
DISTRICT 7, REGIONAL PLANNING
IGR/CEQA BRANCH
100 MAIN STREET, MS # 16
LOS ANGELES, CA 90012-3606
PHONE: (213) 897-6696
FAX: (213) 897-1337

Flex your power!
Be energy efficient!

IGR/CEQA No. 091103AL, ND
Fire Station 143 Project
Vic. LA-05 / PM R56.60
SCH # 2009111004

November 23, 2009

Mr. Ken Schumann
County of Los Angeles
Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803

RECEIVED
DEC 03 2009
DEPT. PUBLIC WORKS
PROJECT MANAGEMENT DIVISION II

Dear Mr. Schumann:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The proposed project is to construct a fire station. The project site is about 1 mile away from I-5. 1

Storm water run-off is a sensitive issue for Los Angeles. Please be mindful that projects need to be designed to discharge clean run-off water. Any transportation of heavy construction equipment and/or materials which requires the use of oversized-transport vehicles on State highways will require a Caltrans transportation permit. We recommend that large size truck trips be limited to off-peak commute periods. Thank you for the opportunity to have reviewed this project. 2

If you have any questions, please feel free to contact me at (213) 897-6696 or Alan Lin the project coordinator at (213) 897-8391 and refer to IGR/CEQA No. 091103AL. 3

Sincerely,

Elmer Alvarez

ELMER ALVAREZ
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

LETTER 1

Elmer Alvarez, IGR/Branch Chief
California Department of Transportation (Caltrans)
District 7, Regional Planning
IGR/CEQA Branch
100 Main Street, MS #16
Los Angeles, CA 90012

November 23, 2009

RESPONSE 1

Comment noted.

RESPONSE 2

Regarding stormwater runoff, as discussed on page B-45 of the Draft Initial Study/Mitigated Declaration, construction-related water quality impacts would be less than significant as the project would comply with applicable state, regional and local water quality regulatory requirements. During project operation, site specific design features would be implemented as best management practices (BMPs) to treat on-site surface water (i.e., from the rear driveway and employee parking areas) prior to entering the storm drain. Further, the project would comply with applicable long-term state, regional and local water quality regulatory requirements. Thus, less than significant water quality impacts during project operation would occur.

Should transportation of heavy construction equipment and/or materials which requires the use of oversized-transport vehicles on State Highways be necessary during project implementation, a Caltrans transportation permit will be obtained, as appropriate. Further, large size truck trips will be limited to off-peak commute period to the maximum extent practicable.

RESPONSE 3

Comment noted.