November 2, 2009

Ken Schumann
Project Management Division II
LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
900 S. Fremont Avenue
Alhambra, California 91803

Re: ADDENDUM TO THE RIVERPARK FINAL ENVIRONMENTAL IMPACT REPORT TO ADDRESS DEVELOPMENT OF FIRE STATION NUMBER 104 (MASTER CASE 97-212) IN THE CITY OF SANTA CLARITA, CALIFORNIA

Dear Mr. Schumann:

In accordance with the California Environmental Quality Act (CEQA), an Addendum to the Riverpark Final Environmental Impact Report (EIR) dated, May 2005, has been prepared to address impacts associated with the development of the proposed Fire Station 104. As indicated in the attached Addendum, the addition of Fire Station 104 to the greater Riverpark Project would not result in the identification of a new significant impact beyond what was previously analyzed in the certified Riverpark Final EIR, nor would it result in a substantial increase to the severity of significant effects identified in the Final EIR. Based on these conclusions, an Addendum to the certified Riverpark Final EIR is the appropriate CEQA environmental clearance for the Fire Station 104 Project.

Sincerely,
PCR SERVICES CORPORATION

Mike Harden
Principal Planner

Enclosure: Addendum to the certified Riverpark Final EIR

One Venture, Suite 150, Irvine, California 92618 INTERNET www.pcrnet.com TEL 949.753.7001 FAX 949.753.7002

TABLE OF CONTENTS

Page

ATTACHMENTS

LIST OF TABLES

Table **Page**

ADDENDUM TO THE RIVERPARK FINAL ENVIRONMENTAL IMPACT REPORT (MAY 2005)

The Los Angeles County Fire Department, (the "Applicant" or "LACoFD"), proposes the development of Fire Station 104 as part of the Riverpark Project. The environmental impacts associated with Riverpark Project were addressed in Riverpark Final Environmental Impact Report (SCH No. 2002091081) certified on May 24, 2005, hereafter referred to as the "certified EIR." This Addendum demonstrates that the addition of Fire Station 104 to the Riverpark Project, referred to hereafter as the "Modified Project," would result in environmental impacts that would be within the scope of impacts that were addressed in the certified EIR, thus, further environmental documentation beyond this Addendum to the certified EIR is not necessary pursuant to the California Environmental Quality Act (CEQA).

1. INTRODUCTION/BACKGROUND

The Newhall Land and Farming Company, proposed the Riverpark Project, consisting of the development of a 695.4-acre site in the central portion of the City of Santa Clarita. The project required approval of a General Plan Amendment 02-002, Zone Change 02-002, Vesting Tentative Tract Map (VTTM) 53425, Conditional Use Permit 02-009, Hillside Development Application 02-003 including an Innovative Application, Oak Tree Permit 02-025 and Adjustment No. 02-010.

As part of the approval process for the Riverpark Project, an EIR was prepared in accordance with the requirements of the CEQA with the City of Santa Clarita serving as the Lead Agency. The Draft EIR for the Riverpark Project was circulated for a 60-day review period from March 3, 2004 to May 3, 2004. Impacts regarding Geotechnical Hazards, Flood, Cultural Resources, Water Service, Wastewater Disposal, Land Use, Water Quality, Solid Waste Disposal, Education, Libraries Services, Parks and Recreation, Fire Services, Sheriff Services, Population, Housing and Employment, Agricultural Resources, Human Made Hazards, and Floodplain Modification were concluded to be less than significant or reduced to a less than significant level with appropriate mitigation measures. In addition, the Draft EIR identified several significant unavoidable impacts relating to Air Quality, Traffic/Access, Biological Resources, Solid Waste Disposal, Visual Resources, Agricultural Resources, and Noise.

At the December 21, 2004 meeting, the City of Santa Clarita Planning Commission in a 4:1 vote recommended approval of the project and associated entitlements to the City Council. On May 24, 2005, the City of Santa Clarita City Council certified the Riverpark Final EIR and

adopted the Statement of Overriding Considerations and Mitigation Monitoring and Reporting Program.

2. PURPOSE OF ADDENDUM AND CEQA REQUIREMENTS

This document is an Addendum to the certified Final EIR for the Riverpark Project. The certified EIR included all statutory sections required by CEQA, comments received on the Draft EIR, responses to comments on the Draft EIR, and supporting technical appendices. Section 15164 of the CEQA Guidelines provides that an addendum to a previously certified EIR can be prepared if changes or additions are necessary and none of the conditions in Section 15162 of the Guidelines requiring preparation of a Subsequent EIR have occurred.

Section 15162 of the CEQA Guidelines requires preparation of a Subsequent EIR, instead of an Addendum to an EIR, where an EIR has already been prepared under the following circumstances:

1. *Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*

2. *Substantial changes occur with respect to the circumstances under which the project is undertaken, which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*

3. *New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete shows any of the following:*

    a. *The project will have one or more significant effects not discussed in the previous EIR or negative declaration,*

    b. *Significant effects previously examined will be substantially more severe than shown in the previous EIR,*

    c. *Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative, or*

    d. *Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant*

effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

While the previously certified EIR for Riverpark did not address a fire station on the site, it did analyze the environmental impacts of developing a master planned community on the project site, which would include such uses as a fire station among other public services. The land area where the fire station would be located already has been assessed for impacts in the certified EIR including geotechnical hazards, biological resource impacts, as well as cultural and agricultural effects. Regarding traffic, the project adopted in the certified EIR was estimated to generate about 1,700 fewer average daily trips than the project evaluated in the Draft EIR. In addition, the proposed fire station would eventually replace the temporary Fire Station 104 located at 26201 Golden Valley Road, Santa Clarita, 91350, which is located approximately 0.9 miles from the proposed fire station site. Thus, the trips associated with that station would be relocated to the project site, without new or more severe environmental impacts. All other potential impacts are addressed in this Addendum. There are no new mitigation measures necessary beyond those identified in the certified EIR for the proposed Fire Station 104. Further, the addendum includes an evaluation of climate change issues related to construction and operation of the modified project.

As demonstrated by the analyses herein, the proposed inclusion of Fire Station 104 into the Riverpark Project would not meet the requirements for preparation of a Subsequent EIR pursuant to Section 15162 of the CEQA Guidelines. Rather, all of the impacts associated with the Modified Project with Fire Station 104 would be within the scope of impacts addressed in the certified EIR and a new significant impact or substantial increase in an already identified significant impact would not occur. Based on this determination, an Addendum is the appropriate form of CEQA documentation to address the Modified Project with Fire Station 104.

3. PROJECT DESCRIPTION

a. Description of Project Addressed in Certified EIR

As originally proposed, the Riverpark Project included in general 1,183 residential units and up to a maximum of 40,000 square feet of commercial uses. During nine hearings held by the City of Santa Clarita Planning Commission from March 2 to August 31, 2004, the project was revised in response to comments from the Planning Commission and its staff, governmental agencies and the public, in general by reducing the residential units from 1,183 to 1,123 and the maximum commercial square footage from 40,000 to 16,000 square feet, and preserving additional areas of the Santa Clara River and its south fork. Additional reports and analyses of the project with these changes were included in the December 2004 Final certified EIR and its responses to comments (released on December 1, 2004).

During on January 25 and March 22, 2005, the City of Santa Clarita City Council further reduced the residential units from 1,123 to 1,089 and provided for the preservation of even more land and river areas (revised project). The revised project now proposed, in general, 432 single-family units in Planning Areas A-1, A-2, and B, and 657 multi-family condominium/townhouse units in Planning Areas C and D (380 units in Area C and 277 units in Area D), privately owned and maintained, and gated, internal streets in Planning Areas A-1, B, and C (built to City standards), and a maximum of 16,000 square feet of commercial uses on a one-acre parcel in Planning Area C.

As stated in the certified EIR, the revised project's changes reduce the original project's potential environmental impacts as identified in the Draft EIR, did not increase the level of any previously identified impacts, and created no new significant impacts. Thus, the City determined, based on the entire record, that the revised project's improvements would not change the Draft EIR's conclusions regarding potential impacts and the significance of potential impacts, and that the revised project would have in general the same environmental impacts, and the same level of impacts, as those identified in the Draft EIR. To note, the certified EIR for Riverpark did not specifically address a fire station on the proposed Fire Station 104 site, although the proposed Fire Station 104 site is included in the overall Riverpark project site boundaries and the certified EIR acknowledged that a temporary Fire Station 104 would be located on Golden Valley Road south of Redview Drive, approximately 3.4 miles from the intersection of Bouquet Canyon and Newhall Ranch Roads. This addendum to the certified EIR addresses only the addition of a permanent fire station to the Riverpark project as described in the certified EIR.

b. Project Location

The Riverpark Project site is located within the central portion of the City of Santa Clarita at the terminus of Newhall Ranch Road, east of Bouquet Canyon Road between the Castaic Lake Water Agency (CLWA) property and Soledad Canyon Road. The Riverpark Project site is bounded on the north by single-family residential, open space, CLWA property used for administrative offices and a water treatment facility. To the south of the Riverpark Project site (across the Santa Clara River) is a mobile home park, a business park, retail commercial uses, the Saugus Speedway facility, Soledad Canyon Road and the Metrolink Station. East of the Riverpark Project site is a business park and open space, residential, and retail commercial uses. Open space and retail commercial uses are located to the west along Bouquet Canyon Road.

Specific to the proposed Fire Station 104 site, the surrounding area is currently being graded as part of the Riverpark Project. The Fire Station 104 site would be located at the northeast corner of Golden Valley Road and Newhall Ranch Road. To the east and west of the Fire Station 104 is undeveloped land, the Santa Clarita River is to the south, and future multi-

family residential uses would be located to the north (approximately 100 feet from site within Planning Area C of the Riverpark Project) of the fire station site. These multi-family residences would be the nearest sensitive receptors to the site. The nearest school site is Emblem Elementary School located at 22635 Espuella Drive in Saugus, approximately 1.6-miles (8,600 feet) northwest of the project site.

Figure 1, Regional Location Map, in Attachment A of this document provides a regional map of the Riverpark and Fire Station 104 Project Site. Figure 2, Local Vicinity Map and Aerial Photograph, illustrates the project location from a local perspective and also provides an aerial photograph of the Fire Station 104 site.

c. Environmental Setting

The Riverpark Project site is located within the Santa Clarita Valley (Valley) which is generally flat with some gently rolling hills that range in elevation from approximately 1,200 to 1,600 feet. The certified EIR did not propose any use for the Fire Station 104 site. If anything, a portion of the site is depicted as slope area for the adjacent multi-family units. A fire station would be considered a Public Service use. The General Plan designation for the Fire Station 104 site is Residential Moderate (RM). The zoning designation for the site is Residential Medium Planned Development (RMDP). Public services, such as a fire station, are allowed in the RMDP District subject to a Minor Use Permit (MUP) to be considered for approval as part of a planning staff-level review by the City of Santa Clarita subsequent to a two-week public review period. To note, development of the Riverpark Project is underway.

d. Proposed Fire Station 104 Project Description

The proposed Fire Station 104 includes the construction of a 12,000 square foot fire station and supporting structures on a 2.36-acre site. This fire station would eventually replace temporary Fire Station 104 located at 26201 Golden Valley Road, Santa Clarita, 91350, which is located approximately 0.9 miles from the proposed fire station site. Construction of Fire Station 104 would require minimal fine grading/earthwork to further balance the site and establish the pad grade. It is anticipated that approximately 60 cubic yards of dirt may be hauled from the site as a result of the fine grading/earthwork needed to balance the site.

Fire Station 104 would include housing for nine fire fighters, two apparatus bays, an office, utility rooms, conditioned storage, an emergency Generator, diesel and unleaded fuel for apparatus and the emergency generator, hose storage, and a hose tower. Fire Station 104 is depicted on Figures 3, Site Plan, of Attachment A in this document. The apparatus would be stored in approximately two bays totaling approximately 3,000 square feet. Three, ten (10) foot high antennas would extend beyond the high point of the station roof. The station would not exceed 28 feet in height. Also located on the site would be a hose tower which is a 30-foot tall

electric powered hose drying rack. The current apparatus proposed for Fire Station 104 includes a Fire Truck and Hazardous Materials Response Unit. The centralized location of the proposed Fire Station 104 would allow for a staging of first responders in the event of a natural disaster or emergency event (Sheriff, California Highway Patrol, Health Services, Allied Fire Agencies, City of Santa Clarita, and County of Los Angeles).

A traffic signal would be installed at the fire station's emergency egress driveway with station controlled preemption for use during emergency and non-emergency responses. Fire Department apparatus and staff vehicles point of egress to the fire station would be on Newhall Ranch Road, west of Golden Valley Road. Visitor parking would be located on Golden Valley Road south of the emergency egress driveway.

The fire station would operate 24 hours a day, seven days a week. Nine (9) 24-hour firefighters would staff the fire station. Eighteen (18) personnel would be on-site during a shift change. A total of 24 parking spaces would be provided onsite (18 for Fire Station staff, 4 public parking stalls and 2 van accessible handicap parking stalls for staff and visitors). A decorative, up to six foot high wall would enclose the Fire Station 104 site. An external public address system would be used during regular business hours –from 8:00 a.m. to 5:00 p.m. The system would be turned off from 5:00 p.m. to 8:00 a.m. A 600-gallon generator diesel fuel storage tank, a 2,500 gallon apparatus diesel fuel storage tank and a 500 gallon unleaded gasoline fuel storage tank are proposed at the Fire Station 104 site. Yard landscape maintenance gasoline would be provided in two, five-gallon containers and stored in the station's oil storage room. Additionally, a 230KW generator is proposed for emergency energy requirements. The generator would be tested for 30 minutes each week and used during power outages. Onsite drainage would include standard Best Management Practices (BMPs) and apparatus floor drains would be routed into a clarifier before entering the storm drain system.

Currently, response times within the proposed fire station boundaries are between 8-9 minutes. Estimated response times when the station is placed in service would be five minutes. The closest fire stations to proposed Fire Station 104 are: Fire Station 111 which is approximately 2.5 miles from the site, Fire Station 126 which is approximately 3.2 miles from the site and Fire Station 128, which is approximately 2.9 miles from the site and is scheduled to be operational in 2011. It is estimated that when placed in service, Fire Station 104 would run an average of four emergency calls per day.

In addition to the MUP that would be approved by the City of Santa Clarita, the following approvals anticipated to be required Fire Station 104 project would include:

- Castaic Lake Water Agency – Will serve letter;
- AQMD – Generator and fuel dispenser permits; and

- William S Hart Union High School District and Saugus Union School District – Compliance with developer fee program requirements.

The anticipated construction start date for Fire Station 104 would commence in the first half of 2010 and last up to approximately twelve months. Construction activities would occur in one phase.

4. APPLICATION OF PREVIOUSLY CERTIFIED ENVIRONMENTAL DOCUMENTATION TO MODIFIED PROJECT WITH FIRE STATION 104

This section compares the impacts of the Modified Project with Fire Station 104 with the impacts analyzed in the certified EIR for the Riverpark Project. All mitigation measures recommended by the certified EIR that are applicable to the Modified Project are incorporated by reference herein and would also be implemented as part of the Modified Project, except where, due to conditions specific to the Modified Project, a recommended mitigation measure is determined to be not applicable.

The technical analysis provided below updates the certified EIR by discussing only those environmental topics that have the potential to require changes or additions to the certified EIR due to the impact potential of constructing Fire Station 104.

The Fire Station 104 site is disturbed from grading operations associated with the construction of Newhall Ranch Road, Golden Valley Road and the residential units located northwest of the site. Consequently, because the Fire Station 104 site has been previously rough graded and no undisturbed soils would be effected by the project there would be no biological or cultural resources impacts associated with development of Fire Station 104. Because Fire Station 104 is not residential there would be no significant impacts to Schools, Parks and Recreation, Library Services, or Population/Housing/Employment. Because the Fire Station 104 site would house only nine fire department personnel onsite at all times, wastewater services, utilities, water resources and Sheriff services would be used in a statistically insignificant amount and would not create any severity of impacts not already identified in the certified EIR. Because the project is a fire station there would be positive impacts regarding the availability of fire services. Although the Fire Station 104 site has been rough graded there were no agricultural resources located on the site. Fire Station 104 does not propose any floodplain modifications that would result in hydraulic impacts on biological resources in the Santa Clara river corridor.

In summary, the proposed fire station would have no or nominal impacts to geotechnical hazards, biological resources, agricultural resources, cultural resources, education, parks and recreation, fire services, library services and population/housing/employment. The fire station

would generate less than significant impacts to wastewater services, utilities, solid waste and disposal, water resources, solid waste and sheriff services.

Based on the above, those environmental topics that have the potential to require changes or additions to the certified EIR due to the impact potential of constructing the fire station include the following: Geology and Soils, Flood/Water Quality, Traffic/Access, Air Quality, Noise, Land Use, Hazardous Materials and Visual Resources. To note, construction of the Riverpark Project would generate greenhouse gas (GHG) emissions. However, the analysis of impacts to global climate was not included when the certified EIR was completed, since this type of analysis was not routinely included in environmental analyses at the time the EIR was prepared in 2004. Thus, the Air Quality analysis includes an evaluation of the effects of greenhouse gases associated with the proposed Fire Station 104 on global climate change. The above referenced environmental topics are discussed in detail below.

Also, it is acknowledged that the certified EIR conducted a cumulative analysis for each of the environmental issues listed above, with the exception of greenhouse gases (cumulative greenhouse gas impacts are discussed in this Addendum). As concluded in this Addendum, the proposed Fire Station 104 would not result in new impacts or substantially increase the severity of impacts identified in the certified EIR for the Riverpark Project. Further, there are no new proposed mitigation measures beyond those identified in the certified EIR for the fire station project. Thus, the cumulative impact conclusions for each impact issue in the certified EIR would not require modification with the inclusion of Fire Station 104 within the Riverpark project site. Accordingly, pursuant to Appendix G of the CEQA Guidelines – Environmental Checklist Form, Section XVII, Mandatory Findings of Significance (b), the fire station project would not result in cumulatively considerable impacts.

In addition, pursuant to the Mandatory Findings of Significance (a), as the proposed Fire Station 104 would not result in new impacts or substantially increase the severity of impacts identified in the certified EIR, the Fire Station 104 Project would not 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. Further, pursuant to the Mandatory Findings of Significance (c), Fire Station 104 would not have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

4.1 Geology and Soils

Original Project. As discussed in Section 4.1, Geotechnical Hazards, of the certified EIR, no active earthquake faults exist on the Riverpark Project site; nonetheless, possible unstable, fractured conditions may exist along an old fault zone on the site, which could result in

a significant geotechnical impact unless mitigated through buttressing/stabilization fill. Approximately 2.5 acres of the southwestern corner of the site are within an Alquist-Priolo Special Studies Zone for the San Gabriel Fault; however, no development is proposed within this location and no significant impacts related to the fault zone are anticipated.

Project activities, including earth grading, construction, and those associated with Fire Station 104 operations, if not properly mitigated, could affect the geologic stability of the site, consequently resulting in significant environmental impacts. Existing geologic instability also poses significant hazards to proposed structures and residents, if unmitigated. Unless mitigated, specific project-related geotechnical impacts could occur if project development occurs.

In compliance with Section 18.02 of the City of Santa Clarita Building Code and the California Building Code, and according to the Project Geotechnical Engineer,[1] the Riverpark Project site is feasible for development from the standpoint of geology/geotechnical conditions provided the mitigation measures identified in the certified EIR are followed and implemented during construction. With implementation of these measures, geologic impacts would be mitigated to below a level of significance and no unavoidable significant geologic impacts would occur.

Modified Project. The Fire Station 104 site was included in the analysis of the certified EIR, which as stated above, the overall Riverpark site was determined to be geologically stable provided the mitigation measures identified in the certified EIR are followed and implemented during construction. Construction of Fire Station 104 would require minimal fine grading/earthwork to further balance the site and establish the pad grade. It is anticipated that approximately 60 cubic yards of dirt may be hauled from the site as a result of the fine grading/earthwork needed to balance the site. The construction of Fire Station 104 would be in conformance with all applicable seismic design standards and regulations, as described within the certified EIR. Fire Station 104 would also implement all applicable recommended mitigation measures of the certified EIR to ensure that seismic, and landslide hazards are reduced to a less than significant level (refer to Mitigation Measures 4.1-1 to 4.1-8, 4,1-11, 4.1-12, 4.1-15 to 4.1-28, 4.1-30 to 4.1-33, 4.1-35 to 4.1-37 and 4.1-39 to 4.1-41 in the certified EIR). As such, there would be no new significant impacts and no increase in the severity of previously identified impacts regarding geologic and seismic hazards generated by the fire station compared to those impacts identified in the certified EIR for the Original Project. Therefore, the impacts for the fire station project are within the scope of impacts identified in the certified EIR.

[1] *Geologic a n d Geotechnical Report; Review o f Tentative Tract Map, prepared by Allan E. Seward Engineering Geology, Inc., ,dated April 4, 2003, and in Geologic and Geotechnical Report – Addendum N o . 1 Revised Tentative Tract Map (Revised June 11, 2003), prepared by Allan E. Seward Engineering Geology, Inc., dated June 30, 2003.*

4.2 Water Quality/Flooding

Original Project. The Riverpark Project site is contained within a tributary drainage area of approximately 835 acres that drains into a portion of the Santa Clara River designated as Reach 9 in United States Environmental Protection Agency (EPA) documents, and as Reach 7 in the Water Quality Control Plan (Basin Plan) for the Los Angeles Region. The site sits at the western boundary of this latter reach. This reach of the river is generally dry for most of the year. Its intermittent flows occur primarily during the "rainy" months; consequently, except during storm events of sufficient size to create flows in this portion of the river, surface flows of Reach 7 do not reach downstream reaches of the river. The site currently contains no drainage, water quality or erosion control structures or facilities, and, as a result, substantial amounts of runoff drain into the Santa Clara River during storm events.

The Riverpark Project proposes primarily residential uses, with a limited amount of commercial uses. In addition to residential and commercial structures and associated infrastructure, the project's improvements would include bank stabilization (primarily buried), toe or erosion protection, various outlet structures, the Newhall Ranch Road/Golden Valley Road Bridge and associated abutments and piers, and storm drain system structures that comply with the Natural River Management Plan (NRMP), as well as water quality control measures that comply with current federal, state and local storm water quality requirements. The project applicant proposes site design, source control and treatment best management practices (BMPs) as design features incorporated into the project.

The Riverpark Project would generate pollutants typical of urban residential and small commercial areas both during construction, and after the site is built out and occupied. In addition, the existing condition of the Santa Clara River, and the current water quality standards applicable to it give rise to water quality concerns. Taking into account the project's non-structural and structural (treatment) BMPs design features, and evaluating the identified pollutants of concern, the certified EIR analysis concluded that project water quality impacts would be less than significant. The certified EIR concluded that the project would meet all applicable regional and local water quality requirements of the State Water Resources Control Board, the Regional Water Quality Control Board, Los Angeles Region, the National Pollutant Discharge Elimination System (NPDES), the County of Los Angeles and the City of Santa Clarita during both construction and operation of the project. Further, each current and future development in the Santa Clarita Valley would also be required to meet all of those requirements to control storm water discharges of pollutants of concern for each such development.

In addition, the certified EIR concluded that implementation of the proposed drainage concept would meet the flood control requirements of the City of Santa Clarita and the Flood Control and Watershed Management Divisions of the Los Angeles County Department of Public Works and would reduce flooding impacts to a less than significant level. There would be no

appreciable increases in eroded areas of the riverbed due to buildout of the study area during the 2-, 5- and 10-year storm events, and there would be a decrease in eroded areas during the 20-year and greater storm events. Therefore, no significant stream erosion and debris deposition impacts are anticipated due to the project.

Modified Project. The proposed Fire Station 104 would be subject to the applicable water quality standards and requirements (e.g. compliance with NPDES requirements) described within the certified EIR. Similar to the Original Project, the Modified Project with Fire Station 104 would result in beneficial surface water quality effects regarding decreased particulate matter as loose soils would either be removed or compacted. The fire station would also implement the applicable mitigation measures prescribed in the certified EIR, as applicable, to ensure that water quality and flooding impacts are reduced to a less than significant level (refer to Mitigation Measures 4.2-8 to 4.2-15, 4.8.1-5 to 4.8.1-9, 4.8.1-16 and 4.8.1-18 in the certified EIR). As such, there would be no new significant impacts and no increase in the severity of previously identified impacts regarding water quality and flooding generated by the fire station project compared to those impacts identified in the certified EIR for the Original Project. Therefore, the impacts for the fire station project are within the scope of impacts identified in the certified EIR.

4.3 Traffic/Access

Original Project. The certified EIR traffic analysis evaluated traffic impacts at full buildout of the Riverpark Project. The Traffic analysis concluded that six study area intersections would be significantly impacted at build out of the project. The certified EIR prescribed mitigation measures that would reduce intersection impacts at two of the intersections to a less than significant level. However, traffic impacts at the remaining four intersections were determined to be significant and unavoidable. In addition, the Riverpark Project would exceed its mitigation goal as required by the Congestion Management Program (CMP) by 95,430 credits, which would offset project impacts to the regional transportation system (i.e., CMP-governed facilities).

Modified Project. Construction traffic includes daily truck trips from on-site construction workers and construction-related vehicles. Construction traffic would include up to approximately 25 total trips per day (including a total of approximately five haul trips for export soils/materials), 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. The number of construction-related vehicular trips would not cause a substantial increase to traffic in relation to the existing traffic load, capacity of the street system or level of service. As such, construction-related traffic impacts would be less than significant. There would be no new significant impacts and no increase in the severity of previously identified impacts regarding construction traffic generated by the fire station project compared to those

impacts identified in the certified EIR for the Original Project. Therefore, the construction-related traffic impacts for the fire station are within the scope of impacts identified in the certified EIR.

Employees of the fire station would take access from Newhall Ranch Road. Public parking is provided from a driveway on Golden Valley Road. Fire trucks would leave the site via Golden Valley Road. Upon return to the site, fire trucks and emergency equipment would access the site via Newhall Ranch Road. The Newhall Ranch Road access is gated. The site plan depicts a total of 24 parking spaces. Nineteen spaces are located in within the gated area of the site, including one van accessible handicap space. Five public spaces are provided adjacent to the fire station visitor entrance, including one van accessible handicap space. It is estimated that the fire station would generate approximately four emergency responses per day and a total of approximately 35 average daily trips (ADT) would be generated by the station. The amount of trips occurring during the peak hours would vary depending on the particular response of the activity.

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 study prepared for the certified EIR was based on an estimated daily trip generation of approximately 13,300 ADT, but did not include a fire station on the site. The certified EIR and project adopted by the City Council on May 25, 2005 was estimated to generate approximately 11,600 ADT, or 1,700 fewer ADT than the project evaluated by the Draft EIR. Therefore, any additional traffic trips generated by the proposed project would be within the range of total traffic evaluated for the certified EIR. Further, the proposed fire station would eventually replace the temporary fire station located at 26201 Golden Valley Road, Santa Clarita, 91350. The trips associated with the existing fire station would eventually be relocated to the proposed Fire Station 104 site. Based on these factors, operational-related traffic impacts would be less than significant. There would be no new significant impacts and no increase in the severity of previously identified impacts regarding operational traffic generated by the fire station project compared to those impacts identified in the certified EIR for the Original Project. No new mitigation measures are required for Fire Station 104 and none of the mitigation measures prescribed in the certified EIR are applicable to Fire Station 104 since they pertain to on- and off-site traffic improvements and alternative transportation, which would be implemented by the Riverpark Project regardless of the fire station project. Overall, the operational-related traffic impacts for the fire station are within the scope of impacts identified in the certified EIR.

4.4 Air Quality

Original Project. According to the certified EIR, construction of the Riverpark Project would generate fugitive dust and combustion emissions. The SCAQMD has established significance thresholds for pollutant emissions from project construction and operations within the South Coast Air Basin, which the County has adopted. Regional construction emissions for the project are expected to exceed the South Coast Air Quality Management District (SCAQMD) daily significance threshold of 550 pounds per day of carbon monoxide (CO), 100 pounds per day for nitrogen oxides (NO_X), and 150 pounds per day for particulates less than 10 microns in diameter (PM_{10}). Furthermore, reactive organic compounds (ROC) emissions are also estimated to exceed the 75 pounds per day threshold, and would result in significant impacts to air quality. Although mitigation measures have been proposed to reduce pollutant emissions during construction, the project would still exceed the SCAQMD daily emission thresholds for NO_X, PM_{10}, and ROC. As such, even with all feasible mitigation, air quality impacts associated with construction activity would still be considered significant and unavoidable.

Air pollutant emissions associated with project occupancy and operation would be generated by both the consumption of energy (electricity and natural gas) and by the operation of on-road vehicles. Regional emissions resulting from project operation would exceed the SCAQMD thresholds for all criteria pollutants except sulfur oxides (SO_X). Therefore, operation of the project would result in a significant impact to regional air quality. Although the certified EIR contains mitigation measures to minimize air quality impacts, emissions would be expected to remain above the SCAQMD thresholds. As such, the impact to regional air quality would be considered significant and unavoidable.

In addition, project traffic generation would increase carbon monoxide (CO) levels at some of the intersections. However, these impacts would be considered less than significant because the concentrations would remain below California's one-hour standard of 20 parts per million (ppm) or 8-hour standard of 9 ppm. An analysis was performed to determine the potential for creation of CO hotspots attributable to the project. CO hot spots are localized areas in the project vicinity where sensitive receptors (pedestrians) are located near to roadways and intersections may be exposed to elevated ambient levels. This analysis indicated that project-related traffic would not exceed the State emission standards. Thus, operation of the project would not result in a significant impact to local air quality and no mitigation measures were necessary regarding CO hotspots.

Modified Project. Construction activities associated with Fire Station 104 do not present any significant impact beyond that previously addressed in the certified EIR. As discussed in Table 4.4-19 of the certified EIR, maximum daily emissions occur during the clearing/grading phase of construction. The fire station would specifically be located on undeveloped land that has been previously mass graded for site development. The fire station

site would be fine graded prior to erecting the proposed fire station. Conservatively, the following discussion evaluates the grading phase should additional fine grading of the site be necessary. The grading phase uses substantial heavy duty construction equipment and generates the largest amount of fugitive dust, which is the primary source of emissions during construction. On a worst-case grading day (i.e., when all heavy equipment is operating all day long), it was estimated in the certified EIR that grading activities would involve the use of heavy equipment, including scrapers, a motor grader, and wheeled bulldozers. Should additional fine grading of the site be required, the maximum daily amount of grading activities is not anticipated to change with Fire Station 104 because an increase in construction duration would not affect worst-case day calculations. Pollutant emissions and fugitive dust from site grading and construction activities would be similar on a daily basis, as the duration of construction and not the intensity of these activities could increase compared to the proposed project. The intensity is not anticipated to increase as no increase in heavy equipment is anticipated to occur during the worse-case day as analyzed in the certified EIR. Thus, impacts during worse-case daily conditions, those used for measuring significance, would be similar to those disclosed in the certified EIR.

The certified EIR concludes that daily construction emissions even with implementation of mitigation, the project would still exceed the SCAQMD daily emission thresholds for NO_X, PM_{10}, and ROC during construction activities. As such, even with all feasible mitigation, air quality impacts associated with construction activity would still be considered significant and unavoidable as noted in the certified EIR. The proposed Fire Station 104 project would implement the applicable construction-related mitigation measures in the certified EIR (refer to Mitigation Measures 4.4-9 and 4.4-10). Because the Fire Station 104 project would not cause an increase in daily construction-emissions, there would be no new significant impacts and no increase in the severity of previously identified impacts regarding construction-related air quality generated by the fire station project compared to those impacts identified in the certified EIR for the Original Project. Therefore, the construction-related air quality impacts for the fire station are within the scope of impacts identified in the certified EIR.

Operational air quality impacts associated with the Modified Project with Fire Station 104 do not present additional impacts of significance beyond those analyzed in the certified EIR. The Modified Project would result in an increase of approximately 35 daily trips from emergency (up to four responses per day) and non-emergency responses, including staff and visitor trips (less than 30 trips per day). On a regional basis, the Modified Project would not result in an increase in emergency Fire Department vehicle trips. Operation of the fire station may even result in a decrease in the vehicle miles traveled, as this station is closer to the residences and businesses than existing stations. However, as a worst-case evaluation, this study considers emissions from both the new employee commuter trips and Fire Station truck trips as incremental sources of emissions. Fire Station 104 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 the Original Project. The URBEMIS 2007 model output files are contained in Appendix A of this document. As indicated therein, pollutant emissions associated with Fire Station 104 would be below SCAQMD regional significance thresholds. In comparison to SCAQMD regional significance thresholds, operational emissions from the fire station would be 0.34 percent of CO, 0.61 percent of ROC, 3.2 percent of NO_X, 0.68percent of SO_X, and 0.53percent of the PM_{10} significance threshold. $PM_{2.5}$ was not analyzed in the Riverpark Project EIR. The Modified Project with Fire Station 104 would result in an increase of approximately 0.34 percent in CO, 0.61 percent in ROC, 3.22 percent in NO_X, 0.68 percent in SO_X, and 0.53 percent in PM_{10} emissions as compared to emissions presented in Table 4.4-20, Estimated Operational Emissions without Mitigation, in the certified EIR. While the Modified Project would result in a slight increase in criteria pollutant emissions, the increase in operational emissions would not trigger any new impact based on SCAQMD daily emission thresholds. Since significant and unavoidable air quality operational impacts were identified in the Certified EIR, the fire station would implement the applicable mitigation measures prescribed in the certified EIR (refer to Mitigation Measures 4.4-10 to 4.4-12, 4.4-14, 4.4-15, 4.4-17 and 4.4-18 in the certified EIR). There would be no new significant impacts and no increase in the severity of previously identified impacts regarding operational air quality generated by the fire station project compared to those impacts identified in the certified EIR for the Original Project. Therefore, the impacts for the fire station project are within the scope of impacts identified in the certified EIR.

a. Global Climate Change

Original Project. Construction of the Riverpark Project would generate greenhouse gas (GHG emissions). However, the analysis of impacts to global climate change was not included when the previously certified EIR was completed, since this type of analysis was not routinely included in environmental analyses at the time the EIR was prepared.

Modified Project. This analysis of impacts relating to global climate change considers regulatory publications from the California Air Pollution Control Officers Association (CAPCOA), the State Office of the Attorney General and the Governor's Office of Planning and Research (OPR), as well as draft regulatory publications from the SCAQMD, and the California Air Resources Board (CARB), to assess the potential impacts of the Fire Station 104 project on global climate and the potential impacts of global climate change on the Fire Station 104 project.

As part of this addendum to the certified EIR, PCR conducted a project-level analysis for the proposed Fire Station 104, as well as a cumulative effects analysis to estimate the emissions of GHG during construction and operation of the proposed fire station. The primary objectives of this analysis were to quantify the GHG impacts from (1) the typical everyday operation of the fire station and (2) construction of the fire station. As part of the analysis, a qualitative

assessment of the Fire Station 104 project features that will help reduce GHG emissions is also provided.

b. 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).[2] There continues to be significant scientific uncertainty concerning the extent to which increased concentrations of GHGs have caused or will cause climate change, and over the appropriate actions to limit and/or respond to climate change.

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). Carbon dioxide is the most abundant GHG in the atmosphere, and represents 77 percent of total GHG emissions.[3]. 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

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

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

emissions, accounting for 38 percent of total GHG emissions in 2004, the latest year for which data are available.[4]

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.[5] 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, Fire Station 104 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 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."[6] 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

---

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

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

[6] *IPCC, Fourth Assessment Report, Summary for Policy Makers, 2007.*

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.

c. 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 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.[7]
- By January 1, 2009, CARB adopts plan to effect GHG reductions from significant sources of GHG via regulations, market mechanisms and other actions.[8] 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.

[7] *http://www.arb.ca.gov/cc/inventory/1990level/1990level.htm (last visited 8/14/2008).*

[8] *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.*

- 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.

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.[9] 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:

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

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 Senate Bill 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.

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."[10] 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."[11] 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

[10] *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*

[11] *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*

infrastructure; and promote a healthier environment.[12] 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.
- **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.

[12] *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*

- 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 South Coast Air Quality Management District (SCAQMD) is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin (SCAB). 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."[13] 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

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

"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 August 2009, SCAQMD and the Working Group are developing interim CEQA GHG significance thresholds for use in a broader context by other lead agencies.

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 City of Santa Clarita, nor the County of Los Angeles, have yet established specific quantitative significance thresholds for GHG emissions. Furthermore, the South Coast Air Quality Management District (SCAQMD) has not established specific quantitative significance thresholds for GHG emissions for projects where SCAQMD is not the lead agency. The regulations required to meet the State goals under AB 32 are still under development. Furthermore, pursuant to SB 97, the Resources Agency may not adopt guidelines to be prepared by OPR for addressing greenhouse gas emissions under CEQA 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.

Accordingly, at this time there is no formal guidance under CEQA and no quantitative standards by which the approval of a commercial or residential project similar to a fire station project must be measured to support or hinder attainment of the State's goals relating to GHG abatement.

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."[14] 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 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 August 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 (carbon dioxide equivalent) 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 August 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

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

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 metric tons proposed in the CAPCOA white paper will be utilized for determining significance on a project level. 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[15], the State of California's Attorney General,[16] and OPR[17] 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 and operational 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.

e. Methodology

Construction. Construction emissions are calculated using the URBEMIS 2007 model, which is based on OFFROAD2007 model outputs. OFFROAD 2007 is an emissions estimation

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

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

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

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 from Fire Station 104 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 Fire Station 104 utilize a projection of trip rate and annual vehicle miles traveled (VMT), which 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 proposed Fire Station 104. Natural gas and electricity usage factors derived from the CEQA Handbook (1993)[18] are used to project fuel consumption rates. Embodied energy rates associated with the fire station'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

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

CCAR GRP, Version 3.1 are implemented in calculating the associated GHGs. Because water conveyance associated with the fire station 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.

f. GHG Emission Impacts

(1) Project-level

Construction. Construction of the proposed fire station is anticipated to occur over approximately ten months, tentatively scheduled to begin in October 2009 and end in July 2010. Emissions were calculated from fossil fuel powered on-site construction equipment and off-site vehicles used to transport 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 8 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 218 tons of CO_2e. Results of this analysis are presented in Table 1. These emissions are less than the 900 metric ton threshold proposed by CAPCOA, which is the most stringent threshold proposed thus far. 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.

The Fire Station 104 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, and therefore will be discussed below.

Operation. The proposed fire station would be 12,000 square feet in size. The fire station would house twelve firefighters at full staffing and a total of 18 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

Table 1

Construction and Operational Greenhouse Gas Emissions

Emission Source	CO_2e (Metric Tons)
Construction (total)	218
2004 Statewide Emissions	479,740,000
Percent	0.000045%
Construction (Amortized)	7
Annual Operations	
On-Road Mobile Sources (vehicles)[a]	56
Electricity	2
Water Conveyance	1
Natural Gas	1
Emergency Generator	28
Fire Trucks	72
Total Annual Operations	159
2004 Statewide Emissions	479,740,000*
Percent	0.000033%
Total (Amortized Construction + Total Annual Operations)	166
Less than 900 tons CO_2e?	**Yes**
2004 Statewide Emissions	479,740,000
Percent	0.000035%

* *Statewide total was derived from the CARB California GHG Inventory, 2007.*

Source: PCR Services Corporation, 2009.

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 is estimated to be a maximum of 159 metric tons CO_2e with implementation of the above listed design features. Including construction emissions, which were amortized over 30 years, the total anticipated project emissions of 166 metric tons (218 metric tons/30 years=7 metric tons; 7 +159 metric tons= 166 metric tons) are substantially lower than the 900 metric ton threshold proposed by CAPCOA, which has been selected for the project. Therefore, construction and operational emissions associated with the fire station are not expected to result in a significant impact at the project level.

(2) Cumulative

The County has proposed delivering Fire Station 104 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 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 project features of Fire Station 104 listed below are consistent with the goals of AB32 and the goals of the County of Los Angeles Green Building Ordinance.

To meet the requirements of the County Green Building Ordinance, Fire Station 104 will incorporate the following features:

- **Energy Conservation**: The fire station will install roofing materials with a high Solar Reflectance Index. The project will also integrate non-roof strategies, such as providing shade to paved areas and using paving materials with a high Solar Reflectance Index. By making 100 percent of surfaces "hi albedo," the proposed project will mitigate the heat island effect around the project site, lower its air conditioning demand, and thus its peak energy usage. The project would reduce its energy usage by at least 21 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 fire station will reduce the use of potable water by 50 percent by incorporating drought resistant or low-water plants and water-efficient irrigation techniques, and will include a smart irrigation controller.

- **Resource Conservation**: At least 75 percent of construction waste (by weight) will be recycled.

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

In addition, Fire Station 104 will reduce its domestic water demand by at least 30 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 fire station is consistent with the following applicable measures:

(3) Energy Efficiency

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

- *Install light colored "cool" roofs and cool pavements.* The fire station will install roofing materials with a high Solar Reflectance Index. The project will integrate non-roof strategies, such as providing shade to paved areas and using paving materials with a high Solar Reflectance Index. 100 percent of surfaces of the proposed project will be "hi albedo."

(4) Water Conservation and Efficiency

- *Create water-efficient landscapes.* Landscaping for the fire station will incorporating drought resistant or low-water plants, water-efficient irrigation techniques, and a smart irrigation controller.

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

- *Design buildings to be water*-efficient. Install water-efficient fixtures and appliances. The fire station will install water-efficient and low-water fixtures, and reduce potable water demand by 30 percent.

(5) Solid Waste Measures

- Reduce and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard). The fire station 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

159 metric tons CO_2e with implementation of the above listed design features. This represents an approximately 0.000033 percent increase over existing state-wide GHG emissions.

It should be noted that implementation of the proposed 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 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 the fire station, 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 fire station 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 fire station will reduce its baseline energy consumption by 21 percent as part of its LEED certification. Thus, because the fire station would result in total GHG emissions less than the 900 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 this 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 and no new impacts related to fire hazards are expected to occur beyond those analyzed in the certified EIR.

Climate change-induced flooding may occur from either a permanent rise in sea levels or temporary or seasonal rise in surface water. The City of Santa Clarita is located approximately 30 miles inland from the nearest sea (Pacific Ocean), at an elevation ranging from approximately 1,200 feet above mean sea level (msl) to 1,900 feet above 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 Santa Clarita area. The Santa Clarita River lies approximately 400 feet south of the proposed fire station site and runs east-west. In addition, two tributaries of the Santa Clarita River, one adjacent to the west of the project site, and one approximately 1500 feet east of the project site flow south, emptying into the river. According to Flood Plain Map #06037C0820F, 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 City 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 fire station from climate change-induced flooding are assumed to be minimal and no new flooding impacts beyond those analyzed in the certified EIR would occur.

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. As such, there would be no new significant impacts and no increase in the severity of impacts regarding water supply compared to those impacts previously identified in the certified EIR for the Original Project. Therefore, the impacts for the fire station project are within the scope of impacts identified in the certified EIR.

4.5 Noise

Original Project. As discussed in detail in Section 4.5, Noise, of the certified EIR, construction of the Riverpark Project would require site preparation, utility infrastructure installation, and roadway and building construction. Each of these construction phases typically involves the use of heavy-duty equipment, including pile drivers associated with the construction of Newhall Ranch Road/Golden Valley Road Bridge, all of which could expose on- and off-site residents, employees, and visitors to temporary noise impacts. Section 11.44.080 of the City of Santa Clarita Noise Ordinance prohibits construction operations to occur within 300 feet of residentially-zoned properties during early morning, evening, and nighttime hours, and all hours on Sundays and major holidays. Nonetheless, even with implementation of the prescribed mitigation measures, project construction noise would intermittently exceed the noise limits adopted for residential and commercial zones in Section 11.44.040 of the Noise Ordinance and the Noise and Land Use Compatibility Guidelines of the City's Noise Element, resulting in temporary, unavoidably significant noise impacts at nearby residences and commercial establishments.

After the Riverpark Project is built out, future traffic on the proposed Newhall Ranch Road, Santa Clarita Parkway, and Golden Valley Road extensions through the site would generate noise that would have a significant impact on project residents located adjacent or near to those roadways because the noise levels would exceed the City's normally acceptable noise standards as defined in its Noise Element and Noise Ordinance. Future traffic on Soledad Canyon Road would also have a significant noise impact on single-family residences within the project that would back to the Santa Clara River. Project generated traffic would not cause increases in future noise levels at existing off-site sensitive receptors within the project study area to exceed 3.0 dB(A); however, since noise levels at many of these receptors already exceed normally acceptable levels, any increase in noise at these locations is considered significant and unavoidable. Mitigation measures to ensure that operation-related noise would not exceed noise standards adopted by the City through its Noise Element and Noise Ordinance were investigated for the project; however, not all of them are deemed feasible because a large number of units would need to be eliminated from the project site and, consequently, the project as revised would fail to meet most of the project's objectives. Therefore, unavoidable on- and off-site significant traffic noise impacts would result from the Riverpark project after buildout.

The Saugus Speedway facility, located to the southwest of the site and approximately 1,200 feet from the nearest proposed residential lot on the site, is a special event facility used for exhibitions, swap meets, and special events, including car racing. Many of these activities occur at night. Noise from these activities may intermittently exceed City noise standards for residential uses at the site and would result in temporary significant and unavoidable noise impacts on project residents, despite implementation of the prescribed mitigation measures.

Modified Project. The nearest residential sensitive receptor (i.e., residential, schools, hospital, etc.) to the Fire Station 104 project site are future multi--family residential use located approximately 100 feet north of the sire station site. The following sections provide descriptions of applicable noise thresholds pertaining to construction and operation of Fire Station 104.

a. Applicable Noise Standards

(1) City of Santa Clarita Noise Ordinance

The City of Santa Clarita Municipal Code (SCMC), Title 11, Chapter 11.44, provides exterior noise limits and specific noise restrictions, exemptions, variances for exterior noise sources. In addition, warning devices on emergency vehicles and horns, burglar and fire alarms, or other warning devices expressly authorized by law are not included in the "Sound-amplifying equipment" per SCMC 11.44.0.020. Therefore, noise from a fire engine siren and public address systems (use for emergency announcement) are not limited by the City's Noise Limits as it is necessary for the protection of public safety. The applicable requirements to the Fire Station 104 project are discussed below.

(a) Section 11.44.040 – Noise Limits

City of Santa Clarita exterior noise limits for the various categories of land uses are provided in Table 2 on page 39. In accordance with the City noise limits, *"It shall be unlawful for any person within the City to produce or cause or allow to be produced noise which is received on property occupied by another person within the designed region, in excess of the levels indicated in Table 2."* Furthermore, the standard states that *"At the boundary line between a resident property and a commercial and manufacturing property, the noise level of the quieter zone shall be used."*

(b) Section 11.44.070 Special Noise Sources – Machinery, Fans and Other Mechanical Devices

"Any noise level from the use or operation of any machinery, equipment, pump, fan, air conditioning apparatus, refrigerating equipment, motor vehicle, or other mechanical or electrical device, or in repairing or rebuilding any motor vehicle, which exceeds the noise limits as set forth in Table 2 at any property line, or, if a condominium or rental units, within any condominium unit or rental within the complex, shall be a violation."

Table 2

City of Santa Clarita Noise Limits

Region	Time	Exterior Sound Level, dB
Residential	Day	65
Residential	Night	55
Commercial and Manufacturing	Day	80
Commercial and Manufacturing	Night	70

[a] *Corrections to Noise Limits. The numerical limits given here shall be adjusted by the following corrections, where the following noise conditions exist:*

Noise Condition	*Correction (in dB)*
1. Repetitive impulsive noise	*-5*
2. Steady whine, screech or hum	*-5*

The following corrections apply to day only:

1. Noise occurring more than 5 but less than 15 minutes per hour	*+5*
2. Noise occurring more than 1 but less than 5 minutes per hour	*+10*
3. Noise occurring less than 1 minute per hour	*+20*

Source: SCMC, Section 11.44.040, Noise Limits.

(c) Section 11.44.080 Special Noise Sources – Construction and Building

"No person shall engage in any construction work which requires a building permit from the City on sites within 300 feet of a residentially zone property except between the hours of 7 A.M. to 7 P.M., Monday through Friday, and 8 A.M. to 6 P.M. on Saturday. Further, no work shall be performed on the following public holidays: New Year's Day, Independence Day, Thanksgiving, Christmas, Memorial Day and Labor Day."

(2) County of Los Angeles Noise Ordinance

Chapter 12.08 of the County of Los Angeles Municipal Code (LACMC) provides exemptions for noise sources within the unincorporated areas within the county. Specifically, 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.

b. Significance Thresholds

The following thresholds of significance were developed to determine noise impacts during construction and operation of the fire station.

(1) Construction

Currently, the City of Santa Clarita Noise Ordinance does not provide quantitative standards or significance thresholds for assessing construction noise impacts. However, the City's Noise Ordinance specifies hour limits for construction activities within 300 feet of a residential zone. Therefore, as a referenced threshold, the noise limits shown in Table 2 have been used to evaluate noise impacts from construction activities. Noise during construction would have a significant impact if:

- Construction activities would exceed 65 dBA at single-family residential uses between the hours of 7:00 A.M. and 7:00 P.M. Monday through Friday, and 8 A.M. to 6 P.M. on Saturday.

(2) Operation

Project related noise would have a significant impact if:

- Project on-site stationary sources exceed 55 dBA during nighttime and 65 dBA during the daytime at any residential use.

c. Construction Impacts

Specific to the proposed Fire Station 104 site, 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. It is anticipated that approximately 60 cubic yards of dirt may be hauled from the site as a result of the fine grading/earthwork needed to balance the site. As such, the following analyzes construction activities during the grading period of the Fire Station 104 site to assess worse-case noise impacts.

Typical noise-generating equipment that would likely be used during grading/excavation 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 is anticipated to result in a noise level of

89 dBA at a 50 feet distance during fine grading phase.[19] 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. No noise sensitive receptors are currently present within 1000 feet of the project site that may be affected by the proposed project. Therefore, construction related noise impacts would be less than significant at the existing noise sensitive receptors. However, the nearest future residential receptor is located approximately 100 feet north of the fire station project site. While it is anticipated that construction of the fire station would occur before construction of the multi-family residences to the north, it is conservatively assumed that these residences would be occupied at the time of construction of the fire station as a worse-case scenario. Based on this distance, it is estimated that noise levels at the nearest residence during construction of the building would be up to approximately 83 dBA, which would exceed City's noise limit of 65 dBA, during daytime hours. Thus, it is anticipated that noise generated during construction of the Fire Station 104 project would result in a potentially significant noise impact at the nearest future residential use.

As stated above for the Original Project, the certified EIR concluded that construction noise activities would be potentially significant. The type of construction noise considered in the certified EIR encompassed noise from projects within the boundaries of the Riverpark Project including public services projects like the Fire Station 104 project. The mitigation measures prescribed would reduce such impacts, however, even with implementation of the prescribed mitigation measures, construction-related noise levels still could exceed 65 dBA City's Noise Limits for residential uses within Riverpark during daytime hours as noted in the certified EIR. Accordingly, the certified EIR concludes that construction-related noise impacts would be unavoidably significant.

Construction of Fire Station 104 would implement the applicable noise reducing mitigation measures identified in the certified EIR such as shutting off idling equipment, notifying residents in advance of construction work, installing temporary acoustic barriers around stationary construction noise sources, and locating construction staging areas on site to maximize the distance between staging areas and occupied on- and off-site residences (refer to Mitigation Measures 4.5-16 to 4.5-17). The decrease in construction noise with mitigation would be approximately five (5) dBA. Thus, construction noise levels would still temporarily exceed the 65 dBA threshold during daytime hours. As described above, this impact is consistent with the findings in the certified EIR for unavoidably significant impacts related to construction noise to residential uses. The addition of the this potential impact does not represent a new impact and no substantial increase in the severity of impacts compared to those impacts previously analyzed in the certified EIR would occur in consideration of the overall size

[19] *L.A. CEQA Thresholds Guide, 2005, Exhibit I.1-2.*

and scope of the Riverpark Project. As such, impacts associated with construction of the fire station during the daytime would be within the scope of impacts identified in the certified EIR.

There would be no construction related noise impact at the future residential uses during nighttime period since exterior noise generating construction activities would be limited to Monday through Friday from 7:00 A.M. to 7:00 P.M., and from 8:00 A.M. to 6:00 P.M. on Saturdays.

d. Operational Impacts

(1) Traffic

Operation of the Modified Project with Fire Station 104 would result in an increase of approximately 35 daily trips from emergency (up to five responses per day) and non-emergency responses including staff and visitor trips (less than 30 trips per day). The increase in traffic with the Modified Project represents less than a one-percent increase when compared with the Original Project. Thus, the incremental increase in traffic related noise impacts under the Modified Project would be less than 0.1 dBA (a negligible increase) and would not result in an audible noise increase along roadways. The unavoidable on- and off-site significant traffic noise impacts identified in the certified EIR would remain as concluded with implementation of the Modified Project with Fire Station 104.

(2) 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, and an emergency power generator (maximum power of 230 KW). The following provides a discussion of impacts associated with operational equipment at the fire station.

(a) 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. Regardless, the project's mechanical equipment would comply with the City's Noise Ordinance, which establishes maximum permitted noise levels from mechanical equipment. Project compliance with the City Noise Ordinance would ensure that noise levels from building mechanical equipment would not exceed thresholds of significance and impacts at the nearest residential receptors would be less than significant.

(b) 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, consistent with the Fire District policies, 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. As discussed above, the use of the PA system for emergency basis is excluded from the City's and County's Noise Ordinances. Therefore, with compliance to the Fire District policies regarding use of the PA system and the exemption from the City's noise ordinance, noise impacts from PA system are concluded to be less than significant.

(c) Generator

The generator would be located at the northern boundary of Fire Station 104 site, which would be enclosed within its own 1-story structure and shielded from noise sensitive receptors by a 6-foot high masonry wall along the northern boundary of the fire station 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 (100 feet north of the site) would be 62 dBA, which is below the allowable 65 dBA City's Noise Limits for residential uses during daytime hours. Therefore, the emergency generator noise level would not pose a significant noise impact.

(d) Emergency Equipment

As part of the operation of the fire station and in compliance with Fire District policies, 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, ect.) are present. These practices would be implemented when the station is in operation. Fire Station 104 is anticipated to receive a maximum of approximately five emergency calls per day. Sirens would be used as necessary to warn pedestrians and motorists. 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 (100 feet to the north) may experience noise levels up to 103 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 City and County noise ordinances, which

were developed to protect the public. Further, it is acknowledged that siren noise from the existing temporary Fire Station 104 exists within the project vicinity during emergency response calls. When the new Fire Station 104 becomes operational, the emergency calls responded to by the new Fire Station 104 would replace those formerly received by the temporary Fire Station 104. This fact acknowledges that siren noise from the new Fire Station 104 would not represent a new noise impact in the project vicinity. With compliance to the Fire District policies regarding use of sirens and the exemption of emergency sirens from the City's and County's noise ordinances, noise impacts from siren noise are concluded to be less than significant. Overall, no new impacts and no increase in the severity of impacts previously analyzed in the certified EIR would occur with development of Fire Station 104 in consideration of the overall size and scope of the Riverpark Project. As such, siren noise impacts associated with operation of the fire station would be within the scope of impacts identified in the certified EIR.

In summary, noise levels associated with operations under the Modified Project with Fire Station 104 are not expected to exceed significance thresholds and would not change the overall characteristics of the Original Project. No changes to noise impact conclusions in the certified EIR would occur with implementation of Fire Station 104. Further, no new impacts and no increase in the severity of impacts previously analyzed in the certified EIR would occur with development of Fire Station 104. Thus, impacts associated with operation of the Modified Project with Fire Station 104 are within the scope of impacts evaluated in the certified EIR.

4.6 Land Use

Original Project. As discussed in detail in Section 4.7, Land Use, of the certified EIR, the Riverpark Project would not result in land use compatibility conflicts with neighboring uses. The Riverpark Project would generally be consistent with relevant goals and policies described in the City Land Use Element and the Unified Development Code with approval of the requested discretionary approvals. The certified EIR concluded that less than significant impacts regarding Land Use would occur with implementation of the Riverpark Project and no mitigation measures were determined necessary.

Modified Project. Fire Station 104 would be developed on an already rough graded area. Thus, the development of Fire Station 104 would not alter any land-use patterns previously identified and addressed in the certified EIR. Therefore, the Modified Project would not disrupt, divide or isolate any existing neighborhoods, communities, or land uses.

The certified EIR did not identify any use for the Fire Station 104 site. If anything, a portion of the site is depicted as slope area for the adjacent multi-family units. A fire station would be considered a Public Service use. The General Plan designation for the site is Residential Moderate (RM). The zoning designation for the site is Residential Medium Planned Development (RMDP). Public services, such as a fire station, are allowed in the RMDP District

subject to a Minor Use Permit. If the City determined that a fire station is consistent with the RMDP District a finding of consistency would be made and no impacts to Land Use would occur, similar to the certified EIR.

Overall, land use impacts of the Modified Project with Fire Station 104 would be less than significant and no mitigation measures are required for Fire Station 104. No new impacts or a substantial increase in the severity of impacts analyzed in the certified EIR would occur with development of Fire Station 104. Therefore, land use impacts would be within the scope of impact identified in the certified EIR.

4.7 Hazards and Hazardous Materials

Original Project. Section 4.15, Human Made Hazards, of the certified EIR evaluated past oil production activities, agricultural activities, previously abandoned underground storage tanks, electrical transmission lines in the project vicinity. As concluded in the certified EIR, there are no recognized environmental conditions that would impact the Riverpark Project site. As such, less than significant impacts regarding human made hazards would occur with implementation of the Riverpark Project.

Modified Project. As described in the certified EIR, an environmental records review of Environmental Data Resources (EDR) database was conducted to identify the location of reported potential hazardous waste sites or landfills within the project site and surrounding area. The proposed Fire Station 104 site was not identified on the EDR database report as containing a hazardous materials site. Construction of Fire Station 104 would involve the use of potentially hazardous materials such as vehicle fuels, oils, paints, and transmission fluids. Operation of Fire Station 104 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.). In addition, the fire station 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. All hazardous materials used during construction and operation would be contained, stored, and used in accordance with applicable 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 levels. Overall, similar to the Original Project, impacts regarding hazardous materials associated with construction and operation of the fire station would be less than significant and no mitigation measures are required for Fire Station 104. No new impacts and no substantial increase in the severity of impacts previously analyzed in the certified EIR would occur with development of Fire Station 104. Therefore, hazards and hazardous materials impacts would be within the scope of impacts identified in the certified EIR.

4.8 Visual Resources

Original Project. Views of existing open space areas view corridors near the Riverpark site would be altered due to development of proposed residential and commercial uses. The Riverpark Project would result in grading of ridgelines classified by the City as secondary ridgelines, bank stabilization and conversion of the site from vacant land to a man-made urban environment. The Riverpark Project would be most visible from Bouquet Canyon Road, Soledad Canyon Road, the extension of Newhall Ranch Road, the proposed and future extension of Santa Clarita Parkway and the existing residential, commercial, and business parkland uses to the west, south and southeast of the Riverpark Project site. Incorporation of recommended mitigation measures would reduce visual resources impacts caused by converting the Riverpark Project site from an undeveloped to a developed urban area, but not to a level less than significant level. Thus, visual resources impacts are concluded to be significant and unavoidable.

Modified Project. Fire Station 104 would be visible from vehicles and pedestrians along Newhall Ranch Road, Golden Valley Road and some residents of the multi-family units located adjacent to the fire station site. The fire station site has been rough graded as a result of construction activities for Newhall Ranch Road and Golden Valley Road.

The fire station structure would have an elevation of no greater than 28 feet. The adjacent multi-family residential units would be located on a pad that is 20 feet higher than the fire station site. Consequently the fire station's roof lines would be visible to residents at the multi-family units. Three, ten (10) foot high antennas would extend 5 +/- feet beyond the high point of the roof, which would be visible. Also located on the Fire Station 104 site would be a Hose Tower, which is a 30-foot tall electric powered hose drying rack.

Given the 28 foot height of the fire station structure and the antennas located on the roof of the station, the total height of the antennas would be 33 feet. Consequently thirteen +/- feet of the antennas would extend beyond the pad of the nearby residential units. The antennas are slender in profile and would not provide a solid blockage of any viewshed. Additionally, building heights of the nearby multi-family units are 34-feet in height and are taller than the height of the fire station roof lines and antennas.

Additionally, the hose drying rack would be visible for 10 feet above the height of the residential pad. While the hose drying rack is a solid structure (12' long x 2' wide), it would be visible for only a small portion of a pad site that is approximately 260 feet in length.

A six-foot high wall would enclose the Fire Station 104 site along the west, east and south property lines, except for driveway access and egress. Therefore, views into the Fire Station 104 site from Golden Valley Road and Newhall Ranch Road would be limited. Fire Station 104 would have security lighting on the site. However, all lighting would be shielded

downward in accordance with City policy to eliminate light traveling outside of the site boundaries. Nonetheless, Fire Station 104 would implement Mitigation Measure 4.16-2 in the certified EIR that requires "All parking lot pole lights and streetlights shall be fully hooded and back shielded to reduce the light "spillage" and glare."

The certified EIR concluded that construction of the Riverpark Project would result in significant and unavoidable visual resource impacts. The construction of the fire station is one additional structure on a site that would part of an overall development (Riverpark) that would ultimately construct approximately 1,100 dwelling units and 16,000 square feet of commercial uses. From an overall visual resources perspective, Fire Station 104 would not significantly add to the visual degradation already analyzed as a part of the certified EIR. As such, there would be no new significant impacts and no increase in the severity of impacts regarding visual resources generated by the fire station compared to those impacts previously identified in the certified EIR for the Original Project. No new mitigation measures are required for Fire Station 104 and none of the mitigation measures prescribed in the certified EIR, with the exception of Mitigation Measure 4.16-2, described above, are applicable to Fire Station 104. Therefore, the impacts for the fire station are within the scope of impacts identified in the certified EIR.

5. CONCLUSION

As demonstrated by the comparative analysis above, the proposed modification to the original Riverpark Project to include Fire Station 104 would not result in any new significant impacts an no substantial increase in the severity of any previously identified impacts in the certified EIR would occur. Rather, all impacts are within the scope of impacts identified within the certified EIR.

6. LIST OF PREPARERS

CEQA Consultant

PCR Services Corporation
One Venture, Suite 150
Irvine, California 92618

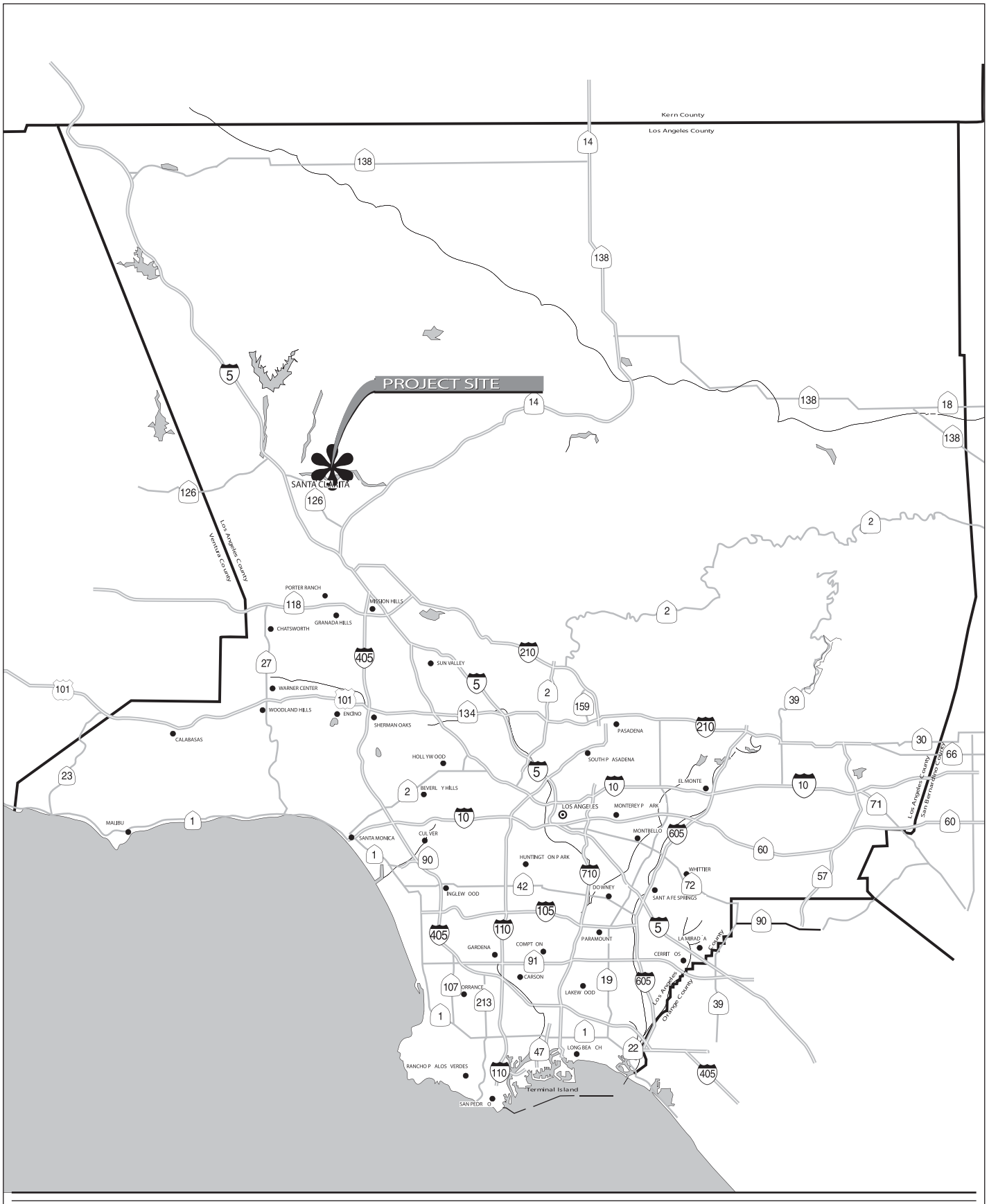
- Mike Harden, Principal Planner
- Heidi Rous, Principal/Director of Air Quality
- Amy Kidd, Environmental Analyst
- Kyle Kim, Senior Acoustic Consultant

ATTACHMENT A
FIGURES

Figure 1 – Regional Location Map

Figure 2 – Local Vicinity Map and Aerial Photograph

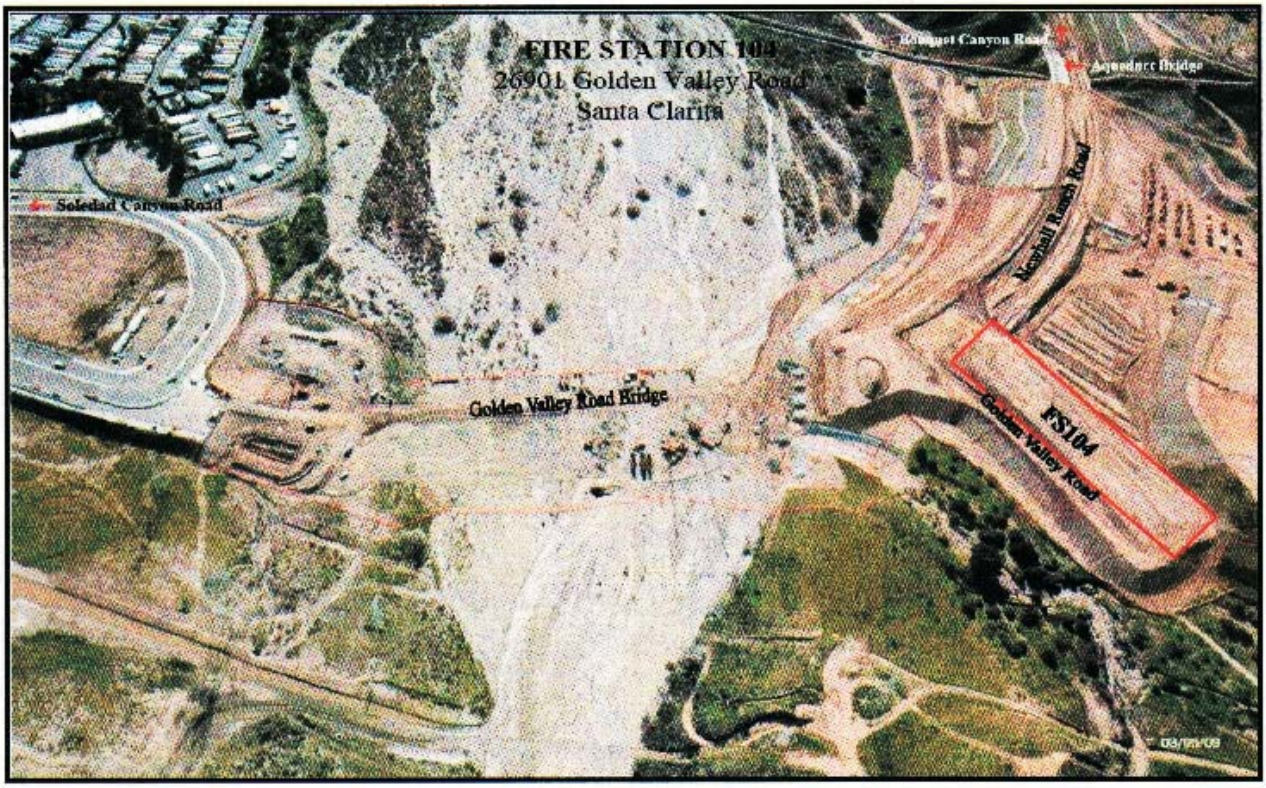
Figure 3 – Site Plan

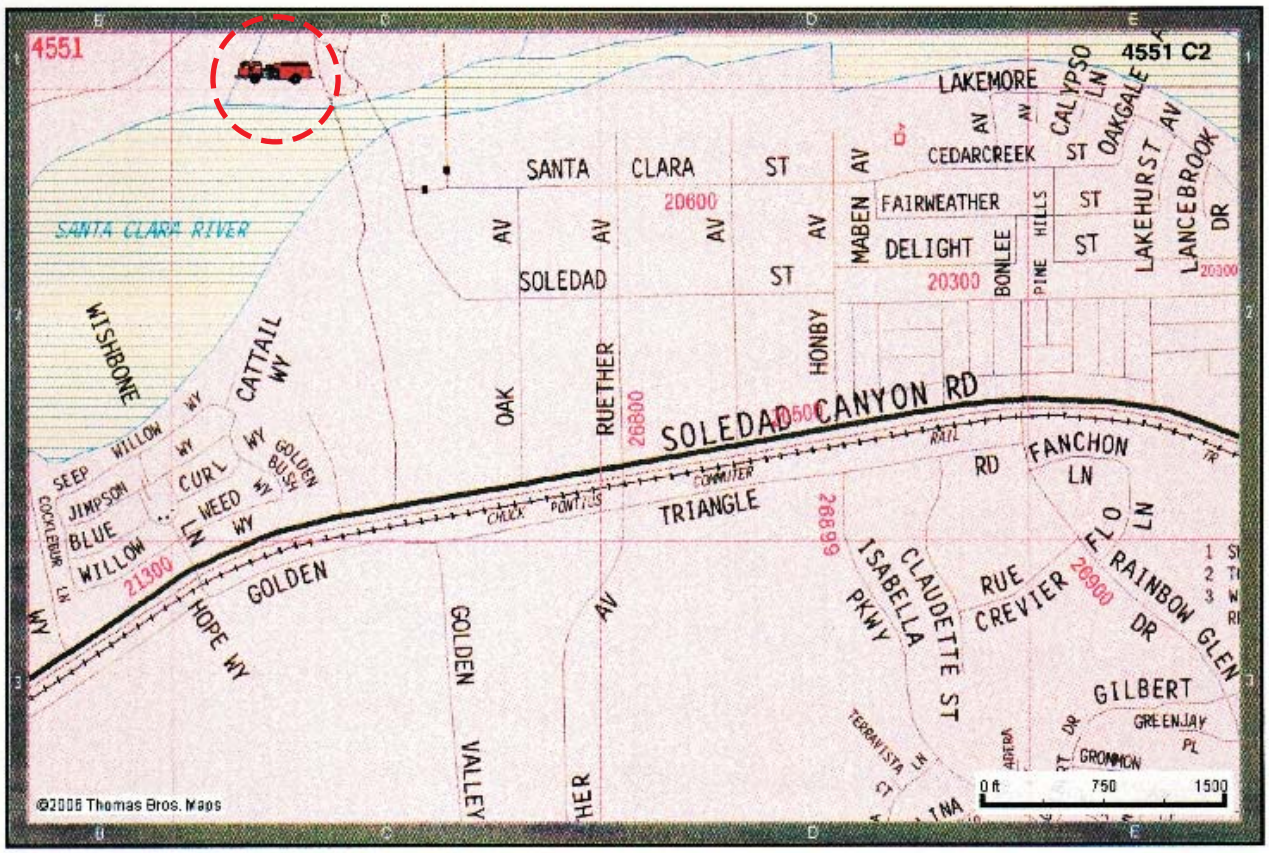


PCR

Figure 1
Regional Location Map

Source: River Park DEIR, February 2004.

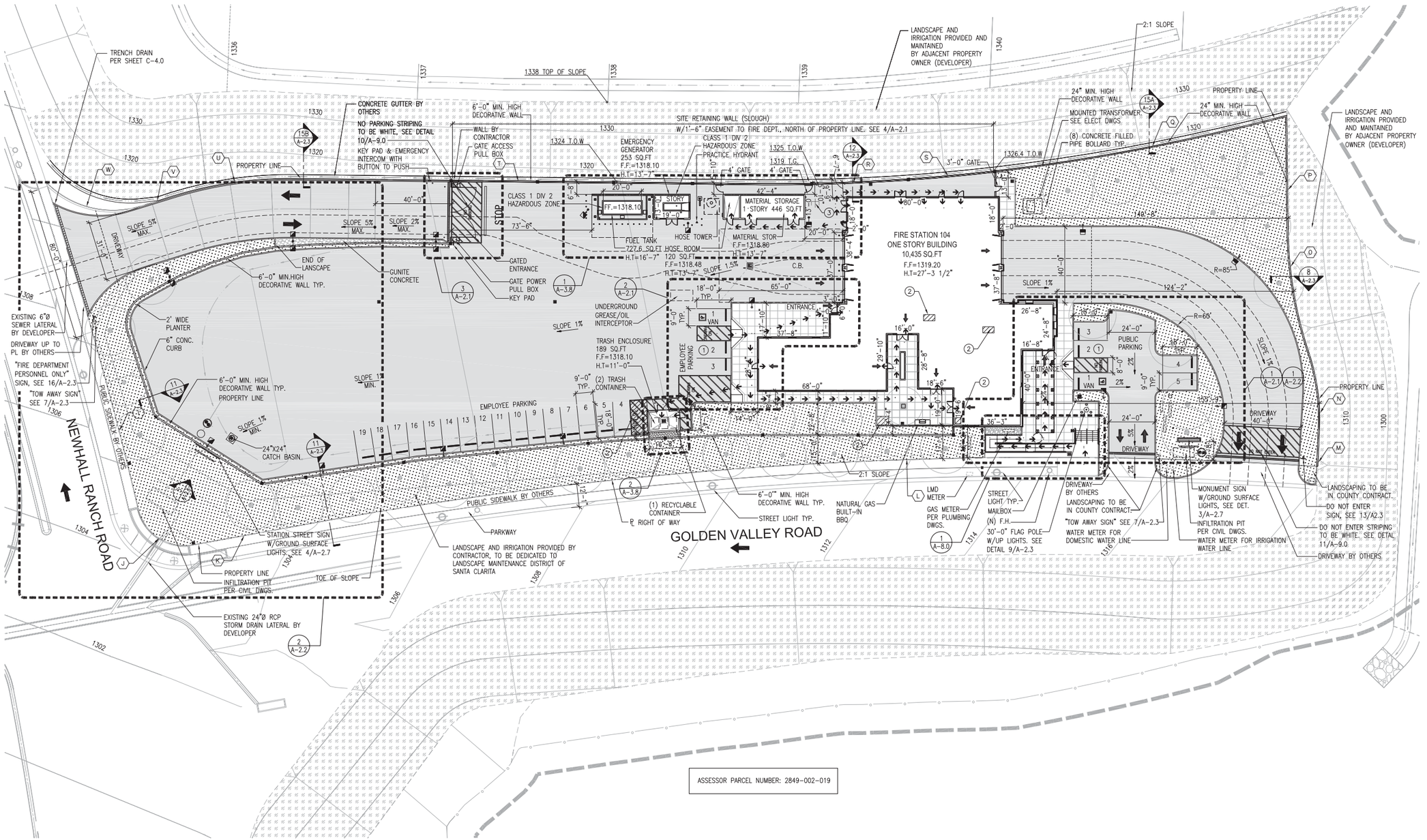




PCR

Figure 2
Local Vicinity Map and Aerial Photograph

Source: Los Angeles County Department of Public Works, 2009.



ACCESSIBILITY PARKING REQUIREMENTS		
STANDARD STALLS (EMPLOYEE PARKING)	=	18
ACCESSIBLE/VAN STALLS REQUIRED (1 OF 25)	=	1
TOTAL STALLS	=	19
STANDARD STALLS (PUBLIC PARKING)	=	4
ACCESSIBLE/VAN STALLS REQUIRED (1 OF 25)	=	1
TOTAL STALLS	=	5

NOTE:
-FOR ACTUAL GRADES SEE SHEET C-3.0
-FOR UTILITIES, ELECTRIC, WATER, STORM DRAIN AND SEWER, SEE CIVIL DWG. C-4.0
-FOR BUILDING CODE ANALYSIS, SEE DWG. T0.0

SITE COVERAGE	AREA (SQ.FT)	(%)
MAIN BUILDING AREA	10,968.0	10.6
MISCELLANEOUS BLDGS AREA	2,352.0	1.5
PARKING AREA	4,176.0	4.2
LANDSCAPE AREA	11,962.0	13.9
LANDSCAPE AREA BY OTHERS	11,218.0	13.9
HARDSCAPE AND PAVED AREA	62,125.0	13.9
TOTAL	102,801	100

SITE AREA: 2.36 ACRES = 102,801 SQ.FT
BUILDING RATIO = 24%
-BUILDING AREAS INCLUDE EXTERIOR WALLS.

LEGEND

- DECORATIVE HARDSCAPE AREA
- LANDSCAPED AREA
- DESCOMPOSED GRANITE
- CONCRETE PAVED AREA
- SLOPE AND LANDSCAPE. (N.I.C.)
- SLOPE AND LANDSCAPE AREA BY CONTRACTOR TO BE DEDICATED TO THE CITY (L.M.D.)
- GUNITE CONCRETE
- YARD LIGHT, POLE MOUNTED 20'-0" A.F.F. SEE DETAIL 10/A-2.3 & 5/A-2.7 & ELECTRICAL DWGS. FOR MORE INFO.
- CATCH BASIN, SEE CIVIL DWGS.
- TRENCH DRAIN, SEE CIVIL DWGS.
- PROPERTY LINE DESCRIPTION PER SHEET C-2.0
- TREE LOCATIONS. SEE LANSCAPE DRAWINGS FOR MORE INFORMATION
- STREET LIGHTS
- TRAFFIC SIGNALS
- FIRE HYDRANTS
- (1) CARPOOL ONLY
- (2) AREA FOR STORAGE OF RECYCLABLE
- (3) BIKE RACK ONE. SEE DETAIL 3/A-2.3 FOR MORE INFORMATION

PCR

0 45 90 Feet

Source: Martinez Architects, Inc., 2009.

Figure 3
Site Plan

ATTACHMENT B
AIR QUALITY DATA

PROPOSED FIRE STATION 104

EIR Addendum
Appendix B

Air Quality Assessment Files

Provided by PCR Services Corporation

August 2009

Appendix B-1

- 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 B-2

- Construction Emissions Inventory
    - URBEMIS2007 Output Files

LAFD 104
Urbemis Construction Emissions

Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Mitigated Emissions (Pounds/Day)

File Name: V:\AQNOISE DIVISION\Active Projects\LACOFD\104\LACOFD 104.urb924

Project Name: Firestation 104

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

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Mitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total
Time Slice 2/1/2010-2/26/2010 Active	2.69	24.18	10.91	**0.01**	6.70	1.18	7.88	1.40	1.09	2.49
Mass Grading 02/01/2010-	2.69	24.18	10.91	0.01	6.70	1.18	7.88	1.40	1.09	2.49
Mass Grading Dust	0.00	0.00	0.00	0.00	6.67	0.00	6.67	1.39	0.00	1.39
Mass Grading Off Road Diesel	2.33	19.99	8.16	0.00	0.00	1.01	1.01	0.00	0.93	0.93
Mass Grading On Road Diesel	0.33	4.12	1.66	0.01	0.02	0.17	0.19	0.01	0.16	0.17
Mass Grading Worker Trips	0.03	0.06	1.09	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Time Slice 3/1/2010-3/31/2010 Active	0.80	5.51	4.01	0.00	0.01	0.41	0.42	0.00	0.38	0.38
Fine Grading 03/01/2010-	0.80	5.51	4.01	0.00	0.01	0.41	0.42	0.00	0.38	0.38
Fine Grading Dust	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	0.68	4.26	2.71	0.00	0.00	0.36	0.36	0.00	0.33	0.33
Fine Grading On Road Diesel	0.10	1.21	0.49	0.00	0.01	0.05	0.06	0.00	0.05	0.05
Fine Grading Worker Trips	0.03	0.05	0.82	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Time Slice 4/1/2010-10/29/2010 Active	2.69	20.62	10.29	0.00	0.00	1.31	1.31	0.00	1.20	1.20
Building 04/01/2010-11/30/2010	2.69	20.62	10.29	0.00	0.00	1.31	1.31	0.00	1.20	1.20
Building Off Road Diesel	2.68	20.59	10.21	0.00	0.00	1.31	1.31	0.00	1.20	1.20
Building Vendor Trips	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Time Slice 11/1/2010-11/30/2010	**4.57**	**28.13**	**14.96**	0.00	0.00	**1.96**	1.97	0.00	**1.80**	1.81
Asphalt 11/01/2010-11/30/2010	1.28	7.51	4.64	0.00	0.00	0.65	0.66	0.00	0.60	0.60
Paving Off-Gas	0.03	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
Paving On Road Diesel	0.01	0.12	0.05	0.00	0.00	0.01	0.01	0.00	0.00	0.01
Paving Worker Trips	0.02	0.03	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building 04/01/2010-11/30/2010	2.69	20.62	10.29	0.00	0.00	1.31	1.31	0.00	1.20	1.20
Building Off Road Diesel	2.68	20.59	10.21	0.00	0.00	1.31	1.31	0.00	1.20	1.20
Building Vendor Trips	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating 11/01/2010-11/30/2010	0.60	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	0.60	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

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 2/1/2010 - 2/28/2010 - 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%

Phase Assumptions

Phase: Fine Grading 3/1/2010 - 3/31/2010 - 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): 38.04
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 2/1/2010 - 2/28/2010 - Default Mass Site Grading/Excavation Description
Total Acres Disturbed: 2.35
Maximum Daily Acreage Disturbed: 0.59
Fugitive Dust Level of Detail: Default
20 lbs per acre-day
On Road Truck Travel (VMT): 129.75
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
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 11/1/2010 - 11/30/2010 - Default Paving Description
Acres to be Paved: 0.24
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 4/1/2010 - 11/30/2010 - 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 11/1/2010 - 11/30/2010 - 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

Page: 1

8/5/2009 01:09:00 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: V:\AQNOISE DIVISION\Active Projects\LACOFD\104\LACOFD 104.urb924

Project Name: Firestation 104

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

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	CO2
2009	59.70
Mass Grading 10/01/2009-10/31/2009	29.50
Mass Grading Dust	0.00
Mass Grading Off Road Diesel	22.63
Mass Grading On Road Diesel	5.50
Mass Grading Worker Trips	1.37
Fine Grading 11/01/2009-11/30/2009	7.08
Fine Grading Dust	0.00
Fine Grading Off Road Diesel	4.33
Fine Grading On Road Diesel	1.77
Fine Grading Worker Trips	0.98
Building 12/01/2009-07/31/2010	23.12
Building Off Road Diesel	22.98
Building Vendor Trips	0.05
Building Worker Trips	0.09
2010	158.81
Building 12/01/2009-07/31/2010	151.81
Building Off Road Diesel	150.89
Building Vendor Trips	0.35
Building Worker Trips	0.56
Asphalt 07/01/2010-07/31/2010	6.96
Paving Off-Gas	0.00
Paving Off Road Diesel	6.09
Paving On Road Diesel	0.18
Paving Worker Trips	0.68
Coating 07/01/2010-07/31/2010	0.04
Architectural Coating	0.00
Coating Worker Trips	0.04

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%

Appendix B-3

- Operation Emissions Inventory
  - Regional Operation Emissions
    - Regional Emission Summary Sheets
    - Stationary Emission Summary Sheets
    - Fire Truck Emissions
    - URBEMIS2007 Output Files
    - TANKS Output

LACOFD- Fire Station 104

Regional Operations Emissions Calculations

Fire Station 104

Regional Emission Calculations (lbs/day)

		VOC	NOx	CO	SO2	PM10	PM2.5
Project							
	Mobile (non-fire trucks)	0	0	3	0	0	0
	Area	0	0	0	0	0	0
	Stationary	0	0	0	0	0	0
	Fire Trucks	1	5	2	0	0	0
	Total Project	**1.2**	**4.9**	**5.1**	**0.01**	**0.6**	**0.25**
	SCAQMD Significance Threshold	55	55	550	150	150	55
	Difference	**(54)**	**(50)**	**(545)**	**(150)**	**(149)**	**(55)**
	Significant?	**No**	**No**	**No**	**No**	**No**	**No**

LACOFD- Fire Station 104

Electricity Usage

Electricity Usage

Land Use	1,000 Sqft	Electricity Usage Rate [a] (kWh\sq.ft\yr)	Total Electricity Usage (KWh\year)	(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	1.0	5,627	5,627	0.015	0.003	0.000	0.018	0.001	0.002	12.402	0.000	0.000
Total Project			**5,627**	**0.015**	**0.003**	**0.00**	**0.02**	**0.00**	**0.00**	**12.40**	**0.00**	**0.00**
Net Emissions From Electricity Usage					**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**12.40**	**0.00**	**0.00**

Summary of Stationary Emissions

	CO	ROC	NOx	PM10	SOx	PM2.5
TANK	0.00	0.24	0.00	0.00	0.00	0.00
Total Project Emissions (lbs/day)	0.00	0.00	0.02	0.00	0.00	0.00
Total Net Emissions (lbs/day)	**0.00**	**0.24**	**0.02**	**0.00**	**0.00**	**0.00**

[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.

Operational On-Road Fire Station Equipment Emissions

Permanent Fire Station Apparatus

Scenario Year: 2010 -- Model Years: 1965 to 2010	
HHDT-DSL (grams/mile)	
VOC	3.82
CO	12.86
NO_X	24.92
SO_2	0.02
PM_{10}	0.97
$PM_{2.5}$	0.90

Scenario Year: 2010 -- Model Years: 1965 to 2010	
HHDT-DSL (grams/idling hour)	
VOC	3.8215
CO	12.86
NO_X	24.92
SO_2	0.02
PM_{10}	0.97
$PM_{2.5}$	0.90

Worst-Case Day				
Classification	**# Round Trips**	**Miles/Trip**	**Miles/Day**	**Hours Idling**
HHDV	8	10	80	2

Pollutant	**Emissions**	
	grams/day	**lbs/day**
VOC	313	0.69
CO	1,054	2.32
NO_X	2,043	4.50
SO_2	2	0.00
PM_{10}	80	0.18
$PM_{2.5}$	73	0.16

Assumptions:
4 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

LAFD 104
EMFAC- Truck Emissions

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

LAFD 104
EMFAC- Truck Emissions

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

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL	
0	0	0	0	46.283	0	0	46.283	
5	0	0	0	29.103	0	0	29.103	
10	0	0	0	20.692	0	0	20.692	
15	0	0	0	14.861	0	0	14.861	
20	0	0	0	11.176	0	0	11.176	
25	0	0	0	9.253	0	0	9.253	
30	0	0	0	7.792	0	0	7.792	
35	0	0	0	6.698	0	0	6.698	
40	0	0	0	5.919	0	0	5.919	
45	0	0	0	5.431	0	0	5.431	
50	0	0	0	5.226	0	0	5.226	
55	0	0	0	5.314	0	0	5.314	
60	0	0	0	5.725	0	0	5.725	
65	0	0	0	6.517	0	0	6.517	
							12.85643	grams/mile
								grams/idling hour

Pollutant Name: Oxides of Nitrogen Temperature: 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL	
0	0	0	0	105.673	0	0	105.673	
5	0	0	0	39.413	0	0	39.413	
10	0	0	0	27.282	0	0	27.282	
15	0	0	0	19.836	0	0	19.836	
20	0	0	0	17.033	0	0	17.033	
25	0	0	0	16.327	0	0	16.327	
30	0	0	0	15.771	0	0	15.771	
35	0	0	0	15.367	0	0	15.367	
40	0	0	0	15.113	0	0	15.113	
45	0	0	0	15.009	0	0	15.009	
50	0	0	0	15.057	0	0	15.057	
55	0	0	0	15.255	0	0	15.255	
60	0	0	0	15.604	0	0	15.604	
65	0	0	0	16.103	0	0	16.103	
							24.91736	grams/mile
								grams/idling hour

LAFD 104
EMFAC- Truck Emissions

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

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL	
0	0	0	0	0.061	0	0	0.061	
5	0	0	0	0.036	0	0	0.036	
10	0	0	0	0.03	0	0	0.03	
15	0	0	0	0.024	0	0	0.024	
20	0	0	0	0.02	0	0	0.02	
25	0	0	0	0.019	0	0	0.019	
30	0	0	0	0.018	0	0	0.018	
35	0	0	0	0.017	0	0	0.017	
40	0	0	0	0.016	0	0	0.016	
45	0	0	0	0.016	0	0	0.016	
50	0	0	0	0.016	0	0	0.016	
55	0	0	0	0.015	0	0	0.015	
60	0	0	0	0.016	0	0	0.016	
65	0	0	0	0.016	0	0	0.016	
							0.022857	grams/mile
								grams/idling hour

Pollutant Name: PM10 Temperature: 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL	
0	0	0	0	1.718	0	0	1.718	
5	0	0	0	2.646	0	0	2.646	
10	0	0	0	1.795	0	0	1.795	
15	0	0	0	1.173	0	0	1.173	
20	0	0	0	0.818	0	0	0.818	
25	0	0	0	0.686	0	0	0.686	
30	0	0	0	0.588	0	0	0.588	
35	0	0	0	0.524	0	0	0.524	
40	0	0	0	0.493	0	0	0.493	
45	0	0	0	0.496	0	0	0.496	
50	0	0	0	0.534	0	0	0.534	
55	0	0	0	0.604	0	0	0.604	
60	0	0	0	0.709	0	0	0.709	
65	0	0	0	0.848	0	0	0.848	
							0.973714	grams/mile
								grams/idling hour

LAFD 104
EMFAC- Truck Emissions

Pollutant Name: PM2.5 Temperature: 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL	
0	0	0	0	1.58	0	0	1.58	
5	0	0	0	2.434	0	0	2.434	
10	0	0	0	1.651	0	0	1.651	
15	0	0	0	1.08	0	0	1.08	
20	0	0	0	0.752	0	0	0.752	
25	0	0	0	0.631	0	0	0.631	
30	0	0	0	0.541	0	0	0.541	
35	0	0	0	0.482	0	0	0.482	
40	0	0	0	0.454	0	0	0.454	
45	0	0	0	0.457	0	0	0.457	
50	0	0	0	0.491	0	0	0.491	
55	0	0	0	0.556	0	0	0.556	
60	0	0	0	0.652	0	0	0.652	
65	0	0	0	0.78	0	0	0.78	
							0.895786	grams/mile
								grams/idling hour

Pollutant Name: Total Organic Gases Temperature: 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL	
0	0	0	0	13.624	0	0	13.624	
5	0	0	0	14.519	0	0	14.519	
10	0	0	0	8.184	0	0	8.184	
15	0	0	0	4.043	0	0	4.043	
20	0	0	0	2.216	0	0	2.216	
25	0	0	0	1.769	0	0	1.769	
30	0	0	0	1.425	0	0	1.425	
35	0	0	0	1.174	0	0	1.174	
40	0	0	0	1.011	0	0	1.011	
45	0	0	0	0.933	0	0	0.933	
50	0	0	0	0.939	0	0	0.939	
55	0	0	0	1.026	0	0	1.026	
60	0	0	0	1.194	0	0	1.194	
65	0	0	0	1.444	0	0	1.444	
							3.8215	grams/mile
								grams/idling hour

LAFD 104
Urbemis Operational Emissions
Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: V:\AQNOISE DIVISION\Active Projects\LACOFD\104\LACOFD 104.urb924

Project Name: Firestation 104

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
Natural Gas	0.00	0.02	0.01	0.00	0.00	0.00
Hearth						
Landscape	0.01	0.00	0.04	0.00	0.00	0.00
Consumer Products	0.05					
Architectural Coatings	0.00					
TOTALS (lbs/day, unmitigated)	0.06	0.02	0.05	0.00	0.00	0.00

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	0.22	0.31	2.86	0.00	0.47	0.09
TOTALS (lbs/day, unmitigated)	0.22	0.31	2.86	0.00	0.47	0.09

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

LAFD 104
Urbemis Operational Emissions

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	0.33	27.00	dwelling units	1.00	27.00	272.78
					27.00	272.78

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

LAFD 104
Urbemis Operational Emissions
Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: V:\AQNOISE DIVISION\Active Projects\LACOFD\104\LACOFD 104.urb924

Project Name: Firestation 104

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
Natural Gas	0.00	0.02	0.01	0.00	0.00	0.00
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

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	0.25	0.38	2.73	0.00	0.47	0.09
TOTALS (lbs/day, unmitigated)	0.25	0.38	2.73	0.00	0.47	0.09

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	27.00	dwelling units	1.00	27.00	272.78
					27.00	272.78

LAFD 104
Urbemis Operational Emissions

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

Appendix B-4

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

Fire Station 104
Greenhouse Gas Analysis

Emission Source	CO_2E[e] (Metric Tons)
Project	
Construction	218
Construction (amortized)	7
On-road Vehicles[a]	56
Electricity[b]	2
Water Conveyance	1
Natural gas[c]	1
Emergency Generator	28
Fire Trucks	72
Total	**166**
Net Increase	
Total	166
2004 Statewide Total[d]	479,740,000
Net Increase as Percentage of 2004 Statewide Inventory	**0.000035%**

[a] *Mobile source values were derived using EMFAC2007 in addition to the California Climate Action Registry General Reporting Protocol; Version 3.1, January 2009.*

[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 CO_2e factors were derived using the California Climate Action Registry General Reporting Protocol; Version 3.0, April 2008*

Sources: PCR Services Corporation, 2009.

Fire Station 104
Greenhouse Gas Analysis
Construction GHG Emissions

CO_2e[d] (Metric Tons)	
Emission Source	**2010**
CO_2 Emissions	217
CH_4 Emissions	1
N_2O Emissions	1
CO_2e Emissions	**218**
2004 Statewide Total[c]	479,740,000
Net Increase as Percentage of 2004 Statewide Inventory	**0.00005%**

[a] Mobile source values were derived using EMFAC2007 in addition to the California Climate Action Registry General Reporting Protocol;

[b] On site construction equipment values were derived using OFFROAD2007 in addition to the California Climate Action Registry General

c Statewide totals were derived from the CARB

[d] All CO_2E factors were derived using the Source: PCR Services Corporation, 2008.

Fire Station 104
Greenhouse Gas Analysis

Electricity

Land Use	1,000 Sqft	Usage Rate [a] (kWh\sq.ft\yr)	(KWh\year)	MWh\year
Project				
Residential (DU)	1.0	4,839	4,839	5
Total Project			**4,839**	**5**
Net Project Electricity Usage			**4,839**	**5**

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	3503.864615	1.589324958	1.589324958
CH_4	0.0302	0.146131458	6.62841E-05	0.001391965
N_2O	0.0081	0.039194199	1.77782E-05	0.005511234
Net				**1.60**
CO_2	724.12	3,504	2	2
CH_4	0.0302	0	0.00	0.00
N_2O	0.0081	0	0.00	0
				2 **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.

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
Residential (DU)	1.0	DU	0.90	0.205	0.2	260	0.066	0.1
Total Project					**0.2**			**0.1**
Net Project					**0.2**			**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	**2,094**	**2**
Wastewater Treatment	0.00	2,500	**166**	**0**
Net Project Water Power Usage			**2,260**	**2**

GHG	lbs/MWh[b]	lbs	metric tons	CO_2E (metric tons)
Project				
CO_2	724.12	1636.509	0.742307176	0.742307176
CH_4	0.0302	0.068252	3.09585E-05	0.000650129
N_2O	0.0081	0.018306	8.30344E-06	0.002574067
Net				**0.75**
CO_2	724.12	1,637	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	3,450	3,450	41,399	42
Total Project			**3,450**	**41,399**	**42**
Net Project			**3,450**	**41,399**	**42**

[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	2,240.55	1.02	1.02
CH_4	0.001	0.04	0.00	0.00
N_2O	0.0001	0.00	0.00	0.00
Net				**1.02**
CO_2	53.06	2,240.55	1.02	1.02
CH_4	0.001	0.04	0.00	0.00
N_2O	0.0001	0.00	0.00	0.00

1.02 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.

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	8	10	80	2

Pollutant	**Emissions**		
	grams/day	**tons/year**	**tons/year CO_2e**
CO_2	195,698	71.43	71.43
CH_4	13.026	0.00	0.10
		total	71.53

Assumptions:
4 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

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

EMFAC2007 Summary **Pollutant Name: Carbon Dioxide Temperature: 60F Relative Humidity: 50%**

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**

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

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

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**

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

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